Abstract: New social risks are key factors for social cohesion of local community and society. Currently new social risks which are caused by changes in a society appear more frequently than before. While previously the groups of underprivileged were counted in endangered groups, now the middle class can be affected as well. This report shows a spatial distribution of these risks. How to obtain this result is shown on a particular example of the city of Ostrava. This report seeks to establish future influence of industrial city cohesion. Mainly processes of industrialization and deindustrialization are examined in a detail, especially their effect on demo-social structure of the city.

The results are based on the research of the project called „Industrial society in a postindustrial city“ under which there were large sociological research of Ostrava and a long term monitoring of statistical indicators carried out.

All social problems lead to inability to retain basic residential standards. Social risk distribution is surveyed in Ostrava however the context of larger area (the Moravian-Silesian Region) is also taken into consideration.

Key words: new social risks, excluded localities, spatial, sustainable development, city

Introduction
Currently within the scope of the transition of an industrial society to the post-industrial, there is a significant polarization of territory and the growth of regional disparities. This leads to the transformation of existing social structures and ways of work, causing a decline in traditional areas of economy, traditional professions and traditional family roles. In the recent decades, also in Europe, we have been experiencing significant changes, the responsibility of the state is shifting to individual citizens and families, which however requires a change in the way of thinking within the society while. „an important strand in political science argues that trust in state institutions is in decline and work in sociology claims that citizens are becoming more
independent, reflexive and keen to the responsibility for meeting their own needs“ (Tailor-Gooby a Hastie, 2003, str. 271).

These changes, however, bring along impacts on society, affecting more and more numerous groups, and unlike in the past, they affect also the middle class. In relation to these changes the groups, those are very probably going to feel the impact of social changes, and therefore will be in need of support to handle their actual situation, were defined.

Through a gradual transformation of the social state, which was built on strong social interaction, we are being transformed to a state, which behaves under all circumstances economically, according to market rules and the ability to compete. We are leaving the society of the old social safety and insurance systems, which were guaranteed by the state to all those who worked, paid taxes and insurance all their lives. A diversified inequality of social classes is sinking ever deeper into the state of absolute incomparability in terms of ownership, power and social status. Until recently, the development of modern society was driven by an effort to come over the vast differences from the periods of feudalism or early capitalism, trying to substitute them with just slightly diversified incomparability. Success brought by this effort was the base for an open society theory and a basic presumption for the development of democracy. This situation lasted for more than a hundred years. An insurance system included a system of social protection related to an employment. A part of the financial benefits resulting from work was devoted, in the form of insurance, to a long-term maintaining of an individual and their entire families. Currently, the society is again divided into totally different and mutually incomparable social segments. Exceeding a certain threshold of incomensurability always leads to the resignation of individuals as well as to unpredictable bursts of group rage. Huge differences in wealth point out at huge differences in the capability to influence the orientation of society, to interfere in other people's destiny and in the fate of the whole country. It turned out that the contemporary post-industrial society brought the hard reality of social incommensurability, poverty, homelessness, social insecurity in the middle of the most economically developed countries. (Keller, 2010)

**RISK**

The idea of a risk has gradually become related with the area of social needs and fighting against poverty, thus being turned into a political issue under solution. The risk is generally related to the uncertain situations in the lives of people and to their actions and decisions. The risk is associated with the possibility, chance or probability of occurrence of some events that represent a result of human activities. Historically, the risk is associated with the loss of
control of the people over the results of their actions, with ignoring the boundaries of their actual knowledge, with the loss of influence within the social environment in which they are located and with the disintegration of social structures in which they had traditionally lived. (Sirovatka - Winkler, 2010)

The risk is statistically understood as a probability that the individual encounters an unexpected situation, against which they are not secured, for instance the unemployment, debt, family disintegration. Individuals within the statistical models are usually classified according to their age, education, gender, income and wealth, housing type and location.

