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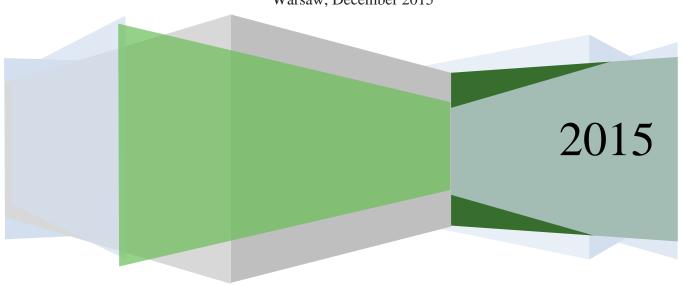


## REGIONAL INVESTMENT ATTRACTIVENESS 2015

### **Lower Silesian Voivodship**

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#### INTRODUCTION

The report has been prepared to order of the Polish Information and Foreign Investment Agency and is the next edition of the regional investment attractiveness reports. The reports have been published since 2008. They are the result of scientific research conducted since 2002 under the supervision of prof. H. Godlewska-Majkowska, Ph.D., full professor in the Warsaw School of Economics, in the Institute of Enterprise, Collegium of Business Administration of the Warsaw School of Economics. All the authors are the core members of a team that develops methodology of calculating regional investment attractiveness.

The report consists of a few parts. The first part includes the synthetic presentation of the voivodship's economy, including social-economic potential of the voivodship and the level of economic development as well as economy structure. The most important socio-economic data, including information on investment attractiveness, is presented in a table. The first part of the report also presents the position of the voivodship compared to other Polish and European Union regions, paying special attention to the most important industries and high potential sectors.

The second part of the report presents internal diversification of voivodship's investment attractiveness at the levels of counties (Polish: *powiat*) and communes (Polish: *gmina*). The results of the investment attractiveness calculations for the Lower Silesian voivodship's territorial units can be compared to the other territorial units from all of the Polish regions as the calculations have been made for all of them.

In the third part of the report the main business environment institutions in the voivodship are presented, taking into consideration kinds of support which they offer to investors. This part also includes information on location of the Special Economic Zones (SEZs) in the voivodship and information on the results of their activities.

The report is completed with the Appendix including tables with comparisons of investment attractiveness indices for voivodship's counties and communes. There is also some more detailed information in the Appendix concerning effects of functioning of the Special Economic Zones in the region.

There are two approaches to the investment attractiveness presented in this work. One of them is **potential investment attractiveness**, defined as a set of regional location advantages that influence achieving investors' goals (such as costs of running a business, sales revenues, net return on investment and investment's competitiveness).

Another approach is **real investment attractiveness**, defined as region's ability to create investor's satisfaction and influence absorption of financial and physical capital in form of investments. They can be measured by effectiveness of capital spending.<sup>1</sup>

Potential investment attractiveness indices in their simplified version (PAI1) measure the location-specific advantages of regions. 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 indices refer to the whole national economy and to the selected sections: C – manufacturing industry, G – trade and repair, I – accommodation and catering, M – professional, scientific and technical services. These sections are the core of the national economy.

Besides, some indices are calculated only for the voivodships, on the basis of characteristics available only on the regional or macro-regional 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.

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. Real investment attractiveness can be calculated for voivodships, based on the statistical data available on the regional level.

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 Institute of Enterprise at the Warsaw School of Economics (<a href="http://kolegia.sgh.waw.pl/pl/KNoP/struktura/IP/struktura/ZOB/">http://kolegia.sgh.waw.pl/pl/KNoP/struktura/IP/struktura/ZOB/</a>), as well as in numerous scientific publications and expert opinions.

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<sup>1.</sup> More information on this topic can be found in: *Atrakcyjność inwestycyjna regionów Polski jako źródło przedsiębiorczych przewag konkurencyjnych*, H. Godlewska-Majkowska (ed.), Studia i Analizy Instytutu Przedsiębiorstwa, Oficyna Wydawnicza SGH, Warszawa 2012; H. Godlewska-Majkowska, *Polish regions and their investment attractiveness in the EU*, in: POLAND Competitiveness Report 2013. National and Regional Dimensions, M. Weresa (ed.), Oficyna Wydawnicza SGH, Warsaw 2013, pp 299-316.

# 1. THE PROFILE OF REGIONAL ECONOMY OF LOWER SILESIAN (DOLNOŚLĄSKIE) VOIVODSHIP

**Lower Silesian (dolnośląskie) voivodship** is one of the three most attractive regions of Poland from investors' point of view.

#### Its advantages are:

- very high level of economic development, significantly exceeding the national average,
- 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/tele-computer infrastructure:
  - o convenient road connections: A4 highway, international roads: E40, E36, E65 and E67,
  - o an expanded system of railways: international railways E30 and E59,
  - o 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,
  - o 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 establishments,
- 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.

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 Silesi	an	Poland	Share [%]		
	reature		voivodship		Folalid	Share [%]		
	Market Potential							
GDP per capi	ta 2013 (PLN/p	oerson)	48420		43175	-		
	n (persons) on ember 2014	31	2.908.457		38.478.602	7.6%		
	Human Resources Potential							
Higher educat graduates (per	tion institutions rsons) in 2014	s	36607		424317	8,6%		
Secondary sch (persons) in 20	nools graduates 014	<b>:</b>	17550		271333	6,5%		
Number of em 2014 (in thous	nployed person sands)	s in	1094		15859	6,9%		
Structure of ea	mployed perso	ns in	indu	strial s	sector 4,6% ector 34,8% ector 60,6%	11,5% 30,5% 58,0%		
Investme	ent outlays and	capital	of companies with	ı foreiş	gn capital participation	in the voivodship		
Investment ou 2013	tlays (PLN mli	n) in	5295,6		75105,1	7,1%		
Capital of com 2013	npanies (PLN n	nln) in	17365,2		209130,1	8,3%		
	\$	Special I	Economic Zones (S	SEZs)	in the voivodship*			
– Legni – Tarno – Wałbi	enna Góra SEZ ca SEZ obrzeg SEZ rzych SEZ stinguishing in		t attractiveness ra	atings	PAI _2 and RAI (class A	A, B and C)		
Potential inves	stment attracti	veness P	AI_2	National economy class A Capital-intensive industry class A Labour-intensive industry class A Trade and repair class A Accommodation and catering class B				
Real investment attractiveness RAI				National economy class A Industry class A Trade and repair class C Accommodation and catering class B Professional, scientific and technical services class B				
Counties an	d communes d	istinguis	hed according to economy (P		tential Attractiveness In	dex for the national		
Counties	Class A	Gł		of Jele	enia Góra, city of Legnica kowice, , Wrocław,	, city of Wrocław,		
	Class B				gorzelec, Świdnica			

