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THE URBAN ECONOMIC RESILIENCE
IN POST-INDUSTRIAL CITY – THE CASE
OF KATOWICE AND BYTOM

1. Methodological remarks to the case studies

Presented case studies was focused on recognition of the research problem connected with evaluation of resilience level of the selected post-industrial cities (Katowice and Bytom) in relation to other Polish cities, which often have different circumstances of economic development (e.g. not always linked with a mining industry). Among comparative cities the following were identified: Wrocław and Gdynia.

The selection criteria for the comparative cities to Katowice and Bytom include the administrative division of the country. Hence, for Katowice as the capital of the NUTS2 Silesia region – Wrocław as the capital of the Low Silesia region was identified. While for Bytom as a town with the status of a county – Gdynia town, with the same status in administrative division and a similar population potential was indicated.

Research tasks make up the solution to the problem posed included:

- description of a socio-economic background of the analysed cities;
- indication of changes impacting the analysed cities development during 1995-2010, which significantly had determined their development paths;
- implementation of quantitative evaluation of identified changes on the analysed cities development paths. This was made by calculation of indexes reflecting: employment level, budgets revenues from companies' profit taxes, level of population in both surveyed cities along with comparative ones. The Hill approach was used in that part of research (Hill et al. 2010);
- identification of new developments in rebuilding Katowice's and Bytom's economic resilience;
- formulation of conclusions referring to level of urban economic resilience with application of research findings from Simmie and Martin investigations (Simmie, Martin, 2009).

2. The Katowice case

2.1. Katowice – the socio-economic background of the city

Katowice (306 thousands of inhabitants in 2010), as the capital of the Silesia Region (NUTS2 level, 4.6 million of inhabitants), is having the highest population and service sector potentials of the Upper Silesian Agglomeration (also called Silesia Metropoly)*. the Agglomeration remains the largest urbanised and

* The city's residents constitute approximately 16% of the Agglomeration's population, and the potential of service sector is approximately 30% of the overall services' sector potential within the Agglomeration.

industrialised area in Poland, numbering around 2 millions inhabitants. Its rapid social and economic development in the twentieth century was associated with a development of heavy industry, mainly mining and metallurgy sectors. The Agglomeration covers two basic groups of different cities (Klasik, 2008, pp. 52-53), i.e.:

- the first group includes the cities and towns numbering more than 100 thousands of inhabitants like: Katowice (the capital of the Silesia Voivodeship and the core city of the Agglomeration), Sosnowiec, Gliwice, Zabrze, Bytom, Ruda Śląska, Tychy, Dąbrowa Górnicza, and Chorzów;
- the second group includes towns with population from 50 to 100 thousands of inhabitants, like: Jaworzno, Mysłowice, Siemianowice Śląskie, Piekary Śląskie and Świętochłowice.

Just like in almost all the Silesia Region (Transformation, 1994), also in the case of Katowice and the Agglomeration processes of restructuring of heavy industry left their indelible ‘mark’ on the social and economic structures. The effects of structural changes in 1995-2010 were manifested inter alia in the level of unemployment, the number of companies, population’s potential, the size of investment (Business Central Europe, 1997; Drobniak, 2003). The scale of these effects was also different in relation to individual cities and towns of the Agglomeration. Some of them, i.e. mainly Katowice, Gliwice, Tychy grew up to be leaders of change in terms of development of the service sector, attracting foreign direct investment, creation of new businesses and jobs. In other cities and towns (like for example: Bytom, Świętochłowice, Piekary Śląskie) the processes of restructuring traditional industries have had such a large socio-economic impact that the processes of their redevelopment – even now – are relatively weak (Suchaček, Wink, Drobniak, 2012).

2.2. Changes impacting the city development during 1995-2010

For Katowice the years 1995-2010 are the period of many positive and negative changes. Up to 2005 the most negative impact on Katowice’s economy had changes in mining and steel industry sectors. During this period reduction of 300 thousands jobs in the Silesia region as a result of mining reform took place.

At the same time the city itself and the region took attempts to create conditions for new development impulses. For instance, the Regional Contract for Silesia Voivodeship, which is the first example in Poland of document relating to regional policy including assistance for a region undergoing major changes of economic structure.

In analysed period, in Katowice few essential investments were realised progressively changing its image and economic profile of the city, particularly in

science, culture, trade, transportation, attracting foreign investment, creating high-class floor space for service activity.

Significant changes, which certainly influenced the dynamics of development of Katowice, in recent years are: financial crisis from 2008 resulting in decline of the foreign investors' interest in the city, rejection of the candidature of Chorzów (neighboring town) for EURO 2012, and also the rejection – though in the second round – the application of Katowice to the European Capital of Culture 2016. A detailed list of the changes taking place in the city and its surroundings is presented in the table below.

