

A Perception of a Town: Inhabitants' Values and Preferences of the Moravian-Silesian Region, the Czech Republic

Vnímání města: hodnoty a preference obyvatel v Moravskoslezském kraji, Česká republika

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Abstract

The overall objective of the towns is their sustainable development, but it is not possible to exactly define it. It is a subjective idea and it is closely related to a value system and preferences of inhabitants. The aim of this study is to evaluate 15 selected areas for living in a town and mainly define a perception and evaluation of Environment as well as the Appearance of public spaces and relations between these areas and image of the town. There is the evaluation of the current situation and proposals for changes in these areas. There is also a position of Environment in the overall ranking of 15 areas that are important for residents. Data for this study were obtained from a survey in six district towns of the Moravian-Silesian Region, 452 people were questioned in February 2014. Respondents evaluated the current situation in 15 selected areas and they also suggested proposals for changes in these areas. Results of the study show that the Environment was ranked with regarding to the typology of the chosen town. But the results of the evaluation of the current environmental situation in the towns were so different that they cannot be averaged for the whole region.

Keywords

perception of a town, evaluation of environment, evaluation of public areas, typology of towns

Abstrakt

Celkovým cílem měst je jejich udržitelný rozvoj, ale tento pojem není možné přesně definovat. Je to subjektivní myšlenka, a ta je také úzce spjata s hodnotovým systémem a preferencemi obyvatel. Cílem této studie je zhodnotit 15 vybraných oblastí pro život ve městě, a zejména definovat vnímání a hodnocení životního prostředí, jakož i vzhledu veřejných prostor a vztahy mezi těmito oblastmi a image města. Je zde zhodnocení současné situace a návrhy na změny v těchto oblastech. K dispozici je také pozice životního prostředí v celkovém pořadí 15 oblastí, které jsou důležité pro obyvatele. Data pro tuto studii byla získána z vlastního výzkumu v šesti okresních městech Moravskoslezského kraje, v únoru 2014 bylo dotázáno 452 obyvatel. Respondenti zhodnotili současnou situaci v 15 vybraných oblastech a také navrhli změny v těchto oblastech. Výsledky studie ukazují, že životní prostředí se umístilo v hodnocení s ohledem na typologii zvoleného města. Výsledky vyhodnocení současné situace v oblasti životního prostředí ve městech byly tak odlišné, že nemohou být počítány jako průměr pro celý region.

Klíčová slova

vnímání města, hodnocení životního prostředí, hodnocení veřejných prostor, typologie měst

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Introduction

The town is ethnically, economically and socially multi-layered community and members of different groups identify themselves with the town on the basis of experience, memories and emotions (Šrajerová, 2006). People of the town identify themselves through: a family and friends, architectural monuments, buildings, streets and squares, a language or dialect, geographical and landscape phenomena and others (Bitušíková, 2003).

People have always felt two contradictory longings: a desire for freedom and a wish to make place one's home (Neill, 2004). Every town is recreated by its residents who work and live in it, so it is often developed spontaneously and not exactly according to plans of its founder or public administrators (Petrová, 2013).

In the past, the most important task for the city council was to provide adequate sanitary conditions for its residents (Hojer, M., Bullberg A. and Pettersson, R., 2011). Today, the city council deals with other questions: How different is our city from the other towns? How to attract new investors, tourists, and eventually future residents? (Baker, 2007) All of these groups contribute to economic and social development of the city. And even the smallest village is ultimately more complex than the largest industrial corporation because there are various reasons why people live in it (Anholt, 2010).

Urban areas are facing not only an increasing population and a growing demand of touristic activity. However, whilst increasing touristic activity is an important for certain cities, tourism facilities are responsible for a substantial increase in environment degradation due to tourists' rising expectation for services and facilities (Girivati, N., Homma, R., Iki, K., 2013).

As Blackman states (1996) urban policy is essentially about welfare of local residents in an urban society. But many of the city's development strategies are focused only on the target groups of tourists and businessmen, which causes discontent of local residents (Matlovičová, 2010).

Olsson and Berglund (2009) wonder why to take into account the interests and attitudes of local residents. How to involve groups of differently oriented residents in the process of planning and development of the town and why they consider this target group to be more important than the target group of visitors and investors. The feedback on dealing with satisfaction with life in a given space is a key element in the creation of the town development strategy. The most important of all inhabitant groups are middle-class residents who best responds to various incentives and initiatives of a local government (Bucchiara, 2013).