New social risks, as listed below, are determine according to Keller (2010):

- The old risk was that for a shorter or longer period, people were unable to find a job, new social risk means that a person does so low-paid job that he and his family balance in the line leading to poverty. **Working poverty.**
- Before, people were victims of unemployment due to an insufficient qualification. New social risk means that also those, who have invested to their qualification (up to the level of university degree) may be left jobless for a long period **Unused skills.**
- Before, people grew old in poverty, in case they had not paid for the retirement. The new risk - people will grow old in poverty, even though they have worked all their life and they paid their retirement. **Third age spent in poverty.**
- Before, sick people lived in poverty, in case they did not pay health insurance. New risk means that a sick person will live in poverty, even though they worked and paid insurance. **Poor sick.**
- A single mother is not able to earn living for herself and a child in case she doesn’t work. The new risk - a woman is unable to make living for herself and a child even when she has a job. **Single mothers.**
- The risk increases with the number of children in the family. In the past, people greatly reduced their standard of living with three or more children, today it happens with only one child. **Families with more children.**
- A household is becoming insolvent, in case the people there are financially illiterate. The new risk – a household is becoming insolvent, even if it is financially literate. (Household members become unemployed, divorced, ill etc ). **Indebted households.**
- A family where parents are unemployed ends up in the ghetto. New risk – even the family where the parents are employed may end up in the ghetto. **Excluded and deprived localities.**
CITY

This present state of society has influenced the structure of contemporary cities in recent years, and will bear an influence on their further development. The city is a dynamic socio-economic system, internally very heterogeneous. This heterogeneity is significantly reflected in the spatial layout. This is why the sociologists of the city often focus on the social morphology of urban settlements and they are looking for patterns in the distribution of the individual population components in these settlements. The organization and spatial distribution of social activities (functions) and related objects (buildings, networks, etc.) is also examined. (Musil, 1996)

The spatial distribution of the social risks in the city is the main topic of this paper, however, we cannot see it as new, because it was Charles Booth in 1885-1903, whose research was already focusing on Mapping London's Poverty. (Booth, 2002). Also, in the beginning of the 20th century, the representative of Chicago School of Social Ecology Robert E. Park (1925), focused in his researches on the segregated areas, and he also introduced the concept of marginality in sociology, particularly within in the context of the neighborhood. There, the marginality was understood as the boundary separating the two culturally different worlds. Those who caused the main discrepancy were above all immigrants. At present, the marginality is rather understood the fact of living on the edge of the society. Another representative of the Chicago School Ernest W. Burgess (1925) developed the first sociological study of the spatial structure of the town, based on ecological principles. He described an expansion of the city as a process of differentiation, resulting in the spatial distribution of groups and individuals according to the nationality, occupation and other socioeconomic characteristics. "Differentiation according to natural and cultural groups gives the shape and character to a city (Burgess, 1925).

Socio-spatial structure is mainly determined by housing of residents, on the other hand availability of work becomes a key factor for functioning of cities in the actual world. The cities, or urban areas are being gradually abandoned by people but most of the jobs are created right in these areas. It is no coincidence that the socio-spatial differentiation of the city also affected the labor market, as the crisis of U.S. cities in the sixtieth of the 20th century, which was related to growth of poor ghettos with high rate of unemployment, s was one of the main reasons for creating a conception of labor markets segmentation (Caín, 1976:1216-1217). Labor market segmentation is the process in which the separation of certain groups of professions or occupations is carried out, thus creating labor market segments, i.e. dividing the market into smaller internally homogeneous parts, which are, to a certain extent,
independent on each other due to the existence of barriers. The barriers can have a geographic or professional character, they can depend on a relationship of an employee to the employer and in some cases, a barrier can also be socio-demographic characteristics of the worker, such as race, gender or age. (Tvrdy, 2008)

The evolution of cities in the twentieth century was significantly influenced by the Athens Charter adopted in 1933, which defined the primary functions of a city (dwelling, work, recreation and transportation connecting all its parts), i.e. the aspects determining the form of a city.