Table 1

Changes in Katowice and its surroundings

Year	Changes in Katowice	Changes in Katowice's surrounding	
1	2	3	
1995	– Foundation of Upper Silesian Industry Park	– Regional Contrast for Silesia Voivodeship – first attempt in the country of programming a regional development	<ul style="list-style-type: none"> – Crisis in mining and steel works sectors, reduction in employment from 400 to about 100 thousands jobs – Closedown of many mines in the Silesia region – Numerous government reform of mining sectors
1996	– Foundation of the Katowice Special Economic Zone	<ul style="list-style-type: none"> – Decision of General Motors to locate the Opel factory in Gliwice (a city within Upper Silesian Agglomeration) – Foundation of sub-zones of the Katowice Special Economic Zone* 	
1997	–	<ul style="list-style-type: none"> – The beginnings of the process of Poland's integration with the EU – start of the negotiations with six Central European countries, including Polish 	
1998	– Opening the new building of the Silesian Library in Katowice	– Reform of Poland's territorial division – creation of 16 NUTS2 regions	
1999	– Decision of the Katowice Coal Mine closedown	–	
2000	– Application for bankruptcy of the Baildon Steel Works	– Creation of South Energy Consortium	
2001	<ul style="list-style-type: none"> – Opening of the first in Katowice office space in A class (Chorzowska 50) – Foundation of the Academy of Fine Arts in Katowice 	– Creation of Polish Entrepreneurship Development Agency	
2002	– Opening the entertainment center "44 Point" – important element of complex changes in post-industrial district Załęże	– Act on financial support for investment assuming assistance from government budget for modernisation investment of up to 500 thousand. euro	

Table 1 cont.

1	2	3	
2003		<ul style="list-style-type: none"> – Sale of the state shares in the Polish Steel Mills SA company to ArcelorMittal Poland – Restructuring and concentration of the mining sector – creation of the Coal Company S.A. 	–
2004	– Opening the Office space „Altus” (A class)	– Integration of Poland to the EU	
2005	– Opening of the biggest in the Silesia Region shopping and entertainment centre “Silesia City Center”	– Handover of the A4 motorway segment passing through the Upper Silesian Agglomeration and linking it with Wrocław and Kraków	
2006	<ul style="list-style-type: none"> – The completion of a tunnel under the Roundabout and Handover of the Katowice section of the DTS (main express road with the Upper Silesian Agglomeration) – Location of the Rockwell Automation in Katowice – the biggest in Central and Eastern Europe supplier of industrial automation – Opening of the Film Arts Centre in Katowice 	– Postponing adaptation of the euro by Poland	– Gradual improvement in the mining sector
2007	<ul style="list-style-type: none"> – Foundation of Science-Technology Park Euro-Centrum (it develops technologies of obtaining energy from alternative sources) – Opening the Science and Music Education Centre “Symfonia” 	– Foundation of Upper Silesian Metropolitan Association, which gather 14 cities and town of Upper Silesian Agglomeration	
2008	– Launch a complex revitalization of the former Katowice mine, including construction of: the communication system of the area, the International Congress Centre, the new headquarter of the National Polish Radio Symphony Orchestra, the new headquarter of the Silesian Museum	<ul style="list-style-type: none"> – Worldwide financial crisis – Opening the B terminal at the Katowice Airport in Pyrzowice (the regional airport) allowing for service for 3.6m of passengers per year 	
2009	<ul style="list-style-type: none"> – The organization of the first European Economic Congress in Katowice – European Championships in basketball and volleyball women in Katowice 	– Rejection of the Chorzów (neighborhood town to Katowice) application as a host town for the European Football Championship Euro 2012	
2010	– Application of the Katowice to European Capital of Culture 2016	– Stock market debut of the TAU-ROD-Poland Energy (big energy company rooted in the Silesia region)	

* Kontrakt Regionalny dla Województwa Śląskiego (1995). Województwo Katowickie, Katowice. Source: Katowice Municipality Office.

2.3. Impact of transition processes on selected social and economic aspects in Katowice

Implementing the restructuring of the mining and steel industry (perceived here as the economic shock) had a significant impact on the labour market in Katowice and other towns of the Agglomeration. The level of Katowice's employment from 1995 was never recovered in the analysed period (1995-2010). Although his level have started to rise since 2005, finally in 2010 it reached only 85% of the level of jobs in 1995 (see Figure 1). The net balance of workplaces in Katowice was negative, that was: – 28 thousands of workplaces.

