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THE IMPACT OF SPATIAL AND SOCIAL QUALITIES ON THE REPRODUCTION OF LOCAL ECONOMIC SUCCESS: THE CASE OF THE PATH DEPENDENT DEVELOPMENT OF GLIWICE

Abstract: The author discusses the reproduction of the localized economic success and its interdependencies with local social and spatial characteristics, using the example of Gliwice in the old industrial region of Upper Silesia. The development of the town over the last 200 years did not rely on the cumulative growth of previously dominant functions, but rather on a succession of dynamic new activities: the steel industry, corporate headquarters, research and higher education. It is shown that the rise of new functions was underlain by the local social qualities and spatial properties, as formed in earlier periods. These properties also facilitate substantial new manufacturing investment at present, including a GM factory, and the recent growth of specialist producer and consumer services in Gliwice in the 1990s.

Key words: local economic development, social structure, urban space, Upper Silesia.

Continuity and change are fundamental, intriguing elements of economic and social processes. One of the salient problems concerning local development is the extent to which economic success is an enduring phenomenon and how it is sustained or reproduced in the same places. The development of towns results from the interaction of various external forces, usually operating on a larger geographical scale, and numerous local factors. Thus the vital question is what local conditions facilitate the reproduction of prosperity of communities in the increasingly competitive national and global economy.

This question has a special meaning in relation to the towns and regions, the fortunes of which rested upon mining and manufacturing activities. De-industrialization processes in Western Europe and the shock of transformation in Central and East European countries have savaged many industrial places on the continent. Communities of former economic heartlands have often become notorious for bankrupt companies, massive unemployment, derelict factories and decrepit infrastructure (see e.g.

Anderson, Duncan, Hudson 1983; Hudson 1989; Webber 1986; Hayter 1997; Watts 1991; Sadler 1992). Their decline is accounted for by several theories.

Long-wave theories, for example these referring to Kondratieff's work, are usually associated with the contention that the locus of innovation shifts geographically in consecutive cycles. According to Hall (1985) new dynamic industries take root in places different from the older ones. Consequently, the 'sunrise' districts of yesterday become the 'sunset' districts of tomorrow. The concept of the 'post-Fordist' organization of production, characterized by flexible specialization, puts emphasis on the growth of networks of inter-related small and medium-sized firms. They may find fertile ground for development in new industrial districts that are free of 'Fordist' traditions, rather than in older centers dominated by large vertically integrated companies, the high volume production of standardized goods, and rigid labor relations (e.g. Piore, Sabel 1984; Storper 1995). In terms of the theory of the product life-cycle, industrial areas suffer if their main industries breed few product innovations and if routine production moves out to low-cost labor locations in the mature stage, which is characterized by severe competition in a saturated market. In all these theories, the structure of older industrial centers may put them at a disadvantage vis-à-vis new agglomerations of economic activity untouched by earlier heavy industrialization. In addition, the latter are in a privileged position as far as the rise of the tertiary sector is concerned.

The possible lasting growth of industrial towns is typically explained in terms of cumulative causation. Localized external economies of scale and scope underlie self-reinforcing processes of expansion and diversification of the local economy (see e.g. Scott 1995). Attention is given to the attributes of local labor force and the potential for development and adoption of innovation. Still, many essentially economic explanations downplay the possible long-lasting impact of local social attributes and spatial properties.

The aim of this paper is to explore the interdependencies among economic development and social and spatial qualities, especially the role of these qualities in the reproduction of local economic success. The problem is examined using the case of the town of Gliwice.

Gliwice (215,000 inhabitants) is a town within the urban conurbation that constitutes the core of the Upper Silesian Industrial Region. This largest spatial concentration of industry in Poland, which has traditionally been dominated by coal and steel industries, is categorized by Rykiel (1997) as a region of decline in the 1990s and of long-term stagnation in the next century. Gorzelak (1998) paints a bleak picture of its imminent economic decay and social predicament, calling it Europe's biggest problem region. At present, on the other hand, the unemployment rate in Upper Silesia remains below the national average, and there are positive processes such as the growth of services and non-core manufacturing sectors, as well as a recent surge in inward foreign investment (Domański 1999). Gliwice is undoubtedly one of the urban places that have achieved economic success in the 1990s. A broader discussion of how to measure local success is beyond the scope of this paper. It will be understood here as better economic performance of the town in comparison to other

urban places within the region and the country. For example, Gliwice compares favourably in terms of low unemployment and growth of the production sector and services, as well as the fact that the social well-being of the inhabitants is above the regional and national averages. Furthermore, there is increasing diversification of the local economy. All of this is discussed below in greater detail.

1. The historical trajectory of Gliwice before 1945

The town was founded in the thirteenth century by dukes of the Piast family. It shared the political fate of Silesia: in the fourteenth century, the Polish kings relinquished their rights to the region to the Kingdom of Bohemia, which later became part of Habsburg Empire. In the mid-eighteenth century, the area was seized by Prussia (see e.g. Upper Silesian political and cultural history in Hartshorne 1933 and Rykiel 1993). From Middle Ages till the late eighteenth century Gliwice had remained a small, low-ranking central place situated in a peripheral, sparsely populated border region[1].

The first momentous stimulus came in 1796, when royal ironworks were opened on the outskirts of the town. The mill was located upon a newly built canal connecting the royal coal mine in nearby Zabrze with the Oder river. It represented a critical transfer of innovation on the European continent: the first coke-fuelled blast furnace outside Britain was erected here. It was designed by the Scottish engineer John Baildon, who was recruited by Count von Reden, the manager of the Prussian royal collieries in Silesia. The technology gradually spread to other plants and localities in Upper Silesia, and together with coal mining and zinc smelting sowed the seeds of the industrial explosion of the region.

The growth received a major impetus with the advent of railways linking Upper Silesia with other regions and neighboring countries. The principal railway from Wrocław reached Gliwice in 1846 and the location of large private factories followed, giving rise to new industrial suburbs. Iron and steel making and processing played a paramount role. The Wrocław merchant of Italian origin Nicolaus Caro established the *Hermina (Łabędy)* steel plant in 1848, Wilhelm Hegenscheidt from Westphalia opened the first Upper Silesian wire factory in 1853, while Hahn & Huldschinsky founded the first steel pipe mill in the region in 1867. The latter was expanded by adding the production of steel in Siemens-Martin furnaces in 1890, as well as various new products including railway wheels. Other manufacturing establishments came to town too, but coal mines were being opened as late as 1912 and 1917.

