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REGIONAL INVESTMENT ATTRACTIVENESS 2013

Łódź Voivodship

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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 Łódź voivodship

Łódź voivodship is situated in the centre of Poland and at the same time in the centre of Europe. It is a region with industrial traditions associated with textile industry and manufacture of clothing. Nowadays, thanks to Łódź, Poland's third largest city, other branches of industry develop in the region, in particular the manufacture of household appliances (white and brown goods) and biotech industry.

The advantages of the voivodship are:

- its excellent location in terms of communications; in the voivodship, in the proximity of Stryków, an interchange of highways is planned. This will increase the voivodships attractiveness as a location for investments targeted at domestic market of Poland.
- access to big human resources including not only cheap low-qualified workers but also well-qualified employees, which is possible thanks to the presence of numerous higher and vocational education institutions,
- big R&D potential of the higher education institutions and research establishments of the area of Łódź¹,
- substantial resources of brown coal thanks to which the surplus of cheap electricity is available in the voivodship,
- large resources of thermal waters which can set the foundations for the development of renewable energy and health resorts in the region,
- attractive investment offers for investors in the locations of special economic zones.

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

Table 1. General characteristics of the economy of Łódź voivodship

Feature	Łódź voivodship	Poland	Share [%]
Market Potential			
GDP per capita 2010. (PLN/person)	34,180	37,096	-
Population (persons) on 31 December 2012	2,524,651	38,533,299	6.6
Human Resources Potential			
Higher education institutions graduates (persons) in 2012	28,999	484,999	6.0
Secondary schools graduates (persons) in 2012	25,971	421,317	6.2
Number of employed persons on 31 December 2012	933,578	13,911,203	6.7

¹ In 2010 the Ministry of Science and Higher Education ranked among the best scientific establishments in Poland the following ones: the Faculty of Chemistry, the Faculty of Mechanics, the Faculty of Construction, Architecture and Environmental Engineering and the Faculty of Biotechnology and Food Studies of the Technical University of Łódź, The Centre of Molecular and Macromolecular Studies of The Polish Academy of Sciences in Łódź, the Faculty of Economics and Sociology of the University of Łódź, Polish Mother's Memorial Hospital Research Institute in Łódź, The Professor Jerzy Nofer Institute of Occupational Medicine in Łódź, The Institute of Medical Biology of The Polish Academy of Sciences in Łódź and The International Institute of The Polish Academy of Sciences in Łódź – European Regional Centre for Ecohydrology in Łódź.

Structure of employed persons 2012	agriculture 19.2% industry 28.4% services 52.4%	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	2,384.7	73,704.4	3.2
Capital of companies (PLN m) in 2011	4,998.8	194,160.6	2.6
Special economic zones (SEZs) in the voivodship*			
<div>– Łódź SEZ, subzones in: gm. Aleksandrów Łódzki, gm. Brójce, gm. Kleszczów, gm. Koluszki, gm. Ksawerów, gm. Opoczno, gm. Paradyż, gm. Sławno, gm. Stryków, gm. Tomaszów Mazowiecki, gm. Ujazd, gm. Widawa, gm. Wieluń, gm. Wola Krzysztoporska, gm. Wolbórz, gm. Wróblew, gm. Zgierz, gm. Żychlin, m. Bełchatów, m. Konstantynów Łódzki, m. Kutno, m. Łęczyca, m. Łowicz, m. Łódź, m. Ozorków, m. Piotrków Trybunalski, m. Radomsko, m. Rawa Mazowiecka, m. Sieradz, m. Skierniewice, m, Tomaszów Mazowiecki, m, Zduńska Wola, m, Zgierz</div> <div>– Starachowice SEZ, subzone: gm. Mniszków</div>			
Distinguishing investment attractiveness ratings PAI_2 and RAI (Class A, B and C)			
Potential investment attractiveness PAI_2		National economy Class C Labour-intensive industry Class B Trade Class C	
Real investment attractiveness RAI		National economy Class B Trade Class B Tourism Class B Science and technical professional activity Class C	
Counties and communes distinguished according to the Potential Attractiveness Index for the national economy (PAI_GN)			
Counties	Class A	Łódź, Bełchatów, Piotrków Trybunalski, Skierniewice	
	Class B		
Counties	Class A	Ksawerów (2), Zduńska Wola (1), Kutno (1), Łęczyca (1), Łowicz (1), Rawa Mazowiecka (1), Zgierz (1), Skierniewice (1), Aleksandrów Łódzki (3), Andrespol (2), Brzeziny (1), Łódź (1), Bełchatów (1), Kleszczów (2), Nowosolna (2), Radomsko (1), Rzgów (3), Tomaszów Mazowiecki (1), Konstantynów Łódzki (1), Piotrków Trybunalski (1), Pabianice (1)	
	Class B	Sieradz (1), Pabianice (2), Głowno (1), Ozorków (1), Rawa Mazowiecka (2), Stryków (3), Szczerców (2), Tuszyn (3), Działoszyn (3), Rząśnia (2), Sulmierzyce (2)	

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 Łódź voivodship made a contribution of 6.1% to the GDP of Poland. Calculated per capita, it amounted to PLN 34,180 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 163% 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 low share of the service sector (52.4%) whereas a share of the agricultural and industrial sectors are respectively 19.2% and 28.4% (Central Statistical Office, Regional Data Bank 2013).

The number of inhabitants of the voivodship amounts to 2,524,651 (as of 2013), which is 6.6% of the population of Poland. The age structure in the voivodship in 2012 was as follows: 17.1% of the population at pre-productive age, 62.9% at productive age and 20% 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 13.7% 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 3430.8, which is 91% of the average for Poland.

The main potential for human capital creation in the voivodship lies in 29 higher education institutions in which there are 102 thousand students studying, which makes up 6.1% of all students in Poland. Moreover, 5.2% of the secondary school students in the voivodship attend vocational schools and 5.8% attend technical schools.

The voivodship's strategic sectors mentioned in the strategy of regional development include above all: power industry, logistics, textile industry, manufacture of food, construction, manufacture of chemical products and biotechnology.

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

- SSE Łódź. subzones in: gm. Aleksandrów Łódzki, gm. Brójce, gm. Kleszczów, gm. Koluszki, gm. Ksawerów, gm. Opoczno, gm. Paradyż, gm. Sławno, gm. Stryków, gm. Tomaszów Mazowiecki, gm. Ujazd, gm. Widawa, gm. Wieluń, gm. Wola Krzysztoporska, gm. Wolbórz, gm. Wróblew, gm. Zgierz, gm. Żychlin, m. Bełchatów, m. Konstantynów Łódzki, m. Kutno, m. Łęczyca, m. Łowicz, m. Łódź, m. Ozorków, m. Piotrków Trybunalski, m. Radomsko, m. Rawa Mazowiecka, m. Sieradz, m. Skierniewice, m. Tomaszów Mazowiecki, m. Zduńska Wola, m. Zgierz,
- SSE Starachowice. subzone: gm. Mniszków.

