

CENTRE FOR REGIONAL
AND LOCAL ANALYSES

REGIONAL INVESTMENT ATTRACTIVENESS 2013

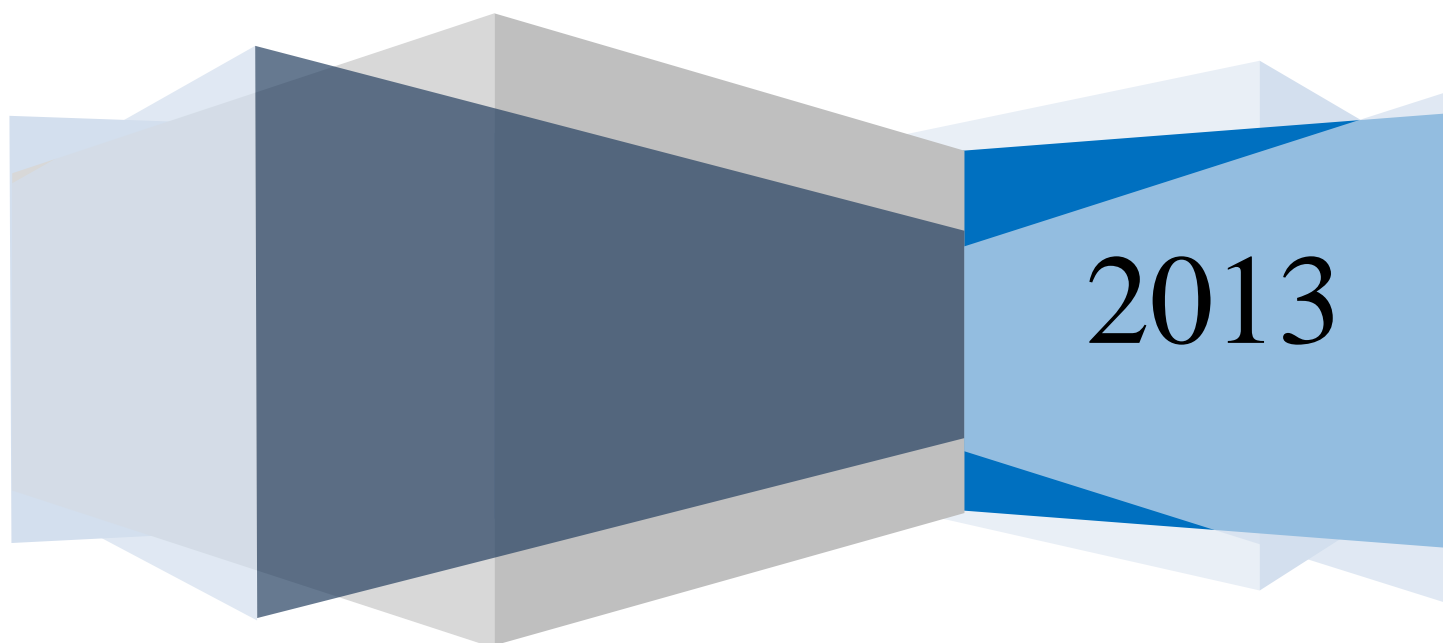
Lower Silesian Voivodship

Hanna Godlewska-Majkowska, Ph.D., *university
professor at the Warsaw School of Economics*

Agnieszka Komor, Ph.D.

Patrycjusz Zarębski, Ph.D.

Magdalena Typa, M.A.



Warsaw, October 2013

Introduction

This report has been prepared thanks to the application of results of scientific research conducted since 2002 by the Institute of Enterprise, Collegium of Business Administration of the Warsaw School of Economics (WSE), under the supervision of H. Godlewska-Majkowska, Ph.D., university professor at the WSE. All the Authors are the core members of a team that develops methodology of calculating regional investment attractiveness in order that characteristics of regions, which are important to investors, are captured as closely as possible, both in general terms and from a point of view of specificity of a given kind of business activity as well as a size of investment.

Potential investment attractiveness (PAI) indices measure the location-specific advantages of regions. In their simplified version they are calculated for territorial units of various levels of statistical division of the country (communes – Polish: *gmina*, counties – Polish: *powiat*, subregions, voivodships/regions). These are PAI1 indices, which refer to the whole regional/national economy (PAI1_GN) and selected sections: C – manufacturing industry, G – trade and repair, I – tourism and catering, M – professional, scientific and technical services.

Besides, some indices are calculated only for the voidoships, on the basis of characteristics available only on the regional or macroregional level which allows evaluating their investment attractiveness in a much broader context. These are PAI2 indices, which are calculated both from a general point of view and with reference to the above mentioned sections of the economy (PAI2_C, PAI2_G, PAI2_I, PAI2_M).

What is more, ranks of real investment attractiveness, which relates to the inflow of capital (in the form of investments) and the effects of investments considered from a point of view of productivity and returns on the outlays made, are used in this report.

The measurements in use are subject to annual review thanks to consulting them with foreign investor assistance institutions and direct contact to territorial self-government units as well as organizations of entrepreneurs. A description of methodological approach to measuring investment attractiveness of Polish regions, counties and communes can be found online on the website of the Centre for Regional and Local Analyses, which cooperates with the Institute of Enterprise: www.caril.edu.pl, as well as in numerous scientific publications and expert opinions.

1. The profile of regional economy of Lower Silesian (*dolnośląskie*) voivodship

Lower Silesian (*dolnośląskie*) voivodship belongs to the most attractive regions of Poland from investors' point of view.

Its advantages are:

- a very high level of economic development, significantly exceeding the national average,
- a highly beneficial geopolitical location by virtue of the proximity of Germany and the Czech Republic as well as an attractive location in view of sales markets of agglomerations of Prague, Berlin and Warsaw,
- very well-developed transport infrastructure (roads, railways, waterways, airways) and communications/telecomputer infrastructure:
 - convenient road connections: A4 highway, international roads: E40, E36, E65 and E67,
 - an expanded system of railways: international railways E30 and E59,
 - a well-developed network of water transport (the Oder system enables to ship by barges from Lower Silesia to the port complex of Szczecin-Świnoujście and through the Oder-Spree and Oder-Havel channels. Lower Silesia is connected to the system of inland waterways of Western Europe),
 - Copernicus Airport Wrocław in Wrocław-Strachowice offers international air connections with Frankfurt upon Main, Munich, London, Copenhagen, Milan, Dublin, Nottingham, Dortmund, Shannon, Glasgow, Liverpool, Stockholm, Cork and Rome,
 - a very good access to the Internet (in this respect the voivodship belongs to the highest rated regions in Poland),
- the presence of many higher education institutions among which there are many renowned Polish scientific establishments¹,
- rich cultural heritage (numerous monuments among which UNESCO World Heritage Sites: The Centennial Hall in Wrocław and the Churches of Peace in Świdnica and Jawor should be noted) and natural conditions (The Sudetes, Sudetian Foreland) set foundations for the development of tourist services,
- a high level of the development of industry which is reflected in the region's specialization in the modern kinds of industrial production (the manufacture of: means of transport, pharmaceuticals, consumer electronics, household appliances/ white and brown goods),
- highly developed agriculture, in particular plant production which is a foundation of the development of food processing,
- numerous locations of special economic zones offering favourable conditions of conducting a business to investors.

¹ In 2010 the Ministry of Science and Higher Education ranked among the best scientific establishments in Poland the following ones: Wrocław University of Technology (Faculty of Chemistry, Faculty of Mechanical Engineering, Faculty of Architecture, Faculty of Microsystem Electronics and Photonics), University of Wrocław (Faculty of Chemistry, Faculty of Biotechnology, Faculty of Mathematics and Computer Science, Faculty of Philology), Wrocław University of Economics (Faculty of Engineering and Economics, Faculty of Management, Computer Science and Finance, Faculty of Economics, Management and Tourism, the latter located in Jelenia Góra), Wrocław University of Environmental and Life Sciences (Faculty of Food Science, Faculty of Veterinary Medicine, Faculty of Biology and Animal Science) and Ludwik Hirszfeld Institute of Immunology and Experimental Therapy in Wrocław.

The general characteristics of the Lower Silesian voivodship are presented in Table 1.

Table 1. General characteristics of the economy of Lower Silesian voivodship

Feature	Lower Silesian voivodship	Poland	Share [%]
Market Potential			
GDP per capita 2010. (PLN/person)	41,750	37,096	-
Population (persons) on 31 December 2012	2,914,362	38,533,299	7.6
Human Resources Potential			
Higher education institutions graduates (persons) in 2012	41,350	484,999	8.5
Secondary schools graduates (persons) in 2012	26,844	421,317	6.4
Number of employed persons on 31 December 2012	1,011,328	1,391,1203	7.3
Structure of employed persons 2012	agriculture 8.7% industry 31.7% services 59.6%	agriculture 17.1% industry 27.4% services 55.5%	
Investment outlays and capital of companies with foreign capital participation in the voivodship			
Investment outlays (PLN m) in 2011	5,759.6	73,704.4	7.8
Capital of companies (PLN m) in 2011	16,608.6	194,160.6	8.6
Special economic zones (SEZs) in the voivodship*			
<ul style="list-style-type: none"> – Kamienna Góra SEZ, subzones in: gm. Dobroszyce, gm. Gryfów Śląski, gm. Janowice Wielkie, gm. Kamienna Góra, gm. Lubawka, gm. Nowogrodzic, gm. Prusice, gm. Żmigród, m. Jawor, m. Jelenia Góra, m. Kamienna Góra, m. Lubań, m. Piechowice, m. Zgorzelec – Legnica SEZ, subzones in: gm. Chojnów, gm. Gromadka, gm. Legnickie Pole, gm. Miękinia, gm. Polkowice, gm. Prochowice, gm. Przemków, gm. Środa Śląska, m. Chojnów, m. Głogów, m. Legnica, m. Lubin, m. Złotoryja – Tarnobrzeg SEZ, subzone in: gm. Kobierzyce – Wałbrzych SEZ, subzones in: gm. Brzeg Dolny, gm. Bystrzyca Kłodzka, gm. Długołęka, gm. Góra, gm. Jelcz-Laskowice, gm. Kłodzko, gm. Kobierzyce, gm. Nowa Ruda, gm. Oława, gm. Strzegom, gm. Strzelin, gm. Syców, gm. Świdnica, gm. Twardogóra, gm. Wiązów, gm. Wołów, gm. Ząbkowice Śląskie, gm. Żarów, m. Bielawa, m. Bolesławiec, m. Dzierżoniów, m. Kłodzko, m. Kudowa-Zdrój, m. Nowa Ruda, m. Oleśnica, m. Oława, m. Piława Górna, m. Świdnica, m. Świebodzice, m. Wałbrzych, m. Wrocław 			
Distinguishing investment attractiveness ratings PAI_2 and RAI (class A, B and C)			
Potential investment attractiveness PAI_2	National economy class A Capital-intensive industry class A Labour-intensive industry class B Trade class A Tourism class A Education class A		
Real investment attractiveness RAI	National economy class A		

		Industry class A Trade class C Tourism class C Science and technical professional activity class A
Counties and communes distinguished according to the Potential Attractiveness Index for the national economy (PAI1_GN)		
Counties	Class A	Lubin, Polkowice, city of Legnica, Wrocław, city of Wrocław
	Class B	Zgorzelec, Jelenia Góra, Głogów, Świdnica, Wołów
Communes	Class A	Bolesławiec (1), Warta Bolesławiecka (2), Jawor (1), Karpacz (1), Kowary (1), Piechowice (1), Kamienna Góra (1), Lubań (1), Świeradów-Zdrój (1), Zawidów (1), Zgorzelec (1), Bogatynia (3), Złotoryja (1), Jelenia Góra (1), Głogów (1), Jerzmanowa (2), Chojnów (1), Lubin (1), Lubin (2), Rudna (2), Grębocice (2), Polkowice (3), Legnica (1), Bielawa (1), Dzierżoniów (1), Piława Górna (1), Duszniki-Zdrój (1), Kłodzko (1), Kudowa-Zdrój (1), Nowa Ruda (1), Polanica-Zdrój (1), Radków (3), Stronie Śląskie (3), Szczytna (3), Świdnica (1), Świebodzice (1), Strzegom (3), Żarów (3), Boguszków-Gorce (1), Szczawno-Zdrój (1), Wałbrzych (1), Oleśnica (1), Oława (1), Strzelin (3), Oborniki Śląskie (3), Brzeg Dolny (3), Czernica (2), Długołęka (2), Kąty Wrocławskie (3), Kobierzyce (2), Siechnice (3), Wrocław (1),
	Class B	Bolesławiec (2), Szklarska Poręba (1), Podgórzyn (2), Lubawka (3), Siekierczyn (2), Pieńsk (3), Góra (3), Kunice (2), Prochowice (3), Chocianów (3), Radwanice (2), Lądek-Zdrój (3), Jedlina-Zdrój (1), Ząbkowice Śląskie (3), Krośnice (2), Syców (3), Jelcz-Laskowice (3), Środa Śląska (3), Trzebnica (3), Wisznia Mała (2), Wołów (3), Sobótka (3),

Source: Authors' own calculations.