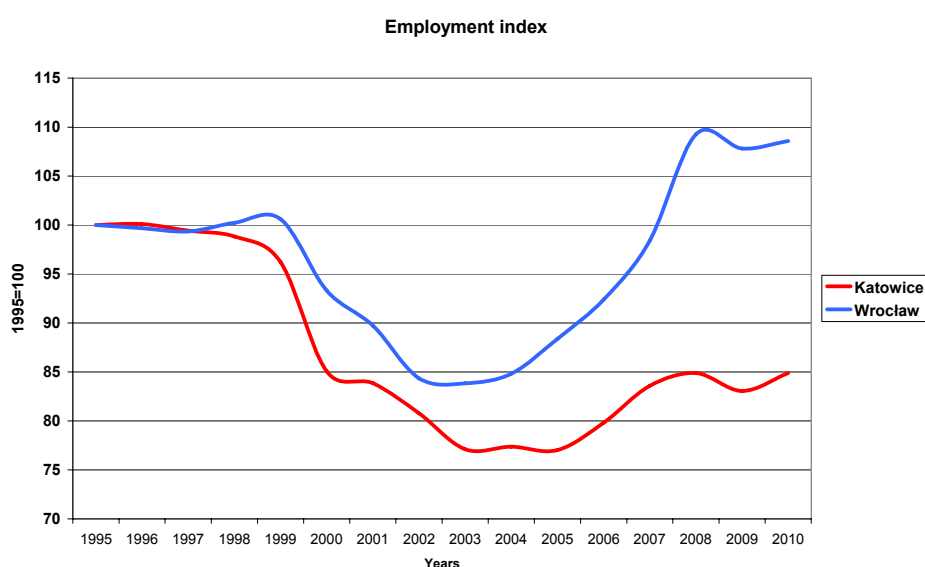


Figure 1. Employment index in Katowice and Wrocław (1995-2010)
Source: According to data of Central Statistical Office, www.stat.gov.pl.

Moreover, when we compare the job growth in post-industrial city as Katowice to the same dynamics of jobs in a city that did not experienced the restructuring processes in the same time like Wrocław (the capital of neighborhood Lower Silesia Region) we can easily find differences in the urban economic resilience between these two cases. In Wrocław job's growth started earlier (in 2004) and had higher dynamics. Finally, in 2007 the city exceeds the level of workplaces from 1995, and in 2008 reached the level of 110% of the baseline (see Figure 2).

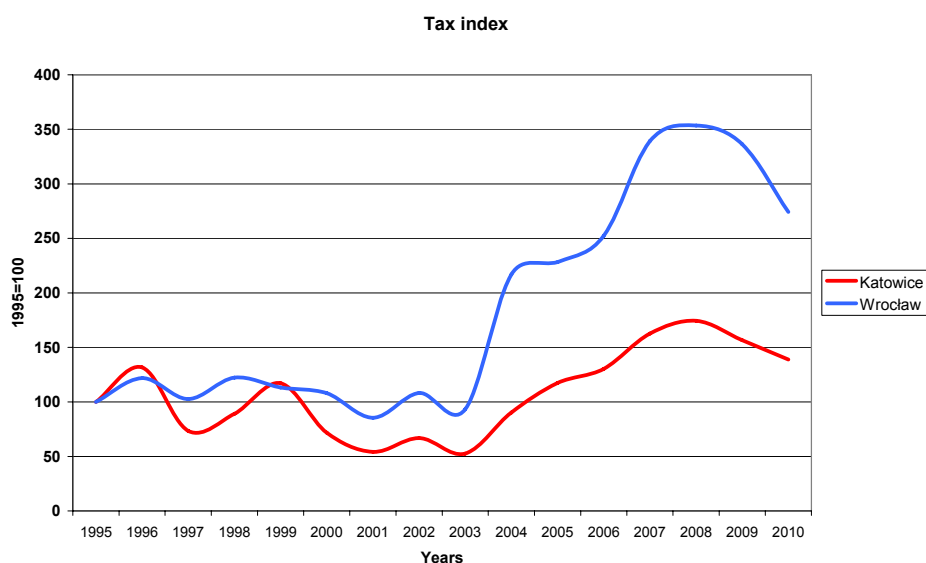


Figure 2. Katowice's and Wrocław's budgets revenues from companies' profit taxes
Source: Ibidem.

Economic conditions of cities described by the cities budgets' revenues from companies' profit taxes* also reflects significant differences in urban economic resilience between Katowice and Wrocław. The value of firms' profit taxes can reflect in interesting manner the economic base of a particular city. In case of Katowice the profit tax collected by the Municipality started to rise in 2003, and reached the level of 174% of the tax revenues from 1995.

* The revenues were discounted by inflation rate to establish their real value on the year 1995.