OSTRAVA

Ostrava is an atypical city with a polycentric structure created under an unconventional historical development. The discovery of coal in 1763 determined the industrial character of Ostrava. The expansion of Ostrava happened within the years 1830 – 1880 when the agricultural villages barged into the industrial city. Coal utilization in modern metallurgy, energetic, chemical industry and transport supported economic development and stimulated the industrialization of unusual scale. The industrialization progressed so quickly that urbanization process was not able to adapt to this trend, falling behind the industrial interests. The expansion of mining brought residential fragmentation which slowed down the development of city-creating activities and resulted into dividing the city into three centers. Along with the expansion of industry and mining, the population rate increased notably. This phenomenon stimulated the development of the construction in the housing sector where, besides private entrepreneurs, also participated owners of the mines and other industrialists who had built and later rented apartments to workers and officials. These historical events, along with the construction of new residential areas for industry employees (Poruba, Hrabuvka, Vyskovice, Dubina,) still affect the actual character of the city. Housing and residential construction in the area of Ostrava is now concentrated in peripheral rural municipalities and it is focusing on building new family houses. Thus, the actual density of residential units on the edge of the city becomes thicker.

Transformation of Ostrava

Since 1989, the process of deindustrialization of Ostrava has accelerated, nevertheless, certain characteristics could be monitored already in the previous period. This process is called deindustrialization and affects all industrial cities (Glasgow, Dortmund). All the mines of
Ostrava were filled up (mining was stopped in the city in 1994) and heavy industry was gradually decreasing. The loss of social and economic prestige under the market economy conditions had a profound impact on unilaterally oriented city and the region. A low rate of tertiary sector in Ostrava was the cause of the low rate of civic facilities in the city center. The construction of the housing estates was gradually ceased, it continued only in the southern part of Ostrava. Since 1991, there has also been a decline in population, which is primarily caused by migration losses. The exit of the population is caused by both economic reasons (lack of job offers), which is reflected in the exit of mainly young and educated people especially to Prague or abroad, and by environmental problems associated mainly with the quality of air, which supports the trend of suburbanization of middle-class population.

The impact of deindustrialization at Ostrava is not so dramatic, due to the reducing of employment rate of temporary residents, but also thanks to the process of re-industrialization (i.e. creating of jobs in the new industrial companies, which have come from abroad, or were created by updating of an obsolete technology). Actually, Ostrava begins to gain a character of agglomeration and there one third of jobs from the Moravian-Silesian Region is located there.

**Process of Deindustrialization**

In 1961 and 1970 more than half of the Ostrava population worked in industry, especially in the mining and processing coal. There was a long-term shift of jobs from industry to services in progress.

Since 1989 the restructuring in two of the largest industry employers has taken place and it has led to significant decline of jobs. In 1989 there were 61 thousand workers in total in both plants, but nowadays there are 13 thousand employees in total in both of them.

In 2001 the employment in industry declined to 26.8% (in 1991 it was 43.7%).
The Spatial Distribution of Economic Activities

Change in employment structure amended the distribution of economic activities in the city and it can prove that old industrial areas provide fewer jobs than before and the economic activity in the center is growing. Distribution of economic activities in industry may partially be identified through the spatial positioning of buildings in the city. Higher representation of industrial buildings is obvious in S-shaped stripe in the eastern part of the city (from Hrabova through Kuncice, Vitkovice, Marianske Hory, Privoz to Hrusov). See the following map.
Heavy industry has always played an important role in Ostrava. Its concentration in three main areas lying in the aforesaid S-shaped stripe (Kuncice, Vitkovice and Marianske Hory) is characteristic for the city. Light industry is evenly distributed all over the stripe, while in recent years there has been an evident and significant concentration of light industry enterprises in the southern part of that area, industrial zone Hrabova.

