

Warsaw School of Economics



REGIONAL INVESTMENT ATTRACTIVENESS 2016

Łódź Voivodship

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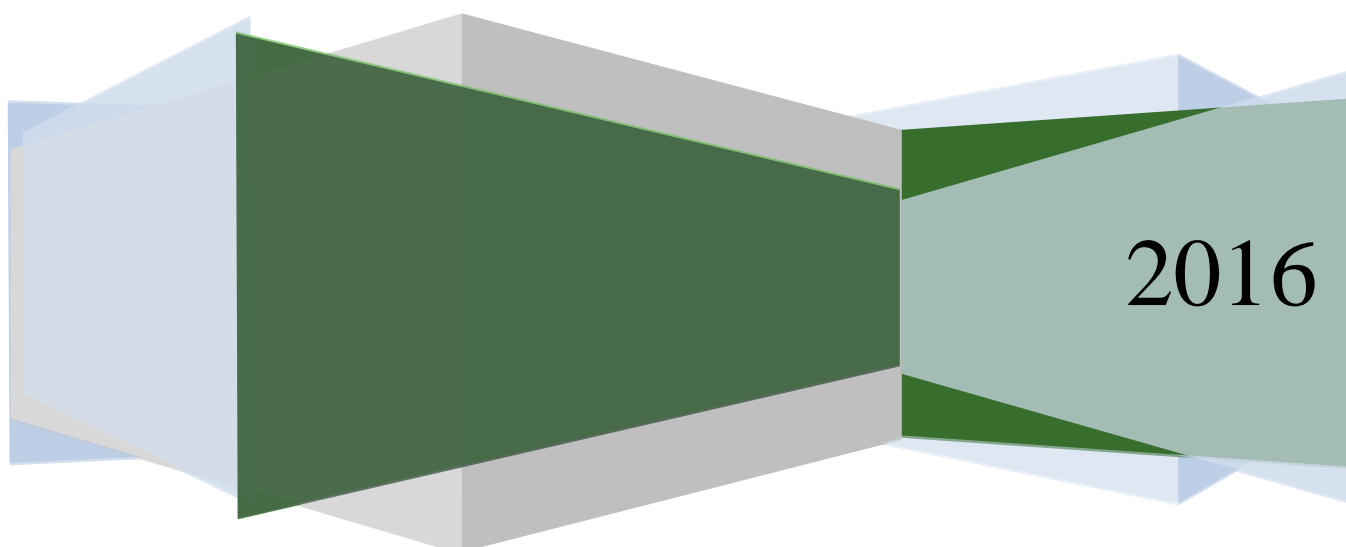
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Polish Information and Foreign Investment Agency

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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 Łódź 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.¹

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 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.

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 (<http://kolegia.sgh.waw.pl/pl/KNoP/struktura/IP/struktura/ZOB/>), as well as in numerous scientific publications and expert opinions.

¹ 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 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 Łódź,
- 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 2014 (PLN/person)		41 839	44 686	-
Population (persons) on 31 December 2015		2 493 603	38 437 239	6.5%
Human Resources Potential				
Higher education institutions graduates (persons) in 2015		21 905	394 987	5.5%
Secondary schools graduates (persons) in 2015		18 382	284 187	6.5%
Number of employed persons in 2015 (in thousands)		1 238	16 084	7.7%
Structure of employed persons in 2015		sgriculture sector 12.3% industry sector 30.6% services sector 57.1%		11.5% 30.5% 58.0%
Investment outlays and capital of companies with foreign capital participation in the voivodship				
Investment outlays (PLN m) in 2014		3 097.9	78 823.1	3.9%
Capital of companies (PLN n) in 2014		5 273.8	215 594.8	2.5%
Special Economic Zones (SEZs) in the voivodship*				
– Łódź – Starachowice				
Distinguishing investment attractiveness ratings PAI_2 and RAI (class A, B and C)				
Potential investment attractiveness PAI_2		National economy class C Capital-intensive industry class C Labour-intensive industry class C Trade and repairs class C Professional, scientific and economic activities class C		
Real investment attractiveness RAI		Trade and repairs class B Accomodation and catering class C		
Counties and communes distinguished according to the Potential Attractiveness Index for the national economy (PAI1_GN)				
Counties	Class A	Bełchatów, city of Łódź, city of Piotrków Trybunalski, city of Skierniewice		
Communes	Class A	Aleksandrów Łódzki (u-r), Andrespol (r), Bełchatów (u), Brzeziny (u), Kleszczów (r), Konstantynów Łódzki (u), Ksawerów (r), Kutno (u), Łowicz (u), Łódź (u), Nowosolna (r), Pabianice (u), Piotrków Trybunalski (u), Rawa Mazowiecka (u), Rząśnia (r), Rzgów (u-r), Skierniewice (u), Stryków (u-r), Sulmierzyce (r), Tomaszów Mazowiecki (u), Zgierz (u)		
	Class B	Głowno (u), Łęczyca (u), Ozorków (u), Pabianice (r), Radomsko (u), Sieradz (u), Szczerców (r), Tuszyn (u-r), Wieluń (u-r), Zduńska Wola (u)		

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

PAI – potential investment attractiveness, RAI – real investment attractiveness

* For more information see Table 4. in the Appendix.

Source: Authors' own calculations.

The number of inhabitants of the voivodship amounts to 2 493 603 (as of 2015), which is 6.5% of the population of Poland. The age structure in the voivodship in 2015 was as follows: 16.8% of the population at pre-productive age, 61.4% at productive age and 21.8% at post-productive age (for Poland it was 18%, 62% and 20% respectively).