It is important that the non-local entrepreneurs who started their manufacturing activity in Gliwice, chose this town as their place of residence and as the headquarters of their companies. Their enterprises subsequently undertook further investment elsewhere in the region and beyond. Hegenscheidt bought the important *Baildon* steel plant in Katowice in 1865, and Caro took over the large *Bobrek* steel complex

[1] There were 1,872 inhabitants in Gliwice in 1787 in comparison to, for example, 6,976 in Nysa, 8,253 in Głogów, and 53,917 in Wrocław in Lower Silesia (Ładogórski 1950).

near Bytom in 1883. After tariffs on finished steel products from Germany were introduced, Huldschinsky decided to invest across the border in the Russian Empire, building steel mills in Sosnowiec (1881) and Zawiercie (1901) in the Dąbrowa Basin (Fig. 1), and another one near Kharkov in Ukraine.

A crucial development was the merger of the Caro and Hegenscheidt enterprises, resulting in the creation of the largest steel concern in Upper Silesia – *Oberschlesische Eisenindustrie AG für Bergbau und Eisenhüttenbetrieb (Obereisen)* in 1887. The new group opened a new rolling mill (1899) and a coal mine (1912) in Gliwice, took possession of the ironworks in Częstochowa (in the Russian Empire in those days), and rapidly expanded vertically by a series of takeovers. It assumed control over a number of emanelling plants in Rybnik, Wrocław, Berlin, Cologne and Glasgow, tool factories in Warsaw and Saratov in Russia as well as coal mines near Wałbrzych in the Sudeten Mountains, iron ore mines in Hungary and a local zinc and lead mine.

In 1905, another Gliwice-based steel company, *Huldschinskywerke AG*, was incorporated into *Oberschlesische Eisenbahn-Bedarfs AG (Oberbedarf)*. The headquarters of *Oberbedarf*, which belonged to Ballestrem family, moved from Nowy Bytom (today part of Ruda Śląska) to Gliwice. *Oberbedarf* included the largest Upper Silesian integrated iron and steel plant in Ruda Śląska (*Friedenshütte* or *Pokój*), accompanied by a big coal mine and a coking mill, a few other steel plants, rolling mills and foundries within Silesia, and steelworks in Sosnowiec, as well as iron ore mines in Silesia, Galicia and Slovakia. The corporation acquired the major steel pipe plant *Ferrum* in Katowice plus ammunition and railway-wagon factories in Berlin.

The final step in the process of capital concentration was consolidation of *Oberbedarf*, *Obereisen* and *Donnersmarckhütte* (from Zabrze) in 1926. This created one of the greatest German concerns, *Vereinigte Oberschlesische Hüttenwerke AG (Oberhütten)*. It controlled many of the plants mentioned earlier (except for the steelworks in Sosnowiec, Zawiercie and Częstochowa, which were sold after the First World War), ironworks and a cokery in Zabrze, iron ore mines in the Sudeten Mountains and Austria, as well as foundries in Gliwice and Ozimek acquired later (former royal ironworks), a mining equipment factory in Wałbrzych and a newly built armaments factory in a Gliwice suburb – Łabędy.

The growth of Gliwice as an industrial center through the location of new factories and their later expansion was most rapid until the First World War. Similar processes took place in the entire region. Królewska Huta (Königshütte, later Chorzów), Bytom, Gliwice and Zabrze became urban[2] and industrial centers of more or less the same size at that time (64,000 – 73,000 inhabitants in 1910). Katowice was smaller (43,000), but concentrated salient regional institutions. The rising manufacturing and mining employment entailed population increases and the development of new housing, urban infrastructure, and services. In Gliwice, these processes were influenced by the ever-widening significance of the town as a seat of large enterprises and corporations.

Company headquarters and their accompanying services needed substantial managerial and clerical staff, which boosted the size of the local middle and upper

[2] Zabrze received formal municipal status only in 1922, and Królewska Huta in 1868, while Bytom and Gliwice were medieval towns.

classes. This inevitably brought about the creation of quality residential quarters and consumer services. There were comprehensive secondary schools, as well as high-grade occupational educational institutions of long tradition. Good healthcare facilities (hospitals), extensive parks, recreational and sports grounds, and a theatre marked a growing standard of living and high-ranking functions in the town.

The new political division of Upper Silesia after the plebiscite in 1921 left Gliwice, Bytom and Zabrze within German boundaries, whereas the majority of the industrial region became part of the newly-revived Polish state. This had profound consequences for Gliwice. Ballestrems, who were chief shareholders of *Oberbedarf* and later *Oberhütten*, decided to shift the main seat of their entire industrial and agricultural businesses to Gliwice in 1922. In the 1930s the conglomerate comprised ten iron and steel plants, seven large collieries, a few coking mills and power plants and more than a dozen factories producing machines, boilers, rolling-stock, motorcycles, etc., in Germany and Poland. Furthermore, the Schaffgotsch capital group relocated its headquarters from Bytom to Gliwice (Table 1). It was the owner of several large coal mines and a power plant in the Bytom area, controlled five collieries and a coking mill near Ruda Śląska in Poland, and built the biggest coking mill in Zdzieszowice.

Several other institutions also moved to Gliwice: the headquarters of major Upper Silesian utility companies, e.g. the electricity board and coal syndicate, as well as public health insurance companies. This was accompanied by the further development of a whole range of consumer and producer services. The town had an airport with regular flights to German cities from 1925, and a regional radio station. In 1920, Gliwice was selected as the seat of the High Command of the Allied Force – the peace-keeping forces that supervised the plebiscite and the post-war political division of Upper Silesia until 1922.

All in all, the town became the major urban place in the German part of Upper Silesia in the inter-war period. It started to grow as a dynamic manufacturing town, but gradually became a leading regional center concentrating company headquarters and supralocal services.

The geographical location probably had a considerable impact on this development. It was the most western town of the new conurbation, the principal economic, social and administrative links of which were westward oriented (Opole, Wrocław, Berlin). Bytom suffered from its more peripheral location away from the major railway from Wrocław to Katowice as well as from the vicinity of the border after 1921, while Zabrze acquired formal urban status very late (1922). In addition, Gliwice, situated on the outskirts of the urban agglomeration, always functioned as a higher-rank shopping and service center for rural areas to the west and for the neighboring industrial towns, e.g., Zabrze.

It is worth noting that the other town that benefited from the post-First-World-War political division of Upper Silesia, as well as from its geographical accessibility, was Katowice. It became the capital of the province (voivodeship) and the main service center of the larger part of Upper Silesia that was incorporated into independent Poland. Królewska Huta was bigger in population terms in 1921. However, it was predominantly an industrial town, lacking a wider range of supralocal institutions and

Tab. 1. Major industrial concerns with headquarters in Gliwice before 1939.