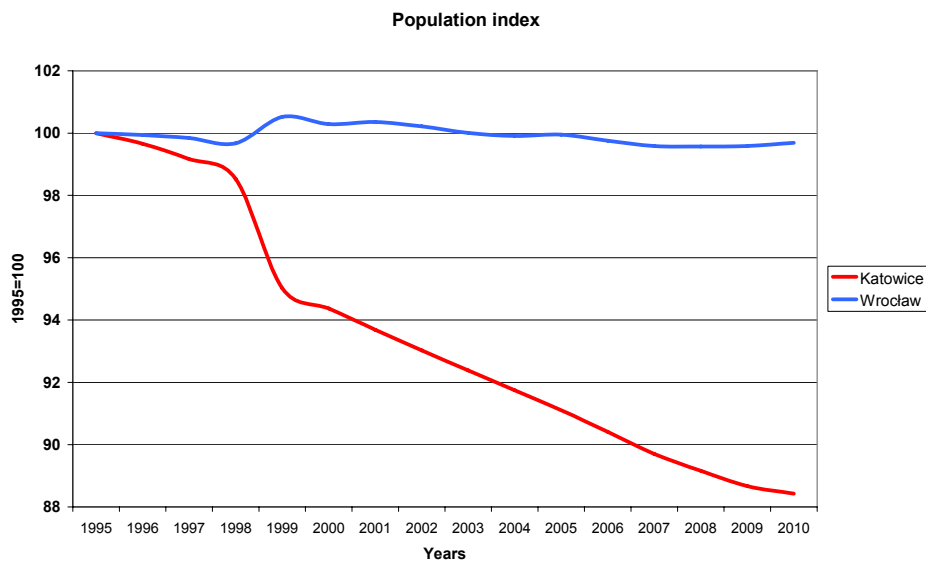


Figure 3. Population indexes in Katowice and Wrocław
Source: Ibidem.

Of course that positive dynamics showed the first financial effects of the city's efforts referring to rebuilding the local economy structure after restructuring decay. But at the same time Wrocław's companies provided much more tax revenues to the city budget – more than 350% of the year 1995 baseline. That shows probably stronger and more internationally competitive economic base of the Wrocław and thus, its better urban economic resilience.

Finally, the population trends which are also affected by a city economic resilience. The restructuring processes of coal mine industry and still works sector impacted significantly on Katowice population level. From 1995 to 2010 it dropped by 40 thousands labeling the city as not-resilient. In this period Wrocław – despite of country-wide deurbanisation processes – almost maintained the population level* proving its 'shock-resistance'.

2.4. New developments in rebuilding Katowice's economic resilience

Today Katowice is under the process of dynamic transformation both spatial and economic. The most distinctive changes can be noticeable in the activi-

* Overall drop of the Wrocław's population from 1995 to 2010 was 1.9 thousands of inhabitants (the city population in 2010 was 623 thousands of inhabitants)

ties concerning revitalization of the brownfield sites. In the history of Katowice more than 50 coal mines were founded, 12 endured till XX century and currently the post-mining facilities cover large areas. When mentioning Katowice, the city is still associated with coal mines (but very few are still operating), which today are either closed or performing new functions. The shopping centre Silesia City Centre (SCC) is the most excellent and famous example of the first post-industrial facility in Katowice. For many years this place was the “Gottwald Coal Mine”, extracting tons of coal per year, and later becoming one of the largest revitalized areas on the European scale. The mine was closed in 1996 and in 2005 the Hungarian investor – TriGranit placed in Katowice its first investment in Poland – the SCC. On the postindustrial areas for EUR 180 million was constructed multifunctional commercial center with total area of 80 thousands square meters, including retail area of 65 thousands square meters. The latter investor Immofinanz Group decided to extend the SCC for EUR 100 million, delivering extra 20 thousands square meters. Different way of adapting “Gottwald Coal Mine” urban-industrial areas, performed by TriGranit, is construction of the new residential – “Oak Terraces” apartments. The residential project consist of 4 stages and will offer ca. 1 thousand apartments in total.

In the very centre of Katowice existed other coal mine named: “Katowice”. On its areas in 2013 for almost PLN 900 millions will be constructed 3 facilities, improving the quality of cultural and business infrastructure: the International Congress Centre, the New Seat of the Polish National Radio Symphonic Orchestra and the Silesian Museum. Those projects provide excellent examples of post-industrial land development and stand as a mark of changes taking place in Katowice.

Different area being the part of the municipality revitalization activities (included in the Local Revitalization Programme of Katowice for years 2007-2013) is Pawła-Wodna-Górnicza quarter. For the years, lack of resources and complex ownership structure has led to degradation and marginalization of this part of the city. The first stage of revitalization project in this area is tearing down 22 buildings and displacing 500 residents. The recovered plot was transferred to the University of Silesia, which will construct the new seat of the Radio and TV Faculty for PLN 20 millions.

The undertaken and planned revitalization projects of Katowice are a direct response to anticipated changes by the business environment. The city transformation that has already been started probably will enable Katowice to enter again into the path of dynamic economic growth. Accordingly, Katowice are changing its economic profile from industrial to services. In Katowice, over the past few years worldwide known companies from BPO/ITO/SSC sector (Steria, Ca-

pgemini, PwC), hotel services sector (Hotel Angelo, Best Western Premier) or R&D (Mentor Graphics, Display Link). have already invested. Mentioned investments will certify in near future the hypothesis that Katowice are dynamically transforming and economically expanding.

3. The Bytom case

3.1. Bytom – the socio-economic background of the town

Bytom, whose population amounts to 181,617, is a town situated at the heart of the Upper-Silesian conurbation. Boasting a 750-year-long history, it is one of the oldest towns in the region. Bytom encompasses an area of 69.44 square kilometres. Bytom's geographical situation is regarded as its great asset: it is located centrally within the Silesian Region, seated at an intersection of major transport routes and Pan-European corridors III and VI.