The main potential for human capital formation in the region representing 26 universities, which educates 82 thousand. students, or 6% of students in the country.

According to a report prepared by the Committee for Evaluation of Research (KEJNA) for the Ministry of Science and Higher Education in the Lodz region 19 faculties of universities has received scientific category A; and 26 faculties received category - B. It is also worth mentioning that 23 schools of higher education had not received any category awarded by KEJNA. Detailed information can be found in Appendix (Table 5).

In addition, 7.7% of the secondary school students in the voivodship attend vocational schools and 28.8% attend technical schools.

The registered unemployment rate in the voivodship amounted to 9.0% in August 2016, compared to 8.5%² in Poland. The average monthly gross wages and salaries in enterprises sector in the first half-year of 2016 amounted to PLN 3788.05, which is 98% of the average for Poland.

In 2014 Łódź voivodship made a contribution of 6.1% to the GDP of Poland. Calculated per capita, it amounted to PLN 41839 with the average for Poland PLN 44686. With this result the voivodship takes the 6th place in the country. The GDP growth rate in the voivodship in the years 2004-2014 amounted to 181% while the average for Poland amounted to 181%.

In comparison with the whole country the structure of employment in the voivodship is characterised by a share of the service sector at the level of 57.1% whereas a share of the agricultural and industrial sectors are respectively 12.3% and 30.6% (Central Statistical Office, Local Data Bank 2016).

In the structure of voivodship's industry important role is played by: manufacture of food products (21% of sold production of the whole voivodship's industry at the end of 2015), manufacture of rubber and plastic products (8%), manufacture of other non-metallic mineral products (6%) and manufacture of metal products (5%).

The region is the leading manufacturer of wearing apparel (29% of country's sold production in 2015), textiles (23%), pharmaceuticals (12%), other non-metallic mineral products (9%), food products (8%), rubber and plastic products (7%) and manufacture of computer, electronic

² The unemployed and the unemployment rate according to voivodship, sub-regions and counties (as of the end of August 2016). Central Statistical Office.

and optical products (6%). It also has a 9% share in country's market of printing and reproduction of recorded media.³

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: energy production, logistics, textile manufacture, agri-food industry, construction, chemical industry, biotechnology.

For the entrepreneurs willing to invest in Łódź 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 Łódź voivodship self-government, based on the observations on investments inflows to the voivodship. The high potential sectors on the list include textile, wearing apparel and knitting industry, advanced building materials, medicine, pharmacy, cosmetics, energy production (including renewable energy sources), innovative agriculture and agri-food industry, media, informatics and telecommunications, mechatronics.

Investments of this kind can be located on preferential conditions in the specially prepared places in the Special Economic Zones: **Łódź SEZ and Starachowice SEZ in the following subzones:**

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

In the all above-mentioned locations investors can benefit from tax allowances amounting to 35% - 55%, depending on the enterprise size – more information can be found on http://www.paiz.gov.pl/investment_support/investment_incentives_in_SEZ.

2. REGION'S RANK IN TERMS OF INVESTMENT ATTRACTIVENESS IN POLAND AND IN THE EUROPEAN UNION

³ Calculations based on Statistical Bulletin of the voivodship, first quarter 2016 and first quarter of Statistical Bulletin 2065 www.stat.gov.pl (26/10/2016).

Łódź voivodship is one of the Polish voivodships characterised by a high investment attractiveness, which is indicated by the high index of potential investment attractiveness PAI_2 for the national economy (class C), especially for capital- and labour-intensive investments in trade and repairs and professional, scientific and technical activities. The investments' effects measured with the index of real investment attractiveness indicate that the voivodship offers favourable conditions for conducting business, especially when it comes to trade and repairs (class B) and tourism and catering (class C).

In the years 2003-2013 the Łódź voivodship's market share measured with the value of foreign capital in the above mentioned companies rose from 2.0% to 2.4%.

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.⁴ However, due to different methodology of research and variables taken into account in Poland and EU, results of research are incomparable. This is because not all data are available for voivodships, communes and counties, e.g. not all regions collect current information about the 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 173rd place of 273 regions, for whom the indices were calculated. However, compared to the previous year, the voivodship increased its position by 18 places and class (E to D). Łódź voivodship has a competitive advantage, when it comes to human capital microclimate, ranked class A.

Łódź voivodship is more attractive than EU regions such as:

- **in Austria:** Burgenland;
- **in Belgium:** Prov. Hainaut, Prov. Luxembourg;
- **in Great Britain:** Cumbria, East Yorkshire and Northern Lincolnshire, Lincolnshire, Cornwall and Isles of Scilly, West Wales and The Valleys, Highlands and Islands;
- **in Bulgaria:** Severozapaden, Severen tsentralen, Severoiztochen, Yugoiztochen, Yuzhen tsentralen;
- **in Czech Republic:** Severozápad;
- **in France:** Champagne-Ardenne, Picardie, Basse-Normandie, Bourgogne, Lorraine, Poitou-Charentes, Limousin, Guadeloupe, Martinique, Guyane, Réunion;

⁴ More on this topic: *Atrakcyjność inwestycyjna regionów Polski na tle Unii Europejskiej*, edited by H. Godlewska-Majkowska, Oficyna Wydawnicza SGH, Warsaw 2014 and