Tab. 1. Główne koncerny przemysłowe z siedzibą w Gliwicach przed 1939 rokiem.

Date	Concerns and important events	Location of major plants controlled by the concern
1887	creation of *Obereisen* through merger of Caro and Hegenscheidt enterprises	iron and steel works: Katowice (*Baildon*), Bytom (*Bobrek*), Gliwice (*Łabędy*, *Wire Factory*), Rybnik (*Silesia*), Częstochowa (*Częstochowa*); coal mines: Gliwice (*Gliwice*), Wałbrzych (*Victoria*); coking mills: Bytom, Wałbrzych, Częstochowa; metal and machine factories: Wrocław, Berlin, Cologne, Glasgow, Warsaw, Saratov
1905	*Oberbedarf* takes over *Huldschinskywerke* and its headquarters moves to Gliwice	iron and steel works: Ruda Śląska (*Pokój*), Sosnowiec (*Buczek, Milmet*), Gliwice (*Gliwice*), Katowice (*Ferrum*), Zawiercie (*Zawiercie*), Zawadzkie (*Andrzej*), Kharkov; foundries, metal and rolling-stock factories: Kolonowskie, Fosowskie, Berlin; coal mine and coking mill Ruda Śląska
1921	headquarters of *Gräflich Schaffgotsch'sche Werke* moves to Gliwice	coal mines: Bytom (*Szombierki, Bobrek*), Ruda Śląska (*Wanda, Karol, Paweł, Wirek, Błogosławieństwo Boże*); power plant Bytom (*Szombierki*); coking mills: Ruda Śląska, Zdzieszowice
1922	headquarters of all Ballestrem industrial and agricultural businesses moves to Gliwice	coal mines: Ruda Śląska (*Wawel, Walenty, Pokój*), Zabrze (*Concordia, Mikulczyce, Rokitnica*), Katowice (*Kleofas*); coking mills Ruda Śląska; carbochemical plant Chorzów (*Hajduki*); metal, machine and rolling-stock factories: Sosnowiec (*Foster Wheeler Fakop*), Siemianowice, Ostrów Wlkp. (*ZNTK*), Kielce (*SHL*), Kraków (*Zieleniewski*); iron and steel works: Ruda Śląska (*Pokój*), Katowice (*Baildon, Ferrum*); steel works of *Oberhütten*, which was also controlled by Ballestrems, are shown separately
1926	creation of *Oberhütten* through merger of *Oberbedarf*, *Obereisen* and *Donnersmarckhütte*	iron and steel works: Bytom (*Bobrek*), Gliwice (*Łabędy*, *Gliwice*, wire factory), Zabrze (*Zabrze*), Ozimek (*Małapanew*), Zawadzkie (*Andrzej*); foundries, metal and machine factories: Gliwice (*GZUT, Bumar Łabędy*), Wałbrzych (*Wamag*), Kolonowskie; coking mills: Bytom, Zabrze

Note: contemporary names of towns and factories are used.
Source: author's compilation based on various historical sources.

Uwagi: użyto współczesnych nazw miast i zakładów.
Źródło: opracowanie własne na podstawie różnych źródeł historycznych.

services, adequate railway connections with the rest of Poland (to the north and the east), and last but not least situated on the Polish-German border. The roots of the development of Katowice as an important center lie in Franz Winkler's decision to

transfer the seat of a newly procured estate business to the village of Katowice in 1839 and the subsequent successful efforts of his manager Friedrich Wilhelm Grundmann at bringing a major railway to the locality and giving it urban status in 1865. This was followed by a broader administrative role as the sub-provincial center of the *Kreis* (*powiat*) and the location of such institutions as the Union of Upper Silesian Mining and Metal Entrepreneurs in 1882 and the regional headquarters of the state railways in 1895. The headquarters of main companies in Polish Upper Silesia moved to Katowice in the 1920s. Thus there are some similarities between the development of Gliwice and Katowice as foremost service centers in the industrial region of Upper Silesia. Still, the growth of Gliwice originated with important manufacturing activities, whereas in the case of Katowice it was from the beginning based on non-industrial functions performed in relation to neighboring industrial localities (some of which were incorporated into the town in 1924).

2. Change and continuity after 1945

The Second World War brought dramatic upheavals in the development trajectory of Gliwice. The town was not seriously damaged by military action, but its political and social situation profoundly changed. The Polish-German border was shifted far to the west, and a substantial part of the local population was deported to Germany. This affected mainly middle and upper class people. All business assets and housing were nationalized, capitalist corporations ceased to exist, and local enterprises found themselves under the control of far-away ministries and industrial associations (usually in Warsaw) within a centralized socialist economy. Hence the town lost both its salient economic functions and a vital social component of its previous development.

What was left were the extensive vacated buildings of former corporate headquarters, public institutions, schools, and the like. This was a significant asset in a war-ravaged country. Spacious secondary school buildings constituted the initial basis for the location of a new technical university (*Politechnika Śląska*) in 1945, originally planned for Katowice. Vast tracts of land near the town center provided room for an academic quarter. The core of the academic staff came from Lwów in Poland's eastern territories, which had been annexed by the Soviet Union. Gliwice was the most eastern town located on the main railway from Lwów to the western territories incorporated into Poland in 1945 (except for industrial Zabrze) and offered easily available quality housing[3]. Professors and other personnel were one of the crucial factors of the development of *Politechnika Śląska*, which has become the largest Polish technical university outside Warsaw.

At the same time, state-owned industrial R&D units were located in Gliwice, attracted by the existing buildings, residential housing, and opportunities for co-operation with the technical university. As a result, the town became the predominant research center in the Upper Silesian Industrial Region, including 7 large Gliwice-

[3] Another significant group of faculty members of Lwów universities settled in the larger, but heavily damaged city of Wrocław farther to the west.

based industrial research institutes, 2 branches of Warsaw-based R&D, 3 departments of the Polish Academy of Science, plus 19 large engineering companies specializing in the industrial design of technology and products. They mainly represented metal and chemical processing, partly mechanical engineering, and to a lesser degree coal mining. Many of them began their activities in former public buildings, including hospitals and military barracks. Gliwice also housed the Central Board of the Chemical Industry for six years before it moved to Warsaw as the Ministry of Chemical Industry in 1951.

Thus research and higher education became important new functions of Gliwice after 1945. Although there were some seeds of this type of activity in pre-1945 Gliwice, e.g. an *Oberhütten* laboratory, it was on the whole a new phenomenon in the town, fostered by its built environment, spatial pattern and location. The new functions attracted educated personnel and lured a number of gifted and resourceful young people. And the town was still the chief shopping and service center in the western part of the region. Manufacturing and, to some degree, mining remained significant, secondary local functions, carried out primarily in older factories.