* On the above list and further in the report *gm.* is a Polish abbreviation for *gmina* – commune and *m.* is an abbreviation for *miasto* – city. If there is information *city* following the name of the county, it indicates a commune which has a status of a city and carries out county's tasks is mentioned (a city county). Otherwise the counties include more than one commune (land counties).

Additional information: (1) – urban commune, (2) – rural commune, (3) – urban-rural commune.

In 2010 Lower Silesian voivodship made a contribution of 8.5 % to the GDP of Poland. Calculated per capita, it amounted to PLN 41,750 with the average for Poland PLN 37,096. With this result the voivodship takes the second place in the country. The GDP growth rate in the voivodship in the years 2003-2010 amounted to 184.2% while the average for Poland amounted to 168%. In comparison with the whole country the structure of employment in the voivodship is characterised by a relatively high share of the service sector (59.6%) whereas a share of the agricultural and industrial sectors are respectively 8.7% and 31.7% (In comparison with the whole country the structure of employment in the voivodship is characterised by a relatively low share of the service sector (54.1%) whereas a share of the agricultural and industrial sectors are respectively 15.7% and 30.2% (Central Statistical Office, Regional Data Bank 2013).

The number of inhabitants of the voivodship amounts to 2,914,362 (as of 2013), which is 7.6% of the population of Poland. The age structure in the voivodship in 2012 was as follows: 14.0% of the population at pre-productive age, 64.8% at productive age and 18.2% at post-productive age (for Poland it was 18.3%, 63.9% and 17.8% respectively). The registered unemployment rate in the voivodship amounted to 12.9% in August 2013, compared to 13% in Poland. The average monthly gross wages and salaries in enterprises sector in the first half-year of 2013 amounted to PLN 3678.7, which is 97.6% of the average for Poland.

The main potential for human capital creation in the voivodship lies in 38 higher education institutions in which there are 155 thousand students studying, which makes up 9.2% of all students in Poland. Moreover, 6.9% of the secondary school students in the voivodship attend vocational schools and 7% attend technical schools.

The voivodship's strategic sectors mentioned in the strategy of regional development include above all: copper ore and brown coal mining and processing, extraction of rock mineral resources, manufacture of textiles, manufacture of food and beverages, manufacture of wooden products, manufacture of chemical products, production of machines and electrical appliances, production of machinery and electrical apparatus, manufacture of glassware and ceramics, production of components and motor vehicles parts.

Preferential conditions of conducting business activities are offered in the voivodship i.a. in the following special economic zones:

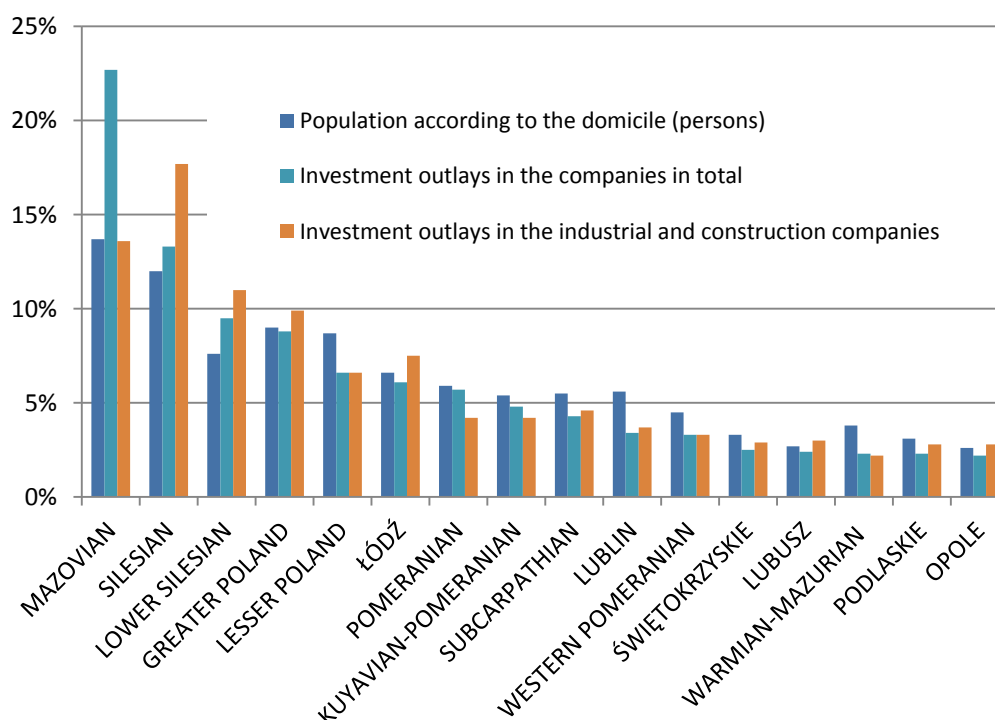
- Kamienna Góra SEZ, subzones in: gm. Dobroszyce, gm. Gryfów Śląski, gm. Janowice Wielkie, gm. Kamienna Góra, gm. Lubawka, gm. Nowogrodzic, gm. Prusice, gm. Żmigród, m. Jawor, m. Jelenia Góra, m. Kamienna Góra, m. Lubań, m. Piechowice, m. Zgorzelec,
- Legnica SEZ, subzones in: gm. Chojnów, gm. Gromadka, gm. Legnickie Pole, gm. Miękinia, gm. Polkowice, gm. Prochowice, gm. Przemków, gm. Środa Śląska, m. Chojnów, m. Głogów, m. Legnica, m. Lubin, m. Złotoryja,
- Tarnobrzeg SEZ, subzone: gm. Kobierzyce,
- Wałbrzych SEZ, subzones in: gm. Brzeg Dolny, gm. Bystrzyca Kłodzka, gm. Długoleś, gm. Góra, gm. Jelcz-Laskowice, gm. Kłodzko, gm. Kobierzyce, gm. Nowa Ruda, gm. Oława, gm. Strzegom, gm. Strzelin, gm. Syców, gm. Świdnica, gm. Twardogóra, gm. Wiązów, gm. Wołów, gm. Ząbkowice Śląskie, gm. Żarów, m. Bielawa, m. Bolesławiec, m. Dzierżoniów, m. Kłodzko, m. Kudowa-Zdrój, m. Nowa Ruda, m. Oleśnica, m. Oława, m. Piława Górna, m. Świdnica, m. Świebodzice, m. Wałbrzych, m. Wrocław.

2. Region's rank in terms of investment attractiveness in Poland and in the European Union

Lower Silesian voivodship is characterised by a very high level of overall investment attractiveness, which is indicated by the high rank (class A) according to the main potential investment attractiveness index calculated for the whole regional economy PAI 2_GN (see Chart 1 in the Appendix). The region was also ranked very high in terms of potential investment attractiveness calculated with use of PAI2 indices for the sections: capital-intensive industry (class A), labour-intensive industry (class A), trade and repair (class A), tourism (class A), professional, scientific and technical activities (class A).²

Investment attractiveness can also be evaluated on the basis of indices of real investment attractiveness (RAI), which are based on microclimates such as: return on tangible assets, labour productivity, self-financing of self-government territorial units and investment outlays. The region was ranked above the average in terms of RAI indices for the national economy (class A), industry (class A), trade and repairs (class C), tourism and gastronomy (class C) and professional, scientific and technical activities (class A) - see Table 2 in the Appendix. Potential and real investment attractiveness is reflected in the decisions of investors on business location. This is shown in Chart 1.

Chart 1. Regional structure of investment outlays in the companies in 2011 in comparison with the share in the country's population



Note: these are the most up-to-date data.

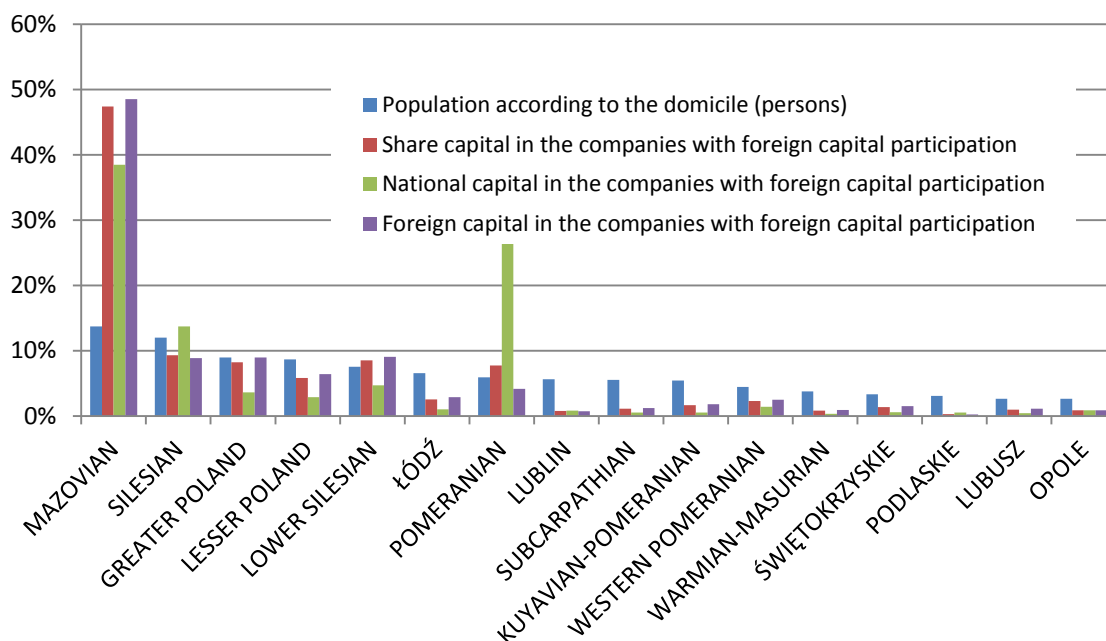
Source: Authors on the basis of the Local Data Bank (downloaded 13 October 2013).

² Section C – manufacturing industry, section G – trade and repair, section I – hotels and restaurants, section M – professional, scientific and technical activities. Methodological description of calculation of investment attractiveness of Polish regions, counties and communes can be found on the website of Institute of Entrepreneurship, Collegium of Business and Administration, Warsaw School of Economics: <http://kolegia.sgh.waw.pl/pl/KNoP/struktura/IP/publikacje>

According to this chart Lower Silesian voivodship is competitive on the investments market as its share in the national investment outlays is higher than its share in the country's population could suggest. This concerns investment outlays in industrial companies (market share of 10%). The region is also above the average in terms of setting up companies with foreign capital participation. In 2011 9% of all newly created firms in Poland were located in Lower Silesian voivodship.

An analysis of the size of accumulated capital in the companies with foreign capital participation leads to the same conclusion – see Chart 2.