Golledge, Richardson and Gale (1987) describe behavior of a newcomer to the city. At the beginning he/she will be interested in three main things: housing, food and employment. There are another incentives and interests for living that residents consider to be important: an attractive, safe and healthy environment, a city without homelessness, adequate housing, opportunities for business and development, a place for cultural excellence and others (Smyth and Hedley, 2005).

Hard and soft factors have significant influence on decision-making of residents. Matlovičová (2010) researched these soft factors: inhabitants' satisfaction with life, quality of housing, willingness to remain living in the town and others. Prioritizing of needs of tourists at the expense of residents (e.g. Russian-language inscriptions in spa towns in a western part of Bohemia) completely suppresses the natural cooperation of target groups in the town, which results in greater separation of residents and owners of the shops and hotels.

Other soft factors for the development and growth such as activities and behavior of the public sector are becoming more important. There are already mentioned quality of housing, possibilities for small business and midsize companies, image of the town, the local culture, environmental quality, access to health care and others (Rumpel 2002). Hard factors of development such as the availability and cost of land, capital or labor are less important for the residents (Ježek, Rumpel a Slach 2007).

Environmental damage negatively influences architectonic heritage and further development of the city. Even towns which are not big industrial centers have pollution problems, as T. Luque-Martínes at al. (2007) shows on an example of Granada.

More and more inhabitants want to participate in the development of their city. Avraham and Ketter (2012) give the example of Tel Aviv, where 800 residents were involved in the process of creating a new vision for the city's development. And according to the Dutch model, development strategy of each town is then incorporated into the overall development strategy of a region (Heeley, 2011).

This study is focused on mapping of opinions and preferences of the population in selected towns of the Moravian-Silesian Region which is situated in the north-eastern part of the Czech Republic. Research questions are following: What is the residents' attitude to the urban environment and appearance of public space in the town? Which areas do the residents consider to be the most important for a satisfied and quality life in the town? How do they evaluate these areas and which changes would they like to make in selected areas?

1 Green Towns – Clean Towns?

Certain amount of green open spaces in the urban environment is a result of long process. The provision of substantial green open areas reached the highest level in 1960 (Freestone, 2000). Since then, parks, public gardens and open areas had to recede because of urban

development. However, not every green city is also a clean city. Almost thirty years ago, C. S. Yadev (1987) stated that the current urban problems are mainly ecological problems.

Air pollution caused by various gases is almost invisible. Carbon monoxide is one of the major pollutants due to the toxicity. It is formed by incomplete combustion of carbon and organic substances. It is emitted by cars, local heating, energy and metallurgical industries. Sulfur dioxide is a colorless, poisonous gas that is produced by burning of sulfur. Oxides of nitrogen are also toxic and mostly colorless gas.

As it is shown in table 1, air quality varies considerably in different towns.

Table 1: Emissions of main pollutants in air by the Moravian-Silesian Region in 2013

Pollutants	Sulphur dioxide	Nitrogen oxides	Carbon monoxide
Towns	REZZO 1-3	REZZO 1-3	REZZO 1-3
Bruntál	0.5	0.2	0.7
Opava	0.4	0.3	1.2
Nový Jičín	0.6	0.4	2.7
Frýdek-Místek	4.6	3.1	51.5
Karviná	11.7	13.9	10.3
Ostrava-město	32.4	28.6	166.5

Note: Sulphur dioxide – specific emissions (t/km²)

Source: The Czech Hydrometeorological Institute

There is also a chemical industry in Ostrava (32.4 t/km² of sulphur dioxide). High levels of carbon monoxide in air in Frýdek-Místek are caused by the fact that many towns and villages near the mountains are not connected with natural gas and the residents are accustomed to use coal to heat their homes.

Marzuff et al (2008) describes four types of ecological studies that can be implemented in the urban environments. N. Heyen, M. Kaika and E. Swyngedouw (2006) developed a ten-point Manifesto for urban political ecology. According to authors, this manual can be used for basic debate about environment in a city or as a platform for future research.

