

ALICJA SZAJNOWSKA-WYSOCKA

UNIVERSITY OF SILESIA

## DEMOGRAPHIC CHANGES IN AN INDUSTRIAL CENTRE (BASED ON SOSNOWIEC AS THE EXAMPLE)

**ABSTRACT.** Changes of demographic potential in Sosnowiec since 1886 till the present times are represented by a demographic curve. Its run reflects social and economic conditions which influenced the discussed industrial centre. The demographic development in the given centre has been irregular, three peaks and three depressions of the population level can be distinguished on the curve. The first peak occurred before the I World War, being the result of intensive development of mining and steel industry, which made Sosnowiec the main industrial centre in Zagłębie Dąbrowskie (Dąbrowa Coal Basin). The second demographic peak developed before the II World War when the town became the most important industrial, trade and cultural centre in the contemporary Kielce province. The second demographic peak occurred in the seventies and eighties of the last century, during the administration reform and intensive industrial development of Zagłębie Dąbrowskie.

Demographic depressions were specific and occurred after both World Wars and after the change of the political system (due to the economic transformation, results of the general demographic crisis).

**KEY WORDS:** industrial centre, demographic development, political system transformation.

### INTRODUCTION

Demographic and social-economic problems in Silesian region (province, Upper Silesian conurbation) have been the subject of numerous historical, sociological, geographic and economic investigations since early post-war times.

The analyses of structures and demographic processes have been carried out due to scientific and practical reasons. Vast research interest has been stimulated by a unique spatial and functional structure of the settlement system in the region. High concentration of population (approx. 5 million people in the current province), which was the result of industrialisation and urbanisation in the XIX and XX centuries. At the turn of the XIX and XX centuries the region was a prestige core of the Polish economic space, at the next turn it lost its status of the core region due to the political system transformation and social modernisation changes. Industrial centres in the region have changed their traditional economic functions and their demographic and social state.

Among research papers on population and social problems of the Silesia region the publications of the following authors are the most worth mentioning: Bytnar-Suboczowa M. (1955); Frąckiewicz L. (1969, 1977, 1980, 1982, 1992, 1994); Heffner K. (1990, 1991, 1992); Jacimierski J. (1969, 1973); Jałowiecki B. (1970, 1985, 1998); Jelonek A. (1956, 1986, 1992); Konobelsdorf W. (1960, 1970); Kosiński L. (1955, 1958); Liszewski S. (2002); Magda K., Runge J. (1990); Rajman J. (1977, 1994, 1997); Rauziński R. (1988); Runge A., Runge J. (2000); Rykiel Z., Szajnowska-Wysocka A. (1989); Słodczyk J. (1987); Szajnowska A. (1979, 1980); Szajnowska-Wysocka A. (1989, 1998, 1999, 2000).

Sosnowiec is one of the towns in the Silesia conurbation, where at the turn of the last decades and centuries significant economic and social transformations occurred. The transformations were the results of historical and regional conditions and also civilisation and cultural development of the town (Szajnowska-Wysocka A., 2003). Growth of population and its dynamics in the period of formation of the industrial centre (since the very beginning till the present) are the investigation subject of this paper.

## POPULATION AND DYNAMICS OF ITS GROWTH

Despite the fact the area of contemporary Sosnowiec was covered by a dense forest and swamplands in the first half of the XIX century, the place was not an uninhabited area. Lusatian tribes lived there in the period of V to I b.c.

The first settlements in the area of the present-day town occurred due to its location close to the Polish Silesia border, which as the Krakow-Silesia border, was established by Casimirus the Just (Kazimierz Sprawiedliwy) in 1170 along the Czarna Przemsza and the Brynica Rivers. The local inhabitants, till the beginning of the XIX century were mostly farmers. The industrial activity in that time was limited only to several mills, smitheries, limestone queries and distilleries working for local land owners. Only Modrzejów, a small town, was inhabited by a group of tradesmen of Jewish origin, which made 86.6% of inhabitants, whose total number was 433 persons.