<http://kolegia.sgh.waw.pl/pl/KNoP/struktura/IP/struktura/ZOB/>

- **in Greece:** Anatoliki Makedonia Thraki, Kentriki Makedonia, Dytiki Makedonia, Thessalia, Ipeiros, Ionia Nisia, Dytiki Ellada, Sterea Ellada, Peloponnisos, Voreio Aigaio, Notio Aigaio, Kriti;
- **in Spain:** Galicia, Cantabria, Castilla y León, Castilla-La Mancha, Extremadura, Comunidad Valenciana, Illes Balears, Andalucía, Región de Murcia, Canarias;
- **in The Netherlands:** Friesland, Drenthe, Zeeland;
- **in Germany:** Mecklenburg-Vorpommern, Lüneburg, Weser-Ems, Münster, Koblenz, Saarland, Sachsen-Anhalt;
- **in Portugal:** Norte, Algarve, Centro, Alentejo, Região Autónoma dos Açores, Região Autónoma da Madeira;
- **in Romania:** Nord-Vest, Centru, Nord-Est, Sud-Est, Sud - Muntenia, Sud-Vest Oltenia, Vest;
- **in Slovakia:** Západné Slovensko, Stredné Slovensko, Východné Slovensko;
- **in Hungary:** Közép-Dunántúl, Nyugat-Dunántúl, Dél-Dunántúl, Észak-Magyarország, Észak-Alföld, Dél-Alföld;
- **in Italy:** Abruzzo, Molise, Campania, Puglia, Basilicata, Calabria, Sicilia, Sardegna, Umbria, Marche.

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 county was Bełchatów and city of Łódź (distinguished with **golden star**). Counties **distinguished with an orange star are**: Łódź East, Pabianice, Piotrków Trybunalski, Skierniewice.

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

- **distinguished with a golden star**: Bełchatów (u), Konstantynów Łódzki (u), Kutno (u), Łódź (u), Pabianice (u),
- **distinguished with an orange star**: Brzeziny (u), Głowno (u), Łowicz (u), Piotrków Trybunalski (u), Radomsko (u), Rawa Mazowiecka (u), Sieradz (u), Skierniewice (u), Tomaszów Mazowiecki (u), Zgierz (u).

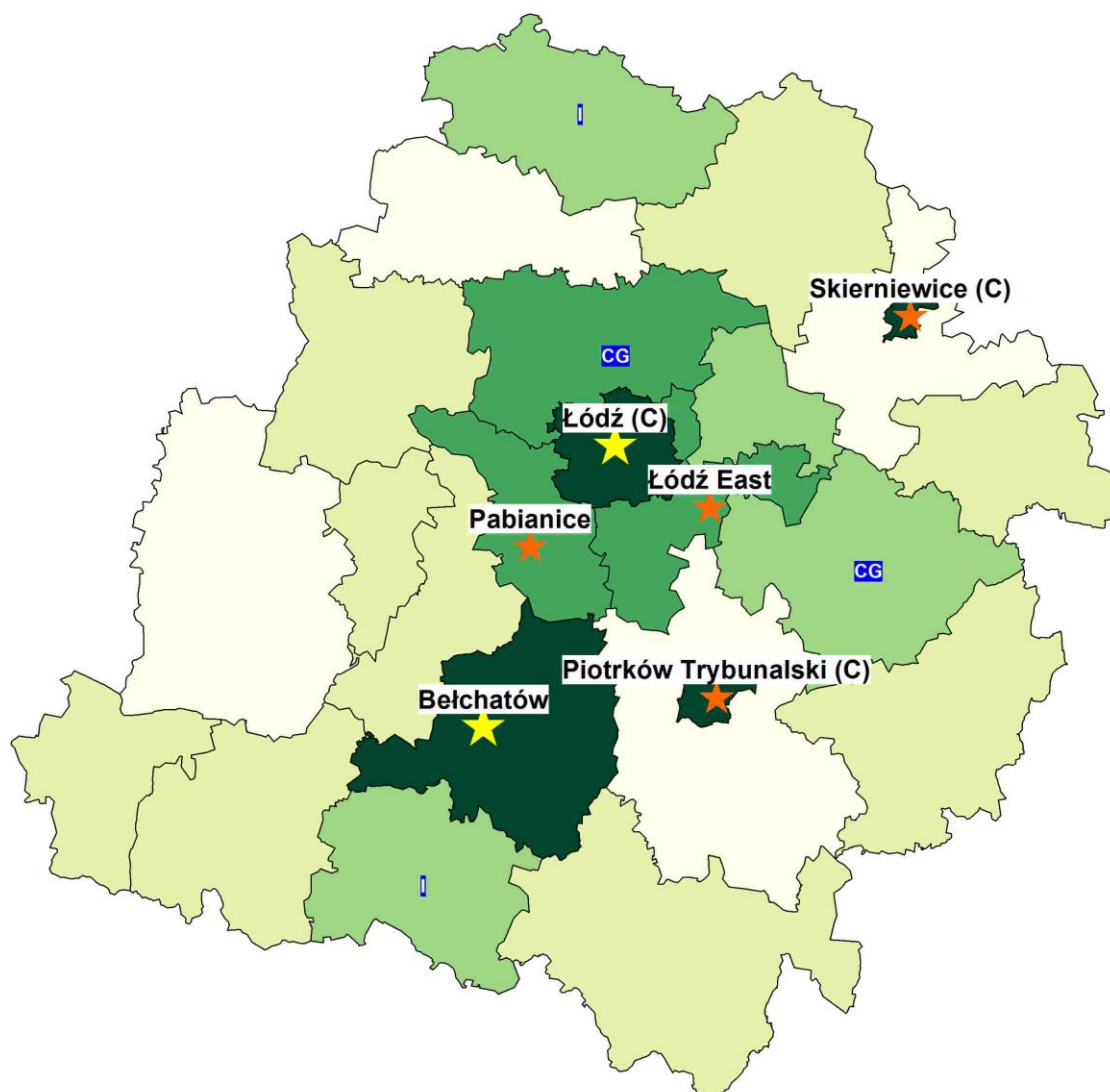
Among rural communes the highest rank communes include:

- **golden star commune**: Kleszczów (r),
- **orange star communes**: Andrespol (r), Ksawerów (r), Nowosolna (r), Ozorków (r), Pabianice (r), Parzęczew (r), Rząśnia (r), Sulmierzyce (r), Szczerców (r).

