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THE INVESTMENT
ATTRACTIVENESS
OF THE REGIONS
AND THE SUB-REGIONS
OF POLAND 2013



Konrad
Adenauer
Stiftung



THE GDAŃSK INSTITUTE FOR MARKET ECONOMICS

**THE INVESTMENT ATTRACTIVENESS
OF THE REGIONS AND THE SUB-REGIONS OF POLAND
2013**

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IN COOPERATION WITH THE **KONRAD ADENAUER FOUNDATION**

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Summary

The aim of the report is to capture differences in the investment attractiveness of the regions (voivodships) and the sub-regions of Poland. Investment attractiveness (IA) is understood as a capability to attract investment through a combination of business benefits linked to location. The areas that produce an optimum combination of location factors offer the best conditions to business operators and hence attract investment.

This report contains the results of investment attractiveness analysis of regions and sub-regions. The IA of regions was characterized on the basis of universal factors that are vital for almost every type of investment. Sub-regions characteristics refers to three types of investments: industrial activities, services and advanced technologies.

Investment attractiveness is a multidimensional matter. In this regard we analysed several dozen variables which form the basis for the assessment of geographical diversification of specific location benefits (factors), including accessibility to transport, cost of labour, quantity and quality of labour resources, absorption capacity of the output market, the level of economic and social infrastructure, the level of economic development and of public safety. Different weights were attributed to these factors depending on the type of business activity.

The Silesian (śląskie) voivodship continues to be the leader in investment attractiveness. A high degree of IA is evinced by the Mazovian (mazowieckie) and the Lower Silesian (dolnośląskie) voivodships. A group of regions with an above average investment attractiveness is formed by the Małopolskie, Wielkopolskie,

Western Pomeranian (zachodniopomorskie), Pomeranian (pomorskie) and the Łódzkie regions. All of the aforementioned regions rank high or average against the majority of IA aspects. However, the combination of these benefits can vary across the regions.

The category of voivodships defined by lower investment attractiveness is comprised of five regions: Podkarpackie, Lubelskie, Warmińsko-Mazurskie, Świętokrzyskie and Podlaskie. Their position in the ranking is an effect of long-term socio-economic processes. Lower intensity of urbanization and industrialization, in the period of deep transformation of many European and a few Polish regions based on above-mentioned processes, did not create a „critical mass” (economies of scale and agglomeration) in terms of the most important resources for big investors. Moreover, despite progression in development and modernization of infrastructure of national importance, these areas can still be characterized by low accessibility to transport.

Low investment attractiveness of five voivodships does not mean, that they are deprived of opportunities to draw in large investors – the chances exist, however they are smaller than in other voivodships. They can be improved by enhancing investment attractiveness for activities basing on unique resources and assets that, by the force of circumstances, are omitted in this comparative analysis. Therefore not large investors, but these who are able to use local assets, should be a target of regional policy in voivodships characterized by lower IA.

In comparison to 2012 there were no significant differences in investment attractiveness of regions.



They were limited to internal changes within three groups of regions (strong, average and weak) and their range was insignificant. Activity towards investors was rated slightly differently. This was due to applying additional, very important indicator - rating of Regional Investors Assistance Centers (IAC) conducted by Polish Agency's for Information and Foreign Investment (PALiZ). The Agency collaborates with the centers in the area of investment promotion and investor oriented services. Above mentioned rating showed that the centers fulfill assigned tasks well. Three of them were awarded.

Sub-regions were also rated from the IA point of view. Among the most attractive sub-regions are two compact areas in the South of Poland. One of them is located around Upper Silesia (Górny Śląsk) and the Western part of Małopolska whereas the second one is found around the industrial cities of Wrocław, Jelenia Góra and Wałbrzych in Lower Silesia (Dolny Śląsk). These areas are characterised by long-standing industrial traditions and a well-developed production sector, a specialised labour market and a relatively high transport accessibility owing to the A-4 motor-

way. There are only three sub-regions outside of this area that show a relatively high level of industrial development and a good access to transport, i.e. the sub-regions of Łódź, Poznań, Bydgoszcz-Toruń.

The highest level of investment attractiveness for the services sector is characteristic for metropolitan sub-regions (the largest Polish cities). They are in possession of vast resources of highly qualified and diversely educated workers and large, absorbent markets. Moreover the largest cities offer a very good transport accessibility and well-developed economic infrastructure.

Metropolitan sub-regions also dominate the group of sub-regions that show the highest level of investment attractiveness in the field of advanced technologies. This is where infrastructure and R&D personnel are concentrated. The labour resources comprise specialists who originate from the local academic establishments as well as those who are attracted by high living standards and a vibrant cultural life. These centers show the best developed ICT infrastructure and a relatively high access to passenger transport..

Table 1 Investment attractiveness of voivodships in 2013

		Transport accessibility		Labour market		Market size		Economic infrastructure		Social infrastructure		Public safety		Investor-oriented activity		Investment attractiveness of voivodships	
		value	rank	value	rank	value	rank	value	rank	value	rank	value	rank	value	rank	value	rank
	Wagi	20		25		15		10		5		5		20			
1	Silesian (śląskie)	0,35	6	1,40	1	1,35	2	1,02	2	2,14	1	-1,02	15	0,32	6	0,85	1
2	Lower Silesian (dolnośląskie)	0,40	5	0,07	4	0,40	4	1,40	1	0,82	3	-1,27	16	1,10	1	0,50	2
3	Mazovian (mazowieckie)	0,60	1	-0,25	13	1,81	1	0,57	3	0,41	4	-0,55	13	0,42	5	0,46	3
4	Małopolskie	0,07	10	0,60	2	0,38	5	0,54	4	1,91	2	-0,15	9	-0,13	8	0,34	4
5	Wielkopolskie	0,59	2	0,17	3	0,10	7	0,21	6	-0,47	10	0,51	5	0,59	4	0,32	5
6	Pomeranian (pomorskie)	-0,23	11	-0,10	8	0,77	3	-0,16	9	0,13	5	-0,64	14	1,02	2	0,21	6
7	Western Pomeranian (zachodniopomorskie)	0,45	3	-0,17	10	-0,11	9	-0,08	8	-0,06	6	-0,47	11	0,91	3	0,18	7
8	Łódzkie	0,33	7	0,05	5	-0,11	8	-0,06	7	-0,07	7	-0,39	10	0,16	7	0,07	8
9	Opolskie	0,12	8	-0,19	11	0,20	6	0,32	5	-0,73	14	0,03	7	-0,45	11	-0,09	9
10	Kujawsko-Pomorskie	0,10	9	0,04	6	-0,60	12	-0,59	14	-0,17	8	-0,04	8	-0,20	9	-0,17	10
11	Lubuskie	0,44	4	-0,24	12	-0,36	10	-0,37	11	-0,65	13	-0,50	12	-0,54	13	-0,23	11
12	Podkarpackie	-0,84	16	-0,04	7	-0,72	13	-0,34	10	-0,51	11	1,29	1	-0,57	14	-0,40	12
13	Warmińsko-Mazurskie	-0,62	13	-0,31	14	-0,89	16	-0,47	12	-0,53	12	0,47	6	-0,25	10	-0,44	13
14	Świętokrzyskie	-0,36	12	-0,12	9	-0,83	14	-0,72	15	-0,47	9	1,01	2	-0,88	15	-0,45	14
15	Lubelskie	-0,66	14	-0,39	15	-0,89	15	-0,50	13	-0,94	16	0,90	3	-0,51	12	-0,52	15
16	Podlaskie	-0,73	15	-0,52	16	-0,50	11	-0,78	16	-0,80	15	0,82	4	-0,99	16	-0,63	16

Source: GIME research

1. Introduction

The Gdańsk Institute for Market Economics (GIME) completed its ninth study of the geographical diversification of foreign investment attractiveness of Poland. This report entitled The Investment Attractiveness of the Regions and the Sub-regions of Poland reflects the facts and findings of our research.

As before our overriding objective was to portray, with a maximum of precision, a time-graded geographical diversification of investment attractiveness of Poland. To this end we needed to modify some of our research methods and, in particular, the choice of indices and weights, due to the evolution of investors' preferences and the socio-economic changes in the regions. In order to maintain the comparability of results in the successive reports, we assumed to restrict the modification of research methods to the degree that would make it possible to analyse changes in the synthetic IA indices between the years.

As in the earlier reports of 2005-2012, we performed a synthetic assessment of IA of voivodships and an assessment of IA of sub-regions against three criteria:

- industrial activities,
- services,
- advanced technologies.

Based on the aforementioned assumptions and our research methodology it is possible to trace changes in the geographical diversification of foreign investment attraction of the Polish voivodships. While analysing the findings of the report it is important to keep in mind that they present an 'average' attractiveness of the regional centre and the periphery. This is crucial as IA is quite often identified with

the attractiveness of the regional capital, which is an unwarranted simplification, especially in reference to the analysis results for large area units.

To give a closer look at the IA diversity within voivodships, an additional – sub-regional study was done. Despite using a narrower range of criteria, this level of analysis gives a far more accurate picture of geographical and functional structure of Poland, and, in consequence, more precisely reflects the country's IA territorial diversity.