After the Second World War, the Upper Silesian Region as a whole did not undergo the significant structural change that was experienced by West European industrial districts of a similar origin: its economic and spatial structure had been petrified by the socialist economic policy. Consequently, the region was exposed to the need for rapid restructuring in 1990, at the same time that it suddenly had to adjust to re-established market relations. Gliwice is hardly free of barriers to economic development typical of the whole region. The town wrestles with the difficulties of many years' worth of infrastructural neglect and the need for environmental abatement, e.g., the reclamation of industrial wasteland and areas of mining damage. It has its share of declining coal mines and ailing factories with obsolete technology and uncertain markets, including old steel plants and a tank manufacturer.

Nevertheless, favorable trends unquestionably prevail. The low unemployment rate (about 4%) reflects the growth of a differentiated local economy with a thriving tertiary sector, including broad consumer and producer services. Manufacturing and mining represent roughly 32% of the urban workforce and bear little resemblance to the typical industrial mix of the region. They comprise numerous producers of machinery, transportation equipment, metal products, chemicals, and plastics as well as construction materials. Most of the firms have been privatized and proved successful in adjusting the type and quality of their products to market requirements in the 1990s. Two steel mills and a wire factory constitute a link with the traditional local industry. The *Łabędy* plant (founded in 1848) is the place where the first modern mini-mill in Central and Eastern Europe was built in 1995, with an electric arc-furnace and continuous steel casting, as a joint venture with domestic private capital. The smaller *Gliwice* steelworks (former *Huldschinsky*) has not modernized its production of railway wheels for years, and a substantial private investment will be instrumental in its survival. Two collieries employ about 7% of the local working population.

The town has attracted considerable foreign manufacturing capital. The French concern of Saint Gobain made Gliwice its major production center of insulation

materials. Other foreign companies have invested in refractories and industrial-gas and metal product factories. An event of far-reaching consequences took place in 1996, when General Motors announced its decision to locate a new car factory in Gliwice. The first stage of this largest foreign greenfield investment in Poland (360 million dollars, 2,000 employees) was completed two years later. As a result of the GM location choice, Gliwice was incorporated into a special economic zone, which offers a 10-year income tax exemption. In 1998 and 1999 alone, five other companies followed and erected their new factories in Gliwice, including car component makers, e.g. Lear, Plastal, HP Chemie Pelzer, and the Spanish ceramics producer Roca.

The locational preference for Gliwice is by and large influenced by the transportation accessibility of the town on the western rim of the biggest, congested urban agglomeration in Poland, where the junction of the A4 (Dresden – Wrocław – Cracow – Kiev) and A1 (Gdańsk – Vienna) motorways is to be situated. Further advantages of Gliwice vis-a-vis other sites within the region are low air pollution, the local availability of specialized services, and skilled staff and training opportunities. And last but not least, the town beat other contestants for the GM location due to competent information and rapid decision-making by the local government.

All these positive tendencies are underlain by the social and educational milieu of the town, which is distinguished by the highest share of university graduates and the most comprehensive educational opportunities at the secondary level (*liceum*) in the region. This is associated with a relatively high living standard (Tab. 2). Numerous research institutions and industrial engineering firms as well as business services may also be an important element here. The research institutes remain state organizations but have set up joint ventures with private partners in order to manufacture specialized products. Many of the engineering companies, which offer consulting, engineering and industrial design plus turnkey contracting, have gone private by employee (management) buy-out; entirely new ones have also appeared. *Prosynchem* (founded in 1945) is now expanding as a subsidiary of *Fluor Daniel* from California and contending for major industrial contracts in Poland. At the same time, less successful firms survive by renting out their office and laboratory space. Paradoxically, this provides room for hundreds of new small businesses. R&D units, engineering firms and the technical university have produced significant spin-offs in the form of mushrooming new firms established by former employees of these institutions. The creation and expansion of new local businesses is a vital component of local economic growth and includes, among other things, enterprises offering engineering design, modernization of industrial processes, computer services and firms manufacturing custom-made electronic and electrical devices, e.g., measuring and medical instruments (Dziewiczkiewicz 1997).

The best residential neighborhoods are chiefly found in western and northern parts of the town, where new housing development is also taking place. Extensive parks and woodland complexes within the town and in the vicinity add to the attractiveness of Gliwice (Fig. 2). Old industrial areas are clustered along the major east-west railway and the non-existent parallel canal as well as in the southeastern part (coal-related). New industry is located upon the main roads in the western and

Tab. 2. Comparison of Gliwice and other towns of the Upper Silesian Industrial Region in 1997.

Tab. 2. Porównanie Gliwic i innych miast Górnośląskiego Okręgu Przemysłowego w 1997 roku.

	Gliwice	Zabrze	Bytom	Katowice	All towns of the Katowice province
Unemployment rate	4,8	9,5	9,0	2,0	6,4
Number of limited and public limited companies per 10000 population	50,6	24,0	23,3	94,2	33,2
Number of companies in financial and business services per 10000 population	13,1	4,2	3,5	22,8	6,1
Foreign investment in manufacturing (in dollars per capita)	2282	8	44	418	996
Number of pupils in *liceum* per 10000 population	247	164	140	178	216
Cinema attendance per 1000 population	1574	632	561	1470	806
Car ownership per 1000 population	319	200	189	267	226
Aggregate index of air pollution in town centre (Katowice = 100)	77	92	124	100	x
Average daily concentration of SO_2 in town centre in winter 1997 (in $\mu g/m^3$)	72	117	97	125	x

Source: author's calculations based on *Rocznik Statystyczny Województwa Katowickiego 1998*, data from Sanepid Katowice and author's studies on foreign investment.

Źródło: opracowanie własne na podstawie *Rocznika Statystycznego Województwa Katowickiego 1998*, danych Sanepidu Katowice oraz badań autora nad inwestycjami zagranicznymi.

southeastern suburbs, where two parts of the special economic zone are also situated and where the chief exits of the west-east motorway are to be built.

3. The interdependence of economic functions, social traits, spatial pattern and the built environment in the development of Gliwice

All things considered, the current economic success of Gliwice is not a new phenomenon. It is interesting that the fortunes of the town in successive stages of its development over the last 200 years did not rely on the same primary functions. The rise of new dynamic activities that stimulated local development was contingent on economic functions, social qualities and human faculties, as well as on urban space and the built environment of the town, which were produced in former eras.