Bytom is a classical example of a post-industrial city. Not so long ago, Bytom was perceived as a town of coal and steel – these two heavy industries played an essential role in the life of the local community and represented decisive factors for its economic welfare. However, recent economic transformations exerted a substantial impact on the town's current situation. The restructuring efforts deployed at traditional economy sectors, notably coal mining and steel industry, have definitely closed this chapter in Bytom's history. At the moment, out of 7 coal mines and 2 ironworks, only one coal mine functions. Consequently, the economic base of the city has been destroyed and, what is in fact really important for the city development, it is still not recover (after 15 years from start-up of restructuring). Bytom is trying to change its image from the city of coal and steel to the city of services, first of all those connected with the culture industry.

The stagnation of most industries and decrease in the number of registering entities can be observed. The largest decrease was recorded in trade and repairs sector. The important increase took place only in industries related to financial and real estate activities.

3.2. Changes impacting the town development during 1995-2010

As in the case of Katowice, also in Bytom the dynamics of socio-economic development significantly was driven by restructuring of the mining and metallurgy in the years 1995-2010. However, in this case, the liquidation process was a much more severe in nature, leading to a significant depletion of the existing economic base of the town.

In comparison to the capital of the Silesia region, in Bytom less significant investments were made both in public and business sector – particularly during the period of 1995-2005. The result of the closedown of existing industries, and weak investment pulses were the highest unemployment rate in the region in 2004 (e.g. 26.7%).

Only measures implemented in recent years, such as opening the Bytom Industrial Park, signing a letter of intent on revitalizing the Szombierki mine, the start of construction of the A1 motorway, the launch of investor service office or the location of the modern shopping center can be regarded as significant development processes of the town. A detailed list of the changes taking place in Bytom and its surroundings was presented the table below.

Table 2

Changes in Bytom and its surroundings

Years	Changes in the town		Changes in its surroundings
1	2		3
1995	<ul style="list-style-type: none"> – Initiation of restructuring the mining industry in the town – Closure of liquidation processes of the Bobrek Steelworks 	<ul style="list-style-type: none"> – Constant drop of work-places – Numerous mining damagedes – Deep depopulation trends 	<ul style="list-style-type: none"> – Regional Contract for Silesia Voivodeship – first attempt in the country of programming a regional development – Establishment of the Upper Silesian Fund S.A. (support for capital market development and support for entrepreneurs)
1996	<ul style="list-style-type: none"> – The decision to issue municipal bonds to finance the revitalization of the market square of the town 		<ul style="list-style-type: none"> – Foundation of Katowice Special Economic Zone*
1997	<ul style="list-style-type: none"> – Establishment of the Local Segment named "Enterprise Activation North Area" within the Regional Contract for Silesia Voivodeship – Foundation of the first tertiary education school in the town (School of Economics and Administration) – Closedown of the Szombierki mine 		–
1998	<ul style="list-style-type: none"> – Separation from the Bytom's administrative division Radzionków district as an independent town (loss of about 30 thousands residents) 		<ul style="list-style-type: none"> – The creation of 16 regions at NUTS2 in Poland – Availability of the PHARE pre-accession fund
1999	–		<ul style="list-style-type: none"> – Availability of grants and low-cost loans for low-emission reduction in the Voivodeship Fund for Environmental Protection and Water Management

Table 2 cont.

1	2	3
2000	<ul style="list-style-type: none"> – Foundation of The Economic Activity Zone in the frame of PHARE-STRUDER 2 programme – Foundation of the Bytom's Mines Restructuring Company – Steelworks Zygmunt bankruptcy 	–
2001	<ul style="list-style-type: none"> – Integrated database of land and buildings was launched in Bytom – the first in Poland – General repair of the Silesian Opera House – Approval of the Bytom's Development Strategy for 2001-2015 	–
2002	<ul style="list-style-type: none"> – Opening recreation and sports complex Dolomites "Sports Valley" 	<ul style="list-style-type: none"> – Direct election of mayors of cities, reducing the number of municipal councilors (in Bytom from 50 to 25 members)
2003	–	–
2004	<ul style="list-style-type: none"> – Approval of the Bytom downtown master plan – The rate of unemployment reached 26.7% in the town (the highest in the Silesia region) – Finishing a closedown process of Rozbark mine and Powstańców Śląskich mine 	<ul style="list-style-type: none"> – Accession of Poland to the EU – The inauguration of the cheap airline Wizz Air flights from the Katowice Airport (dynamic increase in number of passengers)
2005	<ul style="list-style-type: none"> – Finishing a closedown process of Miechowice mine 	<ul style="list-style-type: none"> – Decision of localization of the whole A1 motorway part within the Silesia region
2006	<ul style="list-style-type: none"> – Accession of Bytom to the Upper Silesian Metropolitan Association 	<ul style="list-style-type: none"> – Foundation of Upper Silesian Metropolitan Association – Completion of the S1 expressway connecting the Katowice airport with the cities of Silesian Agglomeration
2007	–	<ul style="list-style-type: none"> – The availability of the ERDF, ESF and Cohesion Fund during the EU programming period 2007-2013
2008	<ul style="list-style-type: none"> – Opening of the Bytom Industrial Park – Signing a letter of intent for the redevelopment of the former coal mine Szombierki 	<ul style="list-style-type: none"> – Worldwide financial crisis
2009	<ul style="list-style-type: none"> – Starting the construction works of A1 motorway in Bytom – Approval of the Bytom Development Strategy 2009-2020 – Launching the Investor Service Office within the Office of the City Development 	–
2010	<ul style="list-style-type: none"> – Opening in the inner city of the shopping center AGORA 	<ul style="list-style-type: none"> – New strategy – EUROPE 2020