The experience of the earlier editions of the report shows that our findings are often taken to signify the success or the failure of a regional or a local policy. It should be noted that the investment policy whose key goal is to increase investment attractiveness forms part of a broader development policy of regions and sub-regions. The investor-centric perspective adopted in this report is not the only and the most important aspect of the development strategies of regions and cities. Therefore the making of investment attractiveness is not an aim in itself (although this happens to be the remit of our report) but should rather be appreciated as a tool used in the overall vision of development. Należy także zaznaczyć, że polityka inwestycyjna nie jest w stanie wprost kształtować wszystkich czynników lokalizacji, których poziom często jest efektem długofalowych i złożonych procesów społeczno-gospodarczych. Let us note further that the investment policy cannot directly shape all the location factors that follow from long-term and complex processes of the socio-economic nature. NThis report cannot be taken as a review of the regional development strategies operated, in particular, by the regional governments. Even the category



of ,investor-oriented activities of the regions' cannot pertain solely to the voivodship governments. as the investment offer and the promotional and information activities are, in a significant degree, operated by local governments, businesses or private individuals or specialised organisations (such as special eco-

nomic zones /SEZ/, regional and local development agencies etc.).

This report is an effect of the annual research project carried out by the team of GIME in cooperation with the Konrad Adenauer Foundation.

2. Objectives, scope and methods of research

2.1. Objectives of the report

This report aims to:

- identify geographical differences in the level of investment attractiveness and to grade voivodships and sub-regions in this respect;
- indicate strong and weak points of individual territorial units in terms of IA factors;
- analyse changes in the investment attractiveness of voivodships and sub-regions.

2.2. Scope of the research

The substantive scope of the report follows from the notion of investment attractiveness. IA is understood as a capability to attract investment through a combination of business benefits linked to location. These benefits stem from the specific features of the area in which business activity is developed and are referred to as location factors. Therefore a set of location factors determines the investment attractiveness of a given area. The areas that offer an optimum combination of location factors attract investment. They make it possible to reduce investment expenditures and the current costs of business while enabling the maximisation of profit/return on capital and reducing the risk of investment failure.

This report assumes the investor-centric perspective. This does not mean, however, that our conclusions are immaterial to the local and regional actors. The understanding of strong and weak points of one's own region as well as those of the competing regions will facilitate the creation of competitive advantages in investment attraction. It should also be noted that the interests of a prospective investor are not the

only ones to be accommodated in the pro-development strategies. Thus the conclusions of the report are material to the making of the local or regional development policy but are not synonymous with it.

Business activities come in all forms and shapes that translate into diverse location preferences. Consequently, there is no investment attractiveness of an area in the absolute sense. Our assessment of investment attractiveness is therefore a two-track process:

- with respect to sub-regions we discuss location factors concerning the three most important types of economic activity i.e. the industry, services and advanced technologies;
- with respect to voivodships the universal location factors are discussed.

The substantive scope of the report is conditioned by:

- the necessity to apply a wide range of indicators that describe, as precisely as possible, the individual location factors;
- the necessity to apply different weights to the individual location factors to highlight the varying importance of these factors to the placement of diverse types of investment projects.

In this framework we analysed several dozen variables which form the basis for the assessment of the geographical diversification of specific location benefits (factors), including accessibility to transport, the cost of labour, the quantity and quality of labour resources, the absorption capacity of the output market, the level of economic and social infrastructure, the level of economic development and of public safety. Various weights were attributed to these factors depending on the type of business activity.

Table 2 Factors and their significance to investment attractiveness of sub-regions and voivodships

	Sub-regions			Voivodships
	Industry	Services	Advanced technologies	
Factors	Weights (in %)			
Transport Accessibility	20	10	20	20
Cost of labour	15	15		25
Quantity & quality of labour resources	40	25	30	
Absorption capacity of output market		20	10	15
Level of economic infrastructure	15	10	10	10
Level of social infrastructure			10	5
Level of economic development	2	5	5	
Level of protection and the condition of natural environment	5	7	7	
Level of public safety	3	8	8	5
Activities of regions towards investors				20
Total	100	100	100	100

Source: GIME research

The geographical scope of the report covers the territory of Poland and subdivides into:

- 16 voivodships (regions);
- 54 sub-regions (formally, there are 66 sub-regions but for the purposes of the report large cities that constitute sub-regions, including Katowice, Cracow, Łódź, Poznań, Szczecin, Tri-City (Trójmiasto: Gdańsk, Gdynia, Sopot) and Wrocław were grouped together with their respective surrounding areas which are functionally linked to them).

The availability of data determines the time-frame of the report as different categories of recent data are released with a varying degree of time-lag. Therefore the research includes following data:

- 2011 – in reference to the size and the structure of value added, of-town road destiny, work-

force in industry, transport and other services and investment outlays,

- 2012 – the majority of indicators obtained from public statistical sources,
- 2013 – mainly, transport accessibility, investor-oriented activities, unemployment, the land available in special economic zones..

2.3. Source data and methodology of the research

The report relied on the quantitative data obtained primarily from the public statistical sources and was complemented by other data. The key sources of information were:

- Regional Data Bank of the Central Statistical Office;
- Polish Agency for Information and Foreign Investment (PAIiIZ);
- Managers of special economic zones;
- Departments of Trade and Investment Promotion (WPHil) at the Polish embassies in the countries with the highest share of foreign investment in Poland.

The principal methodology of IA assessment remained unchanged and consisted in the pseudo-monovariate procedure of classification. This approach effectively means that the assessment of investment attractiveness is relative. The point of reference is the average value of the set of voivodships or sub-regions.

Changes to the set of indicators have been limited to minor technicalities in this edition of the report. One major change was made due to publication of the Polish Agency's for Information and Foreign Investment (PAIiIZ) rating of Regional Investors Assistance Cent-

ers (IAC). IAC's important role in investment promotion and investors assistance, as well as the scope of this rating (which included previous investment projects; certification visits evaluating substantive and technical preparation to providing investor-oriented services; evaluation of investment offers of the regions conducted in English by the IAC's workers)¹ makes the certification results very useful for evaluating investor-oriented activities of the regions.

In spite of the efforts made by the researchers this report does not exhaust all the significant aspects of IA. This is due to the unavailability of some quantitative data or the difficulty in the quantification of the qualitative data which was only fragmentary. Therefore the results of this report can only be interpreted in the specific framework of data used in the analysis.

¹ http://www.paiz.gov.pl/20131105/certyfikacja_regionalnych_centrow_obsługi_inwestora (access 29.11.2013 r.)

3. Factors of investment attractiveness in the regional perspective

3.1. Accessibility to transport

Rola dostępności transportowej w kształtowaniu atrakcyjności wiąże się z:

The role of transport accessibility in IA is following:

- supply of raw materials and components necessary in production and the reduction of supply costs,
- supply of final goods to consumers and the reduction of supply costs,
- provision of passenger traffic and enabling direct meetings between suppliers, collaborators, customers and advisers.

The assessment of transport accessibility requires a point of reference against which it is defined. Following benchmarks were adopted for the purposes of IA assessment:

- location relative to the Western border,
- location of voivodships and sub-regions relative to Warsaw,
- location relative to regional centers,
- location relative to international airports (sub-regions), with respect to their importance (voivodships),
- location relative to major maritime ports (Szczecin, Tri-City).

The above criteria were adopted with consideration to the structure of the Polish foreign trade, the role of the capital city and regional capitals as economic centers, output markets and transport hubs.

The significance of transport accessibility factors varies according to the type of business activity. For example, accessibility by road as well as a general level of the transport and logistics sector are vital to the industrial activities whereas airports are important to the hi-tech business.

3.2. Labour resources

The workforce impacts investment attractiveness as it enables business operators to:

- recruit an adequate number of employees,
- recruit employees of adequate professional skills and experience,
- recruit employees with the appropriate attitude (reliable, responsible, honest, entrepreneurial),
- bearing labour costs to ensure the profitability of investment.

In our assessment of labour resources in regions and sub-regions the following factors were taken into account:

- number of employed persons,
- number of unemployed persons,
- number of vacancies,
- influx of secondary and tertiary schools graduates,
- level of remuneration.

In this framework it is possible to obtain both a quantitative and a qualitative assessment of labour resources. Depending on the type of business, prospective investors will seek different characteristics of the workforce. The production sector tends to



employ graduates of the vocational schools while the services sector relies to a greater extent on persons with secondary and tertiary education.

3.3. Absorption capacity of markets

The absorption capacity of markets influences IA by enabling prospective investors to sell their goods or services on the regional market. The higher the absorption capacity the greater benefits of scale can be obtained and the sooner investment outlays can be recovered. A high absorption capacity of the regional market can reduce the final cost of goods through a reduced cost of transport.

In order to assess IA the following aspects of market absorption were factored in:

- size of output market,
- wealth of households,
- investment outlays of business operators.

The significance of market absorption capacity varies according to the type of business. This factor tends to be less important in the industrial activity whose products are distributed to many markets. In the case of services, which are typically sold on the local market and which require a direct contact with customers, a great importance is attached to the absorption capacity of the regional market.

3.4. Economic infrastructure

The economic infrastructure impacts the level of IA through facilitating the investment process and the operation of the investment project. The following components of infrastructure were considered in the IA analysis:

- density of institutions in business environment,
- presence of R&D centers,

- number of fairs and exhibitions,
- operation of special economic zones (SEZ).

