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Impact of urban regeneration on the socio-economic activation of the Old Town in Bielsko-Biała

Abstract

The author paid attention to the medieval part of Bielsko-Biała City, which for decades had been practically neglected and abandoned. The constantly growing problems of technical, economic and social degradation of this area were analysed. In the mid-1990s attempts were made to regenerate the city historic core and to restore its proper position and rank, which it should occupy in the minds of locals and tourists. Presented in the paper are infrastructural, social and economic changes, which took place within this area as a result of the revitalisation process. The objectives of this process have been highlighted, as well as the renovation of buildings. Social problems affecting the residents have been indicated and completed projects improving their situation have also been discussed. The changes of the service function occurring thanks to the process of revitalisation have been described. The growth of the number of service units showed a positive effect of the regeneration, improving the economic situation of the discussed area. The pace of changes is intense. Every year the number of economic entities increases and most of them are located in the buildings and quarters subjected to renovation. Nevertheless, part of this activity is observed out of Bielsko's Old Town, being replaced by the catering and entertainment services.

Key words: Bielsko-Biała; Bielsko Old Town; urban regeneration; socio-economic changes

Introduction

Urban regeneration is currently one of the most common activities undertaken within urban areas. In a nutshell, one may say that it is a long-term process of combating crisis phenomena, manifested in technical, economic and social aspects.

In Bielsko-Biała City first attempts to overcome the problem of central urban area degradation were undertaken in the mid-1990s. Bielsko's Old Town was then a classic example of nearly absolute degradation on a technical, infrastructural, social and economic levels. These problems had been growing since the end of the 19th century, when this part of the city ceased to perform its former functions, due to development of the new city centre. Throughout the entire 20th century less attention was paid to this area, and, in consequence, its degradation occurred and grew.

The aim of the author was to show how the actual process of revitalisation caused infrastructural, social and economic changes of Bielsko's Old Town. Directions of regeneration activities and the way of their progress have also been described.

Literature overview

The problem of urban regeneration has been widely analysed in recent years by many researchers, as evidenced by a large body of literature. This issue has so far been extensively discussed in many aspects by many Polish and foreign researchers. There have even been multi-volume publications, condensing gathered knowledge (*Podręcznik...* 2003, *Rewitalizacja Miast Polskich*). Similarly, the problem of regeneration of city centres has been undertaken by many authors (Skalski 1998, 2000; Muzioł-Węclawowicz 2009; Wolaniuk 2012).

In Polish there is no clearly defined and generally accepted terminology related to the issue of regeneration of urban areas; therefore, many authors attempt to clarify a large number of synonymous terms (Skalski 1998, 2000; Kaczmarek 2001; Palicki 2007; Jarczewski 2009).

The course of the historic core transformation of an old town in the chronological order was described by Jarczewski (2009). The aspect of their degradation, in relation to the level and quality of life of the city centre inhabitants were discussed by: Zborowski and Dej (2009), Zborowski et al. (2009). Jadach-Sepioło (2009a) described the gentrification process, often developed due to changes in social structure changes during the process of revitalisation. The economic transformations under the influence of regeneration processes were also analysed in the perspective of property values changes (Jadach-Sepioło 2009b). One of the most important publications concerning economic regeneration is the paper by Sztando (2010), broadly presenting the economic aspect of regeneration procedures.

A detailed identification of problems that affected Bielsko's Old Town and became the basis for redevelopment process, its assumptions, goals and expected results are presented in several publications, i.e.: *Miejscowy...*, 1998, *Program rewitalizacji bielskiej...*, 2004, *Program rewitalizacji obszarów...*, 2009, accepted in their scope by the City Council of Bielsko-Biała. They have become the subject of analysis of the program assumptions (Siemiński 2008, Muzioł-Węclawowicz 2009). Regeneration of the area of Bielsko-Biała's Old Town was described fairly often, just in the early period of this action. On the other hand, assumptions of the professional activation of the residents of this area were presented in the *Program aktywności...*, 2009.