More intensive settling began with development of coal mining industry. Numerous mines opened in the years of 1806-1820 and created a labour market for local farmers, who started to work under supervision of experienced miners from Upper Silesia. That growth stimulated also development of coexisting industrial branches, especially zinc and lead works, which influenced development of the labour market (Rechowicz, 1977; Szajnowska-Wysocka, 2003).

The first signs of an intensive demographic growth appeared in 1878-1881, when industrial development was initiated. Its expansion started progressing urbanisation intensified by migration of rural inhabitants from the neighbouring regions of the Polish Kingdom (Kielce, Piotrków, Radom). Since that time, dynamic increase of population has been observed (Fig. 1). The number of inhabitants grew almost four times in the period of 1886 - 1897 from 9,318 inhabitants to 36,289.

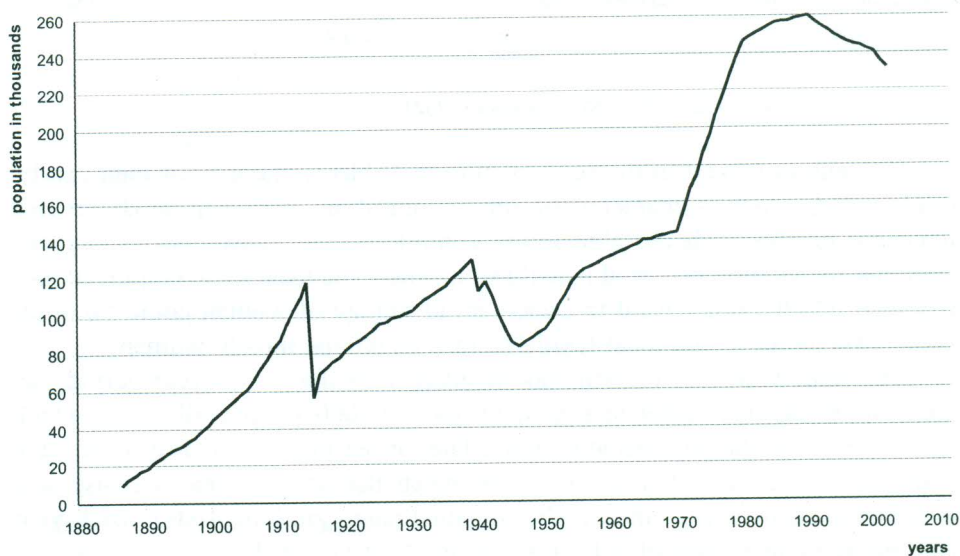


Fig. 1. The curve of demographic development in the period of 1886-2002

Source: the authors analysis based on: J. Ziółkowski (1960); *Mały Rocznik Statystyczny* (Small Statistic Annual) 1937; *Roczniki Województwa Katowickiego* (Annals of the Katowice Province) (1958-1999); *Roczniki Województwa Śląskiego* (Annals of the Silesian Province) (2000-2003).

Population of particular villages, which the future town comprised, are presented in Table 1. Sosnowiec, a central village with well developed trade, ran mostly by Jews, was the most populated village in that time, then came the following ones: Sielec, Pogoń, Konstantynów, Milowice, Ostra Górka and Sosnowiec Stary.

Table 1. Population of the villages in 1897

NAME OF THE VILLAGE	TIME OF FOUNDATION (FIRST RECORD)	TYPE OF THE VILLAGE	POPULATION			YEAR OF INCORPORATION
			TOTAL	FEMALE	MALE	
Pogoń	XIII century	menial village of the castle in Będzin	4,174	2,031	2,143	1902
Sosnowiec	1581	mill village, railway station	10,137	4,855	5,282	1902
Modrzejów	1650	village on the river	1,358	660	698	1915
Stary Sosnowiec	no data	forest village	1,467	679	788	1902
Ostra Górka	XVIII century	village inhabited wood-distillers	1,487	728	759	1902
Sielec	v	village of knights	4,924	2,305	2,619	1902
Milowice	1105	forest-agricultural village	1,700	637	1,063	1915
Konstantynów	1850	workers village	3,132	1,295	1,837	1915
Kuźnica	no data	settlement	1,378	685	693	1902
Wygwizdów	no data	agricultural village	6,532	2,970	3,562	1902
			36,285	16,845	19,444	

Source: after J. Ziółkowski (1960), M. Pulinowa (1992).