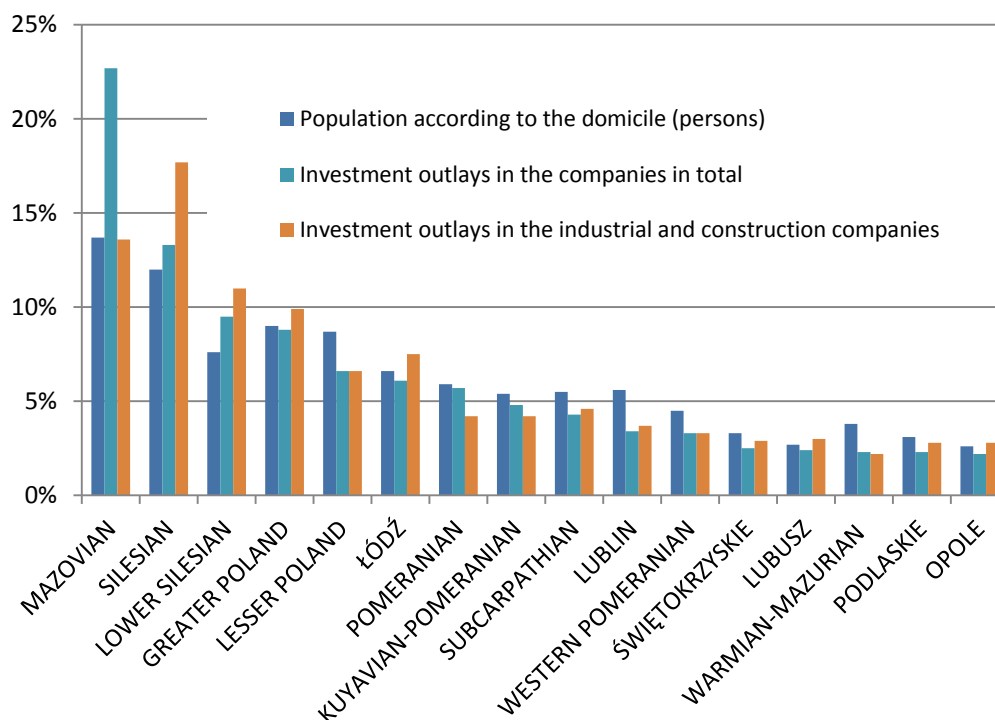
2. Region's rank in terms of investment attractiveness in Poland and in the European Union

Łódź voivodship is characterised by investment attractiveness above the average, which is indicated by its (Class C) 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 high in terms of potential investment attractiveness calculated with use of PAI2 indices for the sections: labour-intensive industry (Class B), trade and repair (Class C).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 B), trade and repairs (class C), hotels and gastronomy (class B) and professional, scientific and technical activities (class C) - 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



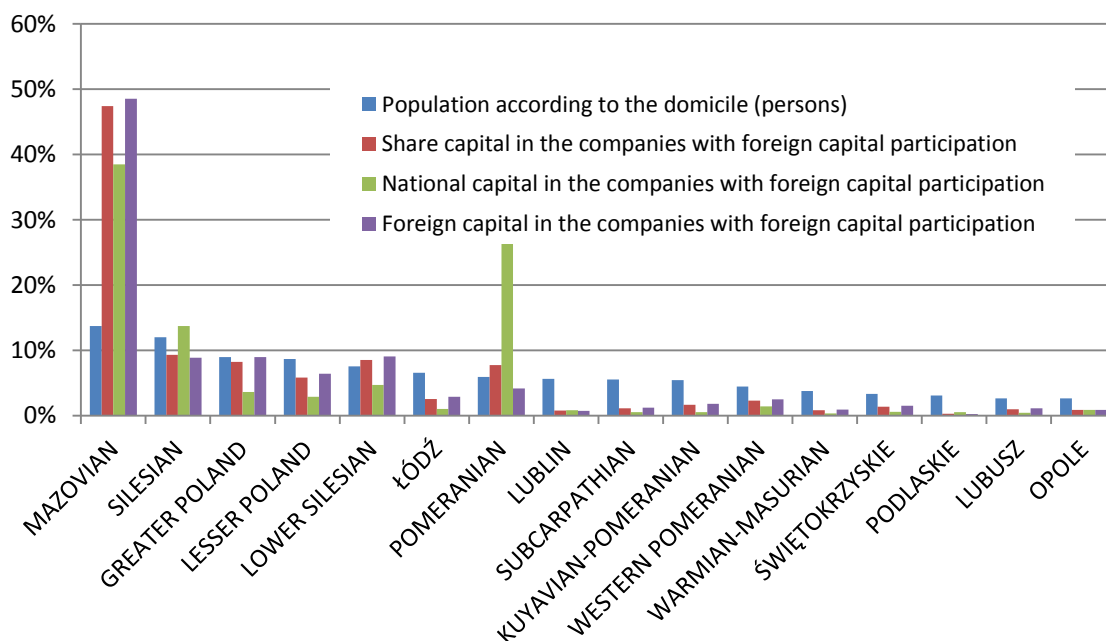
Note: these are the most up-to-date data.

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>

In 2011 Łódź region took the 6th place in Poland in terms of accumulated share capital in the companies with foreign capital participation – a 6.1% share of its total value in all voivodships, compared to a 6.6% share of the voivodship in Poland's population. It does not apply to investments in industry and construction – in this case the share of this region in the total investment outlays for Poland was 8.6% (see Chart 2).

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

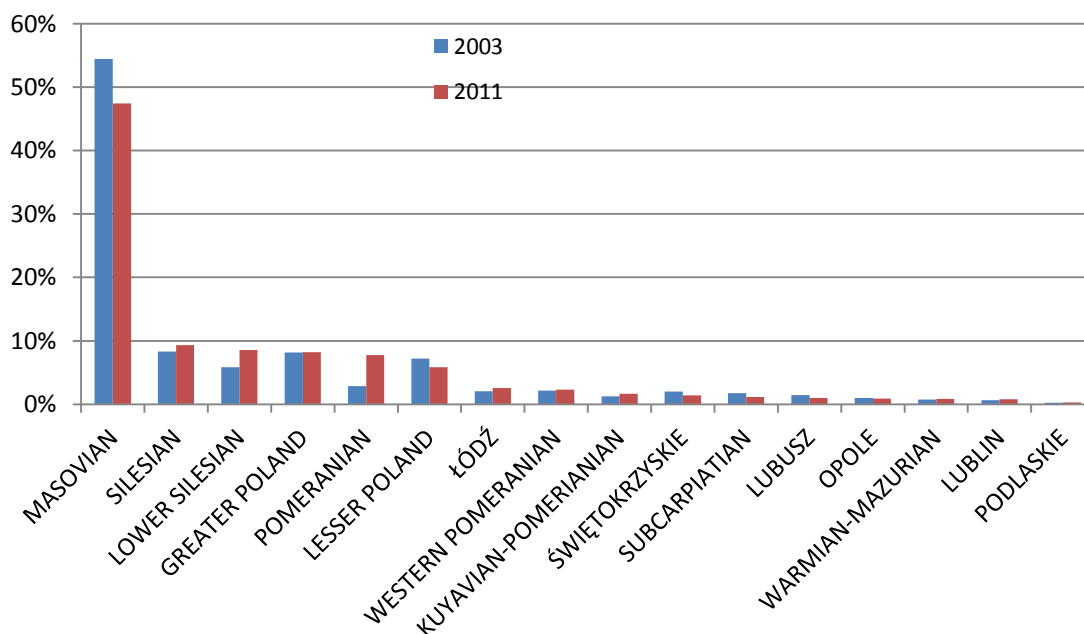


Note: These are the most up-to-date data.

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

The share of Łódź voivodship in the value of share capital in the companies with foreign capital participation amounts to 2.6%. It is not much compared with 6.6% share of the region in the population of Poland. Between 2003 and 2011 the voivodship strengthened its competitive rank on the foreign direct investment market – its share grew from 2.1% to 2.6% – 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).

An opportunity for Łódź voivodship might be investment sites thoroughly prepared by self-government territorial units, utilizing location's advantages.

Łódź voivodship is concerned as a potential business localization in comparison with the other European regions. When it comes to innovativeness, market and human capital factors, the voivodship took the 204th place of 270 regions in the EU and was ranked Class E – see Table 2 in the Appendix.