Area and methods of research

The scope of the author's research includes the oldest part of Bielsko-Biała's¹ City Centre within the old defence walls of the medieval town of Bielsko. This zone has been included in revitalisation programs or ones forming a part of regeneration

¹ Since 1951 the City of Bielsko-Biała has contained two urban units, those of medieval Bielsko and younger Biała, formerly developed separately

activities for several years. Additionally, it is the first historic core to this day distinguished by the urban layout from the times of founding of towns.

Economic transformations caused by revitalisation were studied using data gathered during field research carried out in July 2012, when all forms of service activities were mapped, together with their exact location. Collected information was organised through assigning each economic activity to the type of service activity. This data were compared with a similar study by A. Zarajczyk, completed in July 2008 (Zarajczyk 2008). This material was necessary to show the growth rate of the number of service outlets. On the other hand, the infrastructural transformations were based on the result of field studies, carried out in March 2015. Social problems of this area were analysed in various ways. The simplest method, very important, was an observation of the local community. The project undertaken was about activating and preventing the marginalisation of Old Town's community and it was carried out by the Regional Labour Office in Bielsko-Biała and MOPS (Municipal Social Welfare Centre). Valuable information was also obtained from the Office of the Plenipotentiary for Revitalisation, where one learnt, inter alia, about the exact actions of the city in relation to the population of the Bielsko's Old Town district, which are, to some degree, contrary to the assumptions included in the documents.

Assumptions of the regeneration process of Bielsko's Old Town

Crisis of this part of Bielsko-Biała was initiated partially by moving the city centre activities to 11 listopada Street (*November 11th Street*) more than one hundred years ago, connecting separate (up to 1951) cities of Bielsko and Biała. In most Polish cities the historic core with the market square is the most important part. However, in Bielsko-Biała these functions developed in the neighbouring part of the city for a long time, especially the commercial ones. Therefore we say that Bielsko's Old Town has been forgotten. Even though various, often specialised service functions existed there (i.e. second-hand bookshops), most residents of this zone avoided them, preferring services in other parts of the town. No cultural events were organized on the market square. For many years none of the owners of the buildings has undertaken quarter and visible renovation. Local community, due to unemployment, began to succumb to the growing poverty which often led to various pathologies. This accumulation of serious problems soon led to the degradation of the Historic Core's social, economic, and technical space.

Sustainable development of housing, services and community of this area has been the main goal of the revitalisation activities from the very beginning. The decision to invest in tourism was also made. The idea of the regeneration process included directions and principles of conduct within the scope of the implementation of the program. Within the Old Town there is practically no space for new buildings. Therefore, the only way to increase their residential potential is to modernize of the existing (often highly degraded) historic ones. It is also possible to add floors to several buildings and to add attics to them. However, there should not be any major deformation, for the historic character of the area. As for the ownership of the building, it was decided that the share of private ones should be greater – mostly due to the sale of objects belonging to the city. At the same time, the securing condition was

to perform the agreed renovations within the specified period of time. The option of the long-term lease or selling buildings was approved. Also, the actual tenant of a given flat may purchase it; in such a case the municipality imposes the duty of modernisation not only of the flat, but also of the entire building.

For the duration of the repairs, the city authorities decided to move the tenants to other municipal premises. The costs of organising the alternative housing are incurred by the municipality. Ultimately, the creation of approx. 60 flats was undertaken outside of the Old Town within the municipal resources, both existing and newly built ones (*Program rewitalizacji bielskiej...* 2004). However, this assumption has not been fulfilled, because replacement and temporary flats have not been realised. When the modernisation of a building is planned, all residents are transferred to alternative accommodation. Buildings after renovation are sold and former residents do not return to their apartments. This is why the regeneration process is delayed for the current residents of the Old Town. In practice, the discussed area has less and less inhabitants. As for regeneration carried out by private owners, the city authorities have established conservation guidelines for them. They strive to provide all possible formal help within the scope of modernisation investments; i.e. information on funding opportunities, e.g. from the EU's funds. In the *Revitalisation program of Bielsko's Old Town (Program rewitalizacji bielskiej Starówki)* the assumption was also included on retaining various service units that had functioned in this place for longer time, such as the 18th century pharmacy, important to keep a unique feel of the Old Town. These are for example, the second-hand bookshops and art studios.