Chart 2. Regional structure of capital in the companies with foreign capital participation in comparison with a share in population



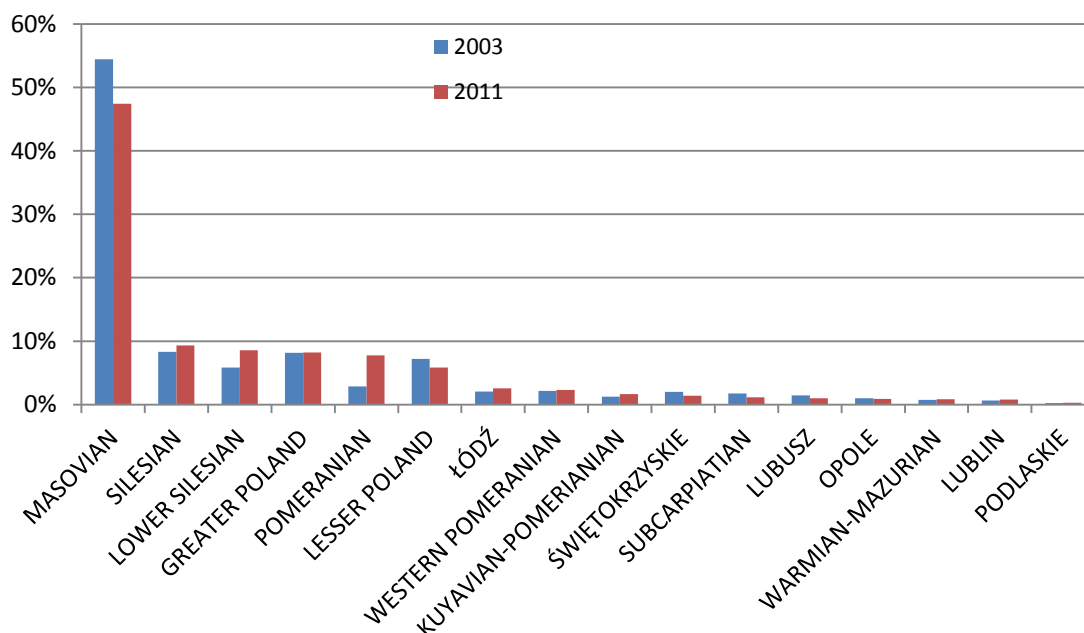
Note: These are the most up-to-date data.

Source: Authors on the basis of the Local Data Bank (downloaded 13 November 2013).

In 2011 Lower Silesian region took the third place in Poland in terms of accumulated share capital in the companies with foreign capital participation (an 8.6% share of its total value in all voivodships).

Lower Silesia is also characterised by a high increase in its competitiveness in terms of foreign direct investments, which is reflected in the fact that in the years 2003-2011 its market share measured with the value of foreign capital in the above mentioned companies rose from 5.8% to 8.6% (see Chart 3).

Chart 3. Regional competitive rank in terms of investments with foreign capital participation according to the value of share capital in the companies with foreign capital participation in 2003 and 2011 (% of total value for Poland)



Source: Authors on the basis of the Local Data Bank (downloaded 13 October 2013).

Lower Silesia region is not only attractive in comparison with other Polish regions, but also in comparison to the European ones. This is reflected by the results of research on investment attractiveness of the regions of the EU – see Table 2 in the Appendix.

Lower Silesia voivodship has competitive advantage when it comes to human capital, ranked class B. In the final classification the voivodship took the 184th place and was ranked class D, which is slightly below the EU average.

Lower Silesia is more attractive than regions like: **in Italy:** Valle d'Aosta/Vallée d'Aoste, Marche (NUTS 2006), Abruzzo, Campania, Umbria (NUTS 2006), Molise, Sardegna, Sicilia, Puglia, Basilicata, Calabria; **in Greece:** Kentriki Makedonia, Thessalia, Notio Aigaio, Kriti, Ionia Nisia, Ipeiros, Dytiki Ellada, Anatoliki Makedonia, Thraki, Sterea Ellada, Voreio Aigaio, Dytiki Makedonia, Peloponnisos; **in the United Kingdom:** Lincolnshire, West Wales and The Valleys, Cornwall and Isles of Scilly; **in the Czech Republic:** Střední Morava, Severozápad; **in Sweden:** Norra Mellansverige, **in Belgium:** Prov. Luxembourg (BE), **in Germany:** Sachsen-Anhalt, Lüneburg; **in France:** Bourgogne, Lorraine, Champagne-Ardenne, Basse-Normandie, Corse, Picardie, Poitou-Charentes; **in Spain:** Canarias, Illes Balears, Andalucía, Castilla-La Mancha, Extremadura; **in Slovenia:** Vzhodna Slovenija; **in Austria:** Burgenland (AT), **in Hungary:** Nyugat-Dunántúl, Közép-Dunántúl, Dél-Dunántúl, Észak-Magyarország, Dél-Alföld; Észak-Alföld; **in Portugal:** Região Autónoma da Madeira (PT), Algarve, Norte, Alentejo, Região Autónoma dos Açores and Centro (PT); **in Slovakia:** Západné Slovensko, Stredné Slovensko, Východné Slovensko; **in Bulgaria:** Severoiztochen, Severen tsentralen, Yugoiztochen, Yuzhen tsentralen oraz Severozapaden; **in Romania:** Vest, Nord-Vest, Centru, Sud-Est, Sud-Vest Oltenia, Nord-Est oraz Sud – Muntenia.

3. Internal diversification of regional investment attractiveness

Counties

The following counties are considered the most attractive in Lower Silesian voivodship: city of Wrocław, Polkowice county, city of Legnica, Lubin county, Wrocław county, city of Jelenia Góra, Zgorzelec county, Głogów county, Wołów county and Świdnica county – see Table 2.

Table 2. Potential investment attractiveness of counties of Lower Silesian voivodship for the national economy and selected sections

County	PAI1_GN	PAI1_GN	PAI1_C	PAI1_G	PAI1_I	PAI1_M
Wrocław (city)	0.367	A	A	A	A	A
Polkowice	0.354	A	A	A	A	A
Legnica (city)	0.318	A	A	A	B	A
Lubin	0.318	A	A	A	B	A
Wrocław	0.303	A	A	A	A	A
Jelenia Góra (city)	0.290	B	B	B	B	A
Zgorzelec	0.283	B	A	B	A	C
Głogów	0.281	B	B	B	C	B
Wołów	0.271	B	B	B	C	B
Świdnica	0.266	B	B	B	C	C

Source: Authors' own calculations.

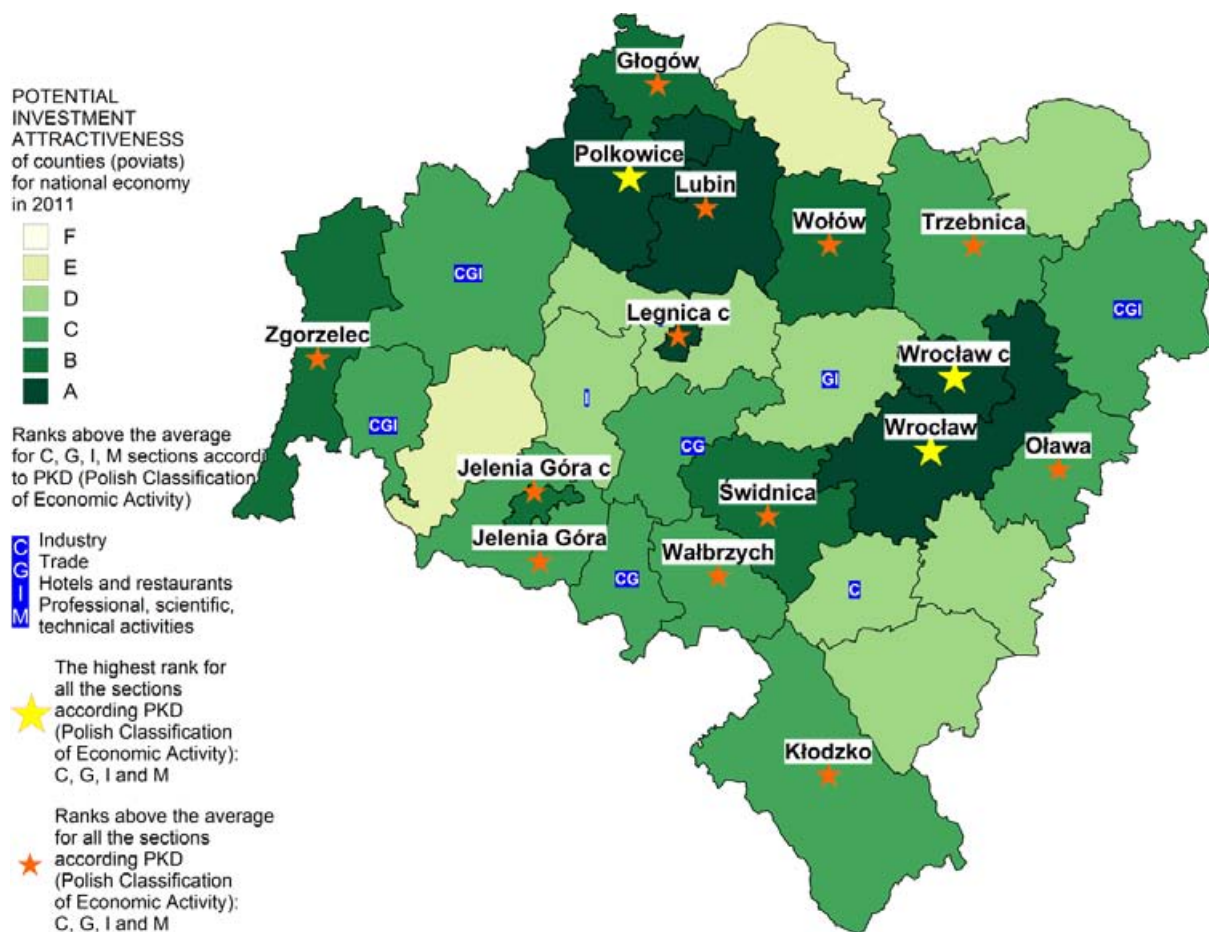
The counties mentioned above are characterized by very high and high investment attractiveness. The following counties should be distinguished: city of Wrocław, Polkowice county and Wrocław county as these units were ranked class A in their potential investment attractiveness for all sections of the national economy analysed in this research.

In reference to the sections mentioned below the following counties should be additionally distinguished (all of them are land counties):

- Oława, Wałbrzych, Bolesławiec, Kamienna Góra, Lubań, Trzebnica, Jawor, Oleśnica (class C) for section C,
- Jelenia Góra, Kłodzko, Oława, Wałbrzych, Kamienna Góra, Lubań, Trzebnica, Jawor, Oleśnica (class C) for section G,
- Oława, Wałbrzych, Trzebnica (class C) for section I and Jelenia Góra, Kłodzko, Oława, Wałbrzych, Trzebnica for section M.

Synthetic evaluation of potential investment attractiveness of counties of Lower Silesian voivodship is presented in Chart 4.

Chart 4. Spatial diversification of potential investment attractiveness of counties of Lower Silesian voivodship with consideration of the most attractive sections



Source: Authors' own materials.

Communes

Like counties, the Lower Silesian communes are also very much diversified in terms of investment attractiveness. The highest ranked communes are: Bolesławiec (1), Warta Bolesławiecka (2), Jawor (1), Karpacz (1), Kowary (1), Piechowice (1), Kamienna Góra (1), Lubań (1), Świeradów-Zdrój (1), Zawidów (1), Zgorzelec (1), Bogatynia (3), Złotoryja (1), Jelenia Góra (1), Głogów (1), Jerzmanowa (2), Chojnów (1), Lubin (1), Lubin (2), Rudna (2), Grębocice (2), Polkowice (3), Legnica (1), Bielawa (1), Dzierżoniów (1), Piława Górna (1), Duszniki-Zdrój (1), Kłodzko (1), Kudowa-Zdrój (1), Nowa Ruda (1), Polanica-Zdrój (1), Radków (3), Stronie Śląskie (3), Szczytna (3), Świdnica (1), Świebodzice (1), Strzegom (3), Żarów (3), Boguszów-Gorce (1), Szczawno-Zdrój (1), Wałbrzych (1), Oleśnica (1), Oława (1), Strzelin (3), Oborniki Śląskie (3), Brzeg Dolny (3), Czernica (2), Długołęka (2), Kąty Wrocławskie (3), Kobierzyce (2), Siechnice (3), Wrocław (1). It is also reflected in their high ranks (class A or B) for all the analyzed sections – see Table 3.