But how do residents evaluate the environment in the city? Should air quality be improved and heating with solid fuels be reduced? Or would they rather encourage people to plant new trees and to sort household waste? And how much attention do the inhabitants pay to the appearance of public space in their town and do they appreciate it? Would they like to have more green areas and parks? Or would they rather repair sidewalks and build more public playgrounds for their children?

Contemporary towns have got multi-layered identity of open public spaces. These spaces are characterized for diversity of users, where people go for different reasons and where they perceive these places in different ways (H. Caskin and F. Bernardo, 2009).

2 Methods

2.1 Study Sites

This research was carried out in six towns of the Moravian-Silesian Region (shortened for the MSR) in February 2014. Forman (2008) describes concept of a region as two main characteristics: macroclimate and a cultural-social pattern. Looking at natural and industrial diversity of towns that are located in the territory of the region, the towns were divided into three groups according to their typology.

Bruntál is located in the western part of the region. This town is characterized by an underdeveloped industry and there are areas with predominating agricultural production. The Jeseníky Mountains have an important place in promotion of tourism. According to the statistics, there is the highest rate of unemployment (17.97%), the least job vacancies and the smallest number of inhabitants per square kilometer.

The city of Ostrava (the district city) and Karvina are characterized by heavy, metallurgical and machine tools industry. Until the end of the 20th century mining dominated in both areas, the OKD Company is the only black coal producer in the Czech Republic. Active coal mining is processed only in Frýdek-Místek and Karvina now. For this reason, the quality of the environment is often on low level. Service area and machine-building industry have been rapidly developing.

Opava, Nový Jičín and Frýdek-Místek are towns which have approximately the same size and population, as well as developed production in light industry, machine-building and services. Tourism is developing in the Beskydy Mountains (Frýdek-Místek) and at the Odra river-landscape (Nový Jičín). There is also the lowest rate of unemployment: Frýdek-Místek 9.34%, Nový Jičín 9.67% and Opava 11.23%.

As it was stated by K. J. Gaston (2010) the Moravian-Silesian Region belongs to the typical European urban settlement, where majority of the population lives in city with less than half a million inhabitants (City of Ostrava) and the others live in towns around. New development models call for better understanding of local circumstances and priorities and links between rural and urban areas (Rydin, 2005).

2.2 Data Sample

The aim of empirical research is to analyse the perception and evaluation of inhabitants' satisfaction in 15 selected areas, which the residents consider to be important areas for life in the town.

For the purpose of this research the construction of a sample that represents people of six towns using the quota sampling was suggested. The basic quotas are place of residence, age, education and gender of the respondents.

Because the research is primarily intended to compare the set of urban population, the specific subset of socio-demographic characteristics of the each of the six towns was designed. The available data from the census of 2011 year were support for the creation of quotas.

Respondents were divided according to age into following groups: under 15 years, 20-24 years, 25-39 years, 40-59 years, +60 years. And according to education: primary, apprenticed, secondary schools, university bachelor, university master's degree. Respondents were chosen as the basis of quota sampling.

The total size of a proposed research sample is 600 respondents, 100 people from each town. This size allows to do the expected statistical evaluation of data (sorting of the second and third grade). The size of each urban sub-population does not reflect the relative size of each urban population. It is primarily used to make a comparison between towns. The sample should adequately contain sufficiently numerous subcategories also in smaller towns to allow adequate statistical evaluation of collected data.

The questionnaire contains 15 closed questions. Basic indicators (areas of evaluation) are in order: interpersonal relationships, culture and behavior of inhabitants, environment in a town, health care, public safety, quality of public administration, appearance of public space, social services, access to education, housing, provision of information to citizens, image of a town, image of a region, the number of job vacancies, transport and infrastructure.

The first part of the question is focused on evaluation of current situation in particular area. Questioners rated the areas from 1 (the best) to 5 (the worst). The total list of all evaluated areas is in Table 3.

The second part of the question includes suggestions for a change in a particular area. Five of the most frequent responses were chosen from a similar questionnaire survey, which was carried out electronically in 2009. The management of the MSR was the author of the survey (Strategie rozvoje MSK). These options - suggestions were summarized in the second part of the question: "What would you change?".

The last question No. 16 refers to the overall evaluation of 15 above mentioned areas. Respondents choose 5 areas out of 15 areas that are most important for them. The area on the first position was given five points, the area on the fifth position was given one point. Total list of all evaluated areas is in Table 4.