Infrastructural changes

During the revitalisation of Bielsko's Old Town, in addition to the modernisation of the Market Square space and most streets, 42 buildings have been renovated, i.e. 38.2% of their total number. The municipality funds were invested in 17 houses, whilst the private ones – in 24 (figure 1). The renovation of the façade of the Sułkowscy Castle, together with the St Anne's Chapel, due to the Marshall's Office funds, was incredibly important. This development, carried out on a large scale, contributed to the improvement of the Old Town's image.

Of 29 houses, 16 have been renovated to date – nearly 50%. For 11 of them the main investor was the municipality, which invested in the renovation of only 6 buildings outside of the Market Square. This shows that for the municipality the most important thing was to renovate its own townhouses in the Market Square, the most important part of the Bielsko's Old Town the central, well-maintained and visually appealing public space. The municipality carried out the repairs of its own houses, the ownership of which is clearly determined.

Renovated buildings of the Historic Core of Bielsko-Biała are concentrated in its south-western part. Said part was the first one to have been renovated, according to the assumptions of the *Revitalisation program of Bielsko's Old Town*. The entire western side of the Market Square was restored. The main investor was the municipality, which, as part of the project: *New Old Town – new opportunities...* carried out the refurbishment of five townhouses. Other renovations were made by private investors. The rest of the area shows a small amount of such types of investments, especially the northern part.

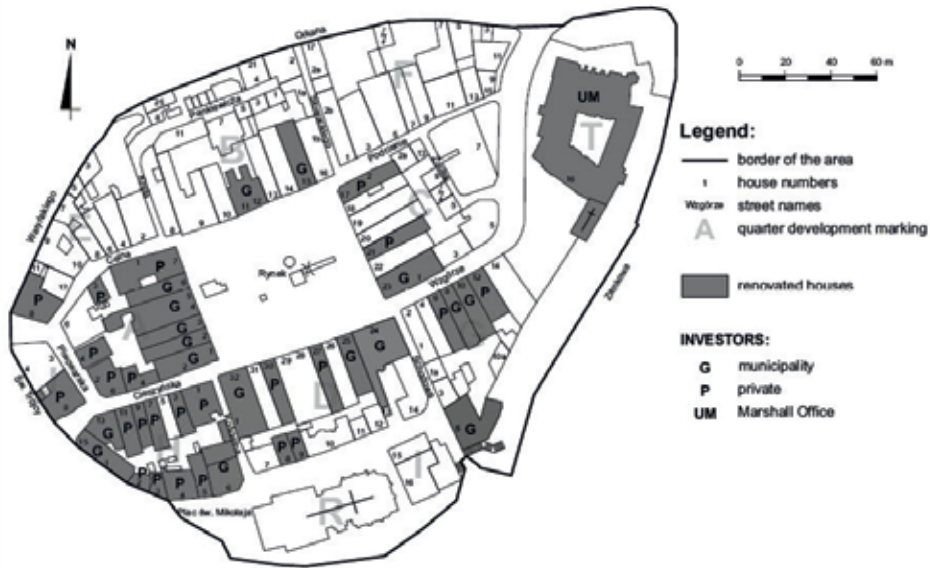


Fig. 1. Renovated buildings and major renovation investors in Bielsko's Old Town (March 2015)

Source: Autor's work

Social changes

Many central areas of contemporary Polish cities show, besides the technical degradation of their buildings, numerous social problems. Usually these negative phenomena are cumulated in the city centre; sometimes they take on a form of pathology. These are: long-term unemployment, poverty, high level of crime or even homelessness. Residents of central zones mainly have low education level, they are often elderly, living on benefits of such institutions as MOPS. Such community usually embodies passiveness and helplessness. Young generation is raised in the environment, which provides them with inadequate role models; this then leads to cementing negative behaviours. Additionally, the inhabitants of the central area live in obsolete buildings, with degradation caused by long lack of investment. All these adverse factors combined result in degradation of the city centre area (Zborowski, Dej 2009).

A similar issue can be encountered in the centre of Bielsko-Biała, including the researched area. Nearly whole of the city-centre shows the highest concentration of negative social phenomena. The unemployment rate is higher than in any other district of the city (*Program rewitalizacji obszarów...*, 2009).