Table 3. Potential investment attractiveness of communes of Lower Silesian voivodship for the national economy and selected sections

Commune	PAI1_GN	PAI1_GN	PAI1_C	PAI1_G	PAI1_I	PAI1_M
Polkowice (3)	0.291	A	A	A	A	A
Wrocław (1)	0.283	A	A	A	A	A
Lubin (1)	0.280	A	A	A	B	A
Świdnica (1)	0.276	A	A	A	B	A
Zgorzelec (1)	0.276	A	A	A	A	A
Chojnów (1)	0.275	A	A	A	C	A
Bolesławiec (1)	0.273	A	A	A	A	A
Brzeg Dolny (3)	0.267	A	A	A	A	A
Głogów (1)	0.266	A	A	A	B	A
Złotoryja (1)	0.264	A	A	A	A	A
Oleśnica (1)	0.261	A	A	A	A	A
Legnica (1)	0.258	A	A	A	A	A
Jawor (1)	0.258	A	A	A	B	A
Kobierzyce (2)	0.256	A	A	A	A	A
Lubań (1)	0.255	A	A	A	A	A
Siechnice (3)	0.249	A	A	A	A	A
Oława (1)	0.247	A	A	A	B	A
Polanica-Zdrój (1)	0.247	A	A	A	A	A
Kłodzko (1)	0.246	A	A	A	B	A
Kamienna Góra (1)	0.243	A	A	A	B	A
Dzierżonów (1)	0.242	A	A	A	A	A
Jerzmanowa (2)	0.242	A	A	A	A	A
Świebodzice (1)	0.242	A	A	A	C	A
Lubin (2)	0.242	A	A	A	A	A
Duszniki-Zdrój (1)	0.241	A	A	A	A	A
Karpacz (1)	0.240	A	A	A	A	A
Rudna (2)	0.237	A	A	A	B	A
Stronie Śląskie (3)	0.236	A	A	B	A	A
Wałbrzych (1)	0.236	A	A	A	B	A
Szczawno-Zdrój (1)	0.235	A	A	A	A	A
Kudowa-Zdrój (1)	0.234	A	A	A	A	B
Kąty Wrocławskie (3)	0.232	A	A	A	A	A
Kowary (1)	0.232	A	A	A	A	A
Bogatynia (3)	0.231	A	A	A	A	B
Jelenia Góra (1)	0.231	A	A	A	A	A
Nowa Ruda (1)	0.229	A	A	B	D	A
Zawidów (1)	0.228	A	A	A	C	B
Grębocice (2)	0.228	A	A	A	C	B
Bielawa (1)	0.227	A	A	A	B	A
Strzegom (3)	0.227	A	A	A	B	B
Świeradów-Zdrój (1)	0.226	A	A	A	A	B
Strzelin (3)	0.225	A	A	A	B	B
Szczytna (3)	0.225	A	A	B	A	B
Piława Górna (1)	0.224	A	A	A	D	B

Boguszów-Gorce (1)	0.224	A	A	A	C	B
Długoleka (2)	0.223	A	A	A	A	B
Warta Bolesławiecka (2)	0.222	A	A	A	B	B
Czernica (2)	0.221	A	A	A	A	A
Radków (3)	0.220	A	A	B	A	B
Piechowice (1)	0.219	A	A	B	A	B
Oborniki Śląskie (3)	0.218	A	A	A	A	A
Żarów (3)	0.218	A	A	A	C	B
Lubawka (3)	0.216	B	B	A	B	B
Syców (3)	0.216	B	A	A	A	B
Środa Śląska (3)	0.216	B	B	B	B	B
Szklarska Poręba (1)	0.214	B	B	B	A	B
Kunice (2)	0.213	B	A	A	B	A
Jelcz-Laskowice (3)	0.213	B	B	B	C	A
Prochowice (3)	0.213	B	B	B	C	B
Lądek-Zdrój (3)	0.213	B	B	A	A	B
Bolesławiec (2)	0.213	B	B	B	A	B
Wołów (3)	0.212	B	B	B	B	B
Góra (3)	0.209	B	B	B	C	B
Sobótka (3)	0.205	B	B	B	B	B
Radwanice (2)	0.204	B	B	B	C	C
Siekierczyn (2)	0.204	B	B	B	B	C
Ząbkowice Śląskie (3)	0.204	B	B	B	D	B
Chocianów (3)	0.203	B	B	B	C	B
Pieńsk (3)	0.203	B	B	B	C	C
Trzebnica (3)	0.202	B	B	B	C	B
Wisznia Mała (2)	0.201	B	B	C	C	B
Jedlina-Zdrój (1)	0.200	B	B	C	B	B
Krośnice (2)	0.199	B	B	B	B	C
Podgórzyn (2)	0.198	B	B	C	A	B

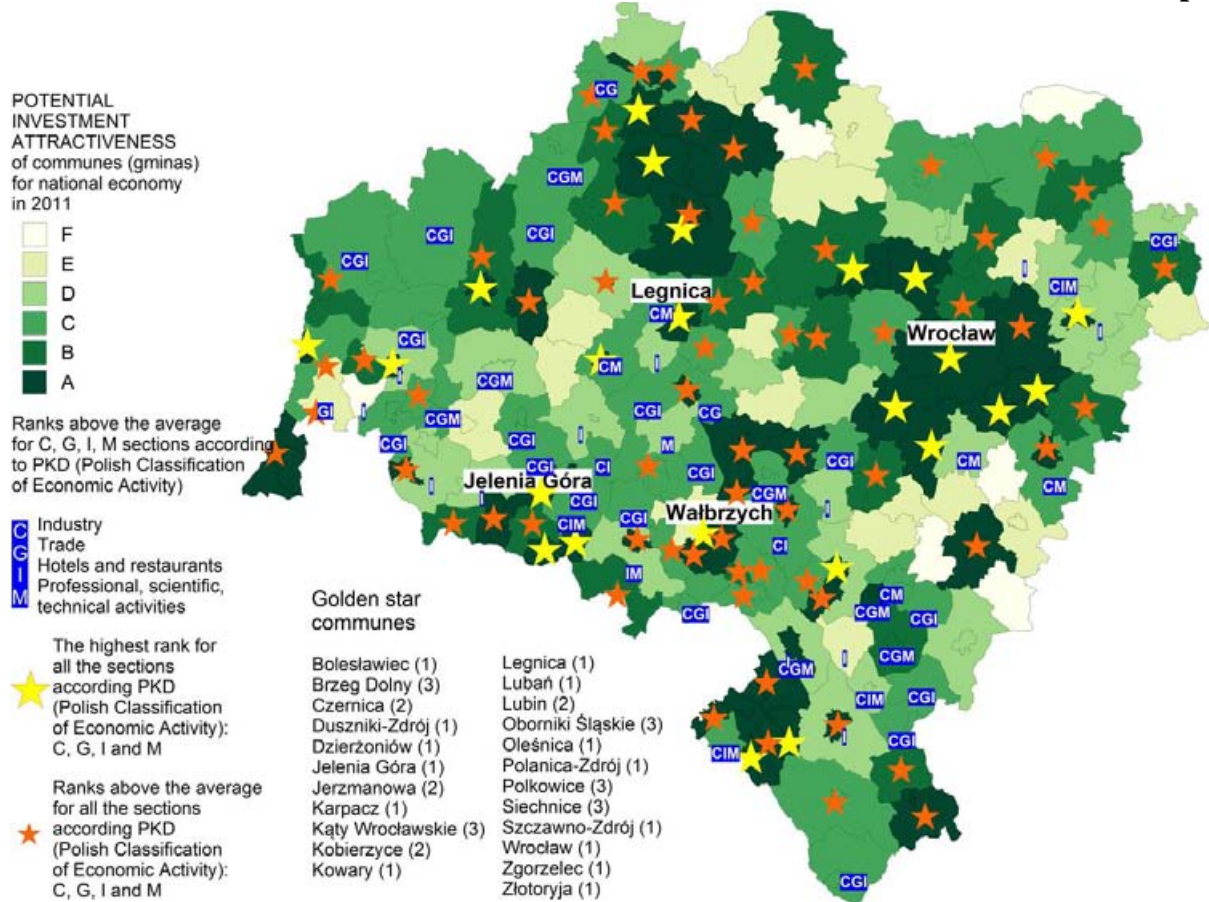
(1) – urban commune, (2) – rural commune, (3) – urban-rural commune

Source: Authors' own calculations.

Attractive communes are also the class B communes according to the PAI1_GN index. Among these communes are: Bolesławiec (2), Szklarska Poręba (1), Podgórzyn (2), Lubawka (3), Siekierczyn (2), Pieńsk (3), Góra (3), Kunice (2), Prochowice (3), Chocianów (3), Radwanice (2), Lądek-Zdrój (3), Jedlina-Zdrój (1), Ząbkowice Śląskie (3), Krośnice (2), Syców (3), Jelcz-Laskowice (3), Środa Śląska (3), Trzebnica (3), Wisznia Mała (2), Wołów (3), Sobótka (3). The location-specific advantages are also universal for these communes, which makes them attractive for all kinds of business activity concerned in this research. However, this characteristic cannot be found in all of the communes that belong to Class C. Only a few Class C communes fulfil this condition: Szczyrk (1), Buczkowice (2), Jasienica (2), Łodygowice (2), Węgierska Górka (2), Łazy (3), Ogrodzieniec (3) – see Table 3 in the Appendix.

In reference to the particular sections taken into consideration in this research the following communes of Class C should be distinguished:

-
- Gromadka (2), Nowogrodziec (3), Osiecznica (2), Bolków (3), Męcinka (2), Mściwojów (2), Jeżów Sudecki (2), Mysłakowice (2), Marciszów (2), Leśna (3), Olszyna (3), Gryfów Śląski (3), Lwówek Śląski (3), Wleń (3), Węgliniec (3), Wojcieszów (1), Złotoryja (2), Głogów (2), Żukowice (2), Miłkowice (2), Ścinawa (3), Gaworzyce (2), Przemków (3), Pieszyce (1), Niemcza (3), Bystrzyca Kłodzka (3), Lewin Kłodzki (2), Międzyzlesie (3), Jaworzyna Śląska (3), Świdnica (2), Głuszyca (3), Bardo (3), Ciepłowody (2), Kamieniec Ząbkowicki (2), Milicz (3), Dobroszyce (2), Międzybórz (3), Twardogóra (3), Oława (2), Malczyce (2), Miękinia (2), Żmigród (3), Mietków (2), Żórawina (2) – for section C,
 - Gromadka (2), Nowogrodziec (3), Bolków (3), Męcinka (2), Mściwojów (2), Janowice Wielkie (2), Podgórzyn (2), Marciszów (2), Leśna (3), Olszyna (3), Gryfów Śląski (3), Lwówek Śląski (3), Sulików (2), Węgliniec (3), Zgorzelec (2), Głogów (2), Żukowice (2), Ścinawa (3), Gaworzyce (2), Przemków (3), Pieszyce (1), Bystrzyca Kłodzka (3), Międzyzlesie (3), Dobromierz (2), Jaworzyna Śląska (3), Jedlina-Zdrój (1), Głuszyca (3), Walim (2), Ciepłowody (2), Kamieniec Ząbkowicki (2), Milicz (3), Twardogóra (3), Malczyce (2), Miękinia (2), Wisznia Mała (2), Żmigród (3), Mietków (2) – for section G,
 - Nowogrodziec (3), Męcinka (2), Kamienna Góra (2), Lubań (2), Olszyna (3), Platerówka (2), Zawidów (1), Pieńsk (3), Wojcieszów (1), Świerzawa (3), Głogów (2), Góra (3), Chojnów (1), Prochowice (3), Ścinawa (3), Chocianów (3), Gaworzyce (2), Grębocice (2), Radwanice (2), Pieszyce (1), Lewin Kłodzki (2), Nowa Ruda (2), Świebodzice (1), Żarów (3), Boguszów-Gorce (1), Głuszyca (3), Bardo (3), Kamieniec Ząbkowicki (2), Stoszowice (2), Milicz (3), Dobroszyce (2), Twardogóra (3), Jelcz-Laskowice (3), Malczyce (2), Miękinia (2), Trzebnica (3), Wisznia Mała (2), Zawonia (2), Żmigród (3), Mietków (2) – for section I,
 - Bolków (3), Paszowice (2), Mysłakowice (2), Kamienna Góra (2), Olszyna (3), Siekierczyn (2), Lwówek Śląski (3), Pieńsk (3), Zgorzelec (2), Legnickie Pole (2), Miłkowice (2), Ścinawa (3), Gaworzyce (2), Radwanice (2), Pieszyce (1), Niemcza (3), Bystrzyca Kłodzka (3), Lewin Kłodzki (2), Jaworzyna Śląska (3), Czarny Bór (2), Głuszyca (3), Walim (2), Bardo (3), Krośnice (2), Dobroszyce (2), Twardogóra (3), Oława (2), Malczyce (2), Miękinia (2), Żmigród (3), Żórawina (2) – for section M.
- Synthetic evaluation of potential investment attractiveness of communes of Lower Silesian voivodship is presented in Chart 5.

Chart 5. Potential investment attractiveness of communes of Lower Silesian voivodship

Source: Authors' own materials.