Focusing on the distribution of the entrepreneurs throughout the city, measured by the amount of entrepreneurial activity, we can compare a similar spatial structure. The S-shaped stripe does not include Hrusov, but newly there were added urban districts of Ostrava - Moravska Ostrava and Hulvaky. Among those urban districts with the higher rate of entrepreneurial activity, where the construction of houses has rapidly increased in the recent period, belong Trebovice and Martinov.
Suburbanization of Economic Activities

In Ostrava occurs, mainly in relation to the entry of foreign investors since the second half of the nineties, a significant transformation of the economic potential - First, there has been the decline in heavy industry, on the other hand there is a we can see a development of commercial-industrial zones along the main transport routes in suburban areas. It is called the suburbanization of economic activities, i.e. commercial suburbanization, when certain functions slowly move out of the city center to more peripheral locations or totally outside the city.

Commercial suburbanization in Ostrava is obvious, considering the concentration of retail services in large retail shopping centers located primarily in the suburbs, the development of new industrial zones (Hrabova, Mosnov) and the location of warehouses and technology parks.

Investors prefer locating their business on the „green field“. Preparation of the so-called greenfield sites is technically, financially and time more favorable than the intensive
regeneration of brownfield sites, which, however, often represent high development potential. This situation results in the negative influence on the development of the territory, because on the one hand, there are more demands for using agricultural land and on the other hand, the number of unused areas of brownfields is growing.

Location of economic activities along the main routes brings along a growing demand for manpower exceeding its own resources results in decline in commuting to Ostrava, but simultaneously it is the reason of increased commuting out of the city, especially out of large housing estates. The trend of suburbanization of economic activity, an increased rate of entrepreneurial activity, can also be perceptible in the peripheral parts of the city (Lhotka Petrkovice, Koblov, Hermanice) and adjacent areas (Vresina, Dolni Lhota, Horní Lhota).

Fig. 4: The Growth of the Entrepreneurs – Self-employed in the District of Ostrava between 1999 and 2009

Population Progression
There was a significant period of population growth between 1869 and 1970. The nineteen-eighties were a period of stagnation for the city of Ostrava.
There were the most inhabitants in Ostrava in 1990, with the population of more than 331 thousand. Since this year, the city has been suffering from decline in its population, mainly because of massive closing of mines and heavy industry in the city and surrounding areas. In the nineteen-nineties Ostrava started losing in average 600 inhabitants per year, since the year 2000 the loss has doubled and the city lost annually almost 1,200 inhabitants. In 2010, the population dropped to 306 thousand. (Sotkovsky, 2009)

Fig. 5: Population Progression in Ostrava after 1970

Data source: The Czech Statistical Office

Since 1991 until these days, the city of Ostrava has lost 10% of its population, especially because of the migration. Compared to other cities going under the process of deindustrialization, the situation is not so bad.

Age Structure of Population

Age structure of population has changed within last 60 years dramatically. After 1950 there was an increase in the child component of the population at the age of 0-14. In 1950 this stake represented one fifth of the total population in Ostrava. The situation stayed the same until Census in 1991, then a decrease of population within 0-14 years started and in 2001 the value was under 16 % of total population. At the beginning of 2010 the stake of early age within the population was only 13.5 %. On the other hand, the proportion of a post-productive part of the population (over 64 years) has been increasing continuously, after 2005 there was even a change in the representation of both age groups and the number of the inhabitants above 64 is now higher than the number of the children of age lower than 15.
The elderly population is concentrated mainly in the west and northwest side of the city. It is determined by the deployment of residential buildings in the city. Housing estates built in the fifties are largely inhabited by the first inhabitants who have grown old there. Ostrava is threatened by the danger of the formation of „senior ghettos“, especially in localities of Poruba and Hrabuvka. The lowest age index is detectable in localities with high representation of gypsy people who have higher number of children than the general population. The neighborhood of Dubina is the very specific locality with the most concentrated housing estate in Ostrava and with younger population. Currently there is a big problem with increasing crime in Dubina.