These factors can play different roles in the placement of business activities. The land available for investment projects will be vital to the production activities in the special economic zones, while hi-tech business will look for the proximity of R&D establishments.

3.5. Social infrastructure

The social infrastructure influences IA indirectly:

- by creating beneficial conditions of life and attracts immigrants, which enhances the quantity and the quality of labour resources,
- by creating a climate of openness to the exchange of ideas, which favors creativity and innovation,
- by facilitating the organization of training courses, conferences and meetings between clients.

The following components of the social infrastructure were taken into account:

- number and the activity of cultural establishments such as theatres, cinemas, culture/creativity centers,
- density of the hotel and catering infrastructure.

The social infrastructure is important to the services sector and, in particular, to the hi-tech services which depend on the availability of high-quality human capital and a social climate that favors innovation.

3.6. Level of economic development

The level of economic structure and development bears on IA as it shapes the technical environment

which may be required by the investor. It makes it possible for the investor to obtain the required services and supplies and provides for an optimum operation of the investment project.

The following factors linked to the level of economic development were taken into account:

- productivity of labour,
- share of non-agricultural activity in the economy,
- presence of companies with a foreign capital.

3.7. Condition of the natural environment

The condition of the natural environment has a two-fold effect on IA::

- presence of a highly valuable natural environment protected by law is a serious impediment to the placement of an investment project,
- a high level of pollution generates a financial cost of business as it requires the implementation of recycling/treatment installations, causes an increased rate of absenteeism due to sickness and, in extreme cases, may lead to the accelerated wear and tear of fixed assets (e.g. through corrosion),
- a high level of pollution lowers the standards of living and bears negatively on the quantity and the quality of labour resources.

The following aspects of the natural environmental have been taken into account:

- size of areas protected by law,
- level of air pollution,

- emissions to the surface and the underground waters.

The condition of the natural environment has diverse effects on the location of different types of business. For the industrial activity, the presence of protected areas will limit the possibility of locating an investment project. A sound natural environment will favor investment in services or high technologies.

3.8. Level of public safety

The level of public safety affects the financial performance of an investment project in a limited degree. A low level of public safety leads to the increased cost of protecting the property and the employees. The role of this factor in shaping IA affects, to a greater extent, the perception of personal safety and the responsibility for the fellow employees or business partners. In addition a low level of public safety:

- may reduce the quantity and the quality of labour resources due to migrations caused by the deteriorating standards of living;
- exemplifies a deficit of the social capital which, in turn, may impede the investment process and the operation of the project;
- signals social pathologies or inadequate public governance.

The following aspects of public safety have been reflected in our assessment:

- level and the structure of criminality
- rate of crime detection.

The level of public safety is slightly more relevant to the investment in services and advanced technologies which are more dependent on the quality of labour resources.

3.9. Investor-oriented activities of the voivodships

The activity towards investors is understood as the ability of the regional/local authorities to build and promote the image of the region as well as to create an investor-friendly climate. This is the least measurable of all the factors and it is therefore not easy to analyse. In fact, the analysis can capture only a fraction of the wide range of marketing activities implemented by the administration. The local and the regional authorities apply diverse tools and strategies in this respect, which makes them difficult to compare. With this reservation in mind, the following aspects of investor-oriented activities were included in our study:

- number of investment offers in the data base of the Polish Agency for Information and Foreign Investment (PAIIZ),
- results of the Regional Investors Assistance Centers' (IAC's) rating by Polish Agency for Information and Foreign Investment (PAIIZ),
- information and promotional activities tar-

geting foreign investors in their country of origin co-performed by the regional authorities and the Polish diplomatic service, i.e. the Departments for the Promotion of Trade and Investment at the Polish embassies (WPHil).

These variables are not free from a few shortcomings (i.e. regional authorities may differ in the degree to which they use such promotional activities) but they have one major benefit in that they present a relatively consistent system of data collection which enables comparability. Establishing an Investor Assistance Center is the most common investor-oriented activity. These centers are part of Marshalls Offices or act as autonomous entities formed by local governments or/and their agencies. The scope, the form and the intensity of their activity are, to some extent, individualised.

The case of investor-oriented activities of the regional administration exemplifies an important rule, i.e. the results of the study reflect investment attractiveness measured by means of a specific set of indicators and can be interpreted only in the framework of these variables.

4. Investment attractiveness of sub-regions

4.1. Industrial activity

Significance of individual location factors

The investment attractiveness of sub-regions is shaped by seven groups of component indicators. Four of these directly influence the cost of production which is a key parameter determining the location of business. This category of indicators includes:

- the quantity of labour resources
- the accessibility to transport
- the cost of labour
- the level of economic infrastructure.

The impact of the three remaining groups of indicators is indirect in nature and concerns, for example, the possibilities of business co-operation or the limitation of location opportunities due to the legal protection of an area. A possible conflict related to the use of natural resources in the proximity of the protected areas may tarnish the image of the investor. However, it is difficult to quantify the financial impact of such incidents as a cost of production. These indirect factors of IA include:

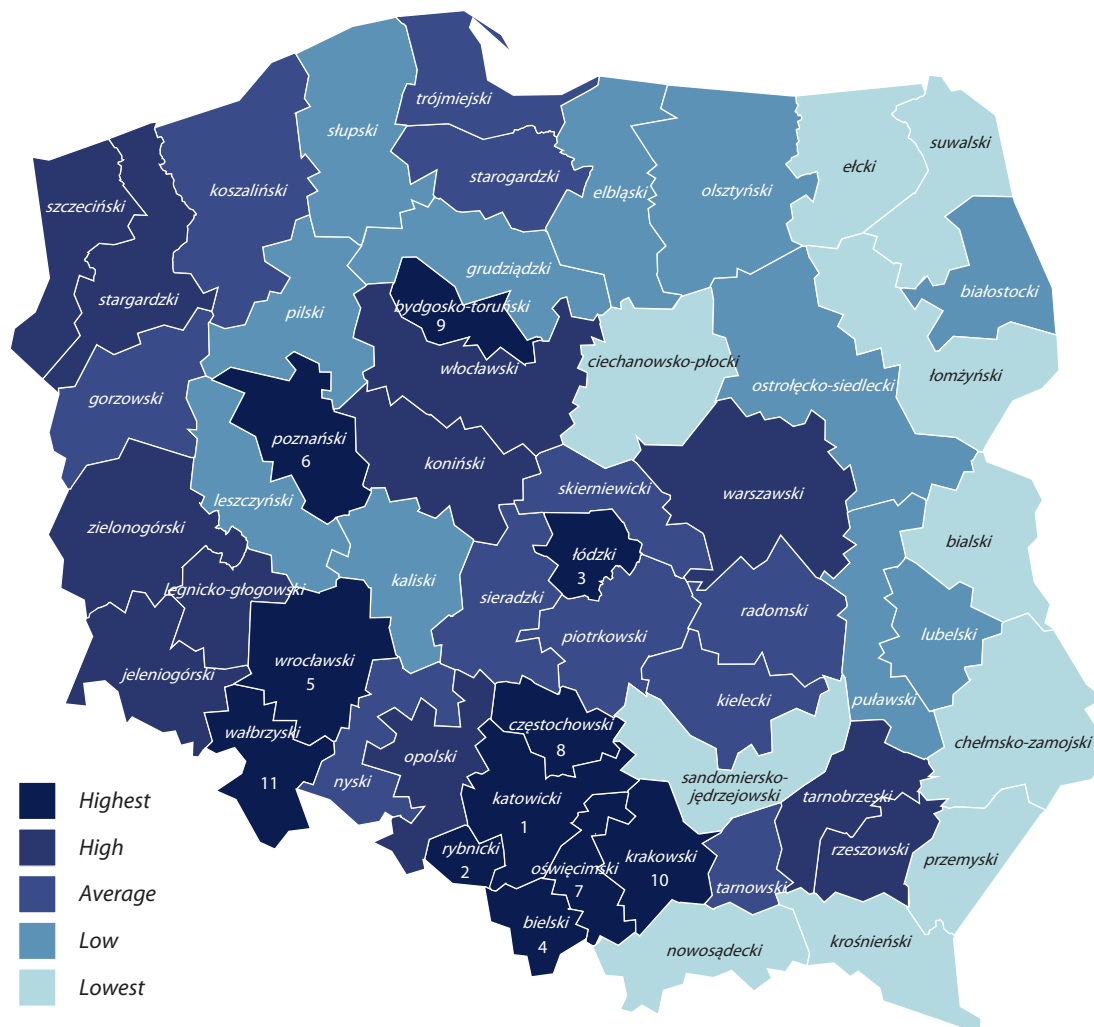
- level of protection of the natural environment;
- level of public safety;
- level of economic development.

Geographical diversification of investment

attractiveness

The aforementioned criteria were used to assign individual sub-regions to one of five equinumerous classes (of 11 elements with the exception of the last class of 10 elements) of investment attractiveness.