Łódź voivodship has competitive advantage when it comes to human capital, ranked class A. Łódź is more attractive than regions like: **in the United Kingdom:** Lincolnshire, West Wales and The Valleys, Cornwall and Isles of Scilly; **in Slovenia:** Vzhodna Slovenija; **in Italy:** Umbria (NUTS 2006), Molise, Sardegna, Sicilia, Puglia, Basilicata, Calabria; **in Czech Republic:** Střední Morava, Severozápad; **in France:** Champagne-Ardenne, Basse-Normandie, Corse, Picardie, Poitou-Charentes; **in Greece:** Thessalia, Notio Aigaio, Kriti, Ionia Nisia, Ipeiros, Dytiki Ellada, Anatoliki Makedonia, Thraki, Sterea Ellada, Voreio Aigaio, Dytiki Makedonia, Peloponnisos; **in Spain:** Andalucía, Castilla-La Mancha, Extremadura; **in Austria:** Burgenland (AT), **in Germany:** Lüneburg; **in Hungary:** Nyugat-Dunántúl, Közép-Dunántúl, Dél-Dunántúl, Észak-Magyarország, Dél-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:** Severozapaden, Severen tsentralen, Yugoiztochen, Yuzhen tsentralen and Severozapaden; **in Romania:** Vest, Nord-Vest, Centru, Sud-Est, Sud-Vest Oltenia, Nord-Est and Sud – Muntenia.

3. Internal diversification of regional investment attractiveness

Counties

The following counties are considered the most attractive in Łódź voivodship: Łódź, Bełchatów, Piotrków Trybunalski, Skierniewice – see Table 2.

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

County	PAI1_GN	PAI1_GN	PAI1_C	PAI1_G	PAI1_I	PAI1_M
Bełchatów	0.333	A	A	A	A	A
Skierniewice	0.324	A	A	A	A	A
Łódź	0.312	A	A	A	B	A
Piotrków Trybunalski	0.303	A	A	A	C	A
Łódź East	0.258	C	C	A	B	C
Pabianice	0.258	C	C	C	C	C
Zgierz	0.246	C	C	C	C	C

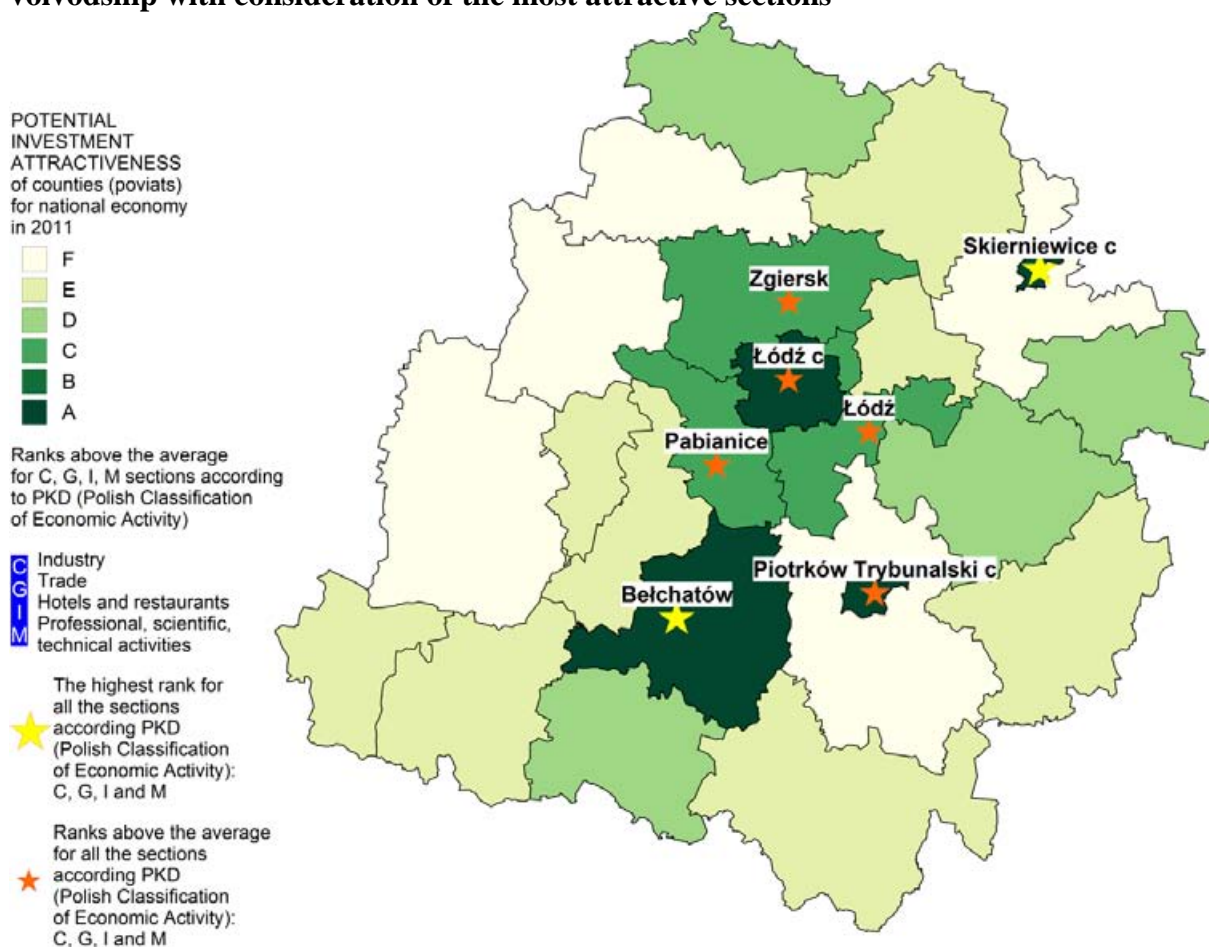
Source: Authors' own calculations.

The counties mentioned above are characterized by very high and high investment attractiveness (beyond Łódź East, Pabianice, Zgierz). The following counties should be distinguished: Skierniewice (city), Bełchatów (land 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 Łódź East, Pabianice, Zgierz (Class C) for section C,

- Pabianice, Zgierz (Class C) for section G,
- Piotrków Trybunalski, Pabianice, Zgierz (Class C) for section I and Łódź East, Pabianice, Zgierz for section M.

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

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

Source: Authors' own materials.

Note: "c" stands for city county.

Communes

Like counties, the Łódź communes are also very much diversified in terms of investment attractiveness. The highest ranked communes are: Ksawerów (2), Zduńska Wola (1), Kutno (1), Łęczyca (1), Łowicz (1), Rawa Mazowiecka (1), Zgierz (1), Skierniewice (1), Aleksandrów Łódzki (3), Andrespol (2), Brzeziny (1), Łódź (1), Bełchatów (1), Kleszczów (2), Nowosolna (2), Radomsko (1), Rzgów (3), Tomaszów Mazowiecki (1), Konstantynów Łódzki (1), Piotrków Trybunalski (1), Pabianice (1). It is also reflected in their high ranks (class A or B) for all the analysed sections – see Table 3.