At the turn of the eighteenth and nineteenth centuries the small, peripheral town of Gliwice became an important industrial place due to the early transfer of

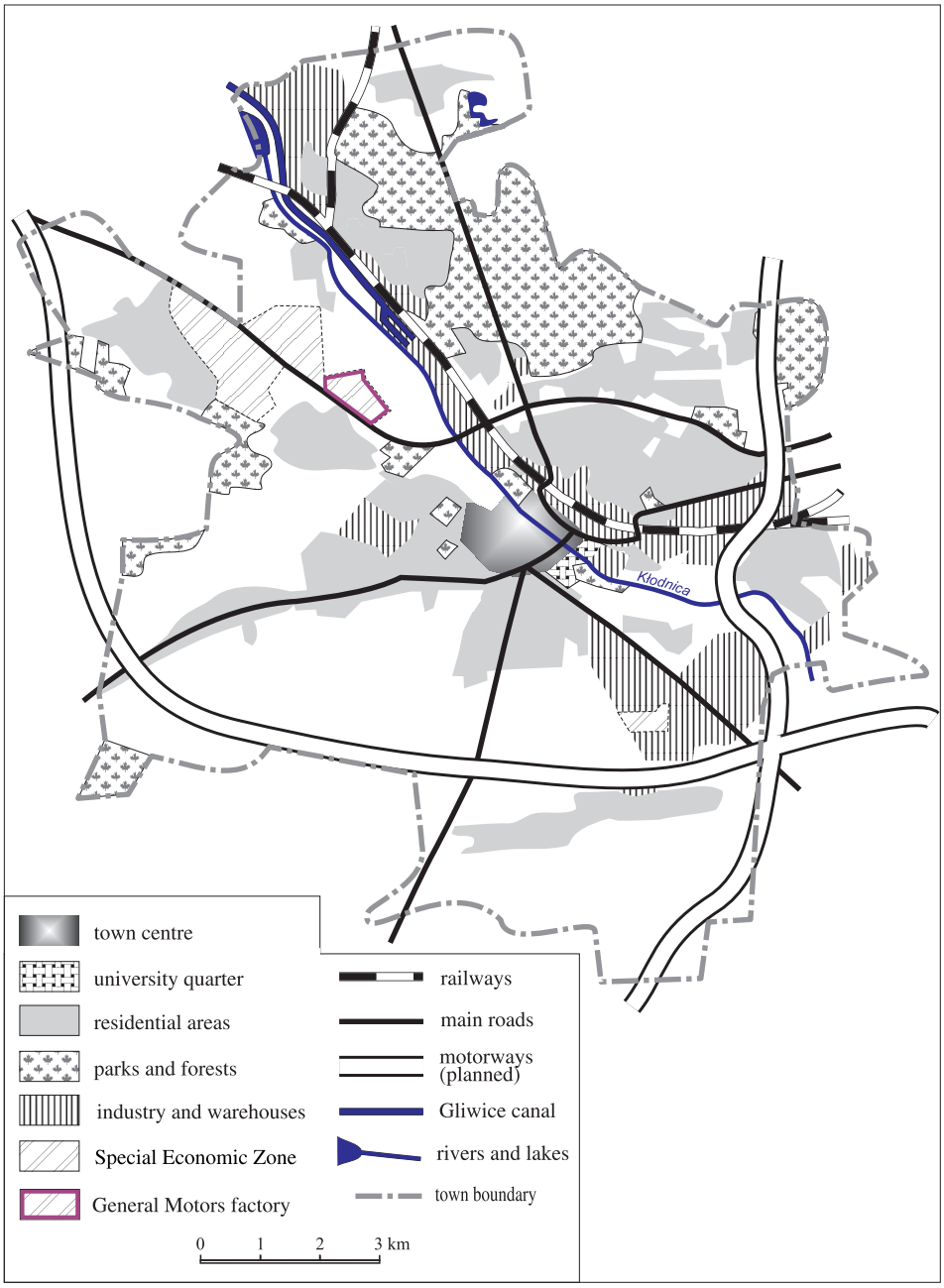

Fig. 2. Spatial pattern of Gliwice.

Ryc. 2. Podstawowe elementy układu przestrzennego Gliwic.

technological innovations in iron and steel production. This was in turn affected by the town's favorable location on a new canal linking the royal coal mines with a major river. It is likely that the subsequent establishment of further factories by non-local entrepreneurs was also influenced by the location of Gliwice as the westernmost town of a new industrial district situated on the essential railway to Wrocław and Berlin. Furthermore, Gliwice was one of the only three urban centers in the industrializing region (Bytom and Mysłowice were other ones) until 1865. Hence the explosive growth of Gliwice as an industrial center throughout the nineteenth century, which was typical of many localities in Upper Silesia, was also accompanied by the development of services built upon the existing spatial pattern and earlier functions. In contrast to the majority of industrial settlements within the conurbation, which predominantly comprised activities serving the local population, Gliwice also included high-ranking services of a longer geographical range.

At the next stage, which began in the late nineteenth century and reached its peak in the interwar period, the dynamics of the town rested primarily on its role as the seat of the main Upper Silesian industrial corporations. This role was embedded in the town's tradition in iron and steel making, as well as the existing producer and consumer services, the expansion of which received an enormous boost from corporate functions. The rise of industrial control functions and various accompanying services was intertwined with the growth of the middle and upper classes. This entailed the development of attractive residential districts, a flourishing urban center, extensive schools and other public institutions.

The Second World War stripped Gliwice of its corporate functions as well as of a significant part of its human capital. Nonetheless, this did not undermine the town's prosperity. The qualities of urban space and built environment, particularly substantial vacated public and office buildings and good housing, were instrumental in the advent of new research and higher education functions (Fig. 3). The local community consists of the native Upper Silesians, with its working class culture emphasizing hard work and tidiness, people displaced from the territories annexed by the Soviet Union (including Lwów), who became a salient part of the local white-collar class after 1945, and migrants from other parts of Poland, many of whom were lured by new jobs in research-related activities.

Finally, the economic growth of Gliwice in the 1990s is based on both its appeal to large inward investment and the endogenous development of local businesses. New manufacturing plants as well as technological change in existing factories (including the steel industry, which played such an important local role in the past) have again become a growth factor, together with the expansion of a diversified tertiary sector. All these processes can be accounted for by the local social structure, human capabilities and educational potential, as well as the town's spatial properties including its accessibility and residential attractiveness vis-à-vis other Upper Silesian towns.