Communes	Class A	Bielawa (u), Bogatynia (u-r), Boguszów-Gorce (u), Bolesławiec (u), Brzeg Dolny (u-r), Chojnów (u), Czernica (r), Długołęka (r), Duszniki-Zdrój (u), Dzierżoniów (u), Głogów (u), Jawor (u), Jedlina-Zdrój (u), Jelenia Góra (u), Jerzmanowa (r), Kamienna Góra (u), Karpacz (u), Kąty Wrocławskie (u-r), Kłodzko (u), Kobierzyce (r), Kowary (u), Kudowa-Zdrój (u), Legnica (u), Lubań (u), Lubin (u), Lubin (r), Nowa Ruda (u), Oleśnica (u), Oława (u), Piechowice (u), Piława Górna (u), Polanica-Zdrój (u), Polkowice (u-r), Prochowice (u-r), Rudna (r), Siechnice (u-r), Strzegom (u-r), Strzelin (u-r), Szczawno-Zdrój (u), Świdnica (u), Świebodzice (u), Świeradów-Zdrój (u), Wałbrzych (u), Warta Bolesławiecka (r), Wrocław (u), Zawidów (u), Ząbkowice Śląskie (u-r), Zgorzelec (u), Złotoryja (u), Żarów (u-r)
	Class B	Bolesławiec (r), Chocianów (u-r), Czarny Bór (r), Góra (u-r), Grębocice (r), Jelcz-Laskowice (u-r), Jeżów Sudecki (r), Kamienna Góra (r), Krośnice (r), Kunice (r), Lądek-Zdrój (u-r), Legnickie Pole (r), Lubawka (u-r), Mieroszów (u-r), Miękinia (r), Oborniki Śląskie (u-r), Pieńsk (u-r), Podgórzyn (r), Radków (u-r), Radwanice (r), Siekierczyn (r), Sobótka (u-r), Stronie Śląskie (u-r), Syców (u-r), Szczytna (u-r), Szklarska Poręba (u), Środa Śląska (u-r), Trzebnica (u-r), Wisznia Mała (r), Wołów (u-r), Zgorzelec (r)

Additional information: (u) – urban commune, (r) – rural commune, (u-r) – urban-rural commune.

PAI – potential investment attractiveness, RAI – real investment attractiveness

Source: Authors' own calculations.

The number of inhabitants of the voivodship amounts to 2,908,457(as of 2014), which is 7.6% of the population of Poland. The age structure in the voivodship in 2014 was as follows:16.8% of the population at pre-productive age, 63.5% at productive age and 19.7% at post-productive age (for Poland it was 18%, 63% and 19% respectively).

The main potential for human capital creation in the voivodship lies in 38 higher education institutions in which there are 137,000 students studying, which makes up 9.3% of all students in Poland.

According to a report prepared by the Committee for Evaluation of Research (KEJNA) for the Ministry of Science and Higher Education in Lower Silesia 4 faculties universities received the highest scientific category A +, they are: Faculty of Microsystem Electronics and Photonics, Wroclaw University of Technology, Faculty of History and Pedagogy, as well as Faculty of Biotechnology of the University of Wroclaw, as well as University of Social Sciences and Humanities, Faculty of Social Psychology in Wroclaw; 24 faculties received the category - A; 30 faculties have received a category - B; and 4 faculties category - C. It is also worth mentioning that 23 colleges had not received any category awarded by KEJNA. Detailed information can be found in Appendix (- see table 5).

Moreover, 11% of the secondary school students in the voivodship attend vocational schools and 30.8% attend technical schools.

<sup>\*</sup> For more information see Table 3 in the Appendix.

The registered unemployment rate in the voivodship amounted to 8.6% in August 2015, compared to 9.7% <sup>2</sup> in Poland. The average monthly gross wages and salaries in enterprises sector in the first half-year of 2015 amounted to PLN 4011.5, which is 106% of the average for Poland.

In 2013 Lower Silesian voivodship made a contribution of 8.5% to the GDP of Poland. Calculated per capita, it amounted to PLN 48.420 with the average for Poland PLN 43.175. With this result the voivodship takes the second place in the country. The GDP growth rate in the voivodship in the years 2003-2013 amounted to 215% while the average for Poland amounted to 197%.

In comparison with the whole country the structure of employment in the voivodship is characterised by share of the service sector at the level of 60.6% whereas a share of the agricultural and industrial sectors are respectively 4.6% and 34.8% (Central Statistical Office, Local Data Bank 2015).

In the structure of voivodship's industry important role is played by: manufacture of motor vehicles, trailers and semi-trailers (20% of sold production of the whole voivodship's industry at the end of 2014), manufacture of computers, electronic and optical products (9%), as well as manufacture of rubber and plastic products (8%), manufacture of food products and metal products (6% each).

High development potential of the voivodship and high level of industrialization made Lower Silesian voivodship the main manufacturer of motor vehicles and vehicle parts in the country (19% of the country's sold production in 2014), paper and paper products (9%) and chemicals and chemical products (8%).

The voivodship's position is especially strong among the voivodships specialized in manufacture of computers, electronic and optical products (27% of the country's sold production). It also distinguishes itself as a region that manufactures leather and leather products (27%), textiles (20%), rubber and plastic products (12%), electric appliances (12%), machinery and appliances (11%),metal products (9%), paper and paper products (9% each).<sup>3</sup>

The information on sectors that are found as strategic by the region's authorities can be important for the investors. 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

<sup>&</sup>lt;sup>2</sup> The unemployed and the unemployment rate according to regions, sub-regions and counties (end of August 2015). Central Statistical Office.

<sup>&</sup>lt;sup>3</sup> Calculations based on Statistic Bulletin of the Lower Silesian Voivodship from the 1st quarter of 2015 and Statistical Bulletin, 1st quarter of 2015, www.stat.gov.pl (10.11.2015).

machines and electrical appliances, production of machinery and electrical apparatus, manufacture of glassware and ceramics, production of components and motor vehicles parts.

For the entrepreneurs willing to invest in Lower Silesian voivodship the list of the high potential sectors may be a good hint. The list was prepared by the Polish Information and Foreign Investment Agency in cooperation with the Lower Silesian voivodship self-government, based on the observations on investments inflows to the voivodship. The high potential sectors on the list include automotive, electric machines, high-tech and BPO sectors.

Investments of this kind can be located on preferential conditions in the specially prepared places in the Special Economic Zones: Kamienna Góra SEZ, Legnica SEZ, Tarnobrzeg SEZ and Wałbrzych SEZ in the following subzones:

- Kamienna Góra SEZ, subzones: Dobroszyce (r), Gryfów Śląski (u-r), Janowice Wielkie (r), Jawor (u), Jelenia Góra (u), Kamienna Góra (u), Kamienna Góra (r), Lubań (u), Lubawka (u-r), Nowogrodziec (u-r), Piechowice (u), Prusice (u-r), Zgorzelec (u), Żmigród (u-r), Bolków (u-r), Kowary (u), Lubań (r), Mirsk (u-r),
- **Legnica SEZ**, subzones: Chojnów (u), Chojnów (r), Głogów (u), Gromadka (r), Legnica (u), Legnickie Pole (r), Lubin (u), Miękinia (r), Polkowice (u-r), Prochowice (u-r), Przemków (u-r), Środa Śląska (u-r), Złotoryja (u), Kostomłoty (r), Lubin (r), Miłkowice (r), Złotoryja (u),
- Tarnobrzeg SEZ, subzone: Kobierzyce (r),
- Wałbrzych SEZ, subzones: Bielawa (u), Bolesławiec (u), Brzeg Dolny (u-r), Bystrzyca Kłodzka (u-r), Długołęka (r), Dzierżoniów (u), Góra (u-r), Jelcz-Laskowice (u-r), Kłodzko (u), Kłodzko (r), Kudowa-Zdrój (u), Nowa Ruda (u), Nowa Ruda (r), Oleśnica (u), Oława (u), Oława (r), Piława Górna (u), Strzegom (u-r), Strzelin (u-r), Syców (u-r), Świdnica (u), Świdnica (r), Świebodzice (u), Twardogóra (u-r), Wałbrzych (u), Wiązów (u-r), Wołów (u-r), Wrocław (u), Ząbkowice Śląskie (u-r), Żarów (u-r), Siechnice (u-r).