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

Commune	PAI1_GN	PAI1_GN	PAI1_C	PAI1_G	PAI1_I	PAI1_M
Kleszczów (2)	0.380	A	A	A	A	A
Bełchatów (1)	0.260	A	A	A	B	A
Pabianice (1)	0.258	A	A	A	B	A
Rawa Mazowiecka (1)	0.258	A	A	A	A	A

Łódź (1)	0.257	A	A	A	B	A
Skierniewice (1)	0.256	A	A	A	B	A
Piotrków Trybunalski (1)	0.244	A	A	A	C	A
Aleksandrów Łódzki (3)	0.240	A	A	A	A	A
Tomaszów Mazowiecki (1)	0.238	A	A	A	D	A
Zgierz (1)	0.235	A	A	A	D	A
Nowosolna (2)	0.234	A	A	A	A	A
Andrespol (2)	0.231	A	A	A	B	B
Łowicz (1)	0.228	A	A	A	C	A
Konstantynów Łódzki (1)	0.228	A	A	A	C	A
Rzgów (3)	0.227	A	A	A	A	B
Kutno (1)	0.227	A	A	A	C	A
Ksawerów (2)	0.223	A	A	A	C	B
Brzeziny (1)	0.222	A	A	A	C	B
Zduńska Wola (1)	0.221	A	A	A	D	A
Łęczyca (1)	0.219	A	A	A	D	A
Radomsko (1)	0.217	A	A	B	D	A
Głowno (1)	0.216	B	B	B	A	B
Sieradz (1)	0.209	B	B	B	D	A
Tuszyn (3)	0.209	B	B	A	A	C
Stryków (3)	0.208	B	B	B	A	C
Pabianice (2)	0.206	B	B	B	B	C
Działoszyn (3)	0.204	B	B	B	C	C
Rząśnia (2)	0.204	B	C	C	D	C
Ozorków (1)	0.203	B	B	B	E	B
Rawa Mazowiecka (2)	0.201	B	B	D	B	C
Szczerców (2)	0.199	B	B	C	D	C
Sulmierzyce (2)	0.198	B	B	B	D	C

(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: Sieradz (1), Pabianice (2), Głowno (1), Ozorków (1), Rawa Mazowiecka (2), Stryków (3), Szczerców (2), Tuszyn (3), Działoszyn (3), Rząśnia (2), Sulmierzyce (2). The location-specific advantages are also universal for these communes, which makes them attractive for all kinds of business activity concerned in this research.

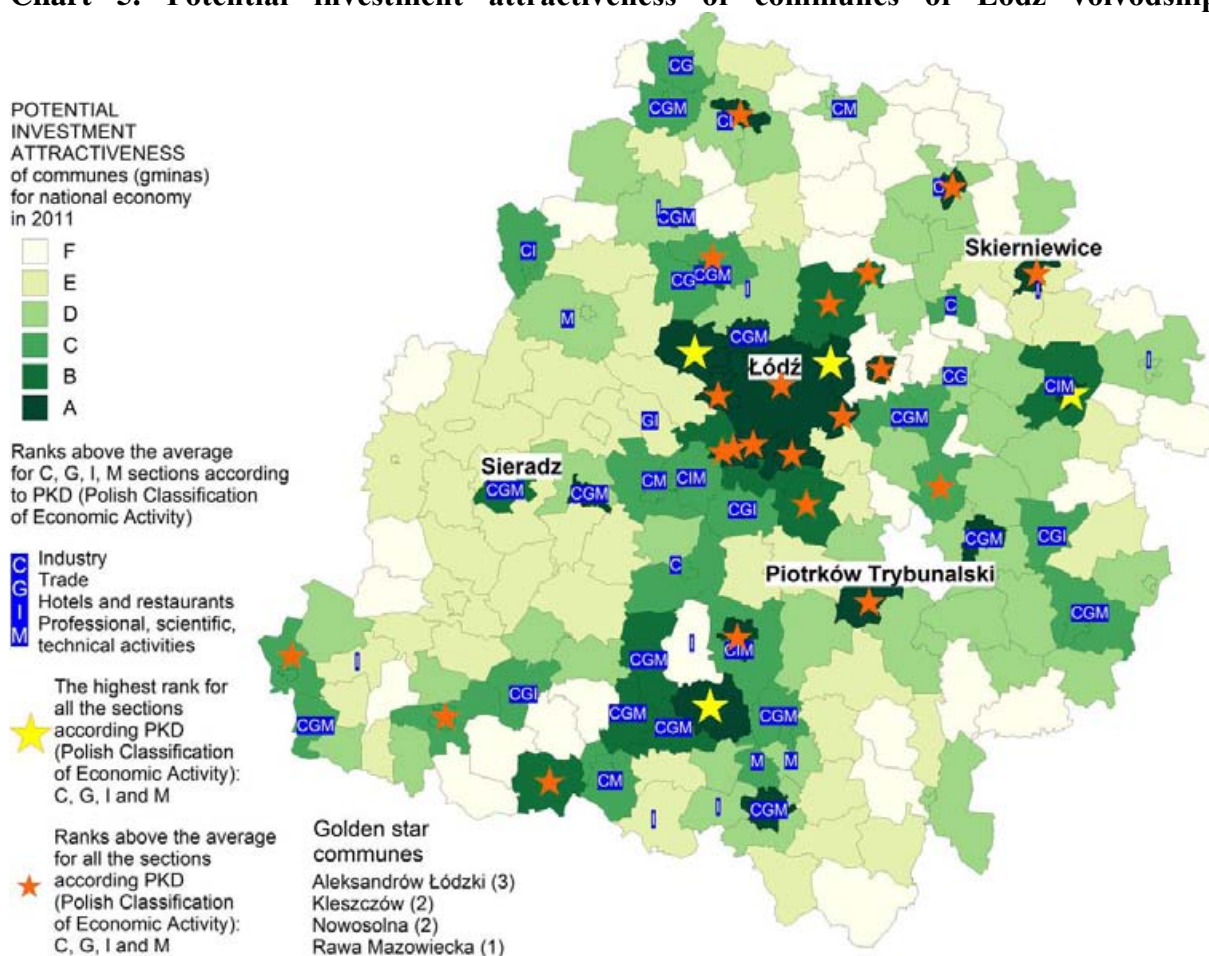
However, this characteristic cannot be found in all of the communes that belong to Class C. Only a few Class C communes fulfil this condition: Lubawka (3), Bolesławiec (2), Długoleka (2), Krośnice (2) – see Table 3 in the Appendix.

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

- Dłutów (2), Dobroń (2), Osjaków (2), Bolesławiec (2), Wieruszów (3), Krośnice (3), Kutno (2), Nowe Ostrowy (2), Żychlin (3), Łowicz (2), Lipce Reymontowskie (2), Parzęczew (2), Jeźów (2), Bełchatów (2), Żelów (3), Koluszki (3), Opoczno (3), Wolbórz (3), Kamieńsk (3), Inowłódz (2), Ujazd (2), Łask (3), Pajęczno (3), Rząśnia (2), Uniejów (3) - for section C,
- Dłutów (2), Osjaków (2), Bolesławiec (2), Wieruszów (3), Krośnice (3), Nowe Ostrowy (2), Parzęczew (2), Jeźów (2), Szczerców (2), Koluszki (3), Opoczno (3), Kamieńsk (3), Ujazd (2), Wodzierady (2), Rząśnia (2) - for section G,
- Dłutów (2), Ksawerów (2), Sokolniki (2), Wieruszów (3), Kutno (1), Kutno (2), Łęczyca (2), Łowicz (1), Biała Rawska (3), Skierniewice (2), Brzeziny (1), Wolbórz (3), Ładzice (2), Konstancin Łódzki (1), Ujazd (2), Piotrków Trybunalski (1), Wodzierady (2), Działoszyn (3), Nowa Brzeźnica (2), Uniejów (3) - for section I,
- Dobroń (2), Bolesławiec (2), Wieruszów (3), Krośnice (3), Pabianice (2), Żychlin (3), Rawa Mazowiecka (2), Ozorków (2), Stryków (3), Bełchatów (2), Szczerców (2), Koluszki (3), Dobrychów (2), Gomunice (2), Kamieńsk (3), Tuszyn (3), Ujazd (2), Łask (3), Działoszyn (3), Pajęczno (3), Rząśnia (2), Sulmierzyce (2), Poddębice (3) - for section M.

Synthetic evaluation of potential investment attractiveness of communes of Łódź voivodship is presented in Chart 5.