Among urban-rural communes the highest rank communes include:

- **orange star communes**: Aleksandrów Łódzki (u-r), Pajęczno (u-r), Rzgów (u-r), Stryków (u-r), Tuszyn (u-r), Wieluń (u-r), Wieruszów (u-r).

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

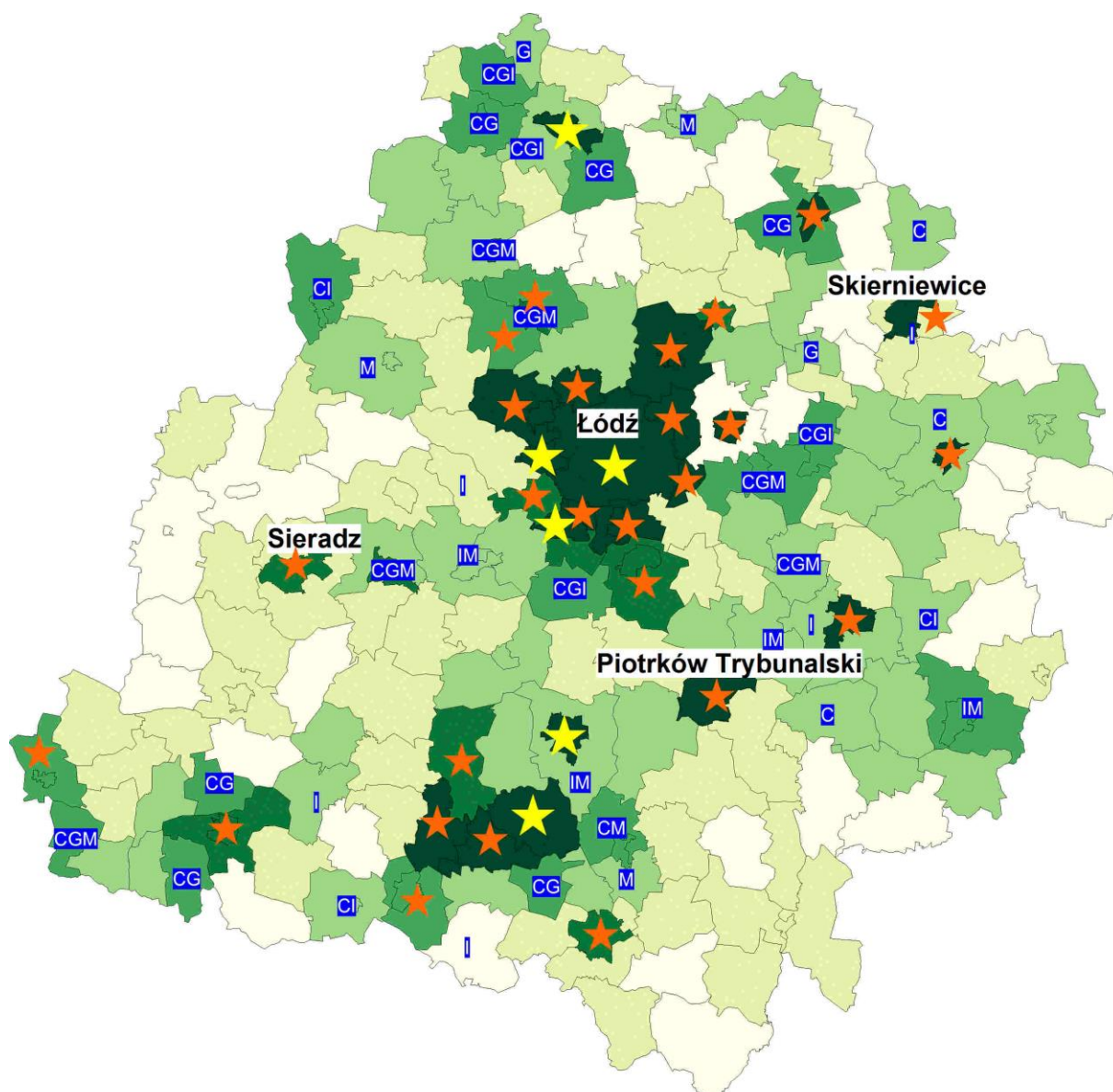


Golden star county:

Bełchatów, city of Łódź

Source: Authors' own work.

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



POTENTIAL INVESTMENT ATTRACTIVENESS
of communes (gminas) for national economy in 2015

- | | |
|-------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>■ A</p> <p>■ B</p> <p>■ C</p> <p>■ D</p> <p>■ E</p> <p>■ F</p> | <p>★ The highest rank for all the sections according PKD (Polish Classification of Economic Activity): C, G, I and M</p> <p>★ Ranks above the average for all the sections according PKD (Polish Classification of Economic Activity): C, G, I and M</p> |
|-------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Ranks above the average for C, G, I, M sections according to PKD (Polish Classification of Economic Activity)

C Industry
G Trade and repairs
I Accommodation and catering
M Professional, scientific, technical activities

Golden star communes:

Bełchatów (u), Konstantynów Łódzki (u), Kutno (u), Łódź (u), Pabianice (u), Kleszczów (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.⁵

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 Łódź voivodship such centre is:

the Investor Services Centre operating within
Marshall's Office of Łódź Voivodship
www.biznes.lodzkie.pl



Łódź Investor Services 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.