*Data source: The Czech Statistical Office*
Social Risks in Ostrava

The analysis of the survey conducted in 2010 in Ostrava shows differences in spatial distribution of three social groups: entrepreneurs, unemployed and old age pensioners. The unemployed are those who are most spatially segregated. The survey also confirms that Ostrava is divided into the rich areas, the areas with medium levels of wealth and the poor localities. The highest differences in the spatial distribution are showed by groups with the highest and lowest incomes respectively, both residing in the different parts of the city. In the nineteen-sixties these groups were more "mixed" in the city area. (Musil, Ivan 2010)

Often, the residential senior facilities are located close to the excluded areas in Ostrava which is usually explained by an unattractiveness of the site for housing construction before excluded area originates and that is why the area is chosen for the construction of the residential senior facilities.

There are the following indicators for the spatial representation of the social risks in the city of Ostrava: the unemployment and the number of job applicants, the debt for the housing rent, the system of assistance in material need, household incomes and housing costs. These
indicators were chosen to provide picture on unemployment, the economic situation of population and dwelling situation. All the risk social groups (people with debt, families with low incomes, etc.) are threatened by homelessness that drives the all affected people beyond border to places from where it is very difficult to return to normal life.

**Unemployment**

The unemployment in the urban districts of Ostrava is distributed very unevenly. In the small peripheral urban districts we encounter relatively lower values. On the other hand, the highest values of unemployment rate are detectable in the urban districts Vitkovice (25%), Silesian Ostrava (19%) and Michalkovice (18%). Other urban districts with higher unemployment rate are the Moravian Ostrava and Privoz, Radvanice and Bartovice, Marianske Hory and Hulvaky.

Fig. 8: Number of the Job Applicants and the Unemployment Rate in the District of Ostrava in 2010
A Debt for Housing Rent

A common social problem in the excluded areas is a high number of families in debt; they owe tens of thousands for rent and are objectively threatened by a court order to abandon the residential unit without any housing compensation. The most troubled urban districts with high numbers of people, who have debts for rent and services, are Hrusov, Hulvaky, Vitkovice and Kuncicky. In the urban district Ostrava-South, in the Jubilee Colony, due to revitalization of this urban district, these inhabitants have started moving to other locations, or urban districts, such as Cujkovova street in Zábreh, which may ultimately result in the transfer of problems and the emergence of new segregated sites.

Fig. 9: Debt for Housing Rent / Inhabitant in the City of Ostrava in 2010

The System of Assistance in Material Need (Benefits in Material Need)

Another indicator for the district assessment is the number of benefits under the system of assistance in material need, which is regulated by Act No. 111/2006 Coll. on assistance in material need, as amended. As a modern system to assist those with insufficient income; it motivates them to strive actively in order to secure the resources they need to meet their living
requirements. It is one of the means applied by the Czech Republic to reduce social exclusion. It is based on the principle that “all people who work must be better off than those who are out of work or who avoid work“.

Benefits of assistance in material need are:

► Allowance for Living
► Supplement for Housing
► Extraordinary Immediate Assistance

Fig. 10: Benefits in Material Need in the District of Ostrava in 2010

[Map image showing the distribution of benefits in the District of Ostrava in 2010]
Hosehold Incomes and Housing Costs

The analyses were performed on data originating from the research “Industrial town in a postindustrial society”, which was carried out in Ostrava in 2010.¹

The following chart shows the average household income of sample households. Outputs are in Czech crowns (CZK), where approximately 24 CZK = 1 EUR. This is a point estimate of the actual average of the basic population, ie all the households of that type in Ostrava with the 95% confidence intervals.

Fig. 11: Average Household Monthly Income in CZK

Data source: OSU, the Survey - “The Industrial City in a Post-Industrial Society”, Ostrava 2010

The middle classes in Ostrava, contrary to other cities, live in panel houses, and they prefer this type of housing. The seniors prefer living on housing estates either because of good accessibility. The middle classes are according to their incomes on the lower boundary of the middle class range but there is a high probability of their fall into the lower classes in case of some changes of their social situation because they do not have any reserves.