In the all above-mentioned locations investors can benefit from tax allowances amounting to 25% - 45%, depending on the enterprise size – more information can be found on <a href="http://www.paiz.gov.pl/investment\_support/investment\_incentives\_in\_SEZ">http://www.paiz.gov.pl/investment\_support/investment\_incentives\_in\_SEZ</a>.

# 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 indices calculated for the national economy, industry, trade and

repair. It also takes a very high position, when it comes to foreign investment inflows to Poland.

In 2013 Lower Silesian region took the 3<sup>rd</sup> place in Poland in terms of accumulated share capital in the companies with foreign capital participation (an 8.3% 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 2003-2013 its market share measured with the value of foreign capital in the above mentioned companies rose from 5.3% to 8.6%.

Based on the methodology prepared by the team of the Enterprise Institute while conducting statutory research in Collegium of Business Administration at the Warsaw School of Economics, calculations of European regions' investment attractiveness have been made for three years. They are based on measurements of attractiveness of human resources, market and innovativeness.<sup>4</sup> However, due to different methodology of research and variables taken into account for regions in Poland only and regions in the EU, the results of research are incomparable. This is because not all data are available for all the regions, e.g. data on infrastructure.

Based on the above-mentioned indices it can be stated that the voivodship is characterized by a relatively low class of investment attractiveness (class D), compared to the EU regions, taking 147<sup>th</sup> place of 270 regions, for whom the indices were calculated.

Lower Silesia voivodship has a competitive advantage, when it comes to human capital, ranked class A, at the 30<sup>th</sup> place among all the EU regions.

It is worth mentioning that the voivodship is more attractive than EU regions such as:

- in Austria: Burgenland, Niederösterreich;
- in Belgium: Prov. Hainaut, Prov. Limburg, Prov. Luxembourg;
- in Great Britain: Cornwall and Isles of Scilly, Cumbria, Dorset and Somerset, East Yorkshire and Northern Lincolnshire, Highlands and Islands, Lincolnshire, Tees Valley and Durham, West Wales and The Valleys;
- **in Bulgaria:** Severen tsentralen, Severoiztochen, Severozapaden, Yugoiztochen, Yuzhen tsentralen;
- in Czech Republic: Jihozápad, Moravskoslezsko, Severozápad, Strední Morava;
- in Denmark: Sjælland;

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<sup>&</sup>lt;sup>4</sup> More on this topic: *Atrakcyjność inwestycyjna regionów Polski na tle Unii Europejskiej*, edited by H. Godlewska-Majkowska, Oficyna Wydawnicza SGH, Warsaw 2013 and <a href="http://kolegia.sgh.waw.pl/pl/KNoP/struktura/IP/struktura/ZOB/">http://kolegia.sgh.waw.pl/pl/KNoP/struktura/IP/struktura/ZOB/</a>

- in France: Basse-Normandie, Bourgogne, Champagne-Ardenne, Guadeloupe, Guyane, Haute-Normandie, Lorraine, Martinique, Nord Pas-de-Calais, Picardie, Poitou-Charentes, Réunion;
- **in Greece:** Anatoliki Makedonia, Thraki, Dytiki Ellada, Dytiki Makedonia, Ionia Nisia, Ipeiros, Kentriki Makedonia, Kriti, Notio Aigaio, Peloponnisos, Sterea Ellada, Thessalia, Voreio Aigaio;
- in Spain: Andalucía, Canarias, Castilla y León, Castilla-La Mancha, Ciudad Autónoma de Ceuta, Comunidad Valenciana, Extremadura, Galicia, Illes Balears, Principado de Asturias, Región de Murcia;
- in The Netherlands: Drenthe, Friesland, Zeeland;
- in Ireland: Border, Midland and Western;
- in Lithuania: Lietuva;
- in Latvia: Latvija;
- **in Germany:** Brandenburg, Chemnitz, Kassel, Koblenz, Lüneburg, Mecklenburg-Vorpommern, Münster, Oberfranken, Saarland, Sachsen-Anhalt, Schleswig-Holstein, Trier, Weser-Ems;
- in Portugal: Alentejo, Algarve, Centro, Norte, Região Autónoma da Madeira, Região Autónoma dos Açores;
- in Romania: Centru, Nord-Est, Nord-Vest, Sud Muntenia, Sud-Est, Sud-Vest Oltenia, Vest;
- in Slovakia: Stredné Slovensko, Východné Slovensko, Západné Slovensko;
- in Slovenia: Vzhodna Slovenija;
- in Hungary: Dél-Alföld, Dél-Dunántúl, Észak-Alföld, Észak-Magyarország, Közép-Dunántúl, Nyugat-Dunántúl;
- in Italy: Abruzzo, Basilicata, Calabria, Campania, Marche, Molise, Puglia, Sardegna, Sicilia, Umbria.

# 3. Internal diversification of regional investment attractiveness

**Investment attractiveness** of the particular administrative units in the voivodship is the result of how investors assess conditions of conducting business that are important for them. These conditions include labour market, technical infrastructure, market and natural conditions.

Labour market assessment gives investor the information on opportunities to recruit the right employees for their companies and labour surpluses or shortages, which indirectly influences costs of hiring workers.

**Technical infrastructure** assessment allows entrepreneurs to plan their investments that need preparing of investment plot equipped with the basic technical elements such as water, gas and electric installations and environment protection equipment such as sewage farms.

**Social infrastructure** is rated as equipment of a place where the investment is to be located with facilities influencing citizens' life quality and human resources development. These facilities provide the citizens with access to education, healthcare, sports and recreation facilities or information technologies such as Internet.

**Market conditions** informs on market absorptive power that means the number of potential customers and indirectly on their wealth that means ability to buy goods and services. Environment conditions were rated as they are a basic factor influencing tourism development and citizens' life quality.

The composite assessment of all the above-mentioned elements in particular counties or communes shows spatial differentiation of investment attractiveness in the voivodship. What is more, calculations for particular sectors of economy are presented such as industry, trade and modern services connected with professional, scientific and technical activities are presented (Chart 1 and Chart 2). The distinguished locations presented on the map are marked with stars that indicate highest marks for the above-mentioned areas of conducting business.

An **orange star** means that a county or a commune was rated above average in all the sections analysed (national economy, industry, trade, tourism and professional services) and the **golden star** is the highest distinction and means that all the rated sections in a particular commune or county were ranked at the highest level.

When it comes to counties, the highest ranked city counties distinguished with a golden star were city of Jelenia Góra city of Wrocław and when it comes to land countiesPolkowice and distinguished with orange stars land counties such as Głogów, Kłodzk, Lubań, Lubin, Oława, Świnica, Wołów, Wrocław, Zgorzelec and city of Legnica.

When it comes to urban communes, the highest ranked of them were:

- distinguished with a golden star: Bolesławiec (u), Duszniki-Zdrój (u), Jelenia Góra u), Karpacz (u), Kudowa-Zdrój (u), Lubań (u), Polanica-Zdrój (u), Szczawno-Zdrój (u), Wrocław (u), Zgorzelec (u), Złotoryja (u),
- distinguished with an orange star: Bielawa (u), Boguszów-Gorce (u), Chojnów (u), Dzierżoniów (u), Głogów (u), Jawor (u), Jedlina-Zdrój (u), Kamienna Góra (u), Kłodzko (u), Kowary (u), Legnica (u), Lubin (u), Oleśnica (u), Oława (u), Piechowice (u), Pieszyce (u), Szklarska Poręba (u), Świdnica (u), Świebodzice (u), Świeradów-Zdrój (u), Wałbrzych (u), Zawidów (u).