⁵ Information included in this part of the report refer to the end of 2015.

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:

Voivodship's Association of Chambers of Commerce (*Wojewódzkie Porozumienie Izb Gospodarczych*) (<http://www.rig.kutno.pl/>)

The Voivodship's Association of Chambers of Commerce's members are: Regional Chamber of Commerce in Kutno, Regional Chamber of Commerce in Łódź, Regional Chamber of Construction in Łódź, Regional Chamber of Commerce in Piotrków Trybunalski, Skierniewice Chamber of Commerce, Tomaszów Region Chamber of Commerce. The main aim of the association is representing economic environment and its interests towards voivodship's authorities and dynamization of works on the shape of economic self-government and its participation in Łódź region's economic life. The most important tasks of WPIG include: actions aiming at the creation and adoption of the "Law on economic self-government", cooperation with other business associations operating in the Lodz region in order to raise the rank of small and medium-sized enterprises, creation of partnership policies with the local authorities of the Lodz region, participation WPIG representatives in the deliberations of the Regional Assembly of Lodz, as well as the integration of the business community organizations and employers representation of the Lodz voivodship.

Łódź Chamber of Commerce and Trade (*Łódź Izba Przemysłowo-Handlowa*) (www.liph.com.pl)

The chamber brings together over 300 business units, to whom it offers various services. The main idea of the Chamber is to care for entrepreneurs. The main areas of action are: ŁIPH B2B meetings, conferences and training, consulting and business information, representation of the interests of member companies, the realization of projects co-financed by the EU, support for improving the competitiveness on foreign markets. The offer of the Chamber for exporters includes Services legalization of documents, issuance of certificates of origin (from 2 March 2015.), and the association of foreign partners (seeking foreign business partners, providing information on tenders and offers of foreign companies addressed to Polish companies to share information on foreign trade fairs - economic missions organized with the Polish and Polish, the transmission of market data Polish missions abroad as well as foreign diplomatic missions and centers in Poland, information about planned visits to Poland, representatives of foreign enterprises).

Foundation for Entrepreneurship Development in Łódź (*Fundacja Rozwoju Przedsiębiorczości w Łodzi*) (www.frp.lodz.pl)

The foundation takes up activities that aim at integration of business environment, development of innovations, cooperation with enterprises and R&D units, transfer of knowledge and technology, creation of knowledge-based economy and supporting European integration. The foundation offers i.a.: training services (including customized trainings on special orders), consulting services (such as technology, innovation and exports audit) and information services.

It also organizes courses for Supervisory Boards members. The foundation issues monthly information bulletin, organizes Entrepreneurship Forum meetings and organizes Science for Business meetings. As a partner and coordinator of the Foundation conducts international pilot projects, among others, in the field of modern management, export development, popularization of science and promotion of the achievements of research teams, the corporate social responsibility of universities to adapt programs to the needs of the economy, the integration risk groups in business and society, mobility in taking up employment in the EU.

Łódź Regional Research and Technology Park (*Łódzki Regionalny Park Naukowo-Technologiczny Sp. z o.o.*) (<http://www.technopark.lodz.pl/>)

The Łódź Technopark offer includes i.a.: transfer of modern technology from science to business (BioNanoPark – implementation centre including Industrial Biotechnology Laboratory, Molecular and Nanostructural Biophysics Laboratory together with the Laboratory of Individual medical implants, the only one in Poland performs implants made-to-measure for an individual patient by the so-called. rapid prototyping) and assistance for young enterprises (Technology Incubator). The park offers preferential conditions of land leasing – the investment area was splitted into 22 investment plots of various sizes. They are included into the Local Spatial Development Plan – the area is assigned for services, non-intrusive production and hotel buildings. The offer is particularly attractive for companies who do not want to invest in their own R & D departments, as they can on attractive terms to commission research their products in BioNanoPark center. The park also operates a training and conference centre.

Bełchatów-Kleszczów TechnoIndustrial Park (*Bełchatowsko Kleszczowski Park Przemysłowo Technologiczny Sp. z o.o.*) (<http://www.ppt.belchatow.pl/>)

Using the local infrastructure, the park enables conducting business on preferential conditions, especially by small and medium entrepreneurs. The park's offer includes i.a.: investment plots leasing and selling for domestic and foreign entrepreneurs, possibility of renting space in Technology Incubator, access to infrastructure and professional ancillary services (information, training, consulting, law, accounting, innovation and pro-innovation services), technology transfer services, as well as assistance while seeking for financial funds (including EU funds). Park also offers virtual address. Within the operating Park Regional Center for Intelligent Energy offering assistance at all stages of the investment with the use of energy-efficient and innovative technological solutions.