4. Voivodship's institutional support for investors and entrepreneurs

The development of business supporting institutions in a region is a vital component of its investment attractiveness. The institutions that support entrepreneurship, pro-investment solutions, research commercialization and enterprises' innovativeness are of special importance. Among the voivodship's business-supporting institutions that influence the voivodship's economic development the following ones should be mentioned (excluding scientific research institutions):

- chambers of commerce: The Lower Silesian Chamber of Craft (*Dolnośląska Izba Rzemieślnicza i Małej Przedsiębiorczości*) in Wrocław, The Legnica Chamber of Commerce and Industry (*Izba Przemysłowo – Handlowa w Legnicy*), The Sudetian Chamber of Commerce and Industry (*Sudecka Izba Przemysłowo-Handlowa*) in Świdnica, The Lower Silesian Chamber of Commerce (*Dolnośląska Izba Gospodarcza*) in Wrocław, Western Chamber of Commerce (*Zachodnia Izba Gospodarcza*) in Wrocław, The Lower Silesian Chamber of Tourism (*Dolnośląska Izba Turystyki*) in Wrocław, The Chamber of Craft and Small Entrepreneurship (*Izba Rzemieślnicza i Małej Przedsiębiorczości*) in Świdnica,
- associations (including business centres): Wrocław Technology Transfer Centre (*Wrocławskie Centrum Transferu Technologii*), Employers' Association POLSKA MIEDŹ S.A. (*Związek Pracodawców POLSKA MIEDŹ S.A.*) in Lubin, Foundation „*Wałbrzych 2000*” in Wałbrzych, Bolesławiec Economic Association (*Bolesławieckie Towarzystwo Gospodarcze*), Regional Employers' Association (*Regionalny Związek Pracodawców*) in Bolesławiec, „Free Entrepreneurship” Association branch (*Oddział Terenowy Stowarzyszenia „Wolna Przedsiębiorczość” Centrum Wspierania Biznesu*) in Świdnica, Association for Entrepreneurship Development (*Stowarzyszenie Rozwoju Przedsiębiorczości*) in Wrocław, Association for Promotion of Lower Silesia (*Stowarzyszenie na Rzecz Promocji Dolnego Śląska*) in Wrocław, Lower Silesian Employers' Association (*Związek Pracodawców Dolnego Śląska*) in Wrocław, Foundation in Support of Local Democracy Lower Silesian Centre (*Fundacja Rozwoju Demokracji Lokalnej Centrum Dolnośląskie*), BCC Lower Silesian Chamber (*Łoża Dolnośląska BCC*) Wrocław branch,
- business incubators: Lower Silesian Incubator for Entrepreneurship at Wrocław Technology Park Inc.,
- technology parks, science parks, industrial parks: Wrocław Technology Park Inc., Wrocław Medical Research – Technology Park,
- consulting centres (including personal consulting and agricultural consulting): Lower Silesian Consulting Centre (*Dolnośląski Ośrodek Doradztwa Rolniczego*) in Wrocław,
- financial institutions (guarantee funds): Lower Silesian Economic Fund LLC (*Dolnośląski Fundusz Gospodarczy Sp. z o.o.*) in Wrocław,
- others: Lower Silesian Regional Development Agency (*Dolnośląska Agencja Rozwoju Regionalnego S.A.*) in Szczawno Zdrój, Wrocław Regional Development Agency (*Wrocławska Agencja Rozwoju Regionalnego S.A.*), Regional Development Agency „AGROREG” Inc. (*Agencja Rozwoju Regionalnego „AGROREG” S.A.*) in Nowa Ruda, Karkonosze Regional Development Agency Inc. (*Karkonoska Agencja Rozwoju Regionalnego S.A.*) in Jelenia Góra, Lower Silesian Agency for Economic Cooperation (*Dolnośląska Agencja Współpracy Gospodarczej*) in Wrocław, Convention Bureau – Wrocław.

The Lower Silesian Chamber of Craft in Wrocław (*Dolnośląska Izba Rzemieślnicza i Małej Przedsiębiorczości we Wrocławiu*) is an organisation of craft economic self-

government, small and medium-sized business and federation of employers. It offers courses and trainings for youth and adults (including preparation for journeyman and craftsman exams). On the chamber's website offers of cooperation from craft enterprises and natural persons can be found (<http://www.izba.wroc.pl/>, as of 30 October 2013)

Wrocław Technology Transfer Centre (*Wrocławskie Centrum Transferu Technologii*) is an organizational unit of Wrocław University of Technology. Its activities concentrate on promotion of use of scientific research results in the modern economy as well as creating and supporting entrepreneurship. The services offered by the Centre are aimed at scientists as well as entrepreneurs (including the young ones who are starting their activity) and at research and business consortia. The Centre offers assistance when it comes to technology transfer, entrepreneurs' innovative activities, commercialization of scientific research results, academic entrepreneurship development and academic cooperation with foreign institutions. As a member of Enterprise Europe Network the centre offers a variety of services for entrepreneurs, i. a. looking for foreign partners in trade and technology. The Centre runs the Regional Contact Spot for EU Research Programmes, which facilitates scientists' and entrepreneurs' access to research projects and funding. (www.wctt.pl/, 30 October 2013)

Employers' Association POLSKA MIEDŹ S.A. (*Związek Pracodawców POLSKA MIEDŹ S.A.*). The Association is an autonomous organization of employers, not dependent from state administration, territorial self-government and other organizations. Currently the association is gathering more than 100 business entities from Lower Silesia, employing more than 30,000 persons. It is monitoring and giving opinions on legislative acts important for the economy, protecting the rights of employers and representing their interests. The Association also organizes trainings concerning i. a. management, business negotiations, selling techniques, marketing strategies, human resources, mediations and public relations. What is more, the Association organizes conferences and seminars on entrepreneurship development, occupational medicine in the market economy, finance and labour legislation. Employers' Association Polska Miedź is one of the creators of the Centre of Legislation Monitoring – an important instrument for the entrepreneurs that enables them to submit their comments on law acts that concern entrepreneurs' interests. (<http://www.pracodawcy.pl/>, 30 October 2013)

Foundation „Wałbrzych 2000” in Wałbrzych (*Fundacja „Wałbrzych 2000”*) aims at supporting the process of economic restructuring of the region of Wałbrzych and supporting abilities of democratic cooperation in the region. There is an Entrepreneurship Development Fund (*Fundusz Rozwoju Przedsiębiorczości*) functioning within the Foundation. Its financial assets allow to give loans for functioning and development of business activities for small entrepreneurs and for the unemployed people who are going to start their own business. There is also a Centre of Entrepreneurship Support which organizes courses, trainings and workshops for the people who want to improve their skills or gain new skills. (<http://www.walbrzych2000.pl/>, 30 October 2013)

Wrocław Technology Park Inc. (*Wrocławski Park Technologiczny S.A.*) is targeted at hi-tech enterprises, laboratories and R&D centres. The Park offers office space renting, conference space and living rooms, laboratories, prototype rooms as well as IT and consulting services. It also houses an alimentation-biotechnology-biomedical cluster NUTRIBIOMED, the Lower Silesian Academic Entrepreneurship Incubator (*Dolnośląski Akademicki Inkubator Przedsiębiorczości*) and a kindergarten. (<http://www.technologypark.pl/>, 30 October 2013)

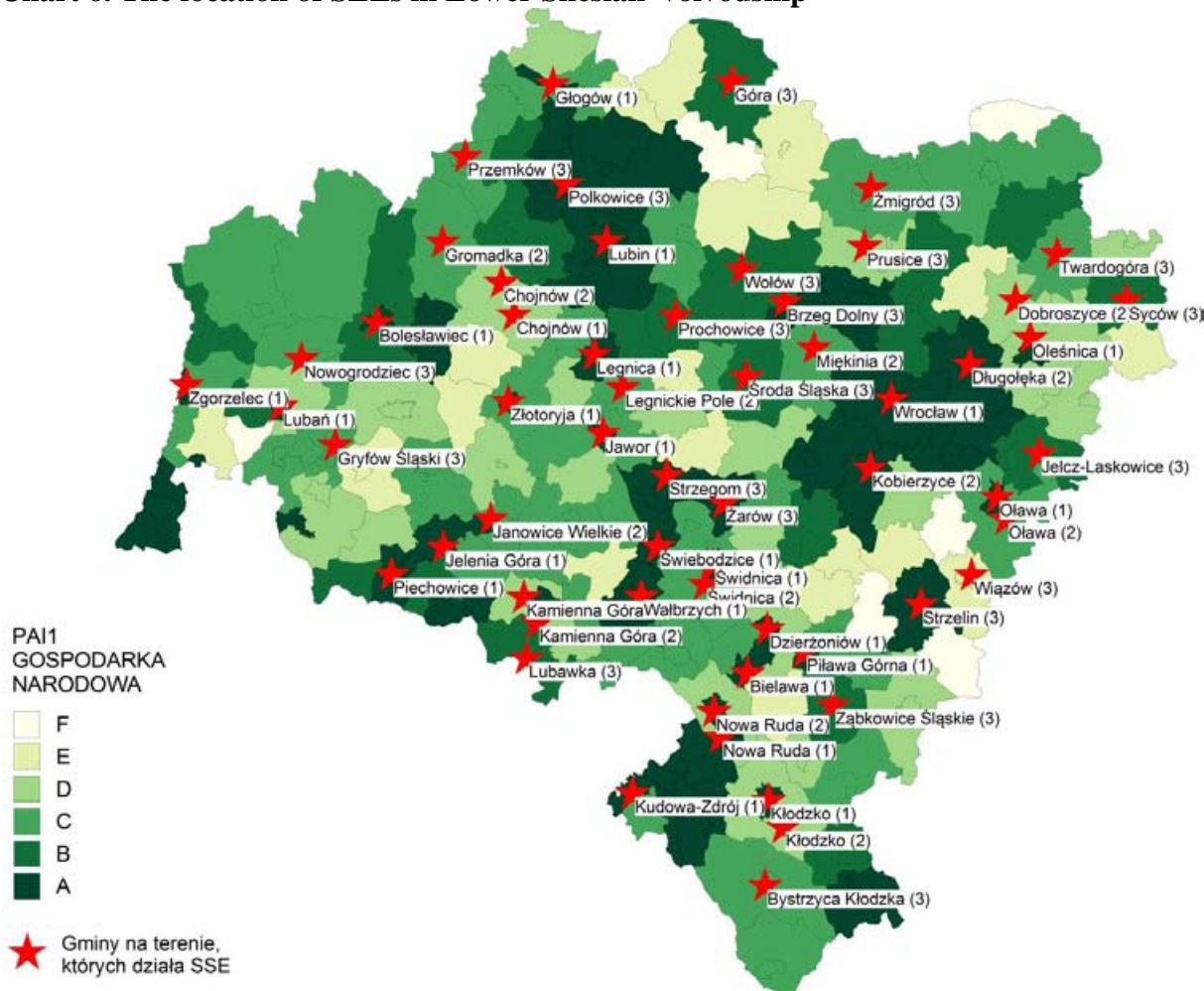
Wrocław Medical Research – Technology Park (*Wrocławski Medyczny Park Naukowo – Technologiczny*) offers office space for firms operating in medical IT and technological branches as well as consulting services that concern raising EU funds, running a business, copyrights, patent law, licenses and management of knowledge transfer between business and science (The Centre for Business and Patent Consulting - *Centrum Doradztwa Biznesowego i Patentowego*). The Park oversees research in the fields of diagnostics, pharmaceuticals and other innovations, which are conceived in Wrocław universities and their commercialisation by acquiring business partners. The Park has initiated and coordinated the All-Poland e-HEALTH cluster (*Ogólnopolski Klaster e-ZDROWIE*) cluster (which promotes hi-tech ICT technologies in healthcare management and telemedical patient care support). The Park runs an Academic Innovation Incubator project, which helps establishing enterprises in IT and medical industries and a project of the Academic Entrepreneurship Incubator, which creates conditions for creation and functioning of companies run by graduates and research staff. The Park intends to create a Medical Centre for Data Processing dedicated to medical data and applications (opening planned for 2014). As parts of the project also e-learning laboratory and telemedical laboratory will be established which should enable enterprises (including spin-off companies set up by academic workers) (www.parkmedyczny.pl/, 30 October 2013)

Lower Silesian Regional Development Agency Inc. in Szczawno Zdrój (*Dolnośląska Agencja Rozwoju Regionalnego S.A. Szczawno Zdrój*) offers its services by the Local Consultation Point for Medium and Small Enterprises, the Regional Operational Programme Information and Contact Point and the Enterprise Europe Network Centre. They offer information and consulting services. The Agency is also a manager of Lower Silesian Technology Park. (<http://www.darr.pl/pl/1/>, 30 October 2013)

Special economic zones in Lower Silesian voivodship – effects

There are four special economic zones (SEZs) in Lower Silesian voivodship: Kamienna Góra SEZ, Legnica SEZ, Tarnobrzeg SEZ and Wałbrzych SEZ. At the end of 2012 the areas of the SEZs were parts of 24 cities and 34 communes (there are 2 zones in the area of Koberzyce – Wałbrzych SEZ and Tarnobrzeg) – see Chart 6.