Among rural communes the highest rank communes include:

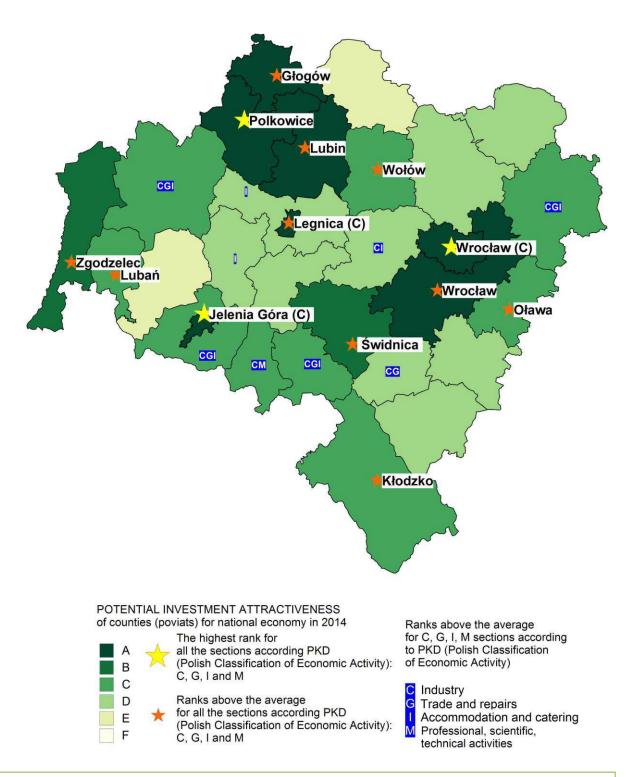
• **golden star communes:** Jerzmanowa (r), Kobierzyce (r), Lubin (r), Rudna (r),

• orange star communes: Bolesławiec (r), Czarny Bór (r), Czernica (r), Długołęka (w), Grębocice (r), Jeżów Sudecki (r), Krośnice (r), Kunice (r), Legnickie Pole (r), Miękinia (r), Mysłakowice (r), Podgórzyn (r), Radwanice (r), Siekierczyn (r), Walim (r), Warta Bolesławiecka (r), Wisznia Mała (r), Zgorzelec (r), Żukowice (r).

#### Among urban-rural communes the highest rank communes include:

- **golden star communes:** Brzeg Dolny (u-r), Kąty Wrocławskie (u-r), Polkowice (u-r) Siechnice (u-r),
- orange star communes: Bogatynia (u-r), Bolków (u-r), Chocianów (u-r), Głuszyca (u-r), Jelcz-Laskowice (u-r), Lądek-Zdrój (u-r), Lubawka (u-r), Oborniki Śląskie (u-r), Pieńsk (u-r), Prochowice (u-r), Radków (u-r), Sobótka (u-r), Stronie Śląskie (u-r), Strzegom (u-r), Strzelin (u-r), Syców (u-r), Szczytna (u-r), Ścinawa (u-r), Środa Śląska (u-r), Trzebnica (u-r), Twardogóra (u-r), Wołów (u-r), Ząbkowice Śląskie (u-r), Żarów (u-r), Żmigród (u-r).

Chart 1. Potential investment attractiveness of counties of Lower Silesian voivodship, considering the most attractive sections

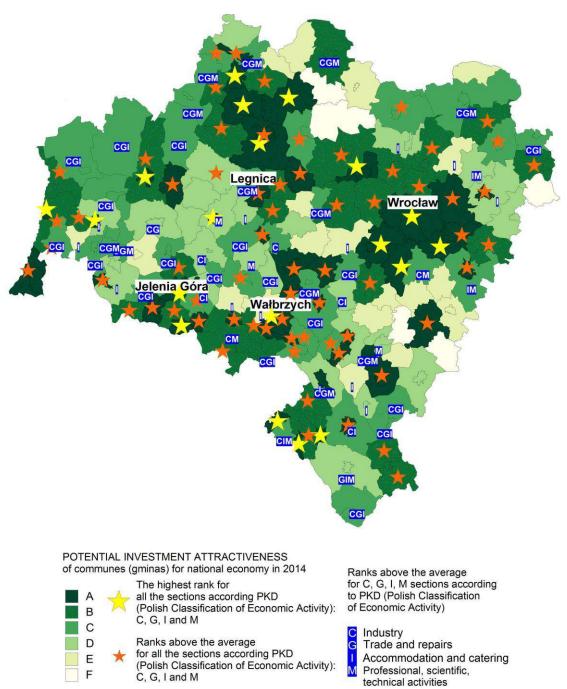


#### **Golden star counties:**

Polkowice, city of Wrocław, , city of Jelenia Góra

Source: Authors' own work.

Chart 2. Potential investment attractiveness of communes of Lower Silesian voivodship, considering the most attractive sections



#### **Golden star communes:**

Bolesławiec (u), Duszniki-Zdrój (u), Jelenia Góra (u), Karpacz (u), Kudowa-Zdrój (u), Lubań (u), Polanica-Zdrój (u), Szczawno-Zdrój (u), Wrocław (u), Zgorzelec (u), Złotoryja (u), Jerzmanowa (r), Kobierzyce (r), Lubin (r), Rudna (r), Brzeg Dolny (u-r), Kąty Wrocławskie (u-r), Polkowice (u-r), Siechnice (u-r)

Source: Authors' own work

# 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.

#### 4.1. BUSINESS ENVIRONMENT INSTITUTIONS

Among business environment institutions (excluding R&D institutions) that influence region's economic development are: chambers of commerce, associations, business incubators, technology parks, technology transfer centres, consulting centres, financial institutions and development agencies.

For the investors especially important is a system of regional Investor Services Centres set up by the Polish Information and Foreign Investment Agency in consultation with voivodships' marshals to ensure complex services for investors in each voivodship.

#### In Lower Silesian voivodship such centre is:

#### the Investor Assistance Centre operating within

Lower Silesian Agency for Economic Cooperation plc (*Dolnośląska Agencja Współpracy Gospodarczej S.A.*) in Wrocław www.dawg.pl



**Lower Silesian Investor Assistance Centre** is a partner of the Polish Information and Foreign Investment Agency and a one stop shop: a source of regional information that are useful for investors, legal acts, investment offers and current data on region's economy. The personnel of the centre have qualifications to offer services for investors and are working according to the standards set by the Polish Information and Foreign Direct Investment Agency, which offers it substantive help and trainings.

An important tool supporting investors are the Special Economic Zones, which are described in the further part of this report.

Below some chosen business environment institutions are presented that operate for entrepreneurship development by supporting development of new technologies and cooperation of enterprises.

#### These institutions are among others:

### **Lower Silesian Chamber of Commerce** (Dolnośląska Izba Gospodarcza) (www.dig.wroc.pl)

This is an organization of economic self-government, whose members are business entities. It arranges partnerships of Polish and international partners and actively looks for their offers, organizes domestic and international trade missions, organizes and coordinates trainings, informs on EU and domestic funds. DIG organizes international meetings and provides provides information on trade fairs, and exhibitions. The Chamber organizes participation in foreign trade missions, fairs and other business event. The Chamber also helps with the documents. DIG has the Arbitration Tribunal established to resolve disputes and conduct conciliation and issue expertise.