We can obtain data from following research issues:

- Assessment of the current situation of each area.
- Suggestions for change (respondents choose 1 out of 5 options).
- Evaluating the most important areas of life in the town.

2.3 Data Analysis

The questionnaire survey was addressed to 600 respondents, 471 questionnaires were answered, 19 pieces were excluded because of incomplete information. 452 questionnaires were collected from towns: 71 pcs from Bruntál, 84 pcs from Opava, 72 pcs from Nový Jičín, 81 pcs from Frýdek-Místek, 69 pcs from Karvina and 75 pcs from Ostrava-city. To sum up, 74% of respondents answered the questionnaire.

Respondents answered all of the 15 surveyed areas in the questionnaire. The aim of this study is to analyze primarily the Question No. 3 Environment in the town and Question No 7 Appearance of public space.

Carr (1992) points that popular awareness concerning the urban environment is about air quality, waste disposal, water supply and general health of the biosphere. Public spaces differ depending on their social, cultural, economic and symbolic functions, depending on the meaning, contested and negotiated they are, that different publics bring to them (Fyfe, 1998). Evaluation of public space is also related with the existence of the town center. Madanipour, A., Knierbein, and Degros S., (2014) consider the center to be the heart of each town, including natural "meeting zones" and therefore it is extremely important to keep the center of the town inhabited by residents, not just companies, offices and commercial space.

Table 2: Evaluation of the current situation – two chosen areas

Town Quest. No.	Bruntál	Opava	Nový Jičín	Frýdek- Místek	Karviná	Ostrava město
3	2.15	2.47	2.81	3.03	3.69	3.65
7	2.50	2.13	2.61	2.41	2.55	2.73

Note: Values are expressed in mathematical average, 1 is the best - 5 is the worst. Quest No. 3 Environment in your town. No. 7 Appearance of public space (area) in your town.

Source: Own research

Residents of Bruntál evaluate Environment in a town as the best of all areas. On the other hand, residents of Karvina and Ostrava-město consider the environment in town as very unsatisfactory. Their assessment is consistent with the data of The Czech Hydrometeorological Institute. Most of the inhabitants receive data indirectly through local media or announcements of the Town Hall. People usually know which factories and companies are the biggest polluters in the area. Unfortunately, many citizens contribute to this situation by burning coal in their home central heating (high levels of carbon monoxide).

Looking at the figures of question No. 7 (Appearance of public space in your town) residents (except the Bruntál ones) evaluated the public spaces in their town better than environment in town.

In the Table 3 there are 15 areas (numbers inside table) and their position on the evaluation of the current situation in each town.

Table 3: Evaluation of the current situation in each town

Town Order	Karviná	Ostrava město	Nový Jičín	Frýdek-Místek	Opava	Bruntál
1 st	9	4	10	9	9	3
2 nd	7	9	11	10	10	6
3 rd	15	10	9	12	7	8
4 th	10	15	4	15	12	7
5 th	11	1	12	4	3	9
6 th	8	8	7	7	1	10
7 th	6	6	6	8	8	11
8 th	1	11	8	11	11	1
9 th	12	7	15	2	2	2
10 th	4	12	3	5	5	5
11 th	2	13	1	1	15	12
12 th	13	2	2	6	4	15
13 th	5	5	5	13	13	13
14 th	3	3	13	3	6	4
15 th	14	14	14	14	14	14

Note: 1st is the best - 15th is the worst. Areas: 1 Interpersonal relationships and cooperation in your town. 2 Culture and behaviour of people in your town. 3 Environment in your town. 4 Health care in your town. 5 The safety of people in your town. 6 The quality of town government. 7 Appearance of public space (area) in your town. 8 Social services in your town. 9 Availability and quality of education in your town. 10 Housing in your town. 11 Providing information to citizens and visitors of town. 12 Image of your town. 13 Image of the Moravian-Silesian region. 14 Number of jobs in your town. 15 Transport and infrastructure in your town.

Source: Own research

When evaluating the current situation, the Appearance of public space (Area No. 7) moves from the 2nd (in Karviná) to the 9th position (in Ostrava-město). There is the difference of 7 positions. Environment in the town (Area No. 3) is evaluated from the 1st (in Bruntál) to the 14th position (industrial towns). The difference is 13 positions.