* Kontrakt Regionalny dla Województwa Śląskiego (1995). Województwo Katowickie, Katowice.
Source: According to the data of Bytom Municipality Office.

3.3. Impact of transition processes on selected social and economic aspects in Bytom

The process of industry restructuring has strong negative impact on social, economy and environment conditions in the town. Concentration of the enterprises connected with mining and coal processing tied most of inhabitants with the mining and metallurgy companies. Closedown of these work places has deprived many residents of their work and their families of income. Over 30 000 work places were closedown between 1995 and 2005 and their potential decreased to about 48 percent of its 1995 potential (see Figure 4).

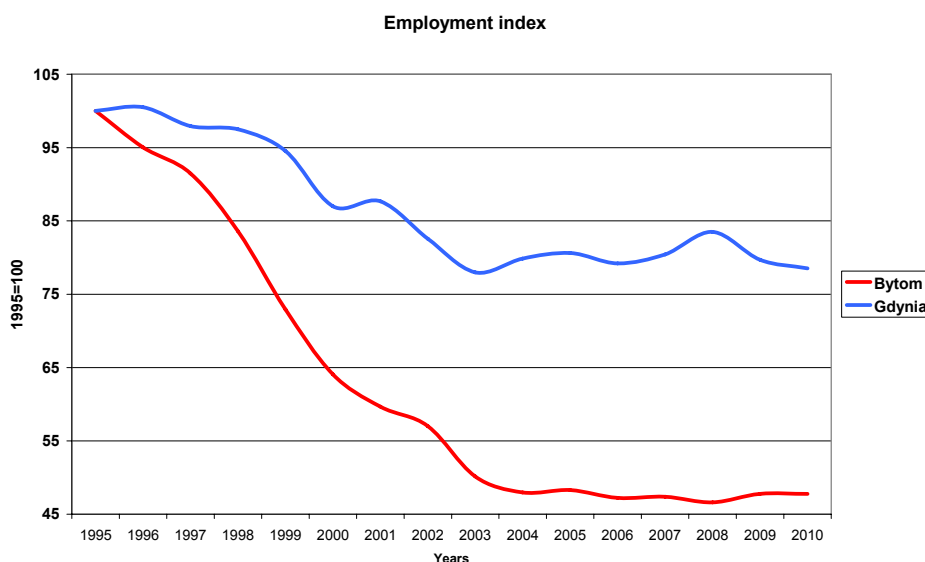


Figure 4. Employment index in Bytom and Gdynia (1995-2010)

Source: Ibidem.

It caused the excessive increase in the unemployment rate which reached its highest value in 2004, that is: 26.7%. For that moment Bytom had the biggest unemployment rate in the Silesia Region. In the 2008 the unemployment rate decreased to 12.7%, but in the following years it increased again, as the consequence of the world financial crisis.

Compared to Gdynia, which development was also related to a industry (shipbuilding, which was also a subject of restructuring in the surveyed period) decrease in the number of jobs in Bytom looks very dramatic. Deep restructuring of the shipbuilding industry in Gdynia indeed led to reduction of potential jobs

but “only” about 20%, while in Bytom economic base perceived by jobs had shrunk by more than 50%. In Bytom, as it was shown on the figure 5, the employment rate started to rise in 2005, but the growth is very small.

The financial condition of the town companies – measured in Bytom’s budget revenues from profit taxes – has significantly improved after the period of 1995-2003. The growth of the town’s budget revenues from the tax on companies profits was the highest in 2008 and reached about 180% of the level from 1995 (the calculation takes into account inflation, reducing the amount of revenue from corporate income tax to values from 1995).

Bytom situation therefore appears favorable. However, in a similar period, i.e. 2007 revenues from corporate income tax in Gdynia’s budget grew by 450% in relation to their value in 1995. After 2008 the growth dynamics of revenues from corporate income tax in Bytom – but also in Gdynia – collapsed. It was partly an impact the global financial crisis (see Figure 5).