The people and bodies involved in the regeneration program of Bielsko's Old Town realization have also noticed those problems. In accordance with the idea of revitalisation, not only did the renovation of dilapidated buildings began, but also that of degraded and poor community. MOPS dealt with the social problem on behalf of the city. Projects addressed to people threatened by marginalisation, especially those in the city centre with the Historic Core included, have been implemented

since 2004 The Professional Activity Support Office was created. In 2004 MOPS began two projects: *Against helplessness* and *Being active pays off*, and in 2008 the third one: *Bielsko-Biała connects people*. All of those were financed from the city budget, the European Social Fund and PHARE 2002 Fund. The Bielsko-Biała Labour Office also runs a number of projects aiming at fighting unemployment. In 2004–2005 two projects designed for the city centre's residents were carried out, including those of Old Town: *Do it yourself* and *Increase your qualifications*, also co-financed by the European Social Fund.

Economic changes

Economic changes of Bielsko's Old Town under the influence of regeneration process were investigated by the author, who compared the number of service units existing in this area in July 2008 and in July 2012. The earliest accurate data on the service outlets present in the Old Town district only date back to 2008. During only those four years one can observe considerable economic transformation, a general dynamics and new places of service concentration. Information on all these units active in the researched area was gathered by mapping of the area. Data for the year 2012 were compared with those acquired by A. Zarajczyk (2008) – figure 2.

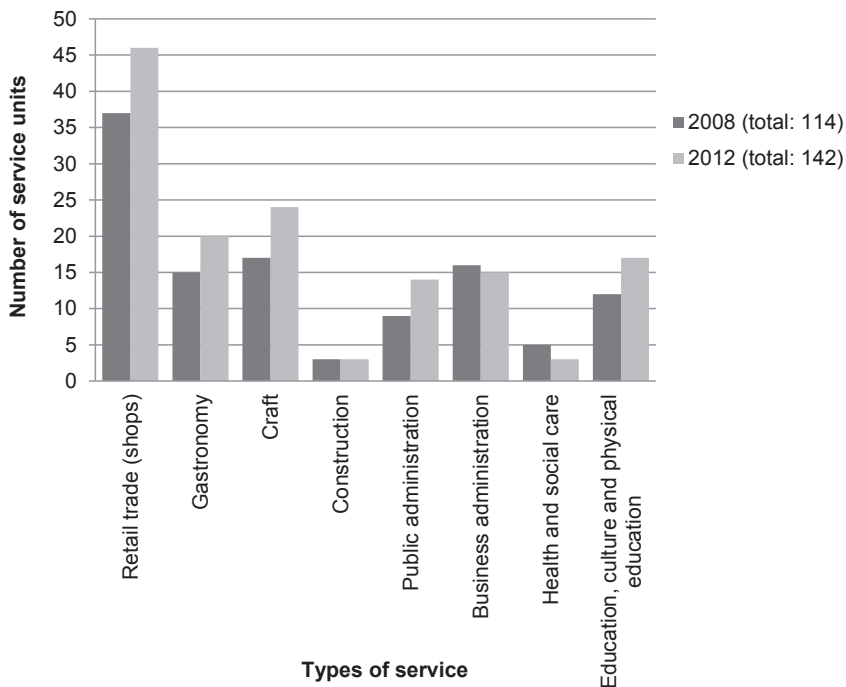


Fig. 2. Number of service units at Bielsko's Old Town in 2008 and 2012

Source: Author's work on the basis of A. Zarajczyk (2008) and own research (2012)

In 2008, retail trade dominated in Bielsko's Old Town, with 37 units of the total 114 (32%). There were 17 units of craft activities; 16 – in business and management, and 15 catering units. There were also 12 institutions dealing with education and culture. In 2008 there were also nine existing offices of public administration: five involved in health and social care, and three design offices in construction business.