In every town, there are the Technical Services that are paid and run by the Town Hall. These companies are responsible for cleaning of areas belonging to the town (litter bins, repair and installation of benches, lawn cutting, care of plants, bushes and trees, functioning of fountains in summer, removal of snow in winter and others). Upkeep of public spaces and other services paid by towns operate reliably, for the general satisfaction of

citizens. Finally, it has to be said, that residents usually do not throw litter in the streets or destroy equipment for relax in parks of the town in which they live.

Appearance of public spaces in Karvina is on the second place. It is unique, because a part of town was newly built after the World War II as residential suburbs for miners and metallurgists (many of them daily commuted to Ostrava). Nevertheless the town has its historic centre, including a square, a town hall, a church and a chateau. Appearance of public spaces of Opava is on the third place and in Bruntál on the fourth place. These towns are very old towns founded in the 13th century which have a square, a town hall and streets with old houses. In Opava, there is a continuous belt of parks, which replaced the medieval fortifications 200 years ago. The urban environment in these towns is also for this reason evaluated positively.

The residents of Frýdek-Místek and Nový Jičín evaluate Appearance of public space on the 6th place. Frýdek-Místek is a conurbation on the Ostravice river, each town (Frýdek and Místek) has its own history, square with Renaissance houses, a town hall and churches (until their union in 1943). Residents, however, still strictly define whether they live in Frýdek or in Místek. Nový Jičín is also an old town with the historic centre, there is a square, a town hall, a castle and a church. In addition, the town centre has been declared as the Urban Conservation Area.

The Ostrava city suffers from the fact that it is "composed" of the former independent villages and boroughs. In fact an important centre of a town (with a square, a church and a town hall) is in every suburb, so the residents living there do not have a close relationship with the main Town Hall and with the main Square in the city centre. Because of the fact that Ostrava was also the former center of metallurgical and mining industries, there are still many empty technical places and buildings (mining towers, old ironworks and factories). Some areas were successfully transformed into the technological museums or places of entertainment (e.g. the Area of Dolní Vítkovice), the others slowly decay.

In the Table 4 there is list of all areas (positions from 1st to 15th) that respondents consider important for their living in each town.

Table 4: Evaluation of all areas in order of priority for living in each town

Town Order	Karviná	Ostrava město	Nový Jičín	Frýdek-Místek	Opava	Bruntál
1 st	5	3	5	4	5	4
2 nd	4	5	1	5	3	14
3 rd	14	14	14	3	10	10
4 th	3	4	4	14	14	5
5 th	10	9	3	1	15	3
6 th	2	1	10	10	1	15
7 th	9	10	8	2	4	9
8 th	1	2	15	9	2	1
9 th	15	15	12	8	8	8
10 th	7	8	2	6	7	7
11 th	8	12	9	7	6	2
12 th	12	7	7	15	9	12
13 th	11	11	6	11	12	13
14 th	13	6	11	13	13	6
15 th	6	13	13	12	11	11

Note: 1st is the most important - 15th is the least important

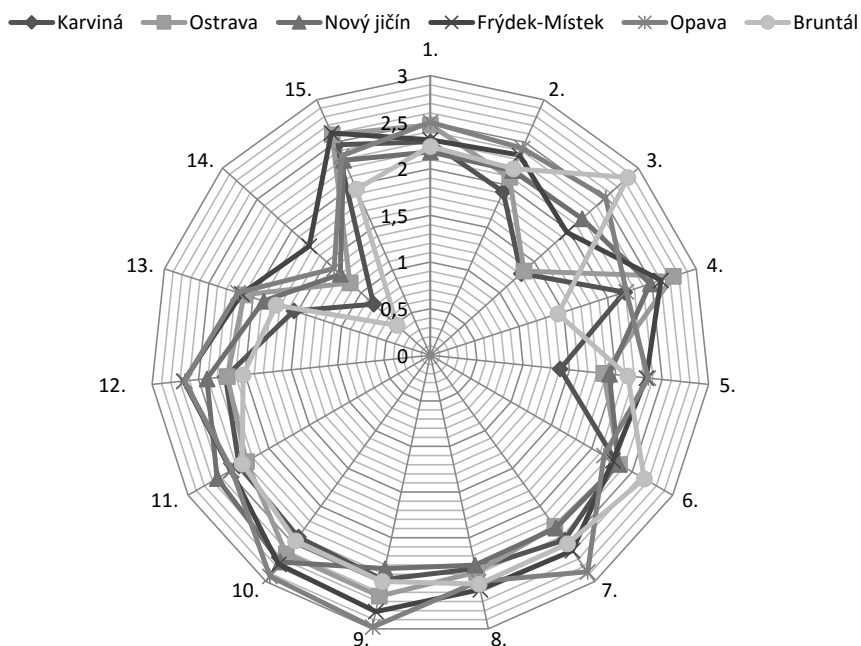
Areas: 1 Interpersonal relationships and cooperation in your town. 2 Culture and behaviour of people in your town. 3 Environment in your town. 4 Health care in your town. 5 The safety of people in your town. 6 The quality of town government. 7 Appearance of public space (area) in your town. 8 Social services in your town. 9 Availability and quality of education in your town. 10 Housing in your town. 11 Providing information to citizens and visitors of town. 12 Image of your town. 13 Image of the Moravian-Silesian region. 14 Number of jobs in your town. 15 Transport and infrastructure in your town