If attention is paid to the sex structure in Table 1, majority of men can be easily noted, which is characteristic for "colonisation" period in newly created industrial centres with unstable living conditions. The most disadvantageous relations 167M/100F occurred in Milowice, where the local mine employed mostly men. On the other hand in Sielec an advantage of women could be observed 118F/100M, as the local textile factory employed mostly women.

The same tempo of growth was maintained in the next 7-year period, i.e. the number of inhabitants increased by over 20,000 people till 1904, which made 613.4% of the population in 1886. The further increases confirm the same population development trend till 1908, when the demographic increase was even more intensified as the number of inhabitants grew by 10,000 each year and the trend decreased slightly in the years of 1911–1914.

Close to the beginning of the I World War the demographic potential of Sosnowiec (86,000 of inhabitants) was two times higher than the one of Katowice where only 43,000 people lived in 1910 (Jałowicki, 1998).

That dynamic demographic development was possible due to immigrants from the neighbouring agricultural regions. In the years of 1904 - 1908, 19,000 people settled in the town. The young municipal centre drew immigrants to work in industry and in accompanying services. According to J. Ziółkowski (1960) increase of population in the period of 1886–1914, caused by migration, was ten times higher than the population level in 1886. The immigration character of the town was also confirmed by proportions of population recorded in 1911 as "permanent inhabitants" – approximately 20,000 and "temporary inha-



bitants" – approximately 79,000. Hence, immigrants, i.e. people born outside Sosnowiec, made 3 of the town population in that time (Ziółkowski, 1960).

The outbreak of the I World War caused a slowdown of the process of intensive immigration of rural inhabitants to an industrial centre, characteristic feature of industrialization and urbanization. Since 1914 significant decrease of population was observed, announcing demographic recession in the post-war period. During the first year of the war, the number of inhabitants in Sosnowiec decreased by more than a half (from 118,475 persons in January to 51,854 persons in October), which can be explained by transfer of workers to the Silesian industrial centers (in German territory) and exodus of the inhabitants to the neighbouring villages to avoid hunger. In the years of 1915 - 1916 the number of Sosnowiec inhabitants increased again to 69,957 persons, but it was due to territorial changes as new sections: Konstantynów, Modrzejów, Milowice, Zagórze were incorporated into the town .

According to the census of 1921, population in the mid-wars period began from 86,497 inhabitants and it was systematically, growing annually by 2.4 thousands. Such tempo of development lead to the level of 129,610 inhabitants in 1939. In the first 10 years of the mid-wars period population of Sosnowiec increased by about 17,000 (103,441 in 1930). During the next 9 years the increase was more intensive and reached over 27,000 in 1939 (149,8%). The pre-war level of population was reached in 1936 (over 118,000) and during the next 3 years the demographic potential was increased by 10,000 inhabitants. The curve of the demographic development presented in Fig. 1 shows that its dynamics was lower than in the period of 1886–1914, characterized by intensive industrialisation and urbanisation, which caused mean annual increase of population equal to approximately 4 thousand inhabitants. Nazi occupation (1939–1945) caused significant transformation of the inhabitants potential in Sosnowiec. Warfares, extermination of Poles and Jews, displacements and leavings, hard living conditions, German population politics (the ban of marriages) were reflected in the nation state and structure. The loss of town inhabitants due to the above mentioned war conditions was equal to 15,000 in 1940. It was not compensated with migration of Germans from the Reich and Volksdeutsches from Silesia. During the next year of the Nazi occupation, concentration of Jews from Zagłębie (27,583 persons) and migration of German citizens increased population up to 118,131 inhabitants, which was drastically decreased in 1942 by 7,000 of Poles and 7,000 of Jews and in 1943 by 20,000 of Jews (the whole Jewish population). In that time, 7,000 of Germans arrived to Sosnowiec. In 1944, the increase of population of the discussed town was also caused by arrival of representatives of other the nationalities, i.e. English prisoners and Italian and French workers (Ziółkowski, 1960).