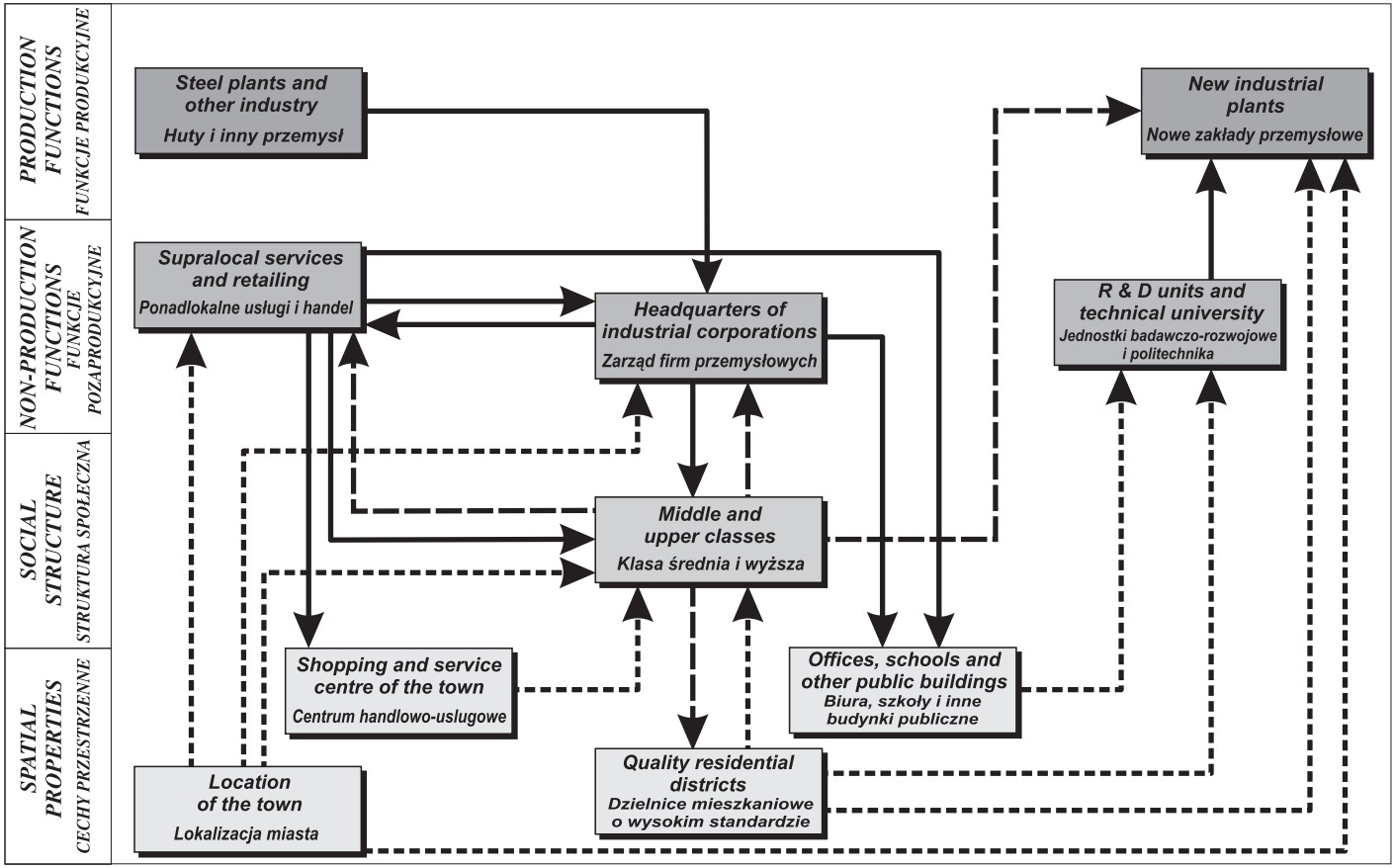

Fig. 3. Main interdependencies among social qualities, spatial properties and economic functions in the development of Gliwice.

Ryc. 3. Główne zależności między cechami społecznymi i przestrzennymi oraz funkcjami godpodarczymi w rozwoju Gliwic.

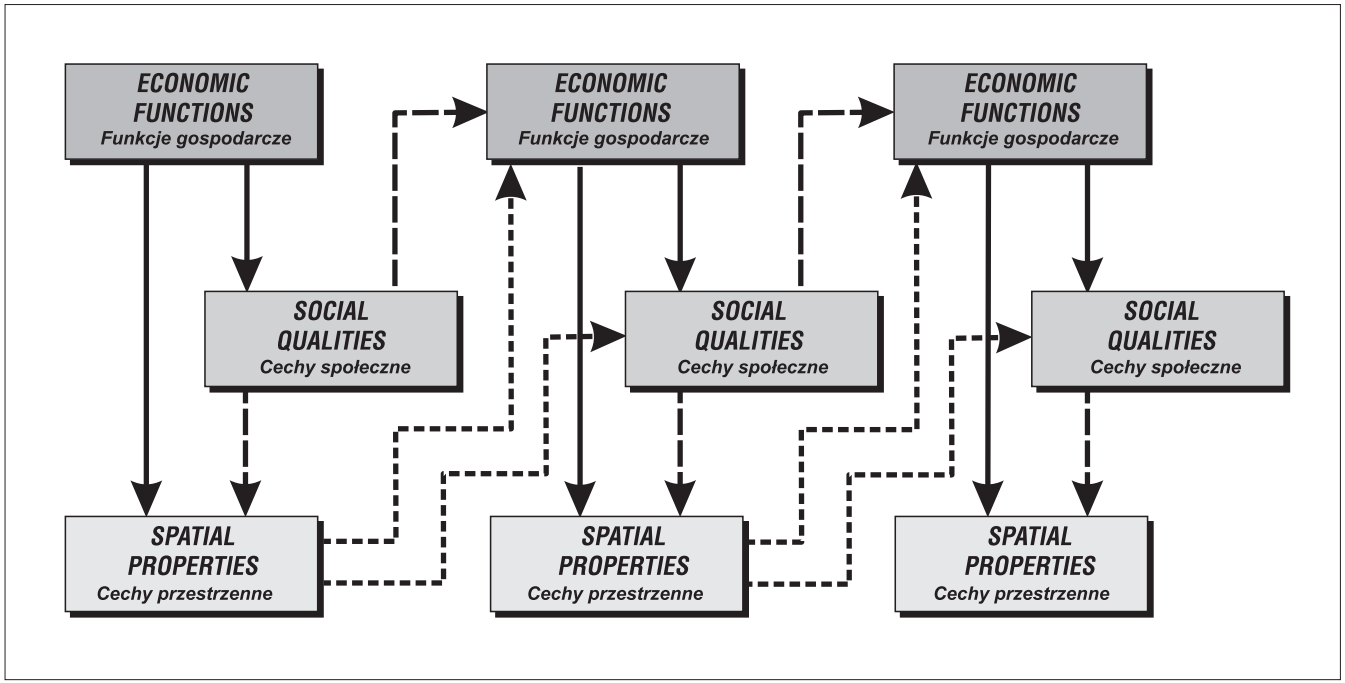

Fig. 4. Interdependencies among economic functions, social qualities and spatial properties of the town.