Source: Own research

After calculating of the total average of six towns, the overall ranking of all 15 areas is following: the most important area is safety of people (Area No. 5), then there is health care (Area No. 4) and number of jobs (Area No. 14). If we look at the priorities stated by Golledge, Richardson and Gale in 1987 (housing, food and employment), we can see a significant change here. Employment or number of jobs is still important, but food and housing were replaced by safe living and available health care.

Scale of evaluation (of the current situation in each town) was reversed in polarity in order to better quantify various areas of the town.

Fig. 1 Dimension of evaluated towns



Areas: 1 Interpersonal relationships and cooperation in your town. 2 Culture and behaviour of people in your town. 3 Environment in your town. 4 Health care in your town. 5 The safety of people in your town. 6 The quality of town government. 7 Appearance of public space (area) in your town. 8 Social services in your town. 9 Availability and quality of education in your town. 10 Housing in your town. 11 Providing information to citizens and visitors of town. 12 Image of your town. 13 Image of the Moravian-Silesian region. 14 Number of jobs in your town. 15 Transport and infrastructure in your town.

Source: Own research

The smallest difference in dimension of the towns is at the Area No. 8 Social Services (0.23 of point), the Area No. 1. Interpersonal relationships (0.31 of point) and on the third place there is the Area No. 11. Providing information to citizens and visitors of town (0.36 of point). At the opposite side of the list on the thirteenth place there is the Area No. 14. The number of jobs (1.00 of point), then Area No. 4. Health care (1.30 of point) and the biggest differences in evaluation are at the Area No. 3 Environment in your town (1.54 of point).

Table 5: Correlation coefficients (Pearson Correlation)

Areas No.	Karviná	Ostrava město	Nový Jičín	Frýdek-Místek	Opava	Bruntál
3 Environment	0.284	0.313	0.219	0.307	0.284	-0.071
4 Health care	-0.234	-0.127	0.012	0.303	0.381	0.017
14 Number of jobs	0.255	0.478	0.224	0.226	0.087	0.118
7 Appearance of public space	0.548	0.332	0.391	0.539	0.237	0.16

Source: Own research, data from Fig. 1. Average evaluation of current situation in relation to evaluation of area No 12 Image of the town.

There is no relation between evaluation of Environment (Area No. 3) and Image of the town (Area No. 12) in Bruntál (-0.07), the value of variable is close to zero. According to the classification of Brymann and Duncan, the relation between these two figures of other five towns is assessed to be small. The image of the Bruntal town is relatively very low and not very efficient. The significant relation between evaluation of Number of jobs (Area No. 14) and Image of the town (Area No. 12) is in Ostrava (0.48). Another relation with higher variable is at evaluation of Appearance of public space (Area No. 7) and Image of the town (Area No. 12) in Karviná (0.55) and in Frýdek-Místek (0.54). According to the above mentioned classification, the relation is considered to be average.

2.4 What Would You Change?

Suggestions what to change in these areas are based on the most mentioned ideas from the survey in 2009. This survey was held by the Municipality Office of the Moravian-Silesian Region (Strategie rozvoje Moravskoslezského kraje, 2009).