The level of population at the end of 1946 showed great decrease of population (77,834), which occurred during Nazi occupation, as its population befo-

re the war had been equal to 129,610 inhabitants (January 1939). Hence, the decrease was significant, reaching 33.2%. Demographic development of Sosnowiec, which was recorded in the period since 1886 till 1946, was characterised by irregularity. 2 peaks and 2 depressions of population may be distinguished in it. The first peak appeared before the I World War (1914), being the result of cumulated dynamics of the steel and coal industry, which created Sosnowiec the main industrial centre in Zagłębie Dąbrowskie. The second demographic peak was reached by population of the investigated town before the II World War. In that time it became the most important industrial, trade and cultural centre in Kielce Province, becoming its unofficial capital and the economic centre of Zagłębie Dąbrowskie (Szajnowska-Wysocka, 2003).

Demographic depressions in Sosnowiec were very specific, as they reached the level of population approximately 86,000 in three years after both World Wars (1921, 1948) as the wars caused abrupt decrease of population and disturbed its development dynamics. Proper functioning of the municipal organism and normalisation of the demographic situation did not occur before complete reconstruction of the economic base (Rosset, 1975).

Demographic development of the town after the II World War was influenced by many factors: post-war compensation with a high birth-rate in the range of 16,6% – 11,6% (1953–1958), 6-years investment plan of the country industrialisation and urbanisation and also administrative changes (Knobelsdorf, 1960; Frąckiewicz, 1969).

The part of the curve modeling demographic development in the period of 1947–1975 shows the points of the highest real increase of the birth-rate. Already in 1951, significant growth of population, in relation to the previous year – above 9,000, could be observed. In that time the post-war Sosnowiec reached the level of 100,000 inhabitants. Since that time the population of Sosnowiec was growing systematically, 1–2 thousands annually, due to the natural birth – rate at the approximate level of 10%. The higher growth was observed only in 1960 (131,600 inhabitants) caused by incorporation of two neighbouring sections: Bór and Jęzor. Not before 15 years after the war, the population of 1939 was reached (129,600). Further 13 years (1961–1973) dynamised the demographic development only by 20% (Jelonek, 1986).

Significant changes in the town population were caused by the administration reform of the country in 1975. In 1975, the following, neighbouring villages were incorporated to the town as its sections: Porąbka, Kazimierz, Klimontów, Ostrowy Górnicze and Maczki. It increased the population of the town by 47,300 inhabitants. It should be emphasised that the added amount was equal to more than 50% of the town population in 1948.

Further analysis of the demographic curve enables to indicate characteristic points and trends in population development since the administration reform in 1975 till now (Fig. 1). They are as follows:



- the years 1975–1982 – tendency to increase population, which reached the maximum in 1982 (255,9000). The growth was created by great migration of people towards a vast labour market developed by investments in industry in Zagłębie Górnośląskie (Upper Silesia Coal Basin) and consequent settling of newly built housing estates (Frąckiewicz, 1980, 1983; Szajnowska-Wysocka, 1999). The second factor, apart from immigration, which caused the growth of population was high birth-rate. It reached the highest value (1995 persons i.e. 7.8%) in 1982. Such increase was stimulated by the general all-country tendency caused by entering the post-war age groups into a progenitive period (Jelonek, 1992),
- 1983 – the first symptoms of the population decrease (by 2%),
- the years of 1987–1991 – five-year period when population stabilised at the level of approximately 260,000, reaching the maximum in 1987.
- 1991 – the turning year, since then decrease of the population has been observed, as decreasing, natural and migration movements and changes of the demographic structure (high coefficient of feminization and aging of the society) started the demographic regress all-over the country. Apart from that population has also been influenced by the political system changes (liquidation of large industrial plants, activation of private enterprises and structural unemployment).