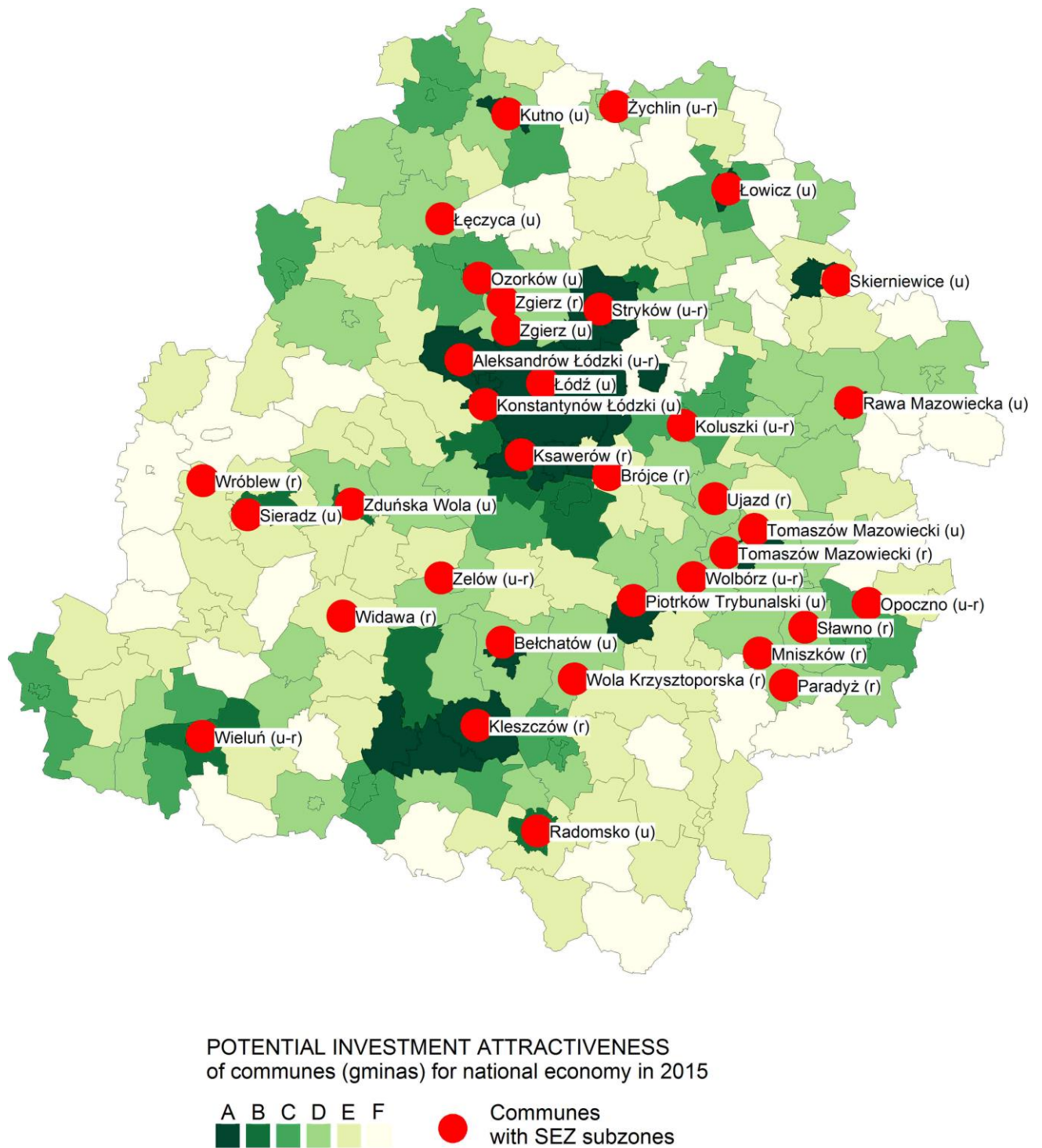
4.2. SPECIAL ECONOMIC ZONES IN THE VOIVODSHIP – EFFECTS

There are 2 special economic zones (SEZs) in Łódź voivodship: Łódź SEZ and Starachowice SEZ.. At the end of 2015 the areas of the SEZs were parts of 15 cities and 20 communes – see Chart 3.

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 2015 amounted to PLN 12 billion, which made 11% of all investment outlays made in the Polish SEZs. In the same time the SEZ companies in the region created 30 thousand new jobs which made 10% of all jobs created in the Polish SEZs (see Table 4).

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 voivodship 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.

Chart 3. The location of SEZs in Łódź voivodship

Source: Authors' own work.

APPENDIX

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

Voivodship	PAI1_GN	PAI1_GN	PAI1_C	PAI1_G	PAI1_I	PAI1_M
	National economy	National economy	Industry	Trade and repairs	Accommodation and catering	Professional, scientific and technical activities
Voivodships						
LOWER SILESIAN	0,868	A	A	A	B	B
KUYAVIAN-POMERANIAN	0,556	C	C	E	E	D
LUBLIN	0,131	F	F	F	F	F
LUBUSZ	0,296	E	E	D	D	E
ŁÓDŹ	0,636	C	B	E	E	D
LESSER POLAND	0,759	B	B	A	A	B
MAZOVIAN	1,000	A	A	A	A	A
OPOLE	0,243	E	E	E	F	E
SUBCARPATHIAN	0,314	E	E	D	E	D
PODLASKIE	0,210	E	E	E	D	E
POMERANIAN	0,716	B	C	A	A	B
SILESIAN	0,988	A	A	C	C	A
ŚWIĘTOKRZYSKIE	0,000	F	F	F	F	F
WARMIAN-MASURIAN	0,291	E	E	C	C	D
GREATER POLAND	0,618	C	C	B	D	B
WESTERN POMERANIAN	0,693	B	C	D	A	C

Source: Authors on the basis of the results of statutory research carried out in Collegium of Business Administration in 2016 under the guidance of H. Godlewska-Majkowska.