Chart 5. Potential investment attractiveness of communes of Łódź 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: Wojewódzkie Porozumienie Izb Gospodarczych in Łódź, Łódzka Izba Przemysłowo-Handlowa, Regionalna Izba Budownictwa in Łódź, Izba Rolnicza Województwa Łódzkiego in Łódź, Krajowa Izba Mody in Łódź, Polska Izba Przemysłu Tekstylnego in Łódź, Polska Izba Bielizny in Łódź, Regionalna Izba Gospodarcza Łódź,
- associations (including business centres): Fundacja Rozwoju Przedsiębiorczości in Łódź, Fundacja Inkubator in Łódź, Centrum Zaawansowanych Technologii BioTechMed in Łódź,
- business incubators: Łódzki Inkubator Technologiczny przy Łódzkim Regionalnym Parku Naukowo-Technologicznym, Inkubator Technologiczny przy Bełchatowsko Kleszczowskim Parku Przemysłowo Technologicznym, Akademickie Inkubatory Przedsiębiorczości in Łódź,
- technology parks, science parks, industrial parks: Łódzki Regionalny Park Naukowo-Technologiczny, Bełchatowsko Kleszczowski Park Przemysłowo Technologiczny,
- consulting centres (including personal consulting and agricultural consulting): Łódzki Ośrodek Doradztwa Rolniczego in Bratoszewice,
- financial institutions (guarantee funds): Łódzki Fundusz Poręczeń Kredytowych Sp. z o.o. in Łódź.
- others: Łódzka Agencja Rozwoju Regionalnego S.A. in Łódź. Agencja Rozwoju Regionu Kutnowskiego, Regionalne Centrum Obsługi Inwestorów i Eksporterów Urzędu Marszałkowskiego Województwa Łódzkiego, Fundacja Rozwoju Gminy Żelów, Fundacja Rozwoju Gminy Kleszczów.

Foundation for Entrepreneurship Development (*Fundacja Rozwoju Przedsiębiorczości*) in **Łódź** is a centre of Enterprise Europe Network, National System of Services for Small and Medium Enterprises, National Innovation Network and Innovative Policy Research for Economic Growth network. The foundation offers trainings on strategic management, human resources management, change management and project management, promotion, sales and marketing, negotiation techniques, business skills development, leadership skills development, organization's relationships management and law and economic aspects of running a business. Trainings on customers' demand can also be organized. The foundation's services include i.a. technology and innovations audit, exports audit, looking for business partners, expertises, opinions on innovativeness, assessment of needs for trainings, management consulting (HR, sales, organizational changes implementation, new projects preparation). The foundation offers information services concerning running a business in Poland and abroad and available funds from national and European programmes. It also organizes a course for boards of supervisors' members (<http://frp.lodz.pl/>. 29 October 2013)

Inkubator Foundation in Łódź (*Fundacja Inkubator*) aims at creating favourable conditions for opening and running small and medium enterprises. The foundation is running Entrepreneurship Support Centre and Entrepreneurship Development Fund. The centre offers consulting and information services for micro-, small and medium enterprises and persons

who want to run a business (including the unemployed). The fund is offering financial support by granting preferential loans for the unemployed who start a business and for the entrepreneurs who create jobs for the unemployed. The financial support is also aimed at small entrepreneurs for investments, creating new jobs and restructuring companies. (<http://www.inkubator.org.pl/fi/index.php>, 29 October 2013)

Advanced Technologies Centre BioTechMed in Łódź (*Centrum Zaawansowanych Technologii BioTechMed*) The centre is an industrial-research consortium established by higher education institutions, Polish Academy of Sciences units and other entities from Łódź voivodship. The aim of BioTechMed is to conduct joint research and innovation projects in the fields of healthcare and environment protection by utilising advancements in biotechnology and medical. The following organizational units are to be included in BioTechMed: R&D Centre, Research and Certification Centre (certifying and certified laboratories), Didactics and Training Centre, Congress Centre and Technology Transfer Centre IPR/Patent Office. To intensify these activities LabNet service was created. It consists of two independent databases available online: virtual laboratory (VirtuaLab) and Scientific Cooperation Offers Bank (ScientCooperation), available both in Polish and in English. LabNet gathers and allows to look for information on currently conducted research in the fields of biotechnology, medical technology (to facilitate cooperation) as well as on equipment resources available at various research and business institutions. (www.biotechmed.pl/, 29 October 2013)

Łódź Regional Research and Technology (*Łódzki Regionalny Park Naukowo-Technologiczny*) operates the Łódź Technology Incubator for hi-tech businesses. It offers a possibility of leasing investment premises covered by local spatial development plans (the area is reserved for services, low-intensity production and hotels). There is also Łódź Technology Business Incubator for innovative companies. The offer includes offices, office-laboratory modules, computer equipment with broadband Internet access, legal and marketing advice, help at looking for external sources of financing. In October 2012 a BioNanoPark was opened in Technopark Łódź. It is one of the largest Polish research and implementation centres for business. It consists of laboratories for biotechnology and nanotechnology. In BioNanoPark two laboratories were opened: of industrial biotechnology and of molecular and nanostructural physics. They are to offer research services for business and academic centres in Poland and abroad (medical, environment protection, pharmaceutical branches and military branch). Also a laboratory of individual medical implants is located there. In 2013 a new investment was started, including incubator facilities modernization and buying laboratory equipment. (www.technopark.lodz.pl/, 29 October 2013)

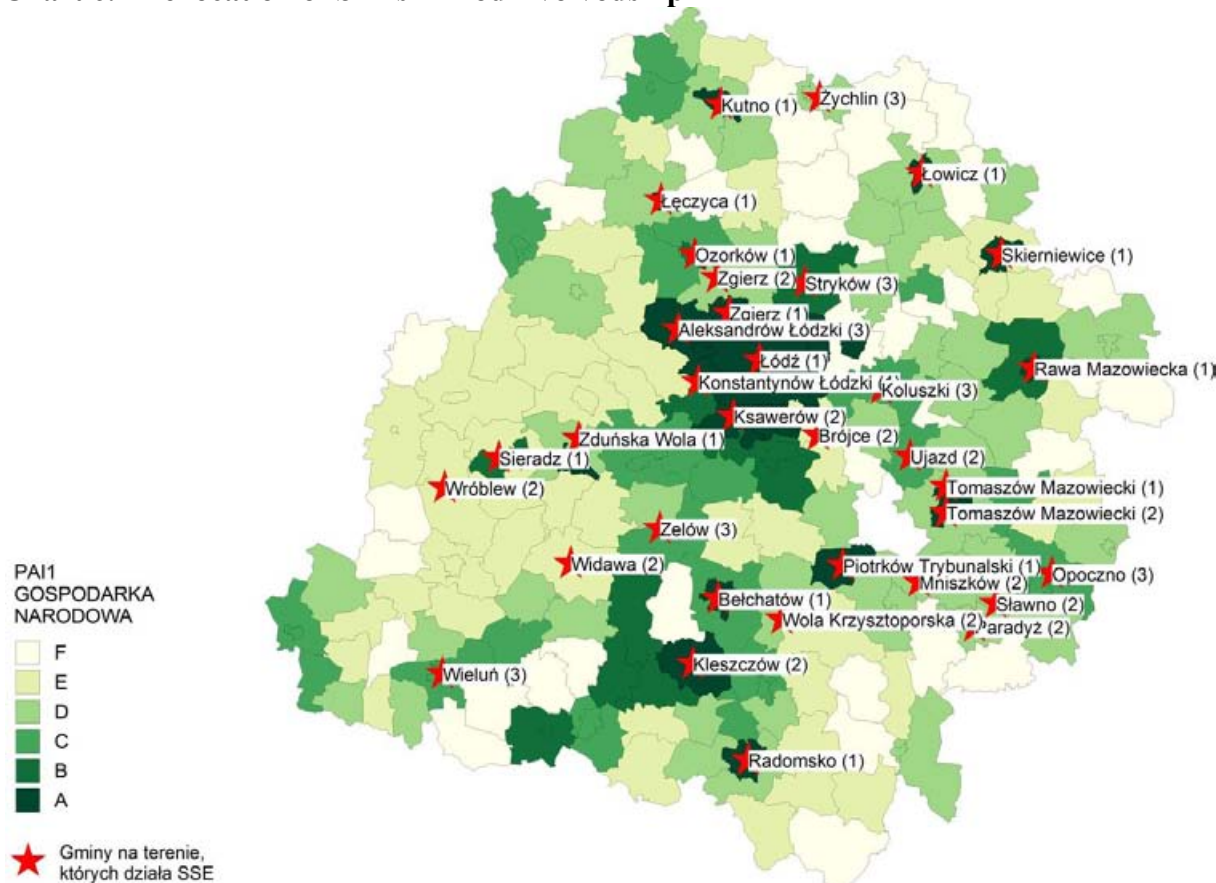
Bełchatów-Kleszczów TechnoIndustrial Park (*Bełchatowsko-Kleszczowski Park Przemysłowo-Technologiczny*) offers information, training and consulting services. A database of technologies for commercialization is being created. The technologies in the database come from the R&D centres and universities in the whole country. The park offers investment sites for business activities and offices to rent in the technology incubator (including technical infrastructure) for the SMEs connected with new technologies implementation. The offer is targeted at the enterprises set by graduates, PhDs and young research staff of Łódź University of Technology and other universities of Łódź region (spin-off and spin-out support) and workers who lost their jobs because of companies restructuring. The incubator also offers a range of consulting services, preparation of company development strategy, preparation of business plan, feasibility studies, technical and technology consulting. (www.ppt.belchatow.pl/, 29 October 2013)