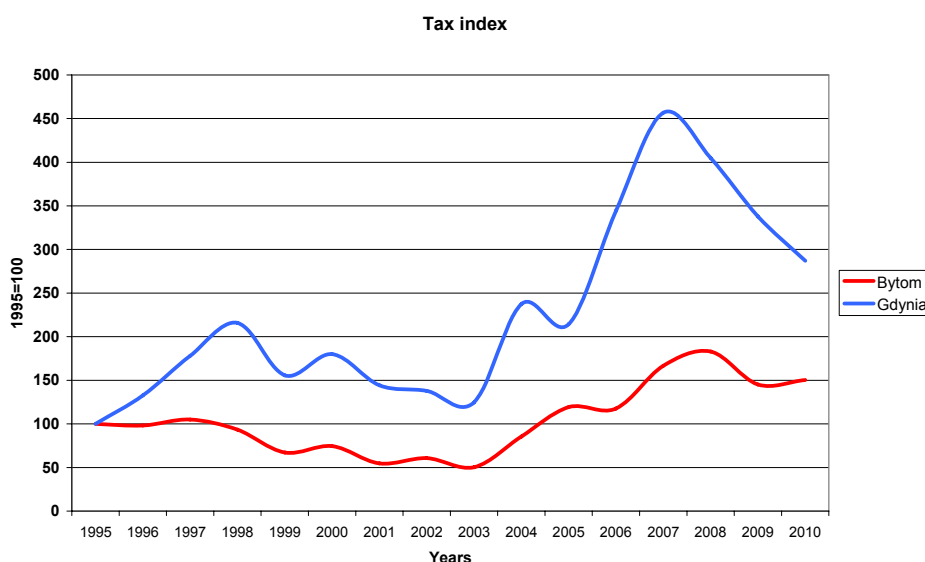


Figure 5. Bytom’s and Gdynia’s budgets revenues from companies’ profit taxes
Source: Ibidem.

Since 1990 the population of Bytom has been decreasing constantly (it was 7.54% in the last decade). There are some demographical causes for this trend:

- The number of births has decreased from 16 on 1000 inhabitants in 1980 to the 9.7 in 2010 (the number of deaths is at the level of 11.1 on 1000 inhabi-

tants). The rate of the population change was 6 on 1000 inhabitants in 1980, and – 1.4 on 1000 inhabitants in 2010.

- The negative balance of the permanent migrations (since the 1994 there have been more people leaving Bytom forever, than people coming to Bytom to settle). The balance of net migrations was: 1,244 in 1990, and – 869 in 2010.

Another negative population trend in Bytom is the decreasing number of young people and economically active group. That is:

- strong decrease in pre-productive age group from 48.107 inhabitants in 1998 to 29.795 inhabitants in 2010,
- decrease in productive age group (from 130.769 in 1998 to 117.057 in 2010).

Concluding the Bytom's population trends it should be noted that in 2010 the town lost about 20% of its demographic potential from 1995 (see Figure 6). According to the official statistical forecasts, the population of Bytom in 2030 will drop to 151.772 inhabitants.

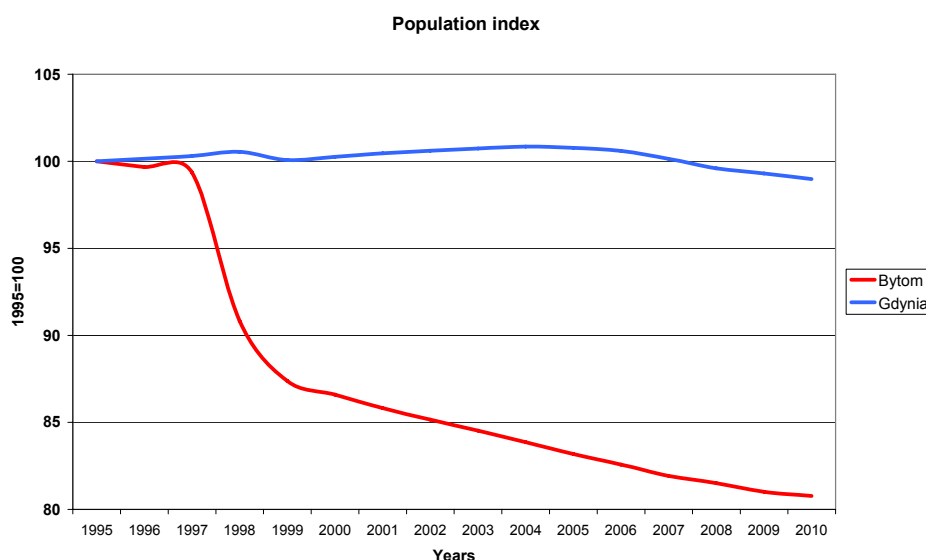


Figure 6. Population indexes in Bytom and Gdynia
Source: Ibidem.

3.4. New developments in rebuilding Bytom's economic resilience

Prior to 1995, when the restructuring process of mining started, mining areas had occupied 83% of the city area. At the moment they cover about 35% the whole town's area and the exploitation takes place underneath the districts like: Śródmieście (inner city), Rozbark, Karb, Miechowice, and Dąbrowa Miejska.