#### Western Chamber of Commerce (Zachodnia Izba Gospodarcza) (www.zig.pl)

The chamber is and organization of economic self-government, securing and representing interests of its members, propagating ethical rules in conducting business and supporting entrepreneurship development and cooperation with self-governments and other organizations. It organizes trainings for entrepreneurs, meetings with experts. It also helps to establish contacts in Poland and abroad. The Chamber helps its members in promoting the services and products Promotion can be done, among others, by: placing ads on the site of the Chamber, placing an ad in the magazine "Horizons", placing an ad during meetings, training sessions, seminars and conferences.

#### Business Centre Club Lower Silesian Chamber (www.bcc.org.pl)

BCC is an organization of entrepreneurs and individual employers. BCC members have to represent high standards of ethical principles of the Code of trade and act in accordance with the idea of corporate social responsibility. It lobbies for development of free market economy, legal regulations and interests of Polish entrepreneurs. BCC represents interests of employers in numerous bodies lobbying or deciding on relations between employers and employees such as Trójstronna Komisja ds. Społeczno-Gospodarczych, Wojewódzkie Komisje Dialogu Społecznego, Rady Zatrudnienia (in counties and voivodships), Rada Ochrony Pracy, Fundusz Gwarantowanych Świadczeń Socjalnych, Naczelna Rada Zatrudnienia. BCC is an initiator of Dialogue Forum (communication platform for different social groups) and promotes the idea of Corporate Social Responsibility.

#### Legnica Technology Park LETIA S.A. (www.letia.pl)

The mission of the park is creating competitive and innovative region's economy by fostering entrepreneurship development. The main goals of the park are seeking for investors, entrepreneurship development and jobs creation. The park disposes of attractive investment plots (about 30 ha of land) located near Legnica Copper Smelter, near A4 motorway and

national road no. 3. Investment plots can be included to the SEZ. In addition Park offers office space for rent in two locations in Legnica, a virtual office service, as well as prototyping lab which allows companies to print objects in three dimensions (3D).

#### Wrocław Technology Park (Wrocław Park Technologiczny) (www.technologpark.pl)

The park is targeted at hi-tech enterprises, laboratories and R&D centres. The goals of the park are: seeking for investors, increasing investment attractiveness of the park and its environment, building right infrastructure for innovative entrepreneurs and supporting such entrepreneurs, commercialization of research results, research, development and implementation works in biotechnology and technical sciences, upgrading high-tech and proinnovative management skills of business units personnel and cooperation with domestic and foreign pro-innovative units. Park offers companies training, rental of laboratory and office space and conference rooms, access to the various laboratories and prototyping facilities. Within the park is functioning cluster NUTRIBIOMED.

### Lower Silesian Innovation and Science Park (Dolnośląski Park Innowacji i Nauki) (www.dpin.pl)

The main goals of the park are: seeking for and promotion of new products and services, commercialization of innovative research results, fostering effective communication between Lower Silesian enterprises and universities, adaptation of modern technology solutions and services in enterprises. Within the park companies can locate their businesses in the park itself (companies declaring cooperation with scientific units and companies working on or introducing new market solutions), in the Technology Incubator (small and medium enterprises working on new products, services or processes) and in the Business Incubator (new-born small and medium enterprises). There is a Cluster of Innovative Manufacturing Technologies working within the park (CINNOMATECH Cluster) and the Design Center of the Lower Silesian Innovation and Science Park, aimed at disseminating knowledge about programs supporting entrepreneurship and innovation businesses in Lower Silesia and activation entrepreneurs to participate in dedicated to their programs and projects in the framework of regional programs and national, international and NFOŚiGW / WFOŚiGW ...

#### 4.2. SPECIAL ECONOMIC ZONES IN THE 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 2013 the areas of the SEZs were parts of 24 cities and 34 communes (there are 2 zones in the area of Kobierzyce – Wałbrzych SEZ and Tarnobrzeg) – see Chart 3.

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 2013 amounted to PLN 25.2 billion, which made 27% of all investment outlays made in the Polish SEZs. In the same time the SEZ companies in the region created 48.1 thousand new jobs which made 25% of all jobs created in the Polish SEZs (see Table 4 in the Appendix).

The largest investments in voivodship's SEZs have been completed in Wałbrzych, Kobierzyce, Wrocław, Polkowice, Legnica, Jelcz-Laskowice, Nowogrodziec, Oława, Świdnica and Żarów 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).

Głogów (u) Przemków (u-r) Żmigród (u-r) Polkowice (u-r) Gromadka (r) Prusice (u-r) Twardogóra (u-r) Chojnów (r) Chojnów (u) Brzeg Dolny (u-r) Dobroszyce (r)Syców (u-r) Oleśnica (u) Bolesławiec (u) Długołęka (r) Miękinia (r) Groda Śląska (u-r) Wrocław (u) Legnica (u) Nowogrodziec (u-r) Zgorzelec (u) Lubań (u) Złotoryja (u) Legnickie Pole (r) Gryfów Śląski (u-r) Jelcz-Laskowice (u-r) Jawor (u) Kobierzyce (r) Strzegom (u-r) Oława (u) Żarów (u-r) Janowice Wielkie (r Oława (r) Jelenia Góra (u) Świebodzice (u) Świdnica (u) Piechowice (u) Niązów (u-r) Kamienna GóraWałbrzych (u) inica (r) Strzelin (u-r) Kamienna Góra (r) Dzierżoniów (u) Piława Górna (u) Lubawka (u-r) Bielawa (u) Nowa Ruda (r) Ząbkowice Śląskie (u-r) Nowa Ruda (u) Kudowa-Zdrój (u) Kłodzko (u) Kłodzko (r) Bystrzyca Kłodzka (u-r)

Chart 3. The location of SEZs in Lower Silesian voivodship

POTENTIAL INVESTMENT ATTRACTIVENESS of communes (gminas) for national economy in 2014





Source: Authors' own work.

According to the plans of development for particular SEZs 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 LG Technological Park in the field of advanced technologies and services in the Tarnobrzeg SEZ.

#### **APPENDIX**

Table 1 POTENTIAL INVESTMENT ATTRACTIVENESS OF POLISH VOIVODSHIPS FOR THE NATIONAL ECONOMY AND ITS SELECTED SECTIONS

	PAI1_GN	PAI1_GN	PAI1_C	PAI1_G	PAI1_I	PAI1_M
Voivodship	National economy	National economy	Industry	Trade and repairs	Accommodation and catering	Professional, scientific and technical activities
		Voivod	lships			
LOWER SILESIAN	0,818	A	A	A	В	В
KUYAVIAN-POMERANIAN	0,565	С	С	Е	D	D
LUBLIN	0,173	F	Е	F	F	F
LUBUSZ	0,319	Е	Е	D	С	Е
ŁÓDŹ	0,566	C	В	E	Е	D
LESSER POLAND	0,691	В	В	A	A	В
MAZOVIAN	0,985	A	A	A	A	A
OPOLE	0,267	Е	E	D	Е	Е
SUB-CARPATHIAN	0,364	D	Е	D	Е	Е
PODLASKIE	0,244	Е	E	E	D	Е
POMERANIAN	0,667	В	C	A	A	В
SILESIAN	1,000	A	A	В	С	A
ŚWIĘTOKRZYSKIE	0,000	F	F	F	F	F
WARMIAN-MAZURIAN	0,206	Е	F	D	С	Е
GREATER POLAND	0,489	D	D	С	D	С
WESTERN POMERANIAN	0,587	С	С	С	A	С