Generally, it may be stated that the seventies were the years of population growth in Sosnowiec, in the eighties its level stabilised, while in the nineties significant decrease of population was observed due to a negative birth-rate and migration. The extensive phase of the population development has ended and Sosnowiec is losing its leading position in demographic changes in the Silesia conurbation.

According to the thesis, that population structures and processes reflect social and economic changes in the country and regional scale, then run of the demographic development curve, which is noting the data since 1886, shows conditions which created municipal organism of the discussed industrial centre (Frąckiewicz, 1992; Szajnowska-Wysocka, 1999). Its population development started with founding the first coal mines and it was close in time to the other industrial towns in the region, e.g. Chorzów, Bytom. Till the II World War, Sosnowiec was the largest town in Zagłębie Dąbrowskie and its strongest industrial and trade centre. It was also its unofficial capital city (Szajnowska-Wysocka, 2003). In further years, till the seventies the town was recovering from the loss caused by the war and the pre-war state was reached in 1960. In the period of administration reform since 1975, an average population dynamics was recorded at approximately 17,000 in the 13-year period (1960–1973). After the reform, due to incorporation of the neighbouring villages, the population of Sosnowiec significantly increased. Its further development was dynamised by two natural components of the real growth; increase of the birth-rate and migra-

tion stimulated by investments in industry in Zagłębie Dąbrowskie, i.e. Katowice Steel Works built in the closest vicinity of Sosnowiec (Frąckiewicz, 1982, 1983).

Obviously economic, social and ecological consequences following the change of the political system appear on the demographic curve of the analysed town. The signs of a demographic crisis emphasised by the all-country population trend determined by the low phase of the demographic cycle are clearly visible (Okólski, 1990).

## REFERENCES

- Bytnar-Suboczowa, M.** 1955: Zagadnienia ludnościowe na Górnym Śląsku w latach 1914–1950. In: Wrzosek A., editor, *Górny Śląsk*, Kraków: Wydawnictwo Literackie, pp. 307–343.
- Frąckiewicz, L.** 1969: Wpływ industrializacji i urbanizacji na procesy demograficzne województwa katowickiego. In: Rybicki P., editor, *Spoleczno-ludnościowe zagadnienia urbanizacji*, t. VII, Katowice: ŚIN, pp. 212–220.
- Frąckiewicz, L.** 1977: Demograficzno-społeczny rozwój regionów gospodarczych województwa katowickiego w latach 1960–1970. *Górnośląskie Studia Socjologiczne*, t. 12, Katowice: ŚIN, pp. 52–98.
- Frąckiewicz, L.** 1980: Przeobrażenia demograficzno-społeczne w aglomeracji górnośląskiej. *Zeszyty KBRU*, No. 75, pp. 162–176.
- Frąckiewicz, L.** 1982: Problemy społeczne Górnośląskiego Okręgu Przemysłowego. *Problemy polskiej przestrzeni, Biuletyn KPZK PAN*, z. 118.
- Frąckiewicz, L.** 1992: *Kwestie społeczne regionu wysoko uprzemysłowionego*, Katowice: Fundacja Wspierania Śląskiej Humanistyki.
- Frąckiewicz, L.** 1994: Społeczne konsekwencje restrukturyzacji na przykładzie regionu śląskiego. *Społeczne skutki restrukturyzacji przemysłu*, Warszawa: Wydawnictwo Sejmowe, pp. 77–86.
- Heffner, K.** (editor) 1990: Przebieg procesów depopulacyjnych na Opolszczyźnie. *Procesy wyludniania wsi w regionie opolskim*, Opole: Instytut Śląski, pp. 91–110.
- Heffner, K.** 1991: *Śląsk Opolski. Proces przekształceń ludnościowych i przestrzennych systemu osadnictwa wiejskiego*, Opole: Instytut Śląski.
- Heffner, K.** 1992: Realcja między regionami: Śląsk Opolski a Górny Śląsk. In: Lesiuk W., *Region jako przyszła struktura europejska*. Materiały polsko-niemieckiego sympozjum, Opole: Państwowy Instytut Naukowy.
- Jacimirski, J.** 1967: Ludność aglomeracji górnośląskiej, *Górnośląskie Studia Socjologiczne*, t. 7, Katowice: ŚIN, pp. 221–226.
- Jacimirski, J.** 1973: Zmiany struktury demograficznej województwa katowickiego w Polsce Ludowej. *Zeszyty Naukowe WSE*, No 2/47, pp. 139–160.
- Jałowicki, B.** 1970: Struktura społeczno-przestrzenna miast Górnośląskiego Okręgu Przemysłowego. *Studia Socjologiczne*, nr 3.
- Jałowicki, B.** 1985: Niektóre problemy rekonstrukcji przestrzeni społecznej Górnośląskiego Okręgu Przemysłowego. *Górnośląskie Studia Socjologiczne*, t. 18, s. 24–24.