Among the most attractive sub-regions are two compact areas in the South of Poland. One of them is located around Upper Silesia (Górny Śląsk) and the Western part of Małopolska whereas the second one is found around the industrial cities of Wrocław, Jelenia Góra and Wałbrzych in Lower Silesia (Dolny Śląsk). These areas are characterised by long-standing industrial traditions and a well-developed production sector, a specialised labour market and a relatively high transport accessibility owing to the A-4 motorway. There are only three sub-regions with high IA for industrial activity outside above-mentioned area: Łódzki, Poznański and Bydgosko-Toruński. These sub-regions are also relatively heavily industrialised and characterised by good transport accessibility.



There has been no change in the three top-scoring sub-regions compared to 2012. The Krakowski sub-region (10) also has not changed its position. Four sub-regions have changed their rank. The Oświęcimski sub-region have moved up by two positions, while the Częstochowski have fallen by two. As a consequence of relative improvement in the economic infrastructure and transport accessibility the Wałbrzyski sub-region have moved up in the ranking.

Table 3 Sub-regional investment attractiveness with respect to industrial activities between 2012 and 2013

Sub-region	Ranking in 2013	Ranking in 2012
Katowicki	1	1
Rybnicki	2	2
Łódzki	3	3
Bielski	4	5
Wrocławski	5	4
Poznański	6	7
Oświęcimski	7	9
Częstochowski	8	6
Bydgosko-Toruński	9	8
Krakowski	10	10
Wałbrzyski	11	13

Source: GIME research

The most attractive sub-regions

Despite some traits in common, each sub-region is characterized by a slightly different make-up of attraction factors. Below are the distinctive characteristics - both strong and weak points – of the IA top-scorers with regard to industrial activity.

Industrial activity		
1. Katowicki sub-region	Strengths	
	Labour resources	Vast number of qualified employees, graduates and the unemployed
	Transport accessibility	Major transport node of national importance, high density of road infrastructure, above average access to Western border, well-developed transport and logistics sector
	Economic infrastructure	Extensive land available in Special Economic Zone (SEZ), high investor activity in SEZ
	Environment protection	Low share of protected areas
	Level of economic development	Many business entities with foreign capital, beneficial structure of the economy, high labour productivity
	Weaknesses	
	Cost of labour	Very High wages
	Public safety	Very high level of criminality, low crime detection rate
2. Rybnicki sub-region	Strengths	
	Labour resources	Vast number of qualified employees, vocational schools graduates and the unemployed
	Economic Infrastructure	Attractive land available in Special Economic Zone, high investor activity in SEZ
	Level of economic development	Beneficial structure of the economy, high labour productivity
	Weaknesses	
	Cost of labour	Very high wages
3. Łódzki sub-region	Strengths	
	Labour resources	Large number of qualified workers and graduates, very high number of unemployed, above average number of vocational schools' graduates
	Level of economic development	above average labour productivity, high destiny of enterprises with foreign capital, beneficial structure of the economy

Industrial activity		
	Transport accessibility	Transport accessibility Major transport node of supra-regional importance, A1 and A2 motorways node, proximity to Warsaw metropolis
	Weaknesses	
	Level of public safety	High level of criminality and low crime detection rate
4. Bielski sub-region	Strengths	
	Labour resources	High number of qualified employees and vocational schools' graduates
	Economic infrastructure	High investor activity in SEZ
	Weaknesses	
	Cost of labour	Above average labour costs
5. Wrocławski sub-region	Strengths	
	Transport accessibility	Proximity to Western border, major transport node of supra-regional importance and access to international airport
	Economic infrastructure	Extensive areas available in SEZ
	Protection of natural environment	Low percentage of protected land
	Level of economic development	Beneficial structure of the economy, high number of enterprises with foreign capital, high labour productivity
	Weaknesses	
	Cost of labour	High wages and low unemployment rate, that can cause additional pressure on wages level
	Level of public safety	Very high level of criminality, low crime detection rate
6. Poznański sub-region	Strengths	
	Labour resources	High number of qualified workforce and vocational schools' graduates
	Transport accessibility	Very good access to transport especially towards Western border, major transport node of supra-regional importance
	Protection of natural environment	Low percentage of protected land

Industrial activity		
	Level of economic development	Beneficial structure of the economy, high labour productivity, many enterprises with foreign capital
	Weaknesses	
	Cost of labour	Very high wages and low unemployment rate, that can cause additional pressure on wages level
	Level of public safety	Above average level of criminality
7. Oświęcimski sub-region	Strengths	
	Labour resources	Above average number of qualified workforce, high number of vocational schools' graduates
	Weaknesses	

8. Częstochowski sub-region	Strengths	
	Labour resources	High number of qualified workers and high number of graduates
	Economic infrastructure	Extensive land available in SEZ, high investor activity in SEZ
	Weaknesses	

9. Bydgosko-Toruński sub-region	Strengths	
	Labour resources	High number of qualified workers and unemployed, high number of vocational schools' graduates
	Transport accessibility	Transport node of regional importance, proximity to a large seaport and A1 motorway, high level of development of the transport and logistics sector
	Weaknesses	
	Cost of labour	Above average wages
	Economic infrastructure	Small area available for investment in SEZ and relatively low investors activity in SEZ
	Level of public safety	Above average level of criminality, low crime detection rate

Industrial activity		
10. Krakowski sub-region	Strengths	
	Labour resources	Very high number of highly qualified workers and graduates
	Level of economic development	High number of enterprises with foreign capital, high productivity of labour in industry, beneficial structure of the economy
	Weaknesses	
	Cost of labour	High wages
	Level of public safety	Above average level of criminality, very low rate of crime detection
11. Wałbrzyski sub-region	Strengths	
	Economic infrastricture	Relatively extensive land available in SEZ
	Weaknesses	

4.2. Services sector

Significance of individual location factors

There are eight groups of component indicators that characterize IA with respect to services. The following are factor groups that are considered significant and quantifiable with the respect to their impact on the cost of services:

- quantity and the quality of labour resources
- absorption capacity of the institutional market
- cost of labour
- accessibility to transport
- level of economic infrastructure

The remaining factors exert an indirect influence

- the level of economic development
- the level of public safety
- the level of protection of the natural environment.

Geographical diversification of investment attractiveness

Table 4 Sub-regional investment attractiveness with respect to services in 2012–2013

Sub-region	Ranking in 2013	Ranking in 2012
Warszawski	1	1
Łódzki	2	2
Katowicki	3	3
Krakowski	4	4
Poznański	5	6
Wrocławski	6	7
Bydgosko-Toruński	7	5
Tri-City (trójmiejski)	8	8
Bielski	9	9
Rzeszowski	10	10
Lubelski	11	14

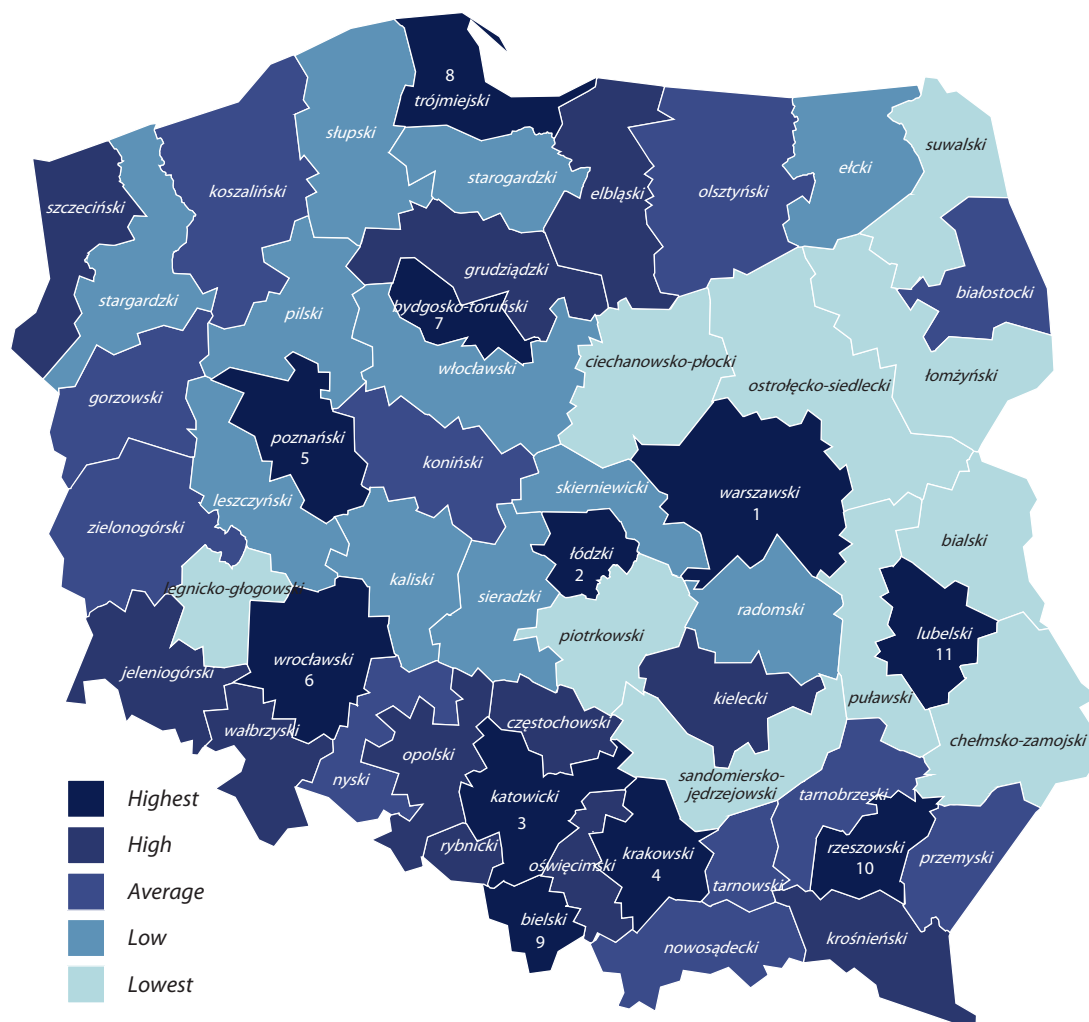
Source: GIME research

The aforementioned criteria were used to assign individual sub-regions to one of five equinumerous classes (of 11 elements with the exception of the last class of 10 elements) of investment attractiveness.