Chart 6. The location of SEZs in Lower Silesian voivodship



Note: Red stars indicate communes with SEZ subzones within their areas.

Source: Authors' own calculations.

The first SEZ areas were brought into life in 1997. The investment outlays made by SEZ companies operating in the communes of Lower Silesia by the end of 2012 amounted to PLN 23 billion, which made 27% of all investment outlays made in the Polish SEZs. In the same time the SEZ companies in the region created 46.5 thousand new jobs which made 25% of all jobs created in the Polish SEZs (see Table 4).

Table 4. Effects of special economic zone functioning at the end of 2012

SEZ / Subzone	County, Commune	Leading industries (at least 20% share of revenue or employment)	Cumulated capital expenditure in million PLN (end of 2012)	Jobs number (end of 2012)
Wałbrzych / Bolesławiec	Bolesławiec, Bolesławiec (1)	rubber and plastic products, fabricated metal products (except machinery and equipment)	179.54	377
Legnica / Krzywa	Bolesławiec, Gromadka (2)	machinery and equipment n.e.c., food products	178.56	313
Kamienna Góra / Nowogrodzic	Bolesławiec, Nowogrodzic (3)	publishing services	1 143.72	1,854
Kamienna Góra / Jawor	Jawor, Jawor (1)	no investors yet		
Kamienna Góra / Piechowice	Jelenia Góra, Piechowice (1)	paper and paper products, other non-metallic mineral products,	238.08	338
Kamienna Góra/ Janowice Wielkie	Jelenia Góra, Janowice Wielkie (2)	rubber and plastic products	89.49	677
Kamienna Góra/ Kamienna Góra	Kamienna Góra, Kamienna Góra (1)	other non-metallic mineral products, motor vehicles (excluding motorcycles), trailers and semi-trailers	84.32	581
Kamienna Góra/ Kamienna Góra	Kamienna Góra, Kamienna Góra (2)	motor vehicles (excluding motorcycles), trailers and semi-trailers	199.46	530
Kamienna Góra/ Lubawka	Kamienna Góra, Lubawka (3)	textile products	14.76	261
Kamienna Góra/ Lubań	Lubań, Lubań (1)	fabricated metal products (except machinery and equipment), machinery and equipment n.e.c.	23.90	213
Kamienna Góra/ Gryfów Śląski.	Lwówek, Gryfów Śląski (3)	no investors yet		
Kamienna Góra/ Zgorzelec	Zgorzelec, Zgorzelec (1)	fabricated metal products (except machinery and equipment)	3.70	
Legnica / Złotoryja	Złotoryja, Złotoryja (1)	rubber and plastic products, computers, electronic and optical products	53.82	154
Kamienna Góra/ Jelenia Góra	Jelenia Góra (city), Jelenia Góra (1)	other non-metallic mineral products	4.35	
Legnica / Głogów	Głogów, Głogów (1)	no investors yet		
Wałbrzych / Góra	Góra, Góra (3)	fabricated metal products (except machinery and equipment)	0.80	2
Legnica / Chojnów	Legnica, Chojnów (1)	machinery and equipment n.e.c., other individual services	47.49	149
Legnica / Chojnów	Legnica, Chojnów (2)	no investors yet		
Legnica / Legnickie	Legnica, Legnickie Pole (2)	fabricated metal products	433.54	672

Regional investment attractiveness 2013

Pole		(except machinery and equipment), motor vehicles (excluding motorcycles), trailers and semi-trailers		
Legnica / Prochowice	Legnica, Prochowice (3)	wood, wood and cork products, except furniture; articles of straw and plaiting materials	10.67	35
Legnica / Lubin	Lubin, Lubin (1)	no investors yet		
Legnica / Polkowice	Polkowice, Polkowice (3)	motor vehicles (excluding motorcycles), trailers and semi-trailers	3,156.65	3,753
Legnica / Przemków	Polkowice, Przemków (3)	no investors yet		
Legnica / Legnica	Legnica (city) Legnica (1)	rubber and plastic products, fabricated metal products (except machinery and equipment), motor vehicles (excluding motorcycles), trailers and semi-trailers	1,291.02	3,486
Wałbrzych / Bielawa	Dzierżoniów, Bielawa (1)	fabricated metal products (except machinery and equipment)	1.53	
Wałbrzych / Dzierżoniów	Dzierżoniów, Dzierżoniów (1)	chemicals and chemical products. rubber and plastic products .	712.44	1,929
Wałbrzych / Pilawa Górna	Dzierżoniów, Pilawa Górna (1)	no investors yet		
Wałbrzych / Kłodzko	Kłodzko, Kłodzko (1)	electrical and non-electrical household appliances	243.07	876
Wałbrzych / Kudowa Zdrój	Kłodzko, Kudowa-Zdrój (1)	fabricated metal products (except machinery and equipment)	13.74	104
Wałbrzych / Nowa Ruda	Kłodzko, Nowa Ruda (1)	rubber and plastic products, electrical and non-electrical household appliances.	53.03	226
Wałbrzych / Bystrzyca Kłodzka	Kłodzko, Bystrzyca Kłodzka (3)	no investors yet		
Wałbrzych / Kłodzko	Kłodzko, Kłodzko (2)	no investors yet		
Wałbrzych / Nowa Ruda	Kłodzko, Nowa Ruda (2)	electrical and non-electrical household appliances	9.35	
Wałbrzych / Świdnica	Świdnica, Świdnica (1)	chemicals and chemical products, electrical and non-electrical household appliances	962.20	2,119
Wałbrzych / Świebodzice	Świdnica, Świebodzice (1)	machinery and equipment n.e.c.	31.31	51
Wałbrzych / Strzegom	Świdnica, Strzegom (3)	food products	70.04	22
Wałbrzych / Świdnica	Świdnica, Świdnica (2)	no investors yet		
Wałbrzych / Żarów	Świdnica, Żarów (3)	chemicals and chemical products. electrical and non-electrical household	919.04	1,828

		appliances, machinery and equipment n.e.c.		
Wałbrzych / Wałbrzych	Wałbrzych, Wałbrzych (1)	motor vehicles (excluding motorcycles), trailers and semi-trailers	4,066.32	6,096
Wałbrzych / Ząbkowice Śląskie	Ząbkowice Śląskie, Ząbkowice Śląskie (3)	wood, wood and cork products, except furniture; articles of straw and plaiting materials	19.66	26
Wałbrzych / Oleśnica	Oleśnica, Oleśnica (1)	no investors yet		
Kamienna Góra/ Dobroszyce	Oleśnica, Dobroszyce (2)	no investors yet		
Wałbrzych / Syców	Oleśnica, Syców (3)	no investors yet		
Wałbrzych / Twardogóra	Oleśnica, Twardogóra (3)	no investors yet		
Wałbrzych / Oława	Oława, Oława (1)	paper and paper products. electrical and non-electrical household appliances	1,090.32	1,571
Wałbrzych / Jelcz Laskowice	Oleśnica, Jelcz-Laskowice (3)	motor vehicles (excluding motorcycles), trailers and semi-trailers	1,486.48	2,652
Wałbrzych / Oława	Oleśnica, Oława (2)	other non-metallic mineral products, storage and support activities for transportation	124.80	98
Wałbrzych / Strzelin	Strzelin, Strzelin (3)	machinery and equipment n.e.c.	84.66	93
Wałbrzych / Wiązów	Strzelin, Wiązów (3)	paper and paper products	2.61	2
Legnica / Środa Śląska - Miękinia	Środa Śląska, Miękinia (2)	no investors yet		
Legnica / Środa Śląska	Środa Śląska, Środa Śląska (3)	other non-metallic mineral products	312.03	749
Kamienna Góra/ Prusice	Trzebnica, Prusice (3)	no investors yet		
Kamienna Góra/ Żmigród	Trzebnica, Żmigród (3)	wood, wood and cork products, except furniture; articles of straw and plaiting materials. fabricated metal products (except machinery and equipment)	40.46	8
Wałbrzych / Brzeg Dolny	Wołów, Brzeg Dolny (3)	chemicals and chemical products	251.78	
Wałbrzych / Wołów	Wołów, Wołów (3)	rubber and plastic products	21.22	54
Wałbrzych / Długołęka	Wrocław, Długołęka (2)	motor vehicles (excluding motorcycles), trailers and semi-trailers	19.97	
Wałbrzych / Wrocław Kobierzyce	Wrocław, Kobierzyce (2)	computers, electronic and optical products	4,150.38	10,208
Wałbrzych / Wrocław	Wrocław (city), Wrocław (1)	rubber and plastic products	933.75	4,353

Source: Authors' own calculations based on the Ministry of Economy data.

The largest investments in voivodship's SEZs have been completed in Wałbrzych, Wrocław, Polkowice, Legnica, Jelcz-Laskowice, Nowogrodziec and Olawa and are mostly related to automotive industry. TOYOTA has invested over 3,1 billion PLN in Wałbrzych and Jelcz. Other communes have attracted firms producing parts and semi-products used in car construction like AGC SILESIA Sp. z o. o. (manufacture of glass products for the automotive industry), Autoliv Poland (manufacture of airbags), EPP Sp. z o.o. (manufacture of plastic products for household appliances industry and automotive industry), FAURECIA WAŁBRZYCH S.A. (manufacture of metal components for car seats), Mando Corporation Poland Sp. z o.o. (manufacture of vehicle parts and accessories), NSK Steering Systems Europe (Polska) sp. z o.o. (manufacture of steering gears), Sanden Manufacturing Poland Sp. z o.o. (automotive industry), Simoldes Plasticos Polska Sp. z o. o. (rubber and plastic products, motor vehicles parts and accessories, engines parts), Sitech Sp. z o.o. (automotive industry) and Volkswagen Motor Polska Sp. z o.o. (automotive industry).

The voivodship intends to acquire the following kinds of investors:

- investors from machine, metal, textile and synthetic materials industries, who would create jobs related to the existing labour resources and facilities as well as investors from wood, furniture and chemical industries and companies interested in transferring innovation into industry – in the Kamienna Góra SEZ;
- investors from automotive, electronic, synthetic materials, and household appliances industries and the ones who would like to invest in innovation development and research projects in municipal areas in the Wałbrzych SEZ;
- investors from hi-tech industries, related to institutions gathering and processing of data as well as investors from logistics, automotive, machinery, textile, construction and food industries in the Legnica SEZ;
- investors that are cooperating with entrepreneurs from Technological Park LG in the field of advanced technologies and services in the Tarnobrzeg SEZ.

'A' Commune

Student Scientific Organisation for Entrepreneurship and Regional Analyses affiliated to the Institute of Enterprise of the Warsaw School of Economics, has again published the results of its research into the quality of investor assistance offered by the communal authorities.

The subject of this qualitative research of investment attractiveness is evaluation of the websites and evaluation of e-mail contact with communal authorities in two languages: Polish and English. The effect of this research is a ranking 'A' Commune, which is thought to distinguish best performing self-government territorial units in terms of the use of means of electronic communication to provide assistance to the customers. The research is carried out with the use of mystery client method. In this year's edition all communes belonging to Class A and B according to the PAI 2011 index were subject to the evaluation.

As a result 90 communes were distinguished, of which 8 are situated in Lower Silesian voivodship (see Table 5).

Table 5. Communes in Lower Silesian voivodship distinguished as ‘A’ Communes

Place in the ranking (for the whole country)	Commune	Evaluation of websites (score)	Evaluation of e-mail contact in Polish (score)	Evaluation of e-mail contact in English (score)	Sum
5	Zgorzelec (1)	12.0	7.0	11.0	30.0
27	Świdnica (1)	14.0	11.0	0.0	25.0
52	Wrocław (1)	12.5	9.0	0.0	21.5
58	Złotoryja (1)	10.0	11.0	0.0	21.0
59	Chojnów (1)	5.0	11.0	5.0	21.0
70	Legnica (1)	13.0	7.0	0.0	20.0
82	Bolesławiec (1)	8.5	11.0	0.0	19.5
83	Bielawa (1)	10.5	9.0	0.0	19.5

Source: Authors' own materials based on the research.