- Jalowiecki, B.** 1998: Śląsk jako problem europejski. *Śląsk–Polska–Europa. Zmieniające się społeczeństwo w perspektywie lokalnej i globalnej*, Katowice: Wydawnictwo Uniwersytetu Śląskiego.
- Jelonek, A.** 1956: Liczba ludności miast i osiedli w Polsce w latach 1810–1955. *Dokumentacja Geograficzna*, pp. 16–18, 43.
- Jelonek, A.** 1986: Ruch naturalny ludności w Polsce w latach 1948–1984. *Dokumentacja Geograficzna IG i PZ PAN.*, z. 6.
- Jelonek, A.** 1992: Ruch naturalny ludności w Polsce w latach 1948–1988. *Prace Geograficzne Uniwersytetu Jagiellońskiego*, z. 92.
- Knobelsdorf, W.** 1960: Ludność województwa w latach 1945–1959. *Zaranie Śląskie*, z. 1a, pp. 114–131.
- Knobelsdorf, W.** 1970: Województwo katowickie na mapie demograficznej Polski Ludowej. Liczba i ruch naturalny. *Zaranie Śląskie*, z. 33, pp. 39–60.
- Kosiński, L.** 1955: Specyfika struktury demograficznej miast Górnośląskiego Okręgu Przemysłowego, Warszawa: Komitet ds. Urbanistyki i Architektury, z. 31 (maszynopis powielany).
- Kosiński, L.** 1958: Charakterystyka ludności GOP i przewidywana zmiana w jej liczbie, strukturze wieku i płci pod wpływem ruchu naturalnego do roku 1970, *Komitet PAN ds. GOP-u, Biuletyn No 16*.
- Liszewski, S.** 2002: Aglomeracja miejska – Geneza. Przemiany. In: Jażdżewska I., editor, *Współczesne formy osadnictwa miejskiego i ich przemiany, XV Konwersatorium wiedzy o mieście*, Łódź, pp. 21–34.
- Magda, K., Runge, J.** 1990: Demograficzno-społeczne aspekty rozwoju miast województwa katowickiego w latach 1975–1986. *Geographia. Studia et Dissertationes*, t. 14, Wyd. Uniwersytetu Śląskiego, pp. 136–162.
- Pulinowa, M.** 1992: Poznać–polubić–zrozumieć Sosnowiec. In: *Sosnowiec. Problemy ekologii, historii i kultury*, Sosnowiec: UM, pp. 7-18.
- Rajman, J.** 1977: Rozwój Górnośląskiego Zespołu Miejskiego. Wybrane problemy osadnicze i społeczno-demograficzne. *Rocznik Naukowo-Dydaktyczny WSP*, Kraków, z. 62, pp. 5–21.
- Rajman, J.** 1994: Tendencje rozwoju demograficznego miast województwa katowickiego w latach 1970–1990. *Prace Monograficzne WSP*, Kraków, t. 15, pp. 75–84.
- Rajman, J.** 1997: Struktura przestrzenna ludności i osadnictwa aglomeracji katowickiej w okresie transformacji gospodarczej. In: Korcelli P., editor, *Agglomeracje miejskie w procesie transformacji*, *Zeszyty IG i PZ PAN*, nr 46, pp. 39–52.
- Rauziński, R.** 1988: Przemiany demograficzne I migracje na Śląsku w latach 1945–1988. In: Lis M., editor, *Polska ludność rodzinna na Śląsku w okresie Polski Ludowej*, Opole: Instytut Śląski, pp. 207–229.
- Rechowicz, H.** 1977: W niepodległej Polsce burżuazyjnej w latach hitlerowskiej okupacji. In: *Sosnowiec – zarys rozwoju miasta*, Warszawa–Kraków: PWN, pp. 106–111.
- Rosset, E.** 1975: *Demografia Polski*, t. 1–2, PWN, Warszawa.
- Runge, A., Runge, J.** 2000: Wybrane tendencje przemian ludnościowych w największych miastach województwa śląskiego, In: Ślodziak J., editor, *Demograficzne i społeczne aspekty rozwoju miast*, Uniwersytet Opolski, pp. 25–36.
- Rykiel, Z., Szajnowska-Wysocka, A.** 1989: Preferencje migracyjne. In: Rykiel Z., editor, *Struktury i procesy społeczno-demograficzne w regionie katowickim*, *Prace Geograficzne IG i PZ PAN*, No 151, Wrocław: Ossolineum, pp. 41–59.