Metropolitan sub-regions emerge as the most attractive for investment. These are centered around the biggest cities in Poland and feature a sizeable workforce of high qualifications and diverse competencies as well as a large and highly absorptive output markets. In addition, the biggest cities offer a very high accessibility to transport and a well-developed economic infrastructure.

The least attractive to investment in services are sub-regions which are deprived of major cities, featuring a high share of agriculture in the economy, low internal demand and a limited accessibility to transport. These factors create a demand barrier which impedes the expansion of services, in particular those of a higher order (finance, insurance, advisory services for enterprises, real estate). Some of these sub-regions are characterized by a high level of specialization in industrial production.

Map 2 Sub-regional investment attractiveness with respect to services in 2013



Source: GIME research

Compared to 2012 there have not been any important changes at the top of the IA ranking list with respect to services. The top four remained the same. The Poznański and the Wrocławski sub-regions moved up by one position. The most significant promotion was achieved by the Lubelski sub-region. The Bydgosko-Toruński sub-region's position was lowered by one rank.

The most attractive sub-regions

Despite some traits in common, each sub-region is characterized by a slightly different make-up of attraction factors. Below are the characteristics - both strong and weak points – of the IA top-scorers with regard to services.

Services		
1. Warszawski sub-region	Strengths	
	Quantity and quality of labour resources	Very high number of qualified employees and tertiary schools' graduates, very high level of economic activity and the highest level of social activity among all sub-regions
	Absorption capacity of market	The highest purchasing power of households and enterprises
	Transport accessibility	International airport of primary importance, key transport hub in Poland
	Economic infrastructure	Very high density of business support institutions
	Level of economic development	Very high labour productivity, advantageous structure of the economy, very high number of enterprises with foreign capital
	Weaknesses	
	Cost of labour	Very high wages
	Level of public safety	Very low crime detection, High level of criminality
2. Łódzki sub-region	Strengths	
	Quantity and quality of labour resources	Very high number of qualified workers and potential employees, tertiary schools' graduates and students, high level of economic activity
	Absorption capacity of market	High purchasing power of households and enterprises
	Transport accessibility	Transport accessibility Supra-regional transport node with access to international airport, A-1 and A-2 motorway nodes, advantageous location in relation to Warsaw
	Level of economic development	Above average labour productivity, advantageous structure of the economy, high density of enterprises with foreign capital
	Weaknesses	
	Level of public safety	High level of criminality, low crime detection rate

Services		
3. Katowicki sub-region	Strengths	
	Quantity and quality of labour resources	High number of students
	Absorption capacity of market	Very high purchasing power of households and high purchasing power of enterprises
	Transport accessibility	Important transport node of national importance, with access to international airport
	Economic infrastructure	High destiny of business support institutions, very large investment possibilities in SEZ, good performance of SEZ
	Level of economic development	Advantageous structure of local economy, high number of enterprises with foreign capital, high labour productivity
	Weaknesses	
	Cost of labour	Very high wages
	Level of public safety	Very high level of criminality, low crime detection rate
	Quality of natural environment	High pollution, low percentage of protected area
4. Krakowski sub-region	Strengths	
	Quantity and quality of labour resources	The highest level of labour quality in Poland. Very high number of qualified workers and of graduates, very high level of entrepreneurship and social activity
	Absorption capacity of market	High purchasing power of households and enterprises
	Transport accessibility	Transport hub of supra regional importance, international airport.

Services		
	Economic infrastructure	High destiny of business support institutions, above average land available in SEZ
	Level of economic development	Advantageous structure of local economy, high number of enterprises with foreign capital, high labour productivity
	Weaknesses	
	Cost of labour	High wages
	Level of public safety	Above average level of criminality, very low crime detection rate
5. Poznański sub-region	Strengths	
	Quantity and quality of labour resources	High number of qualified workers and tertiary schools' students. The highest level of economic activity among sub-regions, very high level social activity
	Absorption capacity of market	High purchasing power of households and enterprises
	Transport accessibility	Very good transport accessibility. Proximity of Western border. Key transport node of supra-regional importance with access to international airport
	Economic infrastructure	High destiny of business support institutions, extensive possibilities of investment in SEZ
	Level of economic environment	High number of enterprises with foreign capital, high level of labour productivity, advantageous structure of local economy
	Weaknesses	
	Cost of labour	Very high wages
	Level of public safety	Above average level of criminality
6. Wrocławski sub-region	Strengths	
	Quantity and quality of labour resources	High level of quality of labour resources. High number of tertiary schools' students. High level of economic and social activity

Services		
	Absorption capacity of market	High purchasing power of local enterprises
	Transport accessibility	Proximity of Western border, transport node of supra-regional importance with access to international airport
	Economic infrastructure	Very high density of business support institutions, extensive possibilities of investment in SEZ
	Level of economic environment	High number of enterprises with foreign capital, high level of labour productivity in services, advantageous structure of local economy
	Weaknesses	
	Level of public safety	Very high level of criminality, low crime detection rate
	Cost of labour	High wages
7. Bydgosko-Toruński sub-region	Strengths	
	Quantity and quality of labour resources	High number of tertiary schools' students, high level of economic activity
	Absorption capacity of market	High purchasing power of households and enterprises
	Transport accessibility	Transport node of regional importance, proximity to A1 motorway
	Weaknesses	
	Level of public safety	Above average of criminality, low crime detection rate
	Cost of labour	Above average wages
8. 8. Tri-City (trójmiejski) sub-region	Strengths	
	Quantity and quality of labour resources	High quality of labour resources. Very high number of tertiary schools' students, very high level economic activity
	Absorption capacity of market	High purchasing power of households and enterprises
	Quality of natural environment	Very low level of pollution caused by household sewage, high percentage of protected areas

Services		
	Level of economic development	Beneficial structure of the economy, high labour productivity, high number of enterprises with foreign capital
	Weaknesses	
	Cost of labour	High wages
	Level of public safety	High level of criminality, very low crime detection rate
9. Bielski sub-region	Strengths	
	Quantity and quality of labour resources	Above average number of employees in the services sector, high supply of secondary schools graduates
	Absorption capacity of market	High purchasing power of households and enterprises
	Level of economic development	Advantageous structure of the economy, high labour productivity
	Weaknesses	
	Cost of labour	Above average wages level
10. Rzeszowski sub-region	Strengths	
	Quantity and quality of labour resources	Above average number of tertiary schools' students
	Weaknesses	

11. Lubelski sub-region	Strengths	
	Transport accessibility	Important regional transport node with access to international airport
	Quantity and quality of labour resources	High number of tertiary schools' students, high level of social activity
	Weaknesses	
	Level of public safety	Relatively high level of criminality, low crime detection rate
	Cost of labour	Above average wages level

4.3. Advanced technologies

Significance of individual location factors

The level of investment attractiveness in advanced technologies is conditioned by eight groups of factors. Four of them have a direct impact on the cost of business. These includes:

- transport accessibility
- market absorption capacity
- quality of labour resources
- economic infrastructure.