All the distinguished Lower Silesian communes run websites where the information is presented in the clear and well-structured way. The websites include information and documents necessary for setting up a new company as well as information used by new investors when making decisions regarding business location.

What is more, the communes distinguished are present in social media and foreign language versions. Particular attention should be given to Świdnica and Bielawa as their websites include professionally prepared investment offers and inform about the inflow of the new investors. The high place in the ranking is also a result of the high quality of the e-mail contact.

5. Region's strengths and weaknesses

Lower Silesian voivodship has its unique character and clear specificity which influences its strengths and weaknesses. If divided according to the main factors of location and location conditions classified into microclimates that influence potential and real investment attractiveness, they can be grouped into strengths (microclimates with ranking A, B or C) and weaknesses (microclimates with ranking D, E or F) – see Table 6.

Table 6. Strengths and weaknesses of Lower Silesian voivodship

Strengths of the region according to the microclimates by the Institute of Enterprise of the Warsaw School of Economics	Weaknesses of the region according to the microclimates by the Institute of Enterprise of the Warsaw School of Economics
National economy	
Microclimate Human Resources Class B Microclimate Technical Infrastructure Class B Microclimate Social Infrastructure Class A Social Microclimate Class B Microclimate Market Class B Microclimate Administration/Governance Class A Microclimate Innovativeness Class C Productivity of enterprises Class A Profitability of enterprises Class A Self-financing of self-government units Class A Investment outlays Class A	Returns on tangible assets Class D
Capital-intensive industry	
Microclimate Human Resources Class A Microclimate Technical Infrastructure Class B Microclimate Social Infrastructure Class A Social Microclimate Class C Market Microclimate Class C Microclimate Administration/Government Class A Returns on tangible assets Class A Labour productivity in enterprises Class A Self-financing of self-government units Class A Investment outlays Class C	Microclimate Innovativeness Class D
Labour-intensive industry	
Microclimate Human Resources Class A Microclimate Technical Infrastructure Class B Microclimate Social Infrastructure Class A Social Microclimate Class C Market Microclimate Class C Microclimate Administration/Government Class A Returns on tangible assets Class A Labour productivity in enterprises Class A Self-financing of self-government units Class A Investment outlays Class C	
Handel	
Microclimate Human Resources Class A Microclimate Technical Infrastructure Class B	Returns on tangible assets Class F Labour productivity in enterprises Class D

Microclimate Social Infrastructure ClassC Social Microclimate ClassA Market Microclimate Class C Microclimate Administration/Government Class A Self-financing of self-government units Class A Investment outlays Class C	
Tourism	
Microclimate Human Resources Class B Microclimate Technical Infrastructure ClassB Microclimate Social Infrastructure ClassA Social Microclimate ClassC Market Microclimate Class C Microclimate Administration/Government Class A Self-financing of self-government units Class A	Returns on tangible assets Class E Labour productivity in enterprises Class D Investment outlays Class D
Professional, scientific and technical activities	
Microclimate Human Resources Class B Microclimate Technical Infrastructure ClassA Microclimate Social Infrastructure ClassA Social Microclimate ClassB Market Microclimate Class B Microclimate Administration/Government Class A Microclimate Innovativeness Class C Returns on tangible assets Class A Labour productivity in enterprises Class A Self-financing of self-government units Class A Investment outlays Class A	

Source: Authors on the basis of the results of research of the Institute of Enterprise of the Warsaw School of Economics.

Summary

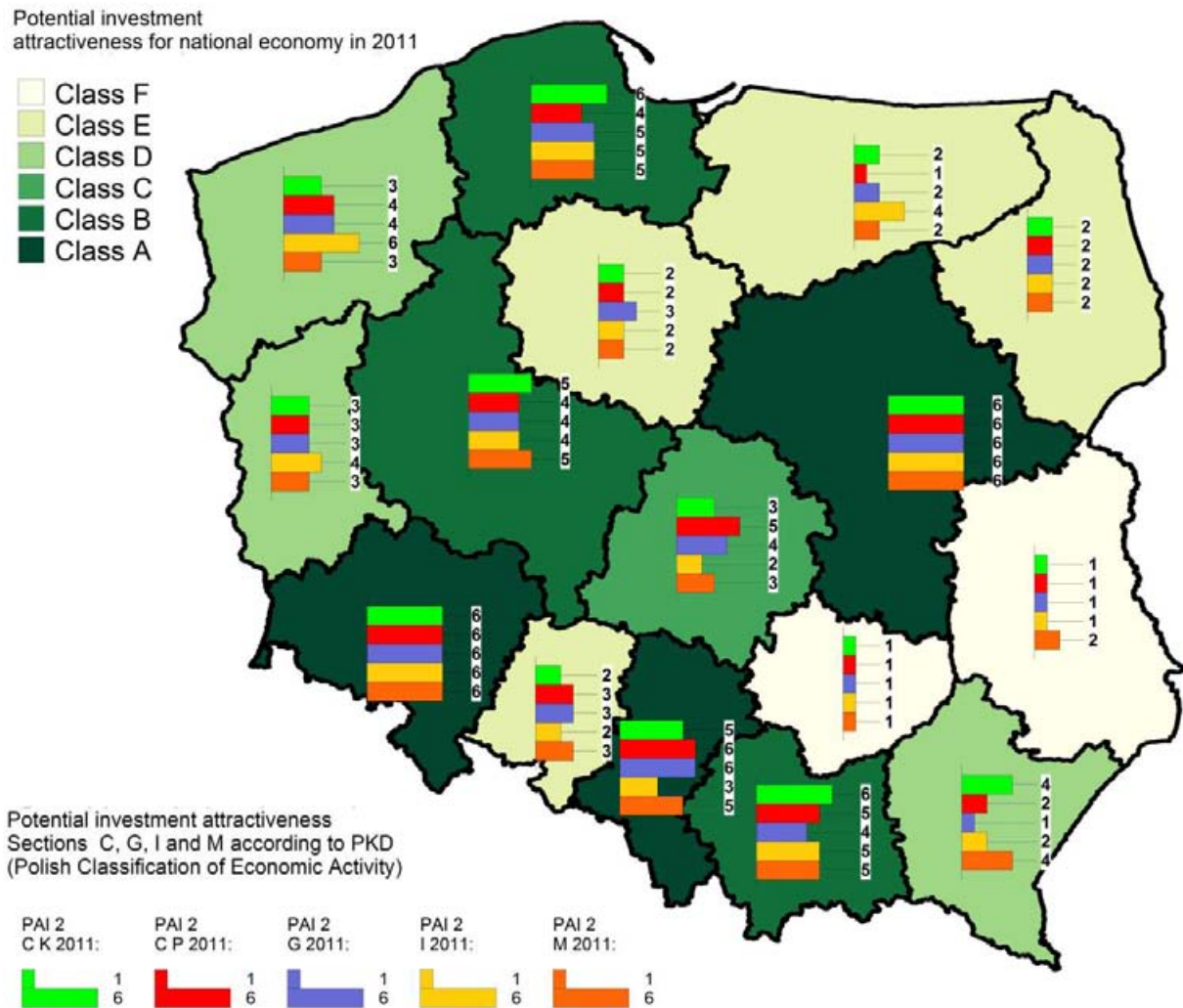
The engines of economic development of Lower Silesian voivodship are the counties: Wrocław (city), Legnica (city), Jelenia Góra (city), Polkowice, Lubin, Zgorzelec, Głogów, Wołów and Świdnica as well as the special economic zones in the region.

Lower Silesian voivodship has predispositions to **create interregional clusters**, especially in sectors such as: manufacture of textile products, manufacture of paper and paper products, manufacture of chemicals and chemical products, manufacture of rubber and plastic products. It can also develop **intelligent specializations** in the medium-high-tech sectors, basing on the competitive big and medium-sized companies, such as: manufacture of chemicals and chemical products, manufacture of machinery and equipment n.e.c., manufacture of fabricated metal products (except machinery and equipment) and manufacture of rubber and plastic products.

The region can also develop high-tech services such as programming services, IT consulting and information services. What is more, the region has also predispositions to develop **knowledge-based services** such as employment-related services. Especially profitable is developing of **offshoring services** (BPO), basing on the competitive enterprises from the sectors: employment-related activities, real estate activities and legal and accounting activities.

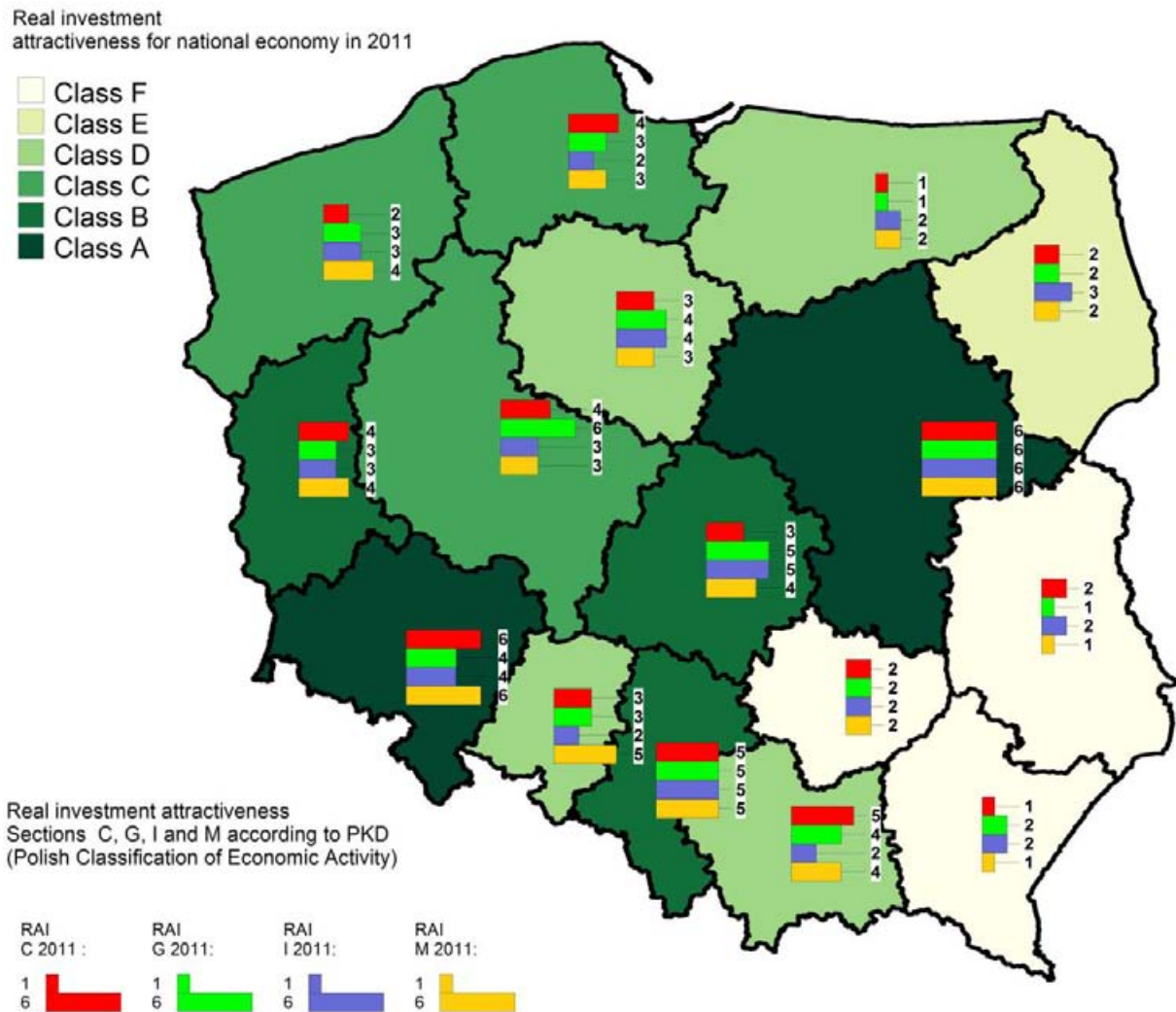
APPENDIX

Chart 1. Potential investment attractiveness of Polish voivodships by basic sections of the national economy



Source: Authors' own materials based on the research.