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

Table 2. POTENTIAL INVESTMENT ATTRACTIVENESS OF COUNTIES OF LOWER SILESIAN VOIVODSHIP FOR THE NATIONAL ECONOMY AND SELECTED SECTIONS

	PAI1_GN	PAI1_GN	PAI1_C	PAI1_G	PAI1_I	PAI1_M
County	National economy	National economy	Industry	Trade and repairs	Accommodation and catering	Professional, scientific and technical activity
		Cour	nties			
city of Wrocław	0,350	A	A	A	A	A
Polkowice	0,320	A	A	A	A	A
city of Legnica	0,299	A	A	A	В	A
Lubin	0,289	A	A	A	В	A
city of Jelenia Góra	0,288	A	A	A	A	A
Wrocław	0,285	A	A	В	A	В
Głogów	0,273	A	A	A	С	В
Zgorzelec	0,264	В	В	A	A	C
Świdnica	0,252	В	В	В	В	C
Jelenia Góra	0,243	C	C	C	A	D
Bolesławiec	0,241	C	В	A	A	D
Oława	0,239	C	C	C	С	C
Kamienna Góra	0,239	C	C	D	Е	C
Wołów	0,238	C	C	В	С	C
Lubań	0,237	С	С	С	В	С
Kłodzko	0,235	С	С	С	В	С
Wałbrzych	0,228	С	С	С	В	D
Oleśnca	0,224	С	С	С	С	D

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

Table 3. POTENTIAL INVESTMENT ATTRACTIVENESS OF COUNTIES OF LOWER SILESIAN VOIVODSHIP FOR THE NATIONAL ECONOMY AND SELECTED SECTIONS

	PAI1_GN	PAI1_GN	PAI1_C	PAI1_G	PAI1_I	PAI1_M
Commune	National economy	National economy	Industry	Trade and repairs	Accommodation and catering	Professional, scientific and technical activity
		Urban comi	munes			
Świdnica (u)	0,268	A	A	A	В	A
Wrocław (u)	0,268	A	A	A	A	A
Chojnów (u)	0,266	A	A	A	В	A
Zgorzelec (u)	0,263	A	A	A	A	A
Bolesławiec (u)	0,262	A	A	A	A	A
Lubin (u)	0,259	A	A	A	В	A
Głogów (u)	0,255	A	A	A	В	A
Złotoryja (u)	0,253	A	A	A	A	A
Oleśnica (u)	0,248	A	A	A	В	A
Oława (u)	0,245	A	A	A	В	A
Jawor (u)	0,245	A	A	A	С	A
Karpacz (u)	0,245	A	A	A	A	A
Lubań (u)	0,245	A	A	A	A	A
Legnica (u)	0,244	A	A	A	В	A
Jelenia Góra (u)	0,242	A	A	A	A	A
Polanica-Zdrój (u)	0,241	A	A	A	A	A
Świeradów-Zdrój (u)	0,235	A	A	A	A	В
Kłodzko (u)	0,233	A	A	A	В	A
Dzierżoniów (u)	0,232	A	A	A	В	A
Kamienna Góra (u)	0,231	A	A	A	С	A
Szczawno-Zdrój (u)	0,229	A	A	A	A	A
Świebodzice (u)	0,228	A	A	A	В	A
Wałbrzych (u)	0,225	A	A	A	В	A
Nowa Ruda (u)	0,224	A	A	В	D	A
Kudowa-Zdrój (u)	0,224	A	A	A	A	A
Duszniki-Zdrój (u)	0,223	A	A	A	A	A
Kowary (u)	0,222	A	A	A	В	A
Bielawa (u)	0,218	A	A	A	С	A
Boguszów-Gorce (u)	0,216	A	A	A	С	В
Piława Górna (u)	0,214	A	A	A	D	В
Jedlina-Zdrój (u)	0,214	A	A	A	A	В

Zawidów (u)	0,213	A	A	A	С	В
Piechowice (u)	0,208	A	В	A	A	В
Szklarska Poręba (u)	0,205	В	В	В	A	В
Pieszyce (u)	0,182	С	С	С	С	С
Wojcieszów (u)	0,176	C	C	C	В	D
	-,	Rural com			_	_
Warta Bolesławiecka (r)	0,249	A	A	A	В	A
Kobierzyce (r)	0,246	A	A	A	A	A
Jerzmanowa (r)	0,240	A	A	A	A	A
Lubin (r)	0,234	A	A	A	A	A
Rudna (r)	0,232	A	A	A	A	A
Czernica (r)	0,221	A	A	A	В	A
Długołęka (r)	0,214	A	A	A	A	В
Kunice (r)	0,204	В	В	В	В	A
Grębocice (r)	0,204	В	В	A	C	В
Bolesławiec (r)	0,204	В	В	В	A	В
Radwanice (r)	0,201	В	В	В	C	C
Jeżów Sudecki (r)	0,198	В	В	В	A	C
Podgórzyn (r)	0,197	В	В	В	A	C
Zgorzelec (r)	0,197	В	В	В	A	C
	0,197	В	В			C
Krośnice (r)				A	A	
Wisznia Mała (r)	0,192	В	В	С	С	В
Siekierczyn (r)	0,192	В	В	В	В	С
Legnickie Pole (r)	0,191	В	В	В	A	C
Czarny Bór (r)	0,191	В	В	В	A	C
Kamienna Góra (r)	0,189	В	С	D	D	В
Miękinia (r)	0,189	В	В	В	В	C
Głogów (r)	0,187	C	С	С	D	В
Żukowice (r)	0,186	C	В	В	C	C
Mietków (r)	0,184	C	В	В	С	D
Lewin Kłodzki (r)	0,183	C	C	D	В	С
Kamieniec Ząbkowicki (r)	0,182	C	C	В	C	D
Malczyce (r)	0,182	C	C	C	D	C
Walim (r)	0,182	C	C	C	В	С
Gromadka (r)	0,181	C	С	C	В	E
Gaworzyce (r)	0,178	C	C	C	D	C
Osiecznica (r)	0,178	C	C	В	A	E
Sulików (r)	0,177	C	C	C	C	D
Świdnica (r)	0,177	C	C	C	A	D
Miłkowice (r)	0,175	C	C	C	D	C
Mysłakowice (r)	0,174	C	C	C	В	С
Męcinka (r)	0,174	C	C	С	C	D
Mściwojów (r)	0,172	С	С	D	D	D