An indirect impact is exerted by the following groups of factors:

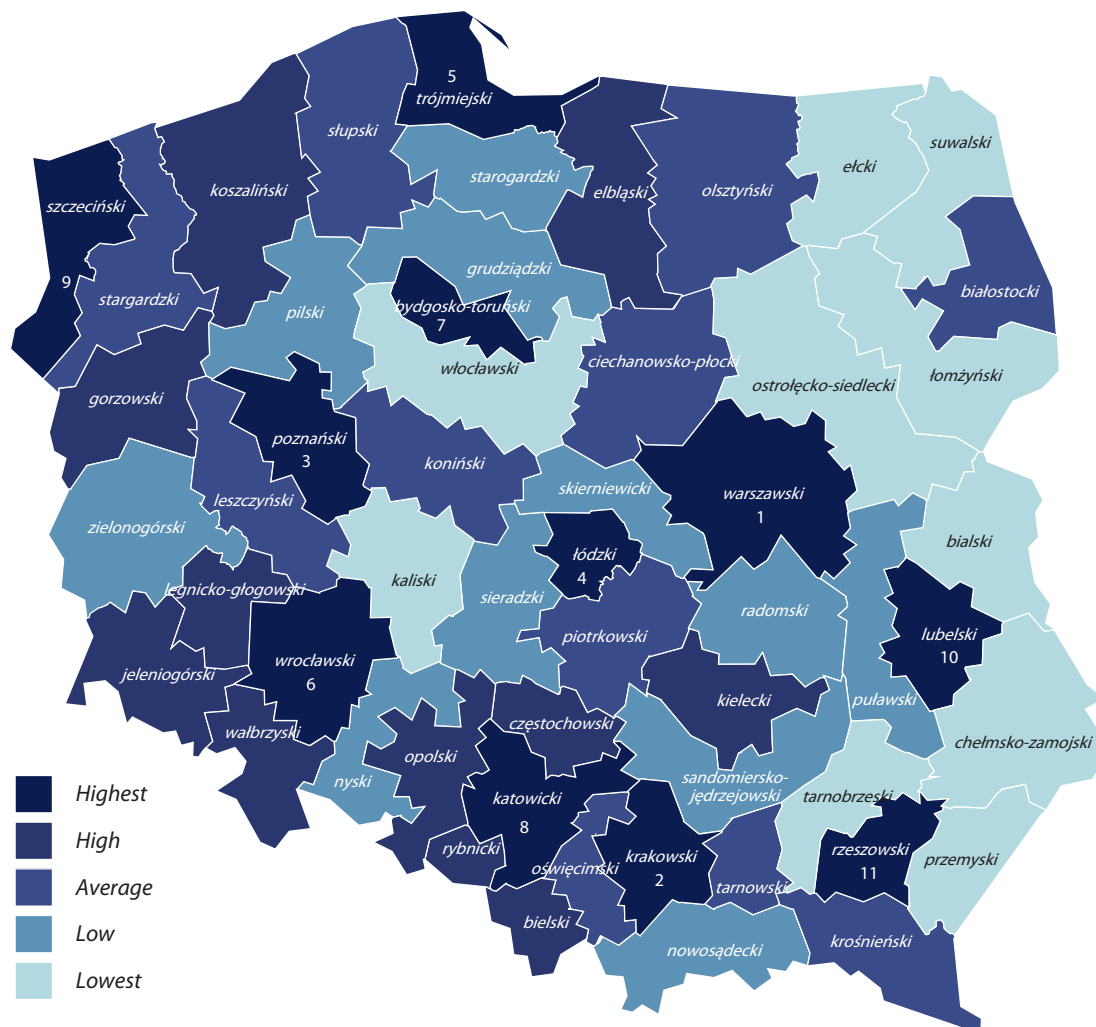
- the level of economic development
- the quality of natural environment
- social infrastructure
- the level of public safety.

Geographical diversification of investment attractiveness

The aforementioned criteria were used to assign individual sub-regions to one of five equinumerous classes (of 11 elements with the exception of the last class of 10 elements) of investment attractiveness.

Metropolitan sub-regions emerge as the most attractive for investment. This is where infrastructure and R&D personnel are concentrated. The workforce includes specialists educated in the local academic centers as well as those who are attracted by good standards of living and a well-developed cultural environment.

Map 3 Sub-regional attractiveness with respect to advanced technologies sector in 2013 r.



Source: GIME research

The lowest IA in the advanced technologies sector is typical of the sub-regions located around minor urban centers. In Poland the vast majority of towns of medium size and some cities (except for the biggest ones) are not able to create conditions that would attract hi-tech investors. This is due not only to a deficit of the production factors but to the unfavorable conditions of the social and economic infrastructure. This is particularly true for towns located in the areas characterized by a low level of urban development. An exception to this rule is presented by centers which host a highly specialized large-scale production and where additional benefits are offered, e.g. investment preferences in the special economic zones.

Table 5. Sub-regional attractiveness with respect to advanced technologies activity in 2012–2013

Sub-region	Ranking in 2013	Ranking in 2012
Warszawski	1	1
Krakowski	2	3
Poznański	3	2
Łódzki	4	4
Tri-City (trójmiejski)	5	5
Wrocławski	6	6
Bydgosko-Toruński	7	7
Katowicki	8	8
Szczeciński	9	9
Lubelski	10	14
Rzeszowski	11	10

Źródło: opracowanie IBnGR

The most attractive sub-regions

Despite some shared characteristics each of the sub-regions exhibits a slightly different attractiveness profile. The tables below present strong and weak points of the most attractive sub-regions with respect to the advanced technologies sector.

Advanced technologies		
1. Warszawski sub-region	Strengths	
	Quality of labour resources	Very high number of qualified workers, college graduates and students, high level of economic activity and the highest level of social activity among sub-regions
	Transport accessibility	The most important transport hub and the largest international airport in Poland

Advanced technologies		
	Absorption capacity of market	The highest purchasing power of households and enterprises among sub-regions
	Social infrastructure	Highly developed cultural infrastructure, high spending on local public infrastructure
	Economic infrastructure	Very high density of business support institutions
	Level of economic development	Very high productivity of labour, advantageous structure of the economy
	Weaknesses	
	Level of public safety	High level of criminality, very low crime detection rate
2. Krakowski sub-region	Strengths	
	Quality of labour resources	The highest quality of labour resources in Poland. Very high number of qualified employees, graduates and students, very high level of economic and social activities
	Transport accessibility	Transport node of supra-regional importance with access to international airport
	Absorption capacity of market	High purchasing power of households and enterprises
	Economic infrastructure	High density of business support institutions
	Social infrastructure	Well-developed cultural infrastructure, extensive hotel base
	Level of economic development	Beneficial structure of the economy, high productivity of labour
	Weaknesses	
	Level of public safety	Above average level of criminality, very low rate of crime detection
3. Poznański sub-region	Strengths	
	Quality of labour resources	High number of qualified workers and tertiary schools' students. The highest level of economic activity and very high level of social activity
	Transport accessibility	Very good accessibility, proximity to the Western border. Transport node of supra-regional importance with access to international airport

Advanced technologies		
	Social infrastructure	Very well developed cultural infrastructure, high spending on local public infrastructure
	Absorption capacity of market	High purchasing power of households and enterprises
	Economic infrastructure	High density of institutions in business environment, significant investment possibilities in SEZ
	Level of economic development	Advantageous structure of the economy, high productivity of labour.
	Weaknesses	
	Public safety	Above average level of criminality
4. Łódzki sub-region	Strengths	
	Quality of labour resources	Very high number of qualified workers and potential employees, i.e. students and graduates, high level of economic activity
	Transport accessibility	Transport node of supra-regional importance with access to international airport, A1 and A2 motorways node, proximity to Warsaw metropolitan area
	Absorption capacity of market	High purchasing power of households and enterprises
	Level of economic development	Beneficial structure of the economy, above average productivity of labour
	Weaknesses	
	Level of public safety	High level of criminality, very low rate of crime detection
5. Tri-City (trójmiejski) sub-region	Strengths	
	Quality of labour resources	High quality of labour resources, very high number of tertiary schools' students, very high level of economic and social activity

Advanced technologies		
	Social infrastructure	Highly developed cultural infrastructure, extensive hotel and catering base, very high spending on local public infrastructure
	Absorption capacity of market	High purchasing power of enterprises and households
	Economic infrastructure	High density of business support institutions
	Quality of natural environment	Low level of pollution from domestic sewage, high percentage of protected areas
	Level of economic development	Advantageous structure of the economy, high productivity of labour
	Weaknesses	
	Level of public safety	High rate of criminality, very low crime detection rate
6. Wrocławski sub-region	Strengths	
	Quality of labour resources	High quality of labour resources. High number of tertiary schools' students, high level of economic and social activity
	Transport accessibility	Transport node of supra-regional importance with access to international airport, proximity to Western border
	Economic infrastructure	Very high density of business support institutions, significant investment possibilities in SEZ
	Social infrastructure	Highly developed cultural infrastructure, high spending on local public infrastructure
	Absorption capacity of market	High purchasing power of enterprises
	Level of economic development	Advantageous structure of the economy, above average productivity of labour
	Weaknesses	
	Level of public safety	Very high level of criminality, low crime detection rate

Advanced technologies

7. Bydgosko-Toruński sub-region	Strengths	
	Transport accessibility	Transport node of regional importance with access to international airport, proximity to A1 motorway
	Quality of labour resources	High number of tertiary schools' students, high level of economic activity
	Absorption capacity of market	High purchasing power of households and enterprises
	Social infrastructure	Highly developed cultural infrastructure, high spending on local public infrastructure
	Weaknesses	
	Level of public safety	Above average level of criminality, low crime detection rate
8. Katowicki sub-region	Strengths	
	Quality of labour resources	High number of tertiary schools' students
	Transport accessibility	Important transport node of national importance with access to international airport
	Economic infrastructure	High density of business support institutions, very high investment opportunities in SEZ, very good performance of SEZ
	Absorption capacity of market	Very high purchasing power of households and high purchasing power enterprises
	Level of economic development	Beneficial structure of the economy, high level of labour productivity
	Weaknesses	
	Level of public safety	Very high rate of criminality, low crime detection rate
	Quality of natural environment	High level of atmospheric pollution, low percentage of protected areas

Advanced technologies		
9. Szczeciński sub-region	Strengths	
	Transport accessibility	Transport node of supra-regional importance, access to international airport, proximity to Western border and to excellent transport infrastructure
	Economic infrastructure	High density of business support institutions
	Social infrastructure	Highly developed social infrastructure, very well developed hotel base, hospitality and catering sector, high spending on local public infrastructure
	Level of economic development	Beneficial structure of the economy, high labour productivity
	Weaknesses	
	Level of public safety	High level of criminality, relatively low level of crime detection
10. Lubelski sub-region	Strengths	
	Quality of labour resources	High level of social activity, high number of tertiary schools' students.
	Weaknesses	
	Level of public safety	Relatively high level of criminality, low level of crime detection
11. Rzeszowski sub-region	Strengths	
	Quality of labour resources	High number of tertiary schools' students, above average public health
	Weaknesses	

5. Investment attractiveness of voivodships

5.1. Significance of individual location factors

The assessment of investment attractiveness of voivodships was performed against seven groups of component indices. Their regional diversification is discussed in the order of significance to investment attractiveness (from highest to lowest):

- labour resources and cost of labour,
- investor-oriented activities of regions,
- transport accessibility,
- size of the output market,
- level of economic infrastructure,
- level of social infrastructure,
- level of public safety.