Chart 2. Real investment attractiveness of Polish voivodships by basic sections of the national economy



Source: Authors' own materials based on the research.

Table 1. List of investment attractiveness indices for voivodships

Voivodship	LOWER SILESIAN	KUYAVIAN-POMERANIAN	LUBLIN	LUBUSZ	ŁÓDŹ	LESSER POLAND	MAZOVIAN	OPOLE	SUBCARPATHIAN	PODLASKIE	POMERANIAN	SILESIAN	ŚWIĘTOKRZYSKIE	WARMIAN-MASURIAN	GREATER POLAND	WESTERN POMERANIAN
PAI1 GN	A	D	F	D	D	C	A	E	D	E	B	A	F	D	B	B
PAI2 GN	A	E	F	D	C	B	A	E	D	E	B	A	F	E	B	D
RAI GN	A	D	F	B	B	D	A	D	F	E	C	B	F	D	C	C
PAI1 C	A	D	F	D	C	C	A	D	E	F	B	A	F	E	B	B
PAI2 C CAPITAL	A	E	F	D	D	A	A	E	C	E	A	B	F	E	B	D
PAI2 C LABOUR	A	E	F	D	B	B	A	D	E	E	C	A	F	F	C	C
RAI C	A	D	E	C	D	B	A	D	F	E	C	B	E	F	C	E
PAI1 G	A	F	F	B	E	B	A	D	D	F	A	C	F	C	C	B
PAI2 G	A	D	F	D	C	C	A	D	F	E	B	A	F	E	C	C
RAI G	C	C	F	D	B	C	A	D	E	E	D	B	E	F	A	D
PAI1 I	B	E	F	C	E	B	A	E	E	E	A	C	F	C	C	A
PAI2 I	A	E	F	C	E	B	A	E	E	E	B	D	F	C	C	A
RAI I	C	C	E	D	B	E	A	E	E	D	E	B	E	E	D	D
PAI1 M	A	E	F	D	D	C	A	D	D	E	B	A	F	D	B	B
PAI2 M	A	E	E	D	D	B	A	D	C	E	B	B	F	E	B	D
RAI M	A	D	F	C	C	C	A	B	F	E	D	B	E	E	D	C

Source: Authors on the basis of the results of statutory research carried out under the guidance of H. Godlewska-Majkowska.

Table 2. Potential investment attractiveness of Polish voivodships according to the EU potential investment attractiveness index PAI _UE in 2011

	Microclimate Human Capital	Microclimate Market	Microclimate Innovativeness	Composite index
Lower Silesian	B	D	D	D
Kuyavian-Pomeranian	B	E	F	E
Lublin	B	F	E	F
Lubusz	A	F	E	E
Łódź	A	E	E	E
Lesser Poland	C	E	E	E
Mazovian	A	C	B	B
Opole	C	F	E	F
Subcarpathian	C	F	E	F
Podlaskie	B	F	E	F
Pomeranian	B	D	D	D
Silesian	B	D	E	D
Świętokrzyskie	A	F	F	F
Warmian-Masurian	B	F	E	F
Greater Poland	A	E	E	E
Western Pomeranian	C	E	E	E

Source: Authors' own materials based on calculations of H. Godlewska-Majkowska and M. Czernecki, made in the course of statutory research *Investment attractiveness and enterprise localization in the global economy* (the team: H. Godlewska-Majkowska, Ph.D., university professor at the Warsaw School of Economics – head of research, P. Bartoszczuk, Ph.D., P. Zarębski, Ph.D., M. Typa, M.A., M. Czernecki, M.A.).

Table 3. Potential investment attractiveness of counties of Lower Silesian voivodship for the national economy and selected sections

County	PAI1_GN	PAI1_GN_Classes	PAI1_C_Classes	PAI1_G_Classes	PAI1_I_Classes	PAI1_M_Classes
Wrocław (city)	0.367	A	A	A	A	A
Polkowice	0.354	A	A	A	A	A
Legnica (city)	0.318	A	A	A	B	A
Lubin	0.318	A	A	A	B	A
Wrocław	0.303	A	A	A	A	A
Jelenia Góra (city)	0.290	B	B	B	B	A
Zgorzelec	0.283	B	A	B	A	C
Głogów	0.281	B	B	B	C	B
Wołów	0.271	B	B	B	C	B
Świdnica	0.266	B	B	B	C	C
Jelenia Góra	0.264	C	B	C	A	C
Kłodzko	0.262	C	B	C	B	C
Oława	0.256	C	C	C	C	C
Wałbrzych	0.250	C	C	C	C	C
Bolesławiec	0.250	C	C	B	A	D
Kamienna Góra	0.250	C	C	C	D	D
Lubań	0.247	C	C	C	A	D
Trzebnica	0.245	C	C	C	C	C
Jawor	0.243	C	C	C	D	D
Oleśnica	0.243	C	C	C	B	D

Source: As in Table 1.

Table 4. Potential investment attractiveness of communes of Lower Silesian voivodship for the national economy and selected sections

Commune	PAI1_GN	PAI1_GN_Classes	PAI1_C_Classes	PAI1_G_Classes	PAI1_I_Classes	PAI1_M_Classes
Polkowice (3)	0.291	A	A	A	A	A
Wrocław (1)	0.283	A	A	A	A	A
Lubin (1)	0.280	A	A	A	B	A
Świdnica (1)	0.276	A	A	A	B	A
Zgorzelec (1)	0.276	A	A	A	A	A
Chojnów (1)	0.275	A	A	A	C	A
Bolesławiec (1)	0.273	A	A	A	A	A
Brzeg Dolny (3)	0.267	A	A	A	A	A
Głogów (1)	0.266	A	A	A	B	A
Złotoryja (1)	0.264	A	A	A	A	A
Oleśnica (1)	0.261	A	A	A	A	A
Legnica (1)	0.258	A	A	A	A	A
Jawor (1)	0.258	A	A	A	B	A
Kobierzyce (2)	0.256	A	A	A	A	A
Lubań (1)	0.255	A	A	A	A	A
Siechnice (3)	0.249	A	A	A	A	A
Oława (1)	0.247	A	A	A	B	A
Polanica-Zdrój (1)	0.247	A	A	A	A	A
Kłodzko (1)	0.246	A	A	A	B	A
Kamienna Góra (1)	0.243	A	A	A	B	A
Dzierżoniów (1)	0.242	A	A	A	A	A
Jerzmanowa (2)	0.242	A	A	A	A	A
Świebodzice (1)	0.242	A	A	A	C	A
Lubin (2)	0.242	A	A	A	A	A
Duszniki-Zdrój (1)	0.241	A	A	A	A	A
Karpacz (1)	0.240	A	A	A	A	A
Rudna (2)	0.237	A	A	A	B	A
Stronie Śląskie (3)	0.236	A	A	B	A	A
Wałbrzych (1)	0.236	A	A	A	B	A
Szczawno-Zdrój (1)	0.235	A	A	A	A	A
Kudowa-Zdrój (1)	0.234	A	A	A	A	B
Kąty Wrocławskie (3)	0.232	A	A	A	A	A
Kowary (1)	0.232	A	A	A	A	A
Bogatynia (3)	0.231	A	A	A	A	B
Jelenia Góra (1)	0.231	A	A	A	A	A
Nowa Ruda (1)	0.229	A	A	B	D	A
Zawidów (1)	0.228	A	A	A	C	B
Grębocice (2)	0.228	A	A	A	C	B
Bielawa (1)	0.227	A	A	A	B	A
Strzegom (3)	0.227	A	A	A	B	B
Świeradów-Zdrój (1)	0.226	A	A	A	A	B
Strzelin (3)	0.225	A	A	A	B	B
Szczytna (3)	0.225	A	A	B	A	B

Piława Górna (1)	0.224	A	A	A	D	B
Boguszów-Gorce (1)	0.224	A	A	A	C	B
Długoleka (2)	0.223	A	A	A	A	B
Warta Bolesławiecka (2)	0.222	A	A	A	B	B
Czernica (2)	0.221	A	A	A	A	A
Radków (3)	0.220	A	A	B	A	B
Piechowice (1)	0.219	A	A	B	A	B
Oborniki Śląskie (3)	0.218	A	A	A	A	A
Żarów (3)	0.218	A	A	A	C	B
Lubawka (3)	0.216	B	B	A	B	B
Syców (3)	0.216	B	A	A	A	B
Środa Śląska (3)	0.216	B	B	B	B	B
Szklarska Poręba (1)	0.214	B	B	B	A	B
Kunice (2)	0.213	B	A	A	B	A
Jelcz-Laskowice (3)	0.213	B	B	B	C	A
Prochowice (3)	0.213	B	B	B	C	B
Łądek-Zdrój (3)	0.213	B	B	A	A	B
Bolesławiec (2)	0.213	B	B	B	A	B
Wołów (3)	0.212	B	B	B	B	B
Góra (3)	0.209	B	B	B	C	B
Sobótka (3)	0.205	B	B	B	B	B
Radwanice (2)	0.204	B	B	B	C	C
Siekierczyn (2)	0.204	B	B	B	B	C
Ząbkowice Śląskie (3)	0.204	B	B	B	D	B
Chocianów (3)	0.203	B	B	B	C	B
Pieńsk (3)	0.203	B	B	B	C	C
Trzebnica (3)	0.202	B	B	B	C	B
Wisznia Mała (2)	0.201	B	B	C	C	B
Jedlina-Zdrój (1)	0.200	B	B	C	B	B
Krośnice (2)	0.199	B	B	B	B	C
Podgórzyn (2)	0.198	B	B	C	A	B
Mieroszów (3)	0.197	C	B	B	A	D
Gryfów Śląski (3)	0.197	C	C	C	D	B
Głuszyca (3)	0.197	C	C	C	C	C
Przemków (3)	0.197	C	C	C	D	B
Czarny Bór (2)	0.196	C	B	B	B	C
Złoty Stok (3)	0.195	C	B	B	A	D
Legnickie Pole (2)	0.195	C	B	B	A	C
Głogów (2)	0.194	C	C	C	C	B
Żmigród (3)	0.194	C	C	C	C	C
Ścinawa (3)	0.194	C	C	C	C	C
Bolków (3)	0.194	C	C	C	B	C
Milicz (3)	0.193	C	C	C	C	B
Kamieniec Ząbkowicki (2)	0.193	C	C	C	C	D
Walim (2)	0.193	C	B	C	B	C
Zgorzelec (2)	0.193	C	B	C	A	C
Malczyce (2)	0.192	C	C	C	C	C

Regional investment attractiveness 2013

Mietków (2)	0.190	C	C	C	C	D
Pieszycy (1)	0.189	C	C	C	C	C
Olszyna (3)	0.189	C	C	C	C	C
Miękinia (2)	0.189	C	C	C	C	C
Węgliniec (3)	0.189	C	C	C	B	D
Twardogóra (3)	0.189	C	C	C	C	C
Dobromierz (2)	0.189	C	B	C	B	D
Marciszów (2)	0.189	C	C	C	B	D
Żukowice (2)	0.189	C	C	C	D	D
Jaworzyna Śląska (3)	0.188	C	C	C	D	C
Janowice Wielkie (2)	0.188	C	B	C	B	D
Gromadka (2)	0.187	C	C	C	A	D
Wleń (3)	0.187	C	C	B	A	D
Nowogrodzice (3)	0.186	C	C	C	C	D
Męcinka (2)	0.185	C	C	C	C	D
Gaworzyce (2)	0.184	C	C	C	C	C
Mściwojów (2)	0.184	C	C	C	D	D
Osiecznica (2)	0.182	C	C	B	A	E
Niemcza (3)	0.182	C	C	D	D	C
Miłkowice (2)	0.182	C	C	D	D	C
Wojcieszów (1)	0.182	C	C	D	C	D
Mysłakowice (2)	0.182	C	C	D	B	C
Złotoryja (2)	0.182	C	C	D	D	B
Międzylesie (3)	0.182	C	C	C	B	D
Lewin Kłodzki (2)	0.181	C	C	D	C	C
Świdnica (2)	0.181	C	C	D	A	D
Leśna (3)	0.180	C	C	C	B	D
Oława (2)	0.180	C	C	D	D	C
Jeżów Sudecki (2)	0.179	C	C	B	A	D
Ciepłowody (2)	0.179	C	C	C	A	E
Bystrzyca Kłodzka (3)	0.178	C	C	C	B	C

Source: As in Table 1.

Note: All the indices in the report have been calculated on the basis on the most up-to-date data from the Regional Data Bank (RDB), 2013.