Łódź Regional Development Agency (*Łódzka Agencja Rozwoju Regionalnego S.A.*) supports development of micro-, small and medium enterprises sector by development and running programs financed from the EU funds. The agency is a Regional Financing Institution, responsible for operating programs aimed at financing investments in new technologies, improvement of workers' qualifications and exports development. The agency also operates in the National System of Services for small and medium enterprises, offering information services, pro-innovation services and financial services such as granting loans and guarantees. A Regional Loan Fund is operating as a part of financial services. At the moment a program "Inicjatywa Jeremie" is operating, for which the funds were raised for loans for the small entrepreneurs. (<http://www.larr.lodz.pl/pl/>, 29 October 2013)

Special economic zones in Łódź voivodship – effects

There are two special economic zones (SEZs) in Łódź voivodship: Łódź and Starachowice. At the end of 2012 the areas of the SEZs were parts of 15 cities and 19 communes – see Chart 6.

Chart 6. The location of SEZs in Łódź 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 1998. The investment outlays made by SEZ companies operating in the communes of Łódź by the end of 2012 amounted to PLN 8.7 billion, which made 10% of all investment outlays made in the Polish SEZs. In the same time the SEZ companies in the region created 17.3 thousand new jobs which made 9% 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)
Łódź / Brójce	Łódź East, Brójce (2)	no investors yet		
Łódź / Koluszki	Łódź East, Koluszki (3)	no investors yet		
Łódź / Konstantynów Łódzki	Pabianice, Konstantynów Łódzki (1)	prints and recorded services, rubber and plastic products	68.19	46
Łódź / Ksawerów	Pabianice, Ksawerów (2)	textile products, basic pharmaceutical products and pharmaceutical preparation	218.80	506
Łódź / Ozorków	Zgierz, Ozorków (1)	paper and paper products, other non-metallic mineral products	532.67	1,539
Łódź / Zgierz	Zgierz, Zgierz (1)	other non-metallic mineral products	159.10	267
Łódź / Aleksandrów Łódzki	Zgierz, Aleksandrów Łódzki (3)	chemicals and chemical products. electrical equipment and non-electric household appliances.	400.81	614
Łódź / Stryków	Zgierz, Stryków (3)	paper and paper products	349.75	207
Łódź / Zgierz	Zgierz, Zgierz (2)	no investors yet		
Łódzka / Łódź	Łódź (city), Łódź (1)	fabricated metal products (except machinery and equipment), electrical equipment and non-electric household appliances	2,816.32	7 192
Łódzka / Bełchatów	Bełchatów, Bełchatów (1)	no investors yet		
Łódzka / Kleszczów	Bełchatów, Kleszczów (2)	metals	26.75	
Starachowice / Mniszków	Opoczno, Mniszków (2)	other non-metallic mineral products	29.82	48
Łódzka / Opoczno	Opoczno, Opoczno (3)	other non-metallic mineral products	13.46	
Łódzka / Paradyż	Opoczno, Paradyż (2)	other non-metallic mineral products	187.71	44
Łódzka / Sławno	Opoczno, Sławno (2)	other non-metallic mineral products	2.51	
Łódzka / Wola Krzysztoporska	Piotrków Trybunalski, Wola Krzysztoporska (2)	no investors yet		
Łódzka / Wolbórz	Piotrków Trybunalski, Wolbórz (3)	storage and support activities for transportation	37.63	56
Łódzka / Radomsko	Radomsko, Radomsko (1)	electrical equipment and non-electric household appliances	871.23	2 043
Łódzka / Tomaszów Maz.	Tomaszów Mazowiecki, Tomaszów Mazowiecki (1)	food products, other non-metallic mineral products.	181.71	294
Łódzka / Tomaszów Maz.	Tomaszów Mazowiecki, Tomaszów Mazowiecki (2)	other non-metallic mineral products	270.01	488
Łódzka / Piotrków Trybunalski	Piotrków Trybunalski (city), Piotrków Trybunalski (1)	metals	286.79	1,271
Łódzka / Chociw	Łask, Widawa (2)	basic pharmaceutical products and pharmaceutical preparation	22.05	
Łódzka / Sieradz	Sieradz, Sieradz (1)	clothing	114.04	234

Łódzka / Wróblew	Sieradz, Wróblew (2)	other non-metallic mineral products	21.27	
Łódzka / Wieluń	Wieluń, Wieluń (3)	motor vehicles (excluding motorcycles), trailers and semi-trailers	87.33	60
Łódzka / Zduńska Wola	Zduńska Wola, Zduńska Wola (1)	clothing, rubber and plastic products	63.01	312
Łódzka / Kutno	Kutno, Kutno (1)	food products, rubber and plastic products	775.30	663
Łódzka / Żychlin	Kutno, Żychlin (3)	no investors yet		
Łódzka / Łęczyca	Łęczyca, Łęczyca (1)	rubber and plastic products	202.32	802
Łódzka / Łowicz	Łowicz, Łowicz (1)	mining supporting services, chemicals and chemical products.	25.51	16
Łódzka / Rawa Mazowiecka	Rawa Mazowiecka, Rawa Mazowiecka (1)	other non-metallic mineral products, fabricated metal products (except machinery and equipment). furniture	92.39	255
Łódzka / Ujazd	Strzelce-Drezdenko, Ujazd (3)	EUROGLAS Polska Sp. z o.o. (Germany, manufacture of glass)	848.2	311
Łódzka / Skierniewice	Skierniewice (city), Skierniewice (1)	rubber and plastic products	1.02	

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

The largest investments in voivodship's SEZs have been completed in Łódź. Investments from numerous branches have been located here, such as: food industry (Dakri Sp. z o.o., Pifo Eko. Strefa Sp. z o.o.), plastic (COKO. Werk Polska Sp z o.o., Wirthwein Polska Sp z o.o., Hirsch Porozell Sp. z o.o., MECALIT POLSKA Sp. z o.o., CKM Technologie), BPO (Fujitsu Services Sp. z o.o., Business Support Solution S.A.), packaging (Albea Poland Sp. Z o.o., Schaumaplast, Organika Sp. z o.o., AMCOR FLEXIBLES REFLEX Sp. z o.o., medical (MDH Sp. z o.o.), cosmetics (Gillette Poland International Sp. z o.o. Delia Cosmetics Distribution), IT (DELL Products (Poland) Sp z o.o., Ericpol Telecom Sp. z o.o., AMG lab), automotive industry (P.H/U, Bilex Sp. z o.o. ABB Sp. z o.o.), metal products (Bobrus Maszyny Poligraficzne Sp. z o.o.), household appliances (BSH Sprzęt Gospodarstwa Domowego Sp. z o.o. Grupa Bosch-Siemens, Coko-Werk Polska Sp. z o.o.).