In this order the IA factors were characterized, with particular attention given to the top-scoring voivodships.

5.2. Labour cost and resources

Geographical diversification of IA

Two regions are the most attractive with respect to labour cost and resources - Małopolskie, and Silesian (śląskie) voivodships. Their fundamental advantages are the quantity of labour resources and relatively low deficit of qualified workforce. Both regions are characterised by highly developed tertiary education's sector, which provides qualified workforce. The Silesian voivodship has the largest labour resources, which are somewhat limited by high wages. The Małopolskie voivodship is characterised by smaller labour resources, but also by lower wages – this fact balances the workforce deficits and facilitates assembling a crew.

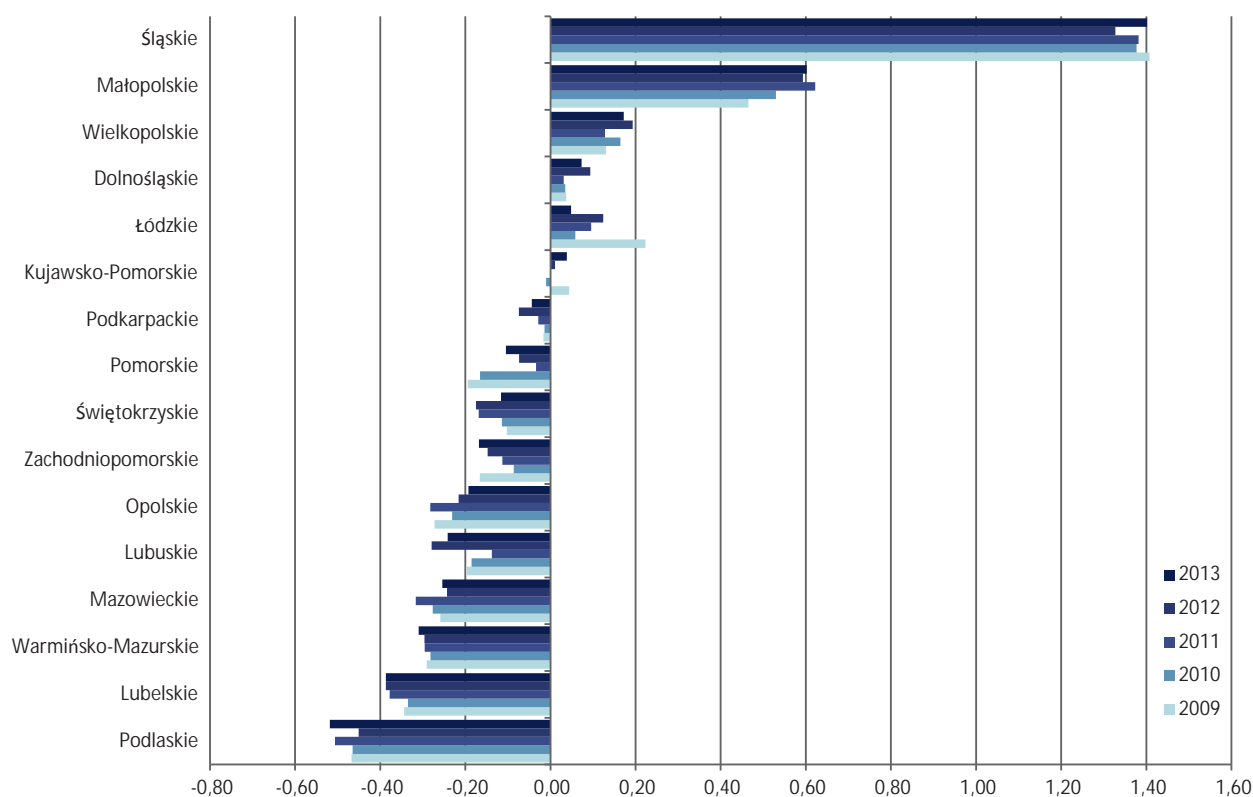


Chart 1 Assessment of voivodships with respect to labour cost and resources

Source: GIME research

The six regions that clearly exhibit the lowest labour cost or resources (or both) are the Opolskie, Mazowieckie, Lubuskie, Warmińsko-Mazurskie, Lubelskie and Podlaskie voivodships. Very high labour costs, as well as a strong deficit of qualified workforce are the main causes of the remote ranking of the Mazovian (Mazowieckie) voivodship, which was not balanced even by the above average number of employees and graduates, nor by other qualitative attributes of labour resources, such as high level of entrepreneurship. In the remaining cases the weak point is presented by the very limited labour resources in all the aspects, i.e. the number of those employed, the unemployed and graduates. There are also some qualitative deficits such as a low level of entrepreneurship. Opolskie and Lubuskie voivodships show an acute deficit of qualified workforce. Low cost of labour is a common feature of all above-mentioned regions (except the Mazovian voivodship) – which is the key factors for most of investors.

The most attractive voivodships

Despite main features in common, some differences (in labour costs and resources) between the Małopolskie and the Silesian (śląskie) regions can be indicated. These dissimilarities may be significant in the process of making a location decision.

Labour cost and resources	
1. Silesian (Śląskie) voivodship	Strengths
	Plentiful labour resources – employees, the unemployed and graduates
	Weaknesses
	Quality of labour resources below average, high cost of labour
	Changes
	No significant changes over 5 years; an improvement in comparison to 2012, as a consequence of lower deficit of qualified labour resources
2. Małopolskie voivodship	Strengths
	Above average labour resources, especially secondary schools graduates and students, low deficit of qualified workforce
	Weaknesses

	Changes
	Improvement over 5 years. Compared to 2012 no significant changes.

5.3. Investor-oriented activities

Geographical diversification of investment attractiveness

As regards investor-oriented activities of the voivodships, six regions exhibit a clear leadership: the Silesian (śląskie), Mazovian (mazowieckie), Wielkopolskie, Western Pomeranian (zachodniopomorskie), Pomeranian (pomorskie) and Lower Silesian (dolnośląskie). All of them stand out with an above average level of information and promotional activities operated via WPHil (Departments for the Promotion of Trade and Investment at the Polish embassies). Three of them – Lower Silesian (dolnośląskie), Silesian (śląskie) and Wielkopolskie – possess a vast investment area. Regional Investors Assistance Centers (IACs) in: Lower Silesian (dolnośląskie), Pomeranian (pomorskie) and Western Pomeranian (zachodniopomorskie) have been distinkted by PAIiZ for hitherto investors assistance, substantive and technical preparation and the region's investment offer presentation.