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
	National economy	National economy	Industry	Trade and repairs	Accommodation and catering	Professional, scientific and technical activity
Counties						
Bełchatów	0,308	A	A	A	A	A
city of Łódź	0,299	A	A	A	A	A
city of Skierniewice	0,288	A	A	A	C	A
city of Piotrków Trybunalski	0,270	A	A	B	B	A
Łódź East	0,230	C	C	C	B	C
Zgierz	0,229	C	B	C	D	D
Pabianice	0,228	C	C	C	C	C

Source: Authors on the basis of the results of statutory research of Collegium of Business Administration carried out under the guidance of H. Godlewska-Majkowska in 2016.

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

	PAII_GN	PAII_GN	PAII_C	PAII_G	PAII_I	PAII_M
Commune	National economy	National economy	Industry	Trade and repairs	Accommodation and catering	Professional, scientific and technical activity
Urban communes						
Bełchatów (u)	0,228	A	A	A	A	A
Łódź (u)	0,217	A	A	A	A	A
Pabianice (u)	0,212	A	A	A	A	A
Rawa Mazowiecka (u)	0,212	A	A	A	C	A
Skierniewice (u)	0,207	A	A	A	C	A
Zgierz (u)	0,192	A	A	A	C	A
Piotrków Trybunalski (u)	0,191	A	A	A	B	A
Tomaszów Mazowiecki (u)	0,190	A	A	A	C	B
Konstantynów Łódzki (u)	0,186	A	A	A	A	A
Łowicz (u)	0,183	A	A	A	B	A
Kutno (u)	0,182	A	A	A	A	A
Brzeziny (u)	0,180	A	A	A	C	B
Łęczyca (u)	0,174	B	A	A	E	A
Radomsko (u)	0,174	B	A	B	C	A
Zduńska Wola (u)	0,173	B	B	B	D	A
Głowno (u)	0,169	B	B	B	C	C
Sieradz (u)	0,165	B	B	C	C	B
Ozorków (u)	0,160	B	B	C	D	B
Rural communes						
Kleszczów (r)	0,325	A	A	A	A	A
Sulmierzyce (r)	0,198	A	A	A	A	C
Ksawerów (r)	0,190	A	A	A	C	B
Andrespol (r)	0,190	A	A	A	B	A
Nowosolna (r)	0,184	A	A	A	B	A
Rząśnia (r)	0,176	A	A	A	A	B
Szczerców (r)	0,170	B	B	B	B	C
Pabianice (r)	0,161	B	B	B	B	C
Jeżów (r)	0,157	C	B	C	B	D
Parzęczew (r)	0,156	C	B	C	C	C
Nowe Ostrowy (r)	0,156	C	C	B	C	D
Bolesławiec (r)	0,156	C	C	C	D	C
Czarnożyły (r)	0,151	C	C	C	D	D
Ozorków (r)	0,150	C	C	C	C	C
Łowicz (r)	0,150	C	C	C	D	D

Krzyżanów (r)	0,146	C	C	C	D	E
Lgota Wielka (r)	0,144	C	C	C	E	D
Dłutów (r)	0,143	C	C	C	C	D
Mokrsko (r)	0,142	C	C	C	D	D
Urban-rural communes						
Aleksandrów Łódzki (u-r)	0,192	A	A	A	B	A
Rzgów (u-r)	0,185	A	A	A	B	B
Stryków (u-r)	0,178	A	A	A	A	B
Tuszyn (u-r)	0,163	B	B	A	A	C
Wieluń (u-r)	0,159	B	B	B	A	B
Pajęczno (u-r)	0,158	C	B	B	C	C
Uniejów (u-r)	0,153	C	C	E	A	D
Koluszki (u-r)	0,151	C	C	C	D	C
Krośniewice (u-r)	0,149	C	C	C	D	D
Wieruszów (u-r)	0,149	C	C	C	C	C
Kamieńsk (u-r)	0,147	C	C	D	D	C
Opoczno (u-r)	0,142	C	D	D	C	C

(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 (LDB), 2016

Table 4. EFFECTS OF SPECIAL ECONOMIC ZONE FUNCTIONING AT THE END OF 2015

SEZ	County, commune	Cumulated capital expenditure in million PLN	New jobs number	Leading industries (at least 20% share of revenue or employment)
Łódź	Bełchatów, Bełchatów (u)	-	-	no leading industry
Łódź	Bełchatów, Kleszczów (r)	208	142	rubber and plastics; metals
Łódź	Bełchatów, Żelów (u-r)	-	-	no leading industry
Łódź	Kutno, Kutno (u)	1 957	1 464	groceries; rubber and plastic
Łódź	Kutno, Żychlin (u-r)	-	-	no leading industry
Łódź	Łask, Widawa (r)	4	42	chemicals and chemical products
Łódź	Łęczycza, Łęczycza (u)	276	978	rubber and plastic
Łódź	Łowicz, Łowicz (u)	19	15	chemicals and chemical products; electrical and non-electrical household appliances
Łódź	Łódź East, Brójce (r)	-	-	no leading industry
Łódź	Łódź East, Koluszki (u-r)	25	43	storage and support services for transportation
Łódź	city of Łódź, Łódź (u)	3 081	8 762	fabricated metal products, except machinery and equipment; electrical and non-electrical household appliances
Łódź	city of Piotrków Trybunalski, Piotrków Trybunalski (u)	458	2 017	metals
Łódź	city of Skierniewice, Skierniewice (u)	20	16	rubber and plastic
Łódź	Opoczno, Opoczno (u-r)	29	25	products of other non-metallic mineral
Łódź	Opoczno, Paradyż (r)	202	27	products of other non-metallic mineral
Łódź	Opoczno, Sławno (r)	19	3	other mining and quarrying products
Łódź	Pabianice, Konstantynów Łódzki (u)	223	215	chemicals and chemical products; basic pharmaceutical substances, medicines and other pharmaceutical products; rubber and plastic