The voivodeship intends to attract investors from R&D, the hi-tech, household appliances, pharmaceutical and cosmetics and construction material industries sectors – both for Łódź SEZ and Starachowice 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 5 are situated in Łódź voivodship (see Table 5).

Table 5. Communes in Łódź 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
10	Piotrków Trybunalski (1)	12.0	11.0	5.0	28.0
30	Sieradz (1)	10.5	9.0	5.0	24.5
34	Łódź (1)	9.0	12.0	3.0	24.0
54	Skierniewice (1)	8.5	13.0	0.0	21.5
86	Łowicz (1)	12.5	7.0	0.0	19.5

Source: Authors' own materials based on the research.

All the distinguished Łódź communes run websites where the information is presented in the clear and well-structured way. Skierniewice also offers preferential conditions for investing (property tax exemption).

5. Region's strengths and weaknesses

Łódź 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 Łódź 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 Technical Infrastructure Class C Microclimate Social Infrastructure Class C Market Microclimate Class B Microclimate Innovativeness Class C Returns on tangible assets Class A Profitability of enterprises Class C Self-financing of self-government units Class B Investment outlays Class B	Microclimate Human Resources Class F Social Microclimate Class D Microclimate Administration/Government Class D Productivity of enterprises Class D
Capital-intensive industry	
Microclimate Technical Infrastructure Class C Market Microclimate Class B Self-financing of self-government units Class B Investment outlays Class C	Microclimate Human Resources Class E Microclimate Social Infrastructure Class D Social Microclimate Class E Microclimate Administration/Government Class E Microclimate Innovativeness Class D Returns on tangible assets Class D Productivity of enterprises Class E
Labour-intensive industry	
Microclimate Technical Infrastructure Class B Microclimate Social Infrastructure Class C Social Microclimate Class C Market Microclimate Class B Microclimate Administration/Government Class B Self-financing of self-government units Class B Investment outlays Class C	Microclimate Human Resources Class E Returns on tangible assets Class D Productivity of enterprises Class E
Trade	
Microclimate Technical Infrastructure Class B Microclimate Social Infrastructure Class B Market Microclimate Class C Microclimate Administration/Government Class C Returns on tangible assets Class A Self-financing of self-government units Class B Investment outlays Class B	Microclimate Human Resources Class F Social Microclimate Class D Productivity of enterprises Class D
Tourism	
Microclimate Technical Infrastructure Class A Microclimate Administration/Government Class	Microclimate Human Resources Class F Microclimate Social Infrastructure Class E

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

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

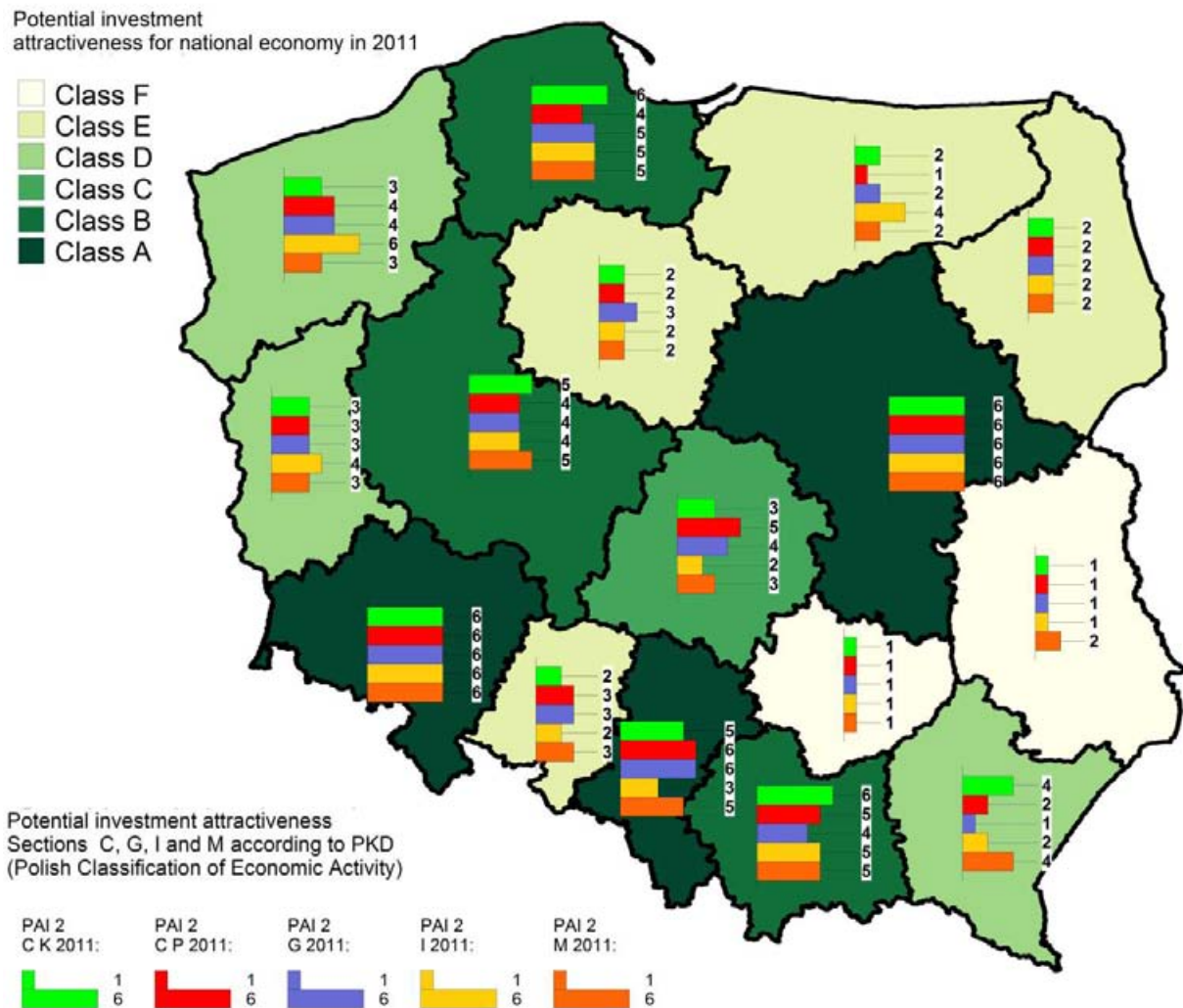
Summary

The engines of economic development of Łódź voivodship are the counties: Łódź (city), Piotrków Trybunalski (city) and Bełchatów as well as the special economic zones in the region.

Łódź voivodship has predispositions to **create interregional clusters**, especially in sectors such as: manufacture of food products, manufacture of textile products, legal and accounting activities, healthcare, processing and preserving of fruit and vegetables, manufacture of grain mill products, starch and starch products, manufacture of other food products, manufacture of textiles, manufacture of soap and detergents, perfumes and toilet preparations, washing and cleaning preparations.