In 2012 there were 142 service units at the Bielsko's Old Town. Most of them were commercial ones (various types of shops) – 46 (32%). There are also 24 craft workshops in the area (17%); some of them represented the industrial craft, e.g. repairs of electronic equipment; some provide personal services, e.g. hairdressers. Among 20 gastronomic establishments (14%) were restaurants, pubs, coffee shops, and tea houses. There were also 17 institutions of cultural, educational, or physical culture functions, i.e.: the Beskidzka Library – Special Collections Department, Regional Museum at the Sułkowsky Castle and the Cathedral Church of St Nicholas. Moreover, there were language schools, clubs and societies, as well as exhibition halls. There were also various offices, e.g. financial service units estate agents, and 14 units of public administration. In addition to several lawyer firms and notaries there was also the office of the St Nicholas parish and two units connected with the Bielsko-Biała Town Hall: the Office of the Mayor's Plenipotentiary for the Bielsko's Old Town Revitalisation, and the office of the project: *Bielsko-Biała connects people*, serving inhabitants of the city centre. Construction, health and social care had only 4 units. These were: design offices, two units of health care (dentist and a doctor's practice), and a day care centre.

The number of service units within the studied area increased by 28 (25%) in only four years – from 114 in 2008 to 142 in 2012. In this short time their growth was approx. 24.6%. The number of shops grew to over 24% and craft units to 41%. Compared to 2008, there are five more dining options (increase of 25%), points providing educational, cultural and physical culture services (increased by almost 42%), and also public administration institutions (a 56% increase). In the period studied only the number of design offices in construction did not change. On the other hand, in the Old Town two out of five existing in 2008 institutions providing health and social care were closed. The number of institutions dealing with business and management also decreased slightly.

The conducted studies show also more accurate changes, which related to as many as 80 establishments. In four years in 20 facilities the services provided have changed. During the analysed period 44 businesses emerged in the premises, where in 2008 there was no activity whatsoever. Additionally, 16 places were closed, and until 2012 they were not replaced by any new ones. In 2012 in 77 buildings various services were provided, while in 2008 – only in 59. This means that new service units were created in 18 more buildings than four years earlier; this was an effect of modernisation of those houses.

The analysis showed that within Bielsko's Old Town the increase of the number of service units was quick – almost $\frac{1}{4}$ in four years. The area began to attract various new functions. Due to the modernisation of the Market Square space more residents and tourists (potential clients) come here. Therefore, the author states that regeneration process contributes to economic redevelopment of Bielsko's Old Town.

Discussion and conclusions

The number and the structure of economic entities are, according to Sztando (2010), key indicators of the effects of revitalisation of an area. Where old existing functions have been exhausted or pushed out completely, revitalisation causes their restoration through the implementation of socio-economic objectives, e.g. creation of new jobs (Mączyńska 2009).

But it is unknown to what extent these economic changes are caused by the financial funds for the revitalisation program, and how the quality factors, for example, the attractiveness of the area or “a trend for the place”, contribute to them (Jadach-Sepioło 2009b). We also do not know whether the social and economic redevelopment of Bielsko’s Old Town is solely due to the revitalisation process, or whether its influence is only partial. Sztando (2010) highlights that such knowledge is needed to study the results of the revitalisation effect, as one of the four conditions (condition of discretion) necessary to fulfil. There is a risk that the establishing of service units here does not depend on revitalisation at all, but on other factors, such as the “trend” for a given place. However, the above-described results and observations show that a large part of the new activity developed when revitalisation actions were already in progress.

Revitalisation activities should not be based merely on renovation of buildings and that of technical infrastructure of the area, but also on searching for and implementing factors causing the economic growth, such as: property tax services, advice for people wishing to start their own business, support for economic promotion, sureties (Sztando 2008). Jadach-Sepioło (2009b) believes that in the case of a high degradation of an area (like that of Bielsko’s Old Town) support from public authorities is needed to create the new commercial and service infrastructure, and to stimulate the local entrepreneurship. Numerous program documents, the body of Plenipotentiary for Revitalisation, renovating and selling of townhouses by the municipality, providing support, e.g. for long-term unemployed, indicate the necessary involvement of local authorities also in generating the economic effects of the regeneration. However, it is hardly possible to fully predict the result of these activities.