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Łódź	Pabianice, Ksawerów (r)	283	552	textiles; basic pharmaceutical substances, medicines and other pharmaceutical products
Łódź	Piotrków Trybunalski, Wola Krzysztoporska (r)	-	-	no leading industry
Łódź	Piotrków Trybunalski, Wolbórz (u-r)	39	219	storage and support services for transportation
Łódź	Radomsko, Radomsko (u)	1 163	3 271	electrical and non-electrical household appliances
Łódź	Rawa, Rawa Mazowiecka (u)	142	286	products of other non-metallic mineral; machinery and equipment nec; furniture
Łódź	Sieradz, Sieradz (u)	147	159	basic pharmaceutical substances, medicines and other pharmaceutical products
Łódź	Sieradz, Wróblew (r)	25	-	products of other non-metallic mineral
Łódź	Tomaszów Mazowiecki, Tomaszów Mazowiecki (u)	383	514	groceries; products of other non-metallic mineral
Łódź	Tomaszów Mazowiecki, Tomaszów Mazowiecki (r)	285	399	products of other non-metallic mineral
Łódź	Tomaszów Mazowiecki, Ujazd (r)	854	297	products of other non-metallic mineral
Łódź	Wieluń, Wieluń (u-r)	150	443	motor vehicles (excluding motorcycles), trailers and semi-trailers
Łódź	Zduńska Wola, Zduńska Wola (u)	31	354	clothing
Łódź	Zgierz, Aleksandrów Łódzki (u-r)	434	640	chemicals and chemical products; electrical and non-electrical household appliances
Łódź	Zgierz, Ozorków (u)	792	1 451	paper and paper products; products of other non-metallic mineral
Łódź	Zgierz, Stryków (u-r)	537	431	paper and paper products; basic pharmaceutical substances, medicines and other pharmaceutical products
Łódź	Zgierz, Zgierz (u)	163	284	products of other non-metallic mineral
Łódź	Zgierz, Zgierz (r)	-	-	no leading industry
Starachowice	Opoczno, Mniszków (r)	30	54	products of other non-metallic mineral

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 University of Humanities and Economics in Lodz	no data
Grażyna i Kiejstut Bacewicz Music Academy in Łódź	A – Faculty of Composition, Theory of Music, Eurhythmics and Art Education
	B – Vocal and Acting Performance
	B – Instrumental Studies
	B – Piano, Organ, Harpsichord and Early Instruments
Strzebiński Academy of Fine Arts in Łódź	B – Faculty of Industrial Design and Interior Design
	B – Faculty of Visual Arts
	B – Faculty of Graphics and Painting
	B – Faculty of Textile and Fashion
Mazovian Higher School of Humanities and Pedagogy in Łowicz	no data
Łódź Film School	A – Faculty of Cinematography and Television
	A – Faculty of Film and Television
	B – Faculty of Organization of Film Art
	B – Faculty of Acting
State Higher Vocational School in Skierniewice	no data
Łódź University of Technology	A - Faculty of Biotechnology and Food Sciences
	A – Faculty of Architecture and Environmental Engineering
	A - Faculty of Chemistry
	A - Faculty of Electrical, Electronic, Computer and Control
	A - Faculty of Material Technologies and Textile Design
	A - Faculty of Mechanical Engineering
	A - Faculty of Technical Physics, Computer Science and Applied Mathematics
	B – Faculty of Organisation and Management
	B - Faculty of Process and Environmental Protection

	B - The Institute of Papermaking and Printing
Social Academy of Sciences, based in Lodz	A - Faculty of Management
	B - Institute of English Studies
	B - Institute for Information Technology
School of Economics and Management in Łódź	no data
The School of Social Sciences	no data
University of Lodz	A - Faculty of Economics and Sociology
	A - Faculty of Management
	A - Faculty of Biology and Environmental Protection
	A - Faculty of Chemistry
	A - Faculty of Physics and Applied Informatics
	B - Faculty of Philology
	B - Faculty of Philosophy and History
	B - Faculty of Law and Administration
	B - Faculty of International and Political Studies
	B - Faculty of Educational Sciences
	B - Faculty of Geographical Sciences
	B - Faculty of Mathematics and Computer Science
Medical University in Łódź	A - Faculty of of Biomedical Sciences and Postgraduate Education
	A - Faculty of Medicine
	A - Faculty of Pharmacy
	A - Faculty of Health Sciences
	B - Faculty of Military Medicine
East-West School of them. Henry Joźwiak	no data
College of Business and Health Sciences in Lodz	no data
School COSINUS in Lodz	no data
College of Health Education and Social Sciences in Lodz	no data

University of Economics and Humanities them. prof. Stephen A. Pieniążek in Crops	no data
University of Finance and Computer Science. prof. Janusz Chechlińskiego in Lodz	no data
Academy of National Economy in Kutno	no data
School of Economics. King Stefan Batory in Piotrkow	no data
School of Humanities and Economics in Pabianice	no data
School of Humanities and Economics in Sieradz	no data
School of Computer Science and Skills based in Lodz	no data
School of Cosmetology and Health Sciences in Lodz	no data
Merchants School in Lodz	no data
College of Education in New Łomianki	no data
Pedagogical University in Lodz	no data
College Sports them. Kazimierz Gorski in Lodz	no data
School of International Studies in Lodz	B – for the entire school
Higher School of Art and Design in Łódź	no data
Vocational College Educational Corporation Lodz in Lodz	no data
Jan Kochanowski University; Branch in Piotrków Trybunalski	B - Faculty of Philology and History
	B - Faculty of Social Sciences

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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