Ryc. 4. Wzajemna zależność funkcji gospodarczych oraz cech społecznych i przestrzennych miasta.

4. Conclusion

All in all, the local economic success of the town was conditioned by several interdependent phenomena: dynamic economic functions, social features and spatial qualities. Spatial configurations of phenomena are often analyzed as an outcome of economic processes and social structures. Nevertheless, they are something more – they also exert a significant impact on the shape of economic and social phenomena.

From the point of view of economic development, one can consider spatial patterns to be an intervening element influencing the development of dynamic urban functions in successive eras. In other words, economic success is reproduced by means of spatial properties, which have been molded by earlier economic functions and social structures (Fig. 4). It is worth noting that success recurring at later stages may not necessarily represent the cumulative growth of functions dominant previously, and may mean the rise of new dynamic activities as was the case in Gliwice. These new activities locate and develop at a particular place under the impact of spatial patterns, social structures and economic functions that were produced in the past. An important point is that success can be reproduced in the same place even when social continuity was seriously disrupted, as in the deportation of white-collar Germans from Gliwice. What then mediates the creation of new urban functions are spatial forms and the built environment of the town.

All this demonstrates a specific mechanism of path-dependent development, where the particular historical trajectory of a place affects its future. For many towns that appeared as booming industrial centers in the nineteenth century, this is a source of their present weakness. Gliwice is an example to the contrary. Localized economic success in competition with other places within the region or the country stems both from favorable location in relation to main transportation routes, markets, etc., and from the interdependent local economic, social and spatial qualities of the town itself.

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Wpływ cech przestrzennych i społecznych na odtwarzanie lokalnego sukcesu gospodarczego – historyczne uwarunkowania rozwoju Gliwic

Streszczenie

Jednym z interesujących problemów rozwoju lokalnego jest to, na ile lokalny sukces gospodarczy jest zjawiskiem trwałym oraz jakie czynniki sprzyjają podtrzymywaniu i odtwarzaniu sukcesu w tych samych miejscach w przestrzeni. Pytanie to nabiera szczególnego charakteru w odniesieniu do miast, u podstaw sukcesu których legła działalność przemysłowa. Liczne teorie, m.in. postfordowskiej organizacji produkcji i długich cykli Kondratiewa, akcentują korzystne warunki do rozwoju gospodarczego w obszarach innych niż te ukształtowane przez struktury i tradycje

wcześniejszej industrializacji. Szybkiemu wzrostowi dzisiejszych regionów sukcesu towarzyszy więc często upadek dawnych okręgów i ośrodków przemysłowych. Długotrwały rozwój miast przemysłowych wyjaśniany jest natomiast najczęściej w kategoriach korzyści aglomeracji, a więc przede wszystkim kumulacyjnych procesów ekonomicznych. Rzadziej analizowane jest wzajemne powiązanie lokalnych funkcji gospodarczych, struktury społecznej i układu przestrzennego.

Celem artykułu jest pokazanie współzależności rozwoju gospodarczego oraz lokalnych cech społecznych i przestrzennych, a w szczególności wpływu tych cech na trwałość sukcesu gospodarki lokalnej. Autor analizuje w tym celu przykład Gliwic, które, jakkolwiek położone w obrębie starego okręgu przemysłowego GOP i nie wolne od charakterystycznych dla niego problemów, są na tle innych miast regionu ośrodkiem szybkiego wzrostu gospodarczego stymulowanego przez czynniki egzo- i endogeniczne, postępującej dywersyfikacji gospodarki lokalnej, a także niskiego bezrobocia i rosnącego poziomu życia.

Sukces gospodarczy miasta nie jest zjawiskiem nowym, w ciągu ostatnich 200 lat opierał się jednak na zmieniających się funkcjach dominujących. Niewielkie i peryferyjnie położone średniowieczne miasto, jakim były Gliwice, stało się w XIX wieku znaczącym ośrodkiem przemysłowym dzięki wczesnemu transferowi innowacji w hutnictwie żelaza. W 1796 roku Skarb Państwa pruskiego uruchomił tu pierwszą poza wyspami brytyjskimi hutę żelaza opalaną koksem, a po doprowadzeniu linii kolejowej w 1846 roku powstawały prywatne huty, walcownie rur i fabryki drutu – wiele z nich jako pierwsze tego typu zakłady w GOP. Firmy hutnicze zakładane przez pochodzących z Wrocławia i Westfalii przedsiębiorców (Caro, Hegenscheidt, Huldschinsky), którzy osiedli w Gliwicach, rozpoczęły z czasem ekspansję poprzez przejmowanie hut, kopalń i innych fabryk na Górnym Śląsku, a z czasem także w innych regionach i za granicą, m.in. w Zagłębiu Dąbrowskim (tab. 1 i ryc. 1).

Wzrost Gliwic jako ośrodka przemysłowego skupiającego huty i inne zakłady zachodził równolegle z podobnymi procesami w Bytomiu, Królewskiej Hucie, Zabrzu i innych ośrodkach regionu. Sukces w tym pierwszym okresie wiązał się więc przede wszystkim z funkcjami przemysłowymi. Rosnące zatrudnienie w przemyśle prowadziło do szybkiego wzrostu ludnościowego, rozwoju zabudowy mieszkaniowej, infrastruktury komunalnej i usług. W odróżnieniu od wielu nowo powstających ośrodków przemysłowych wewnątrz konurbacji górnośląskiej, w Gliwicach, położonych na jej obrzeżu, postępował jednak także rozwój ponadlokalnych funkcji usługowych.