The survey showed that 58% of respondents belonged to the middle class, the lower class included 32.2% of respondents and only 9.8% of households were in the higher class.

¹ This is a representative set of 900 households in the city of Ostrava. Probability sample was done from the list of addresses in the selected areas. Interview with the head of household was conducted using CAPI (Computer Assisted Personal Interviewing). The length of the interview was approximately 45 minutes, there were used the auxiliary cards to questioning. This cards had allowed to do the interview effectively, especially time effectively, but also efficiently with respect to validity and reliability of responses. Data collection was conducted from November 2009 to February 2010.
The area limited by blue lines shows the middle class space according to the income per consumption unit. All groups are in average on lower interval of the middle class. The childless couples are in the best position.

Data source: OSU, the Survey - “The Industrial City in a Post-Industrial Society”, Ostrava 2010

Data source: OSU, the Survey - “The Industrial City in a Post-Industrial Society”, Ostrava 2010

2 On the basis of the data from the Czech Statistical Office Household Budget Statistics in 2009, which provides net income, the boundaries of the middle class were calculated by the net income per consumption unit. There was used a methodological approach of the EU for a determination of consumption unit. Family members are defined there as follows: first adult in the household = 1.0, each additional adult (person over 13 years) = 0.5, each child (13 years or younger) = 0.3.

The boundaries for the defining the middle class were determined by Regis Bigot (2008:7) times the median household net monthly income per consumption unit (MCPSJ) as follows:

Lower limit = 0.75 x MCPSJ
Upper limit = 1.5 x MCPSJ
The figure 13 shows which proportion from the net monthly income cover the cost of housing. There are again the averages from the selecting samples considered, therefore to these averages were determined the interval estimates for the averages of basic set.

Process of deindustrialization and reindustrialization is going to continue in Ostrava. We can expect increase of employment in services but Ostrava will remain an industrial city. Social problems will rise and it will be visible on the growing unemployment with unequal spatial impacts. All social problems lead to homelessness at first. On 1st January 2011, regulation of the housing rent rates in the area of Ostrava has ceased to exist and we can expect an increase of the number of housing rent debtors and people dependent to the benefits in material need. The future development of indicators depends on the social politics of the state and future reforms. We can expect the increase of social problems in Ostrava in a larger scale than before. The urban discontinuity of Ostrava contributes to the formation of socially excluded localities, mainly in northern and eastern parts of the city.

**CONCLUSION**

New social risks increase the pressure on the management of municipalities and counties (regional management) during planning of the future development of the region and its sustainability. It is necessary to increase the efficiency in the function of local public administration and public services, to determine priorities, take into account social conditions and focus on communication with the public.

Currently, the long-term strategies for cities **should be updated more frequently** to be able to develop continuously and respond to the current situation. Further development of cities must be carried out in accordance with the European Charter for regional / spatial planning, which was adopted in 1984 and which states that the objectives of regional / spatial planning requires using new criteria for targeting and use of technological development in accordance with economic and social needs and it is necessary to critically review the principles of spatial organization and eliminate their influence by **short-term economic plans**, temporarily inconsiderable towards social, cultural and environmental requirements.

In order to retain the basic city functions, especially in housing and work, it is currently necessary to implement measures in both areas. In the area of housing, there is a need to provide sufficient opportunity to reside for middle and lower social classes in the labour market to achieve the diversification of employing subjects by planning ahead in the region. It should be noted that the participants in regional development may not be, as before, directly
connected with the space in which it operates, but the location of their businesses is often outside the region or country.

New social risks will be a central topic within the planning of sustainable urban development and in case we do not pay attention to it, we can experience an extensive increase in homelessness, crime rate and socio-pathological phenomena. The crime rate is currently growing in Ostrava, however it is only the visible tip of an iceberg.

Interactive planning makes it possible to accept early measures and it will help to target financial resources without unnecessary losses. To percept the negative trends in their beginning before they broke out into the crisis situation, reduces the costs spent on their solutions.

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