Table 6: What would you change? (Area No 3. Environment in the town)

Town Areas	Bruntál	Opava	Nový Jičín	Frýdek-Místek	Karviná	Ostrava město
1	8	34	32	38	61	55
2	21	17	28	13	18	17
3	25	7	10	9	1	7
4	25	17	16	13	13	8
5	21	25	14	27	7	13

Note: The figures in the table were converted to percent due to the different number of respondents who answered questionnaire in each town.

Areas: 1 to improve air quality. 2 To reduce heating with solid fuels. 3 To plant new trees. 4 To improve home waste sorting. 5 To reduce density of town traffic.

Source: Own research

The residents of towns (except Bruntál) require improving of air quality. With reference to Table No. 1 Karvina (61%) and Ostrava city (55%) are the cities where there is the highest presence of pollutants in the air. Closely related to it there is the wish to reduce heating with solid fuels (in Frýdek-Místek and also in Nový Jičín), which is dependent on the technical possibilities and willingness of firms to expand the supply of natural gas in places where it is still not available.

The Bruntál town is out of average evaluation, though it is placed almost next to the mountains, the residents require to plant more greenness. The respondents' answers to the suggestions for changes in the environment are balanced (around 23%) they also require to sort more household waste, as well as to reduce traffic congestion in the town

Table 6: What would you change? (Area No 7. Appearance of public space)

Town Areas	Bruntál	Opava	Nový Jičín	Frýdek-Místek	Karviná	Ostrava město
1	35	15	9	22	16	11
2	7	19	17	17	26	27
3	7	7	3	16	7	9
4	9	15	23	6	12	17
5	42	44	48	39	39	36

Note: The figures in the table were converted to percent due to the different number of respondents who answered questionnaire in each town.

Areas: 1 To repair sidewalks. 2 To create more green areas and parks. 3 To build playgrounds for children. 4 To cancel illegal dumping of waste. 5 To engage the unemployed in cleaning of town.

Source: Own research

The most suggestions for change concerning to the appearance of public spaces were gathered in No. 5 - To engage the unemployed in cleaning the town. The residents are aware of the high unemployment rate in their town and region. Looking at the structure of the unemployed, the most of them has only basic education, so it is difficult to find a job. Community work (and cleaning of public areas in particular) has a double benefit both to provide a relevant work for people without permanent jobs and help to remove visible defects in public places of the town.

However, to do this, there is need of cooperation of the City Hall, the local Labour Office and organisations providing social services. To repair sidewalks (Option No. 1) needs co-operation with the Town Hall and local building companies and it can be a good example of Public and Private Partnership. The existing legislative framework of the Czech Republic enables to perform this kind of community work and it is successfully used mainly in small towns and villages.

Different answers occurred in suggestion No. 4. - To cancel illegal dumping of waste. Frequency of these answers seems to depend on the personal experience of residents with illegal dumping of household waste around the town.

Area 3, Option No. 3 (to plant new trees) of the Table 5 and similarly Area 7, Option No. 2 (to create more green space and parks) of the Table 6 show that residents consider their town to be sufficiently green. Option No. 3. Build playgrounds for children – does not seem to be so important for residents. On average, only 7% of inhabitants would like to do changes in this area.

Result

Looking at Table 1 Emissions of main pollutants into air by region in 2013, we can see that the carbon monoxide is the worst pollutant in the air. It is typical for the area of Ostrava and industrial parts of the Moravian-Silesian Region. The study of W. Endlicher (2011) shows that the greatest reduction in air pollution (transport, household heating, small factories and more) in the city of Berlin took place until 2000. Since then, the trend of reducing pollutants is slightly decreasing. Ostrava has been reducing its emissions in the atmosphere, but it is more than 15 years backwards in this process.

Comparing the data in Tables No. 3 and No. 4, we can see that although the Environment in Bruntál is evaluated as the best area, the residents do not consider this area as the most important for their life. Residents do not require improving air quality so much proposals for changes in the other four areas are balanced. First, this is due to economic conditions (absence of large industrial companies) and then natural and climatic conditions subtly influence the evaluation of the urban environment. Residents naturally accept that live near the mountains and that their town is truly "green."