- Słodczyk, J.** 1987: *Przestrzenne powiązania migracyjne województw nadodrzańskich*, Opole: Instytut Śląski.
- Szajnowska, A.** 1979: Migracja ludności między miastami konurbacji górnośląskiej w okresie 1974–1976, *Prace Naukowe Uniwersytetu Śląskiego*, Katowice.
- Szajnowska, A.** 1980: *Rozmieszczenia ludności w konurbacji górnośląskiej*. KBRU PAN, Warszawa: PWN.
- Szajnowska-Wysocka, A.** 1989: Migracje ludności w konurbacji górnośląskiej. Synteza cyklu publikacji, *Geographia. Studia et Dissertationes*, t. 13, pp. 62–78.
- Szajnowska-Wysocka, A.** 1998: Przemieszczenia ludności górnośląskiej w okresie transformacji ustrojowej. In: Szymańska D., editor, *Ruchliwość przestrzenna ludności w okresie przemian ustrojowych*, Toruń: Uniwersytet M. Kopernika, pp. 201–213.
- Szajnowska-Wysocka, A.** 1999: Zachowania przestrzenne w konurbacji górnośląskiej. Synteza badawcza. *Prace Naukowe Uniwersytetu Śląskiego*, Katowice.
- Szajnowska-Wysocka, A.** 2000: Aspekty i walory metodologiczne zjawiska migracji. In: Szymańska D., editor, *Procesy i formy ruchliwości przestrzennej ludności w okresie transformacji ustrojowej*, Toruń: Uniwersytet M. Kopernika, pp. 27–36.
- Szajnowska-Wysocka, A.** 2003: Sosnowiec jako ośrodek przemysłu, kultury i nauki, *Prace Wydziału Nauk o Ziemi, Uniwersytetu Śląskiego*, Sosnowiec.
- Ziółkowski, J.** 1960: *Sosnowiec – drogi i czynniki rozwoju miasta przemysłowego*. Katowice: Wydawnictwo „Śląsk”, pp. 31–58, 83–121.

**CORRESPONDENCE TO:**

Alicja Szajnowska-Wysocka  
Department of Economic Geography  
Faculty of Earth Science, University of Silesia  
Będzińska 60, 41–200, Sosnowiec, Poland