W kolejnym etapie, który rozpoczął się w końcu XIX wieku, a osiągnął swój szczyt w okresie międzywojennym, dynamika miasta opierała się w znacznym stopniu na jego roli jako siedziby dużych koncernów przemysłowych. Tkwiła ona korzeniami we wcześniejszym rozwoju hutnictwa – miejscowe firmy drogą przejęć i fuzji urosły do rozmiarów największych przedsiębiorstw górnośląskich, a nawet niemieckich (tab. 1). Kolejne wielkie firmy przeniosły swoje zarządy do Gliwic po podziale politycznym Górnego Śląska w 1921 roku, w wyniku którego większość okręgu przemysłowego znalazła się w granicach Polski. Skupianie się funkcji zarządzających w mieście związane było nierozerwalnie z rozwojem usług dla firm oraz rosnącej rzeszy konsumentów – znajdowały one lepsze warunki w ukształtowanym w okresie

przedindustrialnym mieście, jakim były Gliwice, niż w ośrodkach o genezie osad przyfabrycznych. Rozwój usług i funkcji korporacyjnych oznaczał przyrost liczby urzędników i menedżerów firm przemysłowych, pracowników kas chorych oraz wielu innych instytucji i placówek usługowych, tworzących łącznie coraz silniejszą lokalną klasę średnią i wyższą. Pociągało to za sobą powstawanie dzielnic mieszkaniowych o wyższym standardzie, formowanie nowoczesnego centrum miasta, zakładanie parków, szkół i różnych instytucji publicznych.

Druga wojna światowa, w następstwie której większość klasy średniej wysiedlono do Niemiec, a przedsiębiorstwa znacjonalizowano, pozbawiła miasto zarówno jego funkcji zarządzających, jak i znacznej części kapitału ludzkiego. Okazało się jednak, że nie przerwało to rozwoju funkcji wyższego rzędu. Cechy przestrzeni miejskiej i lokalnej zabudowy, w szczególności istnienie wielu opuszczonych budynków publicznych (m.in. szkół) i biurowych oraz wysokiej jakości mieszkań, stały się podstawą zlokalizowania w Gliwicach Politechniki Śląskiej, kilkunastu instytutów badawczych i jednostek PAN oraz dwudziestu biur projektowych (ryc. 2 i 3). Trzon kadry owych placówek oraz, szerzej, nowej klasy średniej miasta stanowili emigranci z utraconych przez Polskę terenów Małopolski Wschodniej, w tym pracownicy Politechniki Lwowskiej. Gliwice były dla nich pierwszym miastem Ziem Zachodnich, położonym przy wiodącej tam głównej lini kolejowej i odznaczającym się atrakcyjną formą przestrzenną oraz odpowiednim zestawem usług. Szkolnictwo wyższe i działalność badawczo-rozwojowa stały się po 1945 roku nowymi funkcjami dynamizującymi rozwój lokalny, obok utrzymujących się funkcji przemysłowych i usług konsumpcyjnych.

Powrót do warunków gospodarki rynkowej w 1989 roku zastał Gliwice z bagażem kilku wielkich zakładów o przestarzałej technologii, przeciążonej infrastruktury oraz problemów ekologicznych, ale równocześnie ze zróżnicowaną bazą ekonomiczną i dużym potencjałem ludzi wykształconych. Większość miejscowych przedsiębiorstw zdołała zaadaptować się do nowej sytuacji i została sprywatyzowana. W mieście uruchomiono pierwszą w Polsce nowoczesną mini-stalownię elektryczną Elstal, pojawili się duzi zagraniczni inwestorzy przemysłowi, np. francuski St.Gobain, i pozaprodukcyjni, np. amerykański Fluor Daniel, który przejął największe biuro projektowe Prosynchem. Decyzją o wyjątkowym znaczeniu stał się wybór Gliwic jako miejsca budowy nowej fabryki samochodów General Motors. Jej konsekwencją było utworzenie w mieście specjalnej strefy ekonomicznej, która stała się miejscem lokalizacji kolejnych nowych fabryk. Atrakcyjność miasta dla dużych inwestorów wiąże się z jego położeniem na zachodnim obrzeżu konurbacji katowickiej przy przyszłym skrzyżowaniu autostrad wschód – zachód A4 i północ – południe A1, dostępnością odpowiednich usług lokalnych i kadry kwalifikowanej. Dynamicznie rozwija się równocześnie sektor drobnych i średnich firm, wśród których znaczący udział mają m.in. przedsiębiorstwa oferujące usługi w zakresie projektowania, informatyki, kompletacji dostaw, itd., stanowiące *spin-offs* dużych placówek badawczych i Politechniki Śląskiej. U podstaw rozwoju lokalnej przedsiębiorczości oraz przyciągania nowych inwestycji leżą cechy miejscowego kapitału ludzkiego oraz potencjał edukacyjny, w tym najlepiej rozwinięte w regionie szkolnictwo średnie

(tab. 2). Wiąże się z tym także wysoki standard życia oraz odpowiadająca mu forma przestrzenna miasta.

Przykład Gliwic ilustruje sukces miasta oparty na kilku wzajemnie powiązanych zjawiskach: dynamicznych funkcjach gospodarczych, cechach społecznych oraz właściwościach przestrzeni lokalnej. Układy przestrzenne są przedstawiane często jako wynik ogólnych procesów gospodarczych oraz struktur społecznych. Tymczasem one same wywierają również istotny wpływ na formę zjawisk społecznych i gospodarczych. Z punktu widzenia rozwoju gospodarczego przestrzeń widzieć można jako czynnik pośredniczący, oddziałujący na rozwój dynamicznych funkcji miejskich w kolejnych okresach. Innymi słowy sukces gospodarczy reprodukowany jest za pośrednictwem układów przestrzennych ukształtowanych przez wcześniejsze funkcje gospodarcze i struktury społeczne (ryc. 4). Zwróćmy uwagę, że sukces nie musi polegać na kumulacyjnym wzroście działalności najważniejszych w okresie poprzednim, ale na pojawianiu się nowych funkcji dynamizujących, tak jak miało to miejsce w Gliwicach. Nowe funkcje lokalizują się i rozwijają w danym miejscu pod wpływem układów przestrzennnych, struktur społecznych i funkcji gospodarczych wytworzonych w przeszłości. Warto zauważyć, że sukces może być czasem odtwarzany w mieście, gdzie nastąpiło istotne zerwanie ciągłości społecznej, tak jak w przypadku wysiedlenia niemieckiej klasy średniej z Gliwic. Tym, co pośredniczy wówczas w tworzeniu funkcji wyższego rzędu, stają się cechy przestrzeni miasta.

Przedstawiony wyżej mechanizm rozwoju, w którym szczególna trajektoria historyczna miejsca oddziałuje na jego przyszłość (tzw. *path dependency*), leży u źródeł dzisiejszej słabości wielu miast, które pojawiły się jako kwitnące ośrodki przemysłowe w XIX wieku. Lokalny sukces gospodarczy w konkurencji z innymi miastami w skali kraju czy regionu uzależniony jest zarówno od korzystnej lokalizacji w stosunku do głównych tras komunikacyjnych, rynków zbytu itd., jak również od cech gospodarczych (funkcji), społecznych i przestrzennych samego miasta, tkwiących korzeniami w jego przeszłości.

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