Sztando (2008: 5) claims that it “is easier to answer the question of how to implement urban regeneration, as in this scope we deal with the stable matter and advanced technical knowledge, than to indicate the success-guaranteeing tools and methods of creating economic and social development of a part of the city. It is a conglomeration of various, changeable entities with fluctuating goals functioning in equally variable surroundings, with which it is bound through not always stable relations”. It should be emphasised that the financial situation of the Historic Core population is bad, and a considerable number of inhabitants remain unemployed for a long period. Ensuring the economic redevelopment in the area subjected to revitalisation (or in its vicinity) is effective in reducing poverty (Khosha, Naidoo 2008; Communications & marketing strategy...).

Summary

The process of regeneration of Bielsko's Old Town, undertaken several years ago, resulted in numerous changes. Modernisation of infrastructure is considerable, as in almost 40% of cases the building was completely refurbished. This includes over 50% of buildings situated around the Market Square. The main investors were private individuals, whilst the activities of the municipality were concerned rather with the houses of the Market Square. In addition to the regeneration of houses, the modernisation of the surface of the Market Square was completed, due to which some historical objects were unveiled and made available, and new elements of small architecture were situated. Also the St Nicholas Square was renovated, as well as several adjacent streets.

Social problems have also been solved and the area has been enlivened. Local residents were given aid in overcoming their problems, especially long-term unemployment. The up-to-date actions lead only to introducing new service functions replacing the residential one. Many flats in the renovated houses remain empty or have been transformed into offices. If this trend is continued, the Historic Core will be only the service area, without permanent residents.

Due to revitalisation the structure of the service function of the studied area has changed. During only four years (2008–2012), the number of economic entities increased by 28, i.e. 24.6%. The reason for such a large growth is a well performed regeneration. The restoration of houses made investors open their businesses there. New services units are opened mostly in renovated buildings. Also, a growth in popularity of this area among residents and tourists caused an increase in demand for some new services. In particular new catering establishments and shops started to emerge rapidly. The author can conclude that revitalisation helps Bielsko's Old Town to overcome its crisis.

References

- Communications and marketing strategy for the urban renewal programme. (2015, 1 kwietnia). Retrived from https://www.capetown.gov.za/en/urbanrenewal/Documents/URP_Comms_and_Marketing_Strategy_FINAL_%2817Aug%282%29
- Jadach-Sepioło, A. (2009a). Gentryfikacja w kontekście rewitalizacji. In: A. Zborowski (ed.), *Demograficzne i społeczne uwarunkowania rewitalizacji miast w Polsce*. Kraków: IRM, 125–135.
- Jadach-Sepioło, A. (2009b). Możliwości zarządzania wartością nieruchomości w rewitalizacji polskich miast. In: W. Rydzik (ed.), *Aspekty prawne i organizacyjne zarządzania rewitalizacją*. Kraków: IRM, 105–161.
- Jarczewski, W. (2009). Skala degradacji miast w Polsce. In: W. Jarczewski (ed.), *Przestrzenne aspekty rewitalizacji – śródmieścia, blokowiska, tereny przemysłowe, pokolejowe i powojkowe*. Kraków: IRM, 15–23.
- Kaczmarek, S., (2001). Rewitalizacja terenów przemysłowych. Nowy wymiar w rozwoju miast. Łódź: Wydawnictwo Uniwersytetu Łódzkiego.
- Khosa, M. M., Naidoo, K. (1998). Urban renewal in inner-city Durban. *Urban Forum*, 9(2), 225–239. Retrived from <http://link.springer.com/article/10.1007%2FBF03033051>