Some parts of the city resemble a „lunar landscape” – the remains of the liquidated mining plants. The recovery of many post-industrial monuments takes a long time. It is over 300 hectares to develop. Some of the city’s plots still belong to the Kompania Węglowa (main mining company). Thus, the Bytom Municipality cannot directly finance the revitalization of those areas. Whereas on the other hand, the owner does not feel responsible for taking care of them.

The premises mentioned above were the basis for the Development Strategy of Bytom update process, which was accomplished in May 2009. The strategy included new challenges, defined as follows:

- urban convenience,
- infrastructure of environment protection,
- high culture and free time,
- enterprise and innovation,
- sciences and higher education.

The main challenge for the city is the recover of the economic base.

In this context some successes and failures of the transition process can be observed. One of the successes in transition is exemplified by the area of the former Szombierki Coal Mine, founded in 1870. Up to 1873 two mining shafts were built: Hohenzollern (also called Ewa) and Kaiser Wilhelm (called Krystyna). In 1993 the process of the Szombierki Coal Mine closedown started. The coal mine’s post industrial area covers about 60 hectares. For a long time the whole area was undeveloped. In 2008 a new private owner and investor – GC Investment – has signed the letter of intent with the city of Bytom, according to which the area would be developed in an integrated way, including trade and residential services as well as recreational functions. The presented initiative is an example of a wide revitalisation process of the post-industrial plot. The innovative concept assumes to develop this post-industrial area into a golf course with recreational parts and residential areas. Thanks to that the space will become more competitive and the Szombierki district will increase its value. Apart from these efforts also entrepreneurship and economic activity should be strengthened on the plot. For the further implementation of the project the investor will apply to JESSICA* fund, which will support the further revitalisation investments connected with commercial activity.

On one hand the Bytom Municipality is looking for external investors who are interested in the revitalisation of post-industrial areas like the GC Invest-

* JESSICA (Joint European Support for Sustainable Investment in City Areas) – is an initiative developed by the European Commission and the European Investment Bank, in collaboration with the Council of Europe Development Bank (CEB). Under new procedures, Member States are being given the option of using some of their EU grant funding, their so-called Structural Funds, to make repayable investments in projects forming part of an integrated plan for sustainable urban development.

ment. On the other hand the Municipality tries to develop new concepts of rebuilding the post-industrial areas on its own. The example is another area of the former Rozbark Coal Mine, where the Centre of Dance was raised (the seat of the Silesia Dance Theatre). Within this project two French artists, that are: Jean Paul Ganem and Pierre Lussiere, proposed to transform the area into an impressive garden, as they did in Montreal or in San Paulo.

At the same time, the Municipality of Bytom faces a lot of current challenges connected mainly with the effects of previous long-term mining operations. There are:

- infrastructure damages,
- local depressions (excessive land surface depressions is in the following districts: Śródmieście (inner city): – 7 metres; Karb: – 15 metres; Miechowice: – 14 metres),
- changes in terrain,
- pollution of environment,
- required new functions development on lot of post-industrial, derelict areas,
- building damages.

The most dramatic consequence of the mining influences was felt by the citizens of the district of Karb. During last 3 years the area lowered by 3 meters (from 1965 it is 18 meters). As the consequence of mining operations in the district of Karb there was a catastrophe on an unprecedented scale in Poland. Demolition of 28 housing structures caused by the mining damages, forced over 600 people to move from their homes. The action of resettlement was started on July 2011 and is still continued.

Conclusions

There is no doubt that Katowice among other post-industrial cities and towns of the Upper Silesian Agglomeration transforms its economic structures in probably the fastest and most diversified way. The city is growing up to be the leader of transformation in terms of a service sector development and attracting a foreign direct investment. But, as was showed, in comparison to its competitors – like Wrocław – the post-industrial “heritage” of the Katowice still makes it more vulnerable to external shocks and not resistant to population outflow and workplaces reduction.

Relatively lower economic urban resilience is assigned to Bytom. Besides of the efforts undertaken by the Bytom’s Municipality in last 15 years to rebuild of the town’s economic base and strengthening its capacity to keep and attract new inhabitants – these urban policy priorities still remain not fully realised. After the shocks from years: 1995 (restructuring process), 2008 (influence

of the world financial crisis) and 2011 (geological catastrophe in the district of Karb) the town is still trying to return to its previous growth path, but it seems to be abandoned and alone in these processes.

No central government support in the form of funds and technical assistance focused on the post-industrial areas in Poland makes difficult for towns such as Katowice and Bytom to compete effectively for investors, public institutions, entrepreneurs on national and international level. Thus their economic resilience suffers substantially.

According to Simmie and Martin (Simmie, Martin, 2009), typology of a city's economy response to a shock, both analysed post-industrial cities are still below to their prior (to shock) growth paths. They are not shock resistant and still vulnerable on internal as well as external changes. Probably because of the coal mining sector redevelopment* – coal mines still exist in Katowice and Bytom – the cities are also lock in their path-dependency trajectory of growth in some extent.

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* In 2011 Poland's coal mining sector recorded a very good financial performance connected with increasing internal and external demand on coal.