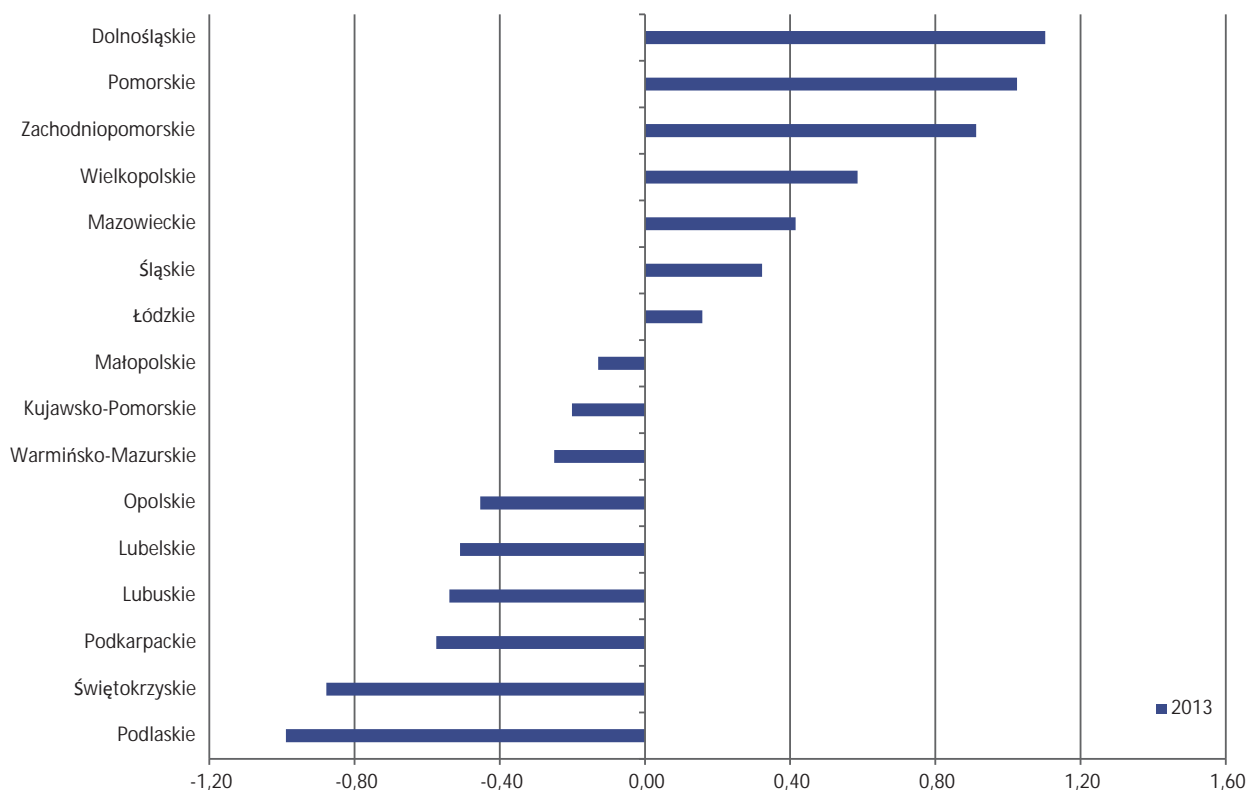


Chart 2 Assessment of voivodships with respect to investor-oriented activities

Source: GIME research

The rating of regions exhibits six voivodships at the bottom of the list: the Opolskie, Lubelskie, Lubuskie, Podkarpackie, Świętokrzyskie and Podlaskie. All of these regions, apart from the Opolskie and Podkarpackie present below average number of location offers in the PAIIZ database. Four of them (excluding the Lubelskie and Lubuskie) have been mentioned significantly less frequently by the surveyed embassies.

The most attractive voivodships

Despite main features in common, some differences between the regions can be indicated. Six leading voivodships have been characterized below.

Investor-oriented activities	
1. Lower Silesian (dolnośląskie) voivodship	Strengths
	The highest number of investment offers, distincted IAC
	Weaknesses

2. Pomeranian (pomorskie) voivodship	Strengths
	Above average information activity, best rated IAC
	Weaknesses

3. Western Pomeranian (zachodniopomorskie) voivodship	Strengths
	Significantly above average intensity of information activity, distincted IAC
	Weaknesses

4. Wielkopolskie voivodship	Strengths
	High number of investment offers
	Weaknesses

Investor-oriented activities	
5. Mazovian (mazowieckie) voivodship	Strengths
	High intensity of information activity
	Weaknesses

6. Silesian (śląskie) voivodship	Strengths
	High number of investment offers
	Weaknesses

5.4. Transport accessibility

Geographical diversification of investment attractiveness

The highest level of transport accessibility is seen in seven voivodships, placed mainly in the western and central part of Poland. These regions are: Silesian (śląskie), Lower Silesian (dolnośląskie), Wielkopolskie, Western Pomeranian (zachodniopomorskie), Mazovian (mazowieckie), Łódzkie and Lubuskie. The feature they all have in common is a good or average accessibility to the Western border of Poland. Other parameters of transport accessibility differ among these regions.

The lowest degree of transport accessibility persists in the four voivodships of Eastern Poland. In addition to a long distance to the Western border, this area is characterized by the lack of international air links (except for the Podkarpackie voivodship) and a poorly developed transport and logistics sector. A potential advantage of these regions (again, except for Podkarpackie), which may help them solve their transport problems, is a relative proximity to Warsaw. However, to exploit the potential of the Warsaw transport hub it is necessary to modernize transport infrastructure to reduce the time needed to reach Warsaw. After 2012, which had abounded in road and airport investments, 2013 did not bring any changes in their transport accessibility. The only significant change (for better) was observed in Warmińsko-Mazurskie voivodship which has gained better accessibility to Western boarder of Poland.

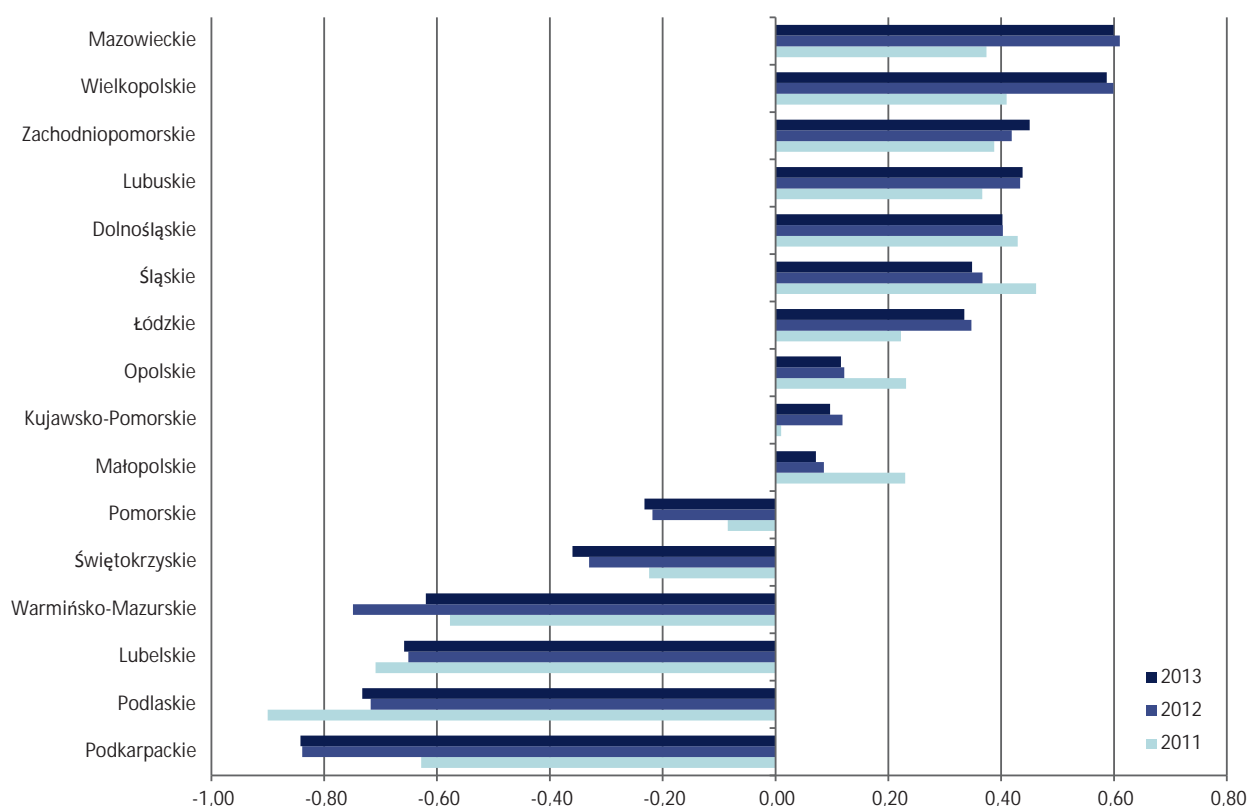


Chart 3 Assessment of voivodships with respect to transport accessibility

Source: GIME research

The most attractive voivodships.

There is a significant degree of variation among voivodships with respect to the aspects of transport accessibility. This also pertains to the regions that enjoy the most beneficial location.

Transport accessibility	
1.	Strengths
	Key transport hub in Poland, above average level of development of transport and logistics' sector, high intensity of air transport
	Weaknesses

1. Mazovian (mazowieckie) voivodship	

Transport accessibility	
2. Wielkopolskie voivodship	Strengths
	Proximity to Western border, no weaknesses
	Weaknesses

3. Western Pomeranian (zachodniopomorskie) voivodship	Strengths
	Proximity to Western border, very good access to maritime transport, high level of the transport and logistics sector
	Weaknesses
	Low density of road network, long distance to Warsaw, low intensity of passenger air transport
4. Lubuskie voivodship	Strengths
	Proximity to Western border, well-developed transport and logistics sector
	Weaknesses
	Low density of road network, long distance to Warsaw; the lowest number of passengers operated by the regional airport
5. Lower Silesian (dolnośląskie) voivodship	Strengths
	Proximity to Western border
	Weaknesses
	Above average distance to Warsaw

Transport accessibility	
6. Silesian (śląskie) voivodship	Strengths
	Above average intensity of passenger air transport , above average development of the transport and logistics sector, high density of road network
	Weaknesses
	Below average accessibility to maritime transport
7. Łódzkie voivodship	Strengths
	Proximity to Warsaw, no weaknesses
	Weaknesses

5.5. Absorption capacity of market

Geographical diversification of investment attractiveness

High market absorption characterises three voivodships: Mazovian, Silesian and Pomeranian. Their common feature is also an above average households wealth (especially with respect to the Mazovian and Pomeranian regions).

Four voivodships, i.e. Warmińsko-Mazurskie, Podkarpackie, Świętokrzyskie and Lubelskie exhibit the lowest absorption capacity of the market. These areas are sparsely populated and the demand generated by households and businesses is significantly lower.