- Mączyńska, E. (2009). Rewitalizacja a zasady biznesu. In: M. Bryx (ed.), *Finansowanie i gospodarka nieruchomościami w procesach rewitalizacji*. Kraków: IRM, 85–116.
- Miejscowy plan zagospodarowania przestrzennego Bielskiej Starówki*, 1998, Bielsko-Biała.
- Muzioł-Węclawowicz, A. (2009). Rewitalizacja dzielnic śródmiejskich. In: W. Jarczewski (ed.), *Przestrzenne aspekty rewitalizacji – śródmieścia, blokowiska, tereny przemysłowe, kolejowe i powojenne*. Kraków: IRM, 25–85.
- Palicki, S. (2007). Revitalization as the one of the aspects of urban renewal. *Journal of the Polish Real Estate Scientific Society*, 15(1-2), 189–198.
- Podręcznik rewitalizacji: zasady, procedury i metody działania współczesnych procesów rewitalizacji, 2003. Warszawa: Urząd Mieszkalnictwa i Rozwoju Miast, Deutsche Gesellschaft für Technische Zusammenarbeit, Institut Wohnen und Umwelt.
- Program aktywności lokalnej dla osiedla Śródmieście Bielsko. Załącznik do Uchwały Nr XLI/956/2009 Rady Miejskiej w Bielsku-Białej z dnia 29 kwietnia 2009 roku, 2009. Bielsko-Biała: Miejski Ośrodek Pomocy Społecznej w Bielsku-Białej.
- Program rewitalizacji bielskiej Starówki. Załącznik do Uchwały Nr XXXI/964/2004 Rady Miejskiej w Bielsku-Białej z dnia 6 lipca 2004 r., 2004. Bielsko-Biała.
- Program rewitalizacji obszarów miejskich w Bielsku-Białej na lata 2007–2013. Załącznik do Uchwały Nr XLV/1077/2009 Rady Miejskiej w Bielsku-Białej z dnia 25 sierpnia 2009 roku, 2009. Bielsko-Biała: Urząd Miejski w Bielsku-Białej.
- Siemiński, W. (2008). Ekonomiczno-finansowe i społeczne aspekty działań rewitalizacyjnych wspartych w okresie 2004–2006 środkami unijnymi. *Człowiek i środowisko*, 32(3-4), 29–51.
- Skalski, K. (1998). Problemy rewitalizacji. In: E. Arvay-Podhalańska (ed.), *Gospodarka przestrzenna gmin. Poradnik*. Kraków: Fundusz Współpracy, Brytyjski Fundusz Know-How.
- Skalski, K. (2000). Rewitalizacja starych dzielnic miejskich. In: Z. Ziobrowski i in. (ed.), *Rewitalizacja, Rehabilitacja, Restrukturyzacja – odnowa miast*. Kraków: Instytut Gospodarki Przestrzennej i Komunalnej Oddział w Krakowie, 33–83.
- Sztando, A. (2008). Pomiar rezultatów programu rewitalizacji miasta. *Samorząd terytorialny*, 9, 41–57.
- Sztando, A. (2010). Gospodarcza płaszczyzna programów rewitalizacji obszarów miejskich. In: J. Słodczyk, E. Szafranek (ed.), *Studia miejskie. Koncepcje i instrumenty zarządzania procesami rozwoju i rewitalizacji miast*. Opole: Wydawnictwo Uniwersytetu Opolskiego, 301–312.
- Wolaniuk, A. (2012). Centra miast. In: S. Liszewski (ed.), *Geografia urbanistyczna*. Warszawa: Wydawnictwo naukowe PWN, 303–341.
- Zarajczyk, A. (2009). Użytkowanie ziemi i funkcje staromiejskiej dzielnicy Bielska-Białej, praca magisterska. Kraków: Instytut Geografii i Gospodarki Przestrzennej Uniwersytetu Jagiellońskiego.
- Zborowski, A., Dej, M. (2009). Ocena stopnia zaawansowania zjawisk degradacji społecznej (patologie społeczne, wykluczenie społeczne i ubóstwo), procesy polaryzacji i segregacji, segmentacja rynku pracy w miastach Polski. In: A. Zborowski (ed.), *Demograficzne i społeczne uwarunkowania rewitalizacji miast w Polsce*. Kraków: IRM, 93–124.
- Zborowski, A., Dej, M., Gorczyca, K. (2009). Ocena jakości życia w wymiarze obiektywnym i subiektywnym w zdegradowanych dzielnicach śródmiejskich i w strefie wielkich osiedli mieszkaniowych w wybranych miastach Polski. In: A. Zborowski (ed.), *Demograficzne i społeczne uwarunkowania rewitalizacji miast w Polsce*. Kraków: IRM, 136–154.

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