Residents of Ostrava, where the environment and especially air is damaged the most, considered quality and clean environment the most important for their life. In the overall assessment there are Opava (engineering), followed by Frýdek-Místek (machinery and mining industry) and Karvina (metallurgy and mining industry).

Looking at the Table 3 Evaluation of the current situation – all areas in towns, we can find out that Appearance of public space in general is evaluated on higher position than Environment in the town. General public space is represented by complex of units such as the main square and by many particular items like street lamps, lawns, benches and others. All these parts of public space are more visible and inhabitants can control them every day. But the environment of the town (and mainly quality of air) is quite invisible issue, so if it got worse, it would be difficult to recognize the changing situation.

Residents of towns (except City of Ostrava) positively evaluated current Appearance of public spaces. All these towns have their historic center, including a main square, a town hall, a church and nearly most of them have a chateau or a castle. According to K. Lynch (1960) all these elements are important parts of the urban image of the city.

People living in the towns of the Moravian-Silesian region value other areas of life differently than it was for example in 1987 (Golledge, Richardson and Gale). Summing up the results of Table 4 three are the most important areas: safe living in the town, accessible health care and work and jobs. It can be a result of general aging of population in these towns. Looking at the other areas we can see that Environment in the town is more important than Appearance of public space.

Results of Table 6 and Table 7 show that the residents suggest to take better care of environment. The prime concern is to improve air quality, which can be achieved by the Regional Office and its organizations (City of Ostrava) in a legislative way - ex ante (official announcements and regulations) and ex post (fines and negative taxes). It will be a long-time process, because most of the main polluters are big industrial corporations (mainly in Ostrava) and family houses (other towns and villages).

The respondents could express only one suggestion for change (Table 6 and Table 7). If they answered that they want to improve the air quality in towns Karvina and Ostrava, there can not be determined whether their next wish was to sort more household waste or to plant more trees in the town. Other suggestions (source of survey in 2009) which were not so common and which were not listed in the questionnaire are: Area No. 3 Environment in the town - building of ring roads outside of the town center, respect for environmental limits of pollution, limits of building on arable land, regular information about the state of the environment and its changes during the time. Area No. 7 Appearance of public space - more frequent cleaning of public areas, revitalization of existing parks, more parking spaces and others. However, it is certain that inhabitants expressed what is now the most important for them and what the Town Council should deal with.

The aims set for this article were fulfilled.

Conclusions

The end of an era of classic industrial cities in the USA by Ward (2000) came in the 80-ies of the last century. Ostrava was the most affected by end of an industrial era twenty years ago. Karviná and Frýdek-Místek, former metallurgical and mining towns, also have to find new ways for their development. Post-industrial times call for new forms and ways of growth of formerly so called "industrial city". Certainly the city would not give up on its "technical heritage", but it should be actively used for further development. It may not cover only technical monuments. Marshall (2011) cites the example of Edinburgh and its Georgian urbanism, which has its historical place, even if it does not serve to its original social purpose.

The Manifest already mentioned and written by N. Heyen, M. Kaiko and E. Swyngedouw (2006) can be the theoretical basis for creation of development strategies with regard to urban political ecology. The practical content of development strategy can be the figures which were obtained in this questionnaire survey. They show that the residents carefully pay attention to in what urban environment they live and they have an accurate idea of how their town should look like and how it should be developed.

In the long term, the environment is more important than the appearance of public spaces. But when the residents evaluate the current situation, the appearance of public space is valued better than existing environment in the town. The Bruntál town is the only exception – it is located next to the mountains and according to the typology of cities and municipalities it belongs among the municipalities with limited industrial production and therefore it has well-preserved environment.

The highest correlation coefficients were measured when evaluating the town's image and appearance of public spaces. This area seems to be important in managing and forming of the image of the town. This is of particular importance in the division of towns according to the typology of cities. The Bruntál town is considered as the town with limited industrial activity and it has given the coefficient as very low with no dependency. The lowest correlation coefficients were measured when evaluating the town's image and health care.

The detected data can be used for comparison with the data from the survey found in 2009 on the territory of the Moravian-Silesian Region. And also the data can be used for active formation of positive image of the Moravian-Silesian Region. Specific data for individual towns can be a guideline for building a city development strategy. It is up to the Town Council of towns how they will work with these specified data and how they will use these figures for the town's development.

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