Kłodzko (r)	0,171	С	С	D	A	D					
Oława (r)	0,171	С	D	D	С	С					
Żórawina (r)	0,170	С	С	D	D	С					
Stara Kamienica (r)	0,169	С	C	С	A	Е					
	Urban-rural communes										
Polkowice (u-r)	0,270	A	A	A	A	A					
Siechnice (u-r)	0,240	A	A	A	A	A					
Brzeg Dolny (u-r)	0,234	A	A	A	A	A					
Ząbkowice Śląskie (u-r)	0,225	A	A	В	С	A					
Bogatynia (u-r)	0,219	A	A	A	A	В					
Kąty Wrocławskie (u-r)	0,219	A	A	A	A	A					
Strzegom u-r)	0,215	A	A	A	В	В					
Żarów (u-r)	0,215	A	A	A	В	В					
Prochowice (u-r)	0,209	A	A	A	В	В					
Strzelin (u-r)	0,208	A	A	A	В	В					
Stronie Śląskie (u-r)	0,206	В	В	В	A	В					
Oborniki Śląskie (u-r)	0,205	В	A	A	В	В					
Wołów (u-r)	0,205	В	В	A	В	В					
Syców (u-r)	0,204	В	В	В	В	В					
Środa Śląska (u-r)	0,204	В	A	A	A	В					
Jelcz-Laskowice (u-r)	0,203	В	В	В	С	В					
Lądek-Zdrój (u-r)	0,201	В	В	В	A	В					
Lubawka (u-r)	0,201	В	В	В	В	В					
Pieńsk (u-r)	0,200	В	В	В	В	С					
Góra (u-r)	0,199	В	В	В	D	В					
Sobótka (u-r)	0,197	В	В	В	В	В					
Radków (u-r)	0,197	В	В	В	В	C					
Szczytna (u-r)	0,194	В	В	В	A	C					
Mieroszów (u-r)	0,191	В	В	В	A	D					
Chocianów (u-r)	0,190	В	C	C	C	В					
Trzebnica (u-r)	0,189	В	C	В	В	В					
Olszyna (u-r)	0,185	C	В	C	D	C					
Gryfów Śląski (u-r)	0,185	C	C	C	D	В					
Przemków (u-r)	0,185	C	C	C	D	В					
Międzybórz (u-r)	0,184	C	C	В	В	D					
Głuszyca (u-r)	0,183	C	С	С	C	C					
Bolków (u-r)	0,182	С	С	С	В	С					
Węgliniec (u-r)	0,181	С	С	В	A	D					
Milicz (u-r)	0,181	С	С	С	D	С					
Twardogóra (u-r)	0,180	С	С	C	C	C					
Jaworzyna Śląska (u-r)	0,179	С	С	C	D	С					
Leśna (u-r)	0,179	С	C	С	С	D					

Żmigród (u-r)	0,179	С	С	С	С	С
Złoty Stok (u-r)	0,179	С	С	С	В	D
Ścinawa (u-r)	0,177	С	С	С	С	С
Nowogrodziec (u-r)	0,173	С	С	С	С	D
Wleń (u-r)	0,171	С	С	С	В	D
Międzylesie (u-r)	0,170	С	С	С	В	D

<sup>(</sup>u) – urban commune, (r) – rural commune, (u-r) – urban-rural commune

Source: As for Table 1.

Note: All the indices in the report have been calculated on the basis on the most up-to-date data from the Local Data Bank (RDB), 2015.

Table 4. Effects of special economic zone functioning at the end of 2014

SEZ	County, commune	Cumulated capital expenditure in million PLN	New jobs number	Leading industries (at least 20% share of revenue or employment)
Legnica	Bolesławiec, Gromadka	187 889 604,00	335	groceries machinery and equipment nec,
Kamienna Góra	Bolesławiec,Nowogro- dziec	1 124 663225,43	2 055	publishing services
Wałbrzych	Bolesławiec, Bolesławiec	214 713 257,45	483	rubber and plastic products, fabricated metal products, except machinery and equipment,
Wałbrzych	Dzierżoniów, Bielawa	5 252 719,18	25	fabricated metal products, except machinery and equipment
Wałbrzych	Dzierżoniów, Dzierżoniów	765 489 255,64	2 291	chemicals and chemical products, rubber and plastic,
Wałbrzych	Dzierżoniów,Piława Górna	-	-	no leading industry
Legnica	Głogów, Głogów	7 372 098,00	1	products of other non- metallic mineral products
Wałbrzych	Góra, Góra	9 349 000,00	33	fabricated metal products, except machinery and equipment
Kamienna Góra	Jawor,Bolków	-	-	no leading industry
Kamienna Góra	Jawor,Jawor	-	-	no leading industry
Kamienna Góra	Jelenia Góra, Janowice Wielkie	139 499 056,00	1 049	rubber and plastic products
Kamienna Góra	Jelenia góra,Piechowice	302 092 395,15	587	paper and paper products, products of other non- metallic mineral products
Kamienna Góra	Kamienna Góra, Kamienna Góra	227 956 072,00	615	motor vehicles (excluding motorcycles), trailers and semi-trailers
Kamienna Góra	Kamienna Góra,Lubawka	16 296 343,00	360	textile products
Kamienna Góra	Kamienna Góra, Kamienna Góra	187 889 604,00	335	groceries machinery and equipment nec,

Wałbrzych	Kłodzko, Bystrzyca Kłodzka	-	-	no leading industry
Wałbrzych	Kłodzko,Kłodzko	-	-	no leading industry
Wałbrzych	Kłodzko,Nowa Ruda	38 662 000,00	382	electric and non-electric household appliances, motor vehicles (excluding motorcycles), trailers and semi-trailers
Wałbrzych	Kłodzko,Kłodzko	247 937 004,55	976	electric and non-electric household appliances
Wałbrzych	Kłodzko,Kudowa- Zdrój	18 937 800,00	91	fabricated metal products, except machinery and equipment
Wałbrzych	Kłodzko,Nowa Ruda	46 033 200,00	246	rubber and plastic products, electrical and non-electrical household appliances,
Legnica	Legnica, Chojnów	-	-	no leading industry
Legnica	Legnica, Legnickie Pole	563 260 010,00	1 506	fabricated metal products, except machinery and equipment, motor vehicles (excluding motorcycles), trailers and semi-trailers,
Legnica	Legnica, Miłkowice	-	-	no leading industry
Legnica	Legnica, Prochowice	-	-	no leading industry
Legnica	Legnica, Chojnów	51 555 000,00	110	machinery and equipment nec
Kamienna Góra	Lubań, Lubań	-	-	no leading industry
Kamienna Góra	Lubań, Lubań	59 695 172,24	757	chemicals and chemical products
Legnicka	Lubin, Lubin	-	-	no leading industry
Kamienna Góra	Lwówek Gryfów Śląski	-	-	no leading industry
Kamienna Góra	Lwówek , Mirsk	-	-	no leading industry
Kamienna Góra	Jelenia Góra, Jelenia Góra	5 569 545,00	39	products of other non- metallic mineral products
Legnica	Legnica, Legnica	1 401 027 995,00	3 819	rubber and plastic products, fabricated metal products, except machinery and equipment, motor vehicles (excluding motorcycles), trailers and semi-trailers