It can also develop **intelligent specializations** in the **high-tech sectors**, such as: basic pharmaceutical products and pharmaceutical preparation, in the **medium-low-tech sectors**: manufacture of rubber and plastic products, manufacture of non-metallic mineral products, in the **low-tech sectors**: manufacture of food products, manufacture of textile products, manufacture of clothes and poligraphy.

APPENDIX

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

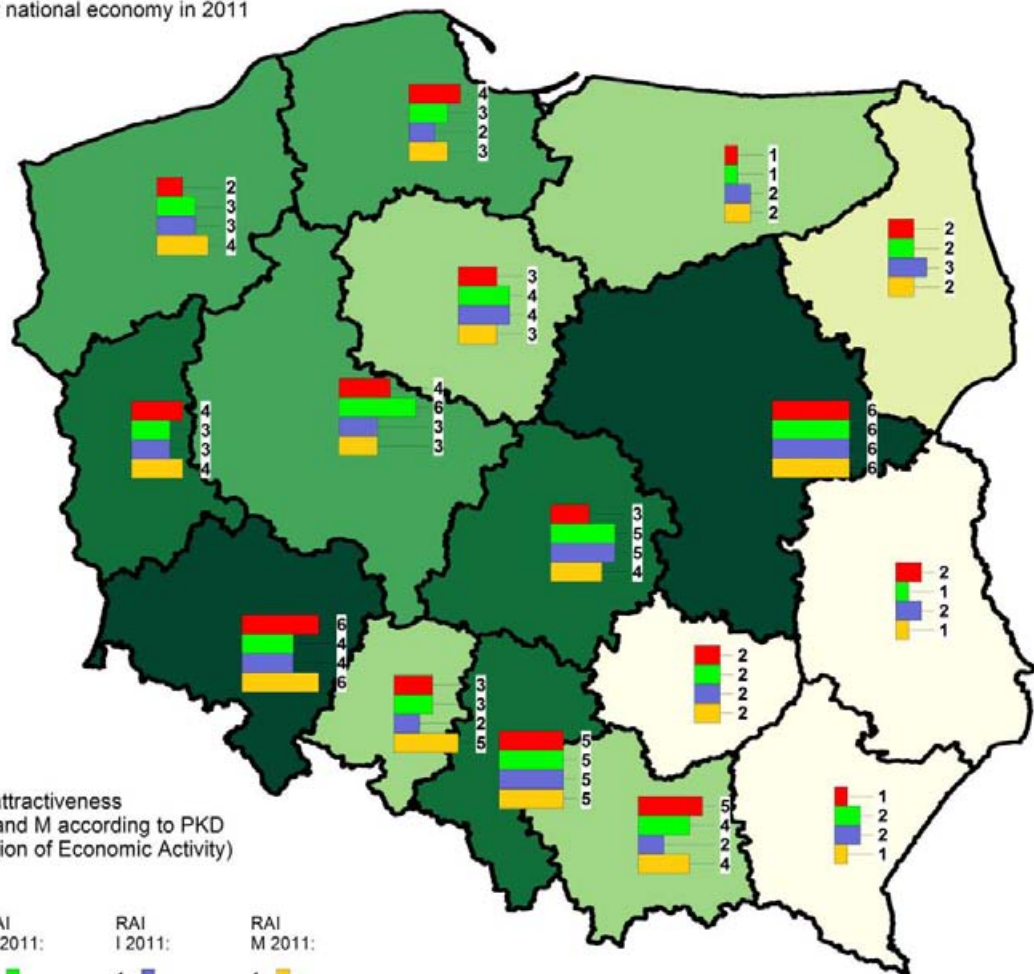
Source: Authors' own materials based on the research.

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

Real investment attractiveness for national economy in 2011

- Class F
- Class E
- Class D
- Class C
- Class B
- Class A

Real investment attractiveness
Sections C, G, I and M according to PKD
(Polish Classification of Economic Activity)



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
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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
Bełchatów	0.333	A	A	A	A	A
Skierniewice	0.324	A	A	A	A	A
Łódź	0.312	A	A	A	B	A
Piotrków Trybunalski	0.303	A	A	A	C	A
Łódź East	0.258	C	C	A	B	C
Pabianice	0.258	C	C	C	C	C
Zgierz	0.246	C	C	C	C	C

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
Kleszczów (2)	0.380	A	A	A	A	A
Bełchatów (1)	0.260	A	A	A	B	A
Pabianice (1)	0.258	A	A	A	B	A
Rawa Mazowiecka (1)	0.258	A	A	A	A	A
Łódź (1)	0.257	A	A	A	B	A
Skierniewice (1)	0.256	A	A	A	B	A
Piotrków Trybunalski (1)	0.244	A	A	A	C	A
Aleksandrów Łódzki (3)	0.240	A	A	A	A	A
Tomaszów Mazowiecki (1)	0.238	A	A	A	D	A
Zgierz (1)	0.235	A	A	A	D	A
Nowosolna (2)	0.234	A	A	A	A	A
Andrespol (2)	0.231	A	A	A	B	B
Łowicz (1)	0.228	A	A	A	C	A
Konstantynów Łódzki (1)	0.228	A	A	A	C	A
Rzgów (3)	0.227	A	A	A	A	B
Kutno (1)	0.227	A	A	A	C	A
Ksawerów (2)	0.223	A	A	A	C	B
Brzeziny (1)	0.222	A	A	A	C	B
Zduńska Wola (1)	0.221	A	A	A	D	A
Łęczyca (1)	0.219	A	A	A	D	A
Radomsko (1)	0.217	A	A	B	D	A
Głowno (1)	0.216	B	B	B	A	B
Sieradz (1)	0.209	B	B	B	D	A
Tuszyn (3)	0.209	B	B	A	A	C
Stryków (3)	0.208	B	B	B	A	C

Pabianice (2)	0.206	B	B	B	B	C
Działoszyn (3)	0.204	B	B	B	C	C
Rząśnia (2)	0.204	B	C	C	D	C
Ozorków (1)	0.203	B	B	B	E	B
Rawa Mazowiecka (2)	0.201	B	B	D	B	C
Szczerców (2)	0.199	B	B	C	D	C
Sulmierzyce (2)	0.198	B	B	B	D	C
Wieluń (3)	0.197	C	B	B	B	B
Kamieńsk (3)	0.196	C	C	C	D	C
Parzęczew (2)	0.196	C	C	C	D	D
Koluszki (3)	0.195	C	C	C	D	C
Ozorków (2)	0.193	C	B	B	B	C
Wieruszów (3)	0.192	C	C	C	C	C
Opoczno (3)	0.192	C	C	C	D	B
Bolesławiec (2)	0.191	C	C	C	D	C
Krośniewice (3)	0.189	C	C	C	D	C
Ujazd (2)	0.187	C	C	C	C	C
Lipce Reymontowskie (2)	0.187	C	C	D	D	D
Dłutów (2)	0.186	C	C	C	C	D
Inowódz (2)	0.185	C	C	B	A	D
Bełchatów (2)	0.182	C	C	D	B	C
Łask (3)	0.182	C	C	D	E	C
Pajęczno (3)	0.182	C	C	D	D	C
Dobroń (2)	0.181	C	C	D	B	C
Osjaków (2)	0.181	C	C	C	A	D
Wolbórz (3)	0.181	C	C	D	C	D
Uniejów (3)	0.180	C	C	E	C	D
Nowe Ostrowy (2)	0.180	C	C	C	D	D
Zelów (3)	0.179	C	C	D	D	D
Dobryszyce (2)	0.179	C	D	D	E	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.