Wałbrzych	Wrocław, Wrocław	1 593 018 253,13	7 298	chemicals and chemical products, rubber and plastics,
Wałbrzych	Oleśnica (r) Syców	-	-	no leading industry
Wałbrzych	Oława, Jelcz- Laskowice	1 613 882 100,31	3 427	motor vehicles (excluding motorcycles), trailers and semi-trailers
Wałbrzych	Oława, Oława	175 208 000,00	240	food, products of other non-metallic mineral
Wałbrzych	Oława, Oława	1 277 245 450,00	2 193	paper and paper products, electrical and non- electrical household appliances,
Legnica	Polkowice, Polkowice	4 021 769 505,00	4 431	motor vehicles (excluding motorcycles), trailers and semi-trailers
Legnicka	Polkowice, Przemków	-	-	no leading industry
Wałbrzych	Strzelin, Strzelin	101 607 765,00	126	machinery and equipment nec
Wałbrzych	Strzelin, Wiązów	2 429 424,93	-	paper and paper products
Legnica	Środa Śląska, Kostomłoty	-	-	no leading industry
Legnica	Środa Śląska,, Miękinia	-	-	no leading industry
Legnica	Środa Śląska, Środa Śląska	857 532 618,00	1 264	products of other non- metallic mineral products, motor vehicles (excluding motorcycles), trailers and semi-trailers,
Wałbrzych	Świdnica, Strzegom	235 960 311,00	201	groceries
Wałbrzych	Świdnica Świdnica	-	-	no leading industry
Wałbrzych	Świdnica, Żarów	1 121 421 059,03	2 074	chemicals and chemical products, electrical and non-electrical household appliances, machinery and equipment nec
Wałbrzych	Świdnica, Świdnica	1 014 412 555,39	2 689	chemicals and chemical products, electrical and non-electrical household appliances,
Wałbrzych	Świdnica Świebodzice	42 625 077,44	161	machinery and equipment nec
Kamienna Góra	Trzebnica, Prusice	-	-	no leading industry
Kamienna Góra	Trzebnica, Żmigród	44 669 259,95	112	fabricated metal products, except machinery and equipment
Wałbrzych	Wałbrzych Wałbrzych	4 705 968 599,43	7 083	motor vehicles (excluding motorcycles), trailers and semi-trailers

Wałbrzych	Wołów, Brzeg Dolny	386 320 647,85	1 149	chemicals and chemical products
Wałbrzych	Wołów, Wołów	28 880 800,00	69	rubber and plastic products
Wałbrzych	Wrocław, Długołęka	-	-	no leading industry
Wałbrzych	Wrocław, Kobierzyce	4 199 123 100,00	9 092	computers, electronic and optical products
Wałbrzych	Ząbkowice, Ząbkowice Śląskie	21 265 000,00	28	wood and products of wood and cork, except furniture; articles of straw and materials of a kind used for plaiting
Kamienna Góra	Zgorzelec, Zgorzelec	3 787 825,00	-	fabricated metal products, except machinery and equipment
Legnica	Złotoryja, Złotoryja	43 859 882,00	107	rubber and plastic products, computers, electronic and optical products,

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

Table 5. Universities, Faculties and its categories

School Name	Ministry of Science and Higher Education Category
The Karol Lipiński Academy of Music in Wrocław	A – The Faculty of Composition, Conducting, Theory of Music and Music Therapy
	B – The Faculty of Music Education
	B – The Vocal Faculty
	B – The Instrumental Faculty
The Eugeniusz Geppert Academy of Art. And Design in Wroclaw	A – Faculty of and Sculpture
	A – Faculty of Ceramics and Glass
	B – Faculty of Graphic Arts and Media Art
	B – Faculty of Interior Design and Designing
Academy of Physical Education in Wroclaw	B – Faculty of Physiotherapy
	B – Faculty of Physical Education
	B – Faculty of Sciences in Sport
University of Lower Silesia in Wroclaw	B – Faculty of Social Sciences and Journalism
	B – Faculty of Pedagogical Sciences
	C – Faculty of Technical Sciences
	C – Branch Campus University of Lower Silesia in Kłodzk
Lower Silesian College of Entrepreneurship and Technology in Polkowice	no data
Lower Silesian College of Public Services "Assessor" in Wroclaw	no data
Evangelical School of Theology in Wroclaw	no data
Karkonoska State College in Jelenia Góra	no data
International University of Logistics and Transport in Wroclaw	B – Faculty of Logistics and Transport
Non-public School of Medicine in Wroclaw	no data
State Higher Vocational School. Angelus Silesius in Walbrzych	no data
Witelon State Higher Vocational School in Legnica	C – Wydział Nauk Technicznych i Ekonomicznych

State Higher Vocational School in Glogow	no data
Pontifical Faculty of Theology in Wroclaw	no data
Wroclaw University of Technology	A+ – Faculty of Microsystem Electronics and Photonics
	A – Faculty of Environmental Engineering
	A – Faculty of Electronics
	A – Faculty of Electrical Engineering
	A – Faculty of Architecture
	A – Faculty of Fundamental Problems of Technology
	A – Faculty of Chemistry
	A – Faculty of Mechanical Engineering
	B – Faculty of of Civil Engineering
	B – Faculty of of Mechanical Engineering
	<b>B</b> – Faculty of Geoengineering, Mining and Geology
	B – Faculty of Computer Science and Management
Sudecka Higher School in Kłodzk headquartered in Kłodzk	no data
Higher School of Applied Arts and Management in Wroclaw	<b>B</b> – Faculty of of Arts and Crafts
The School of Vocational Education in Lubin Copper Basin	no data
University of Economics in Wroclaw	A – Faculty of Engineering and Economics
	A – Faculty of Management, Computer Science and Finance
	A – Faculty of Economic Sciences
	A – Faculty of Economics, Management and Tourism in Jelenia Gora
Wroclaw Medical University in Wroclaw	A – Faculty of of Postgraduate Medical Training
	A – Faculty of Health Sciences
	B – Faculty of Medicine
	<b>B</b> – Faculty of Pharmacy and Division of Laboratory Medicine
	B – Faculty of Dentistry

Wrocław University of Environmental and Life Sciences	A – Wydział Nauk o Żywności
	A – Faculty of Veterinary Medicine
	B – Faculty of Sciences and Technology
	<b>B</b> – Faculty of Environmental Engineering and Geodesy
University of Wrocław	A + – Faculty of History and Pedagogical Sciences
	A+ – Faculty of Biotechnology
	A – Faculty of Biological Sciences
	A – Faculty of Chemistry
	A – Faculty of Phisics and Astronomy
	A – Faculty of Mathematics and Computer Science
	A – Faculty of Philology
	B – Faculty of Earth and Environmental Science
	<b>B</b> – Faculty of Law, Administration and Economy
	B – Faculty of Social Sciences
Wroclaw Higher School of Applied Informatics in Wroclaw	C – Faculty of Computer Sciences
WSB University in Wroclaw	B – Faculty of Finance and Management
The Philological School of Higher Education in Wroclaw	no data
Academy of Physiotherapy in Wrocław	no data
University of Business in Wrocław	B – Faculty of Economics and Management
Higher School of Humanities in Wroclaw	no data
Higher School of Computer Science and Management "Copernicus" in Wroclaw	no data
Higher MEdical School in Klodzk	no data
Higher Medical School in Legnica headquartered in Legnica	no data
Higher School of Management in Jelenia Gora	no data
School of Management in Legnica	no data

The General Tadeusz Kościuszko Military Academy of Land Forces in Wrocław	B – Faculty of Safety Sciences
	B – Faculty of Management
Helena Chodkowska Higher School of Law.	no data
Higher College of Technology and Economics in Swidnica headquartered in Swidnica	no data
College of Management "Edukacja" in Wroclaw	B – Faculty of Management
Higher School of Management and Coaching in Wroclaw	no data
Higher School of Management and Finance in Wrocław	no data
Higher School of Management and Marketing in Wroclaw	no data
Higher School of Management and Entrepreneurship headquartered in Wałbrzych	<b>B</b> – for the whole school
University of Social Sciences and Humanities Faculty in Wrocław	A+ – for the whole faculty

Source: Authors' own work based on the Official Journal of the Ministry of Science and Higher Education Warsaw, 9 July 2014 .; Item 38; Communication from the Minister of Science and Higher Education of July 4, 2014 year; of scientific terms granted to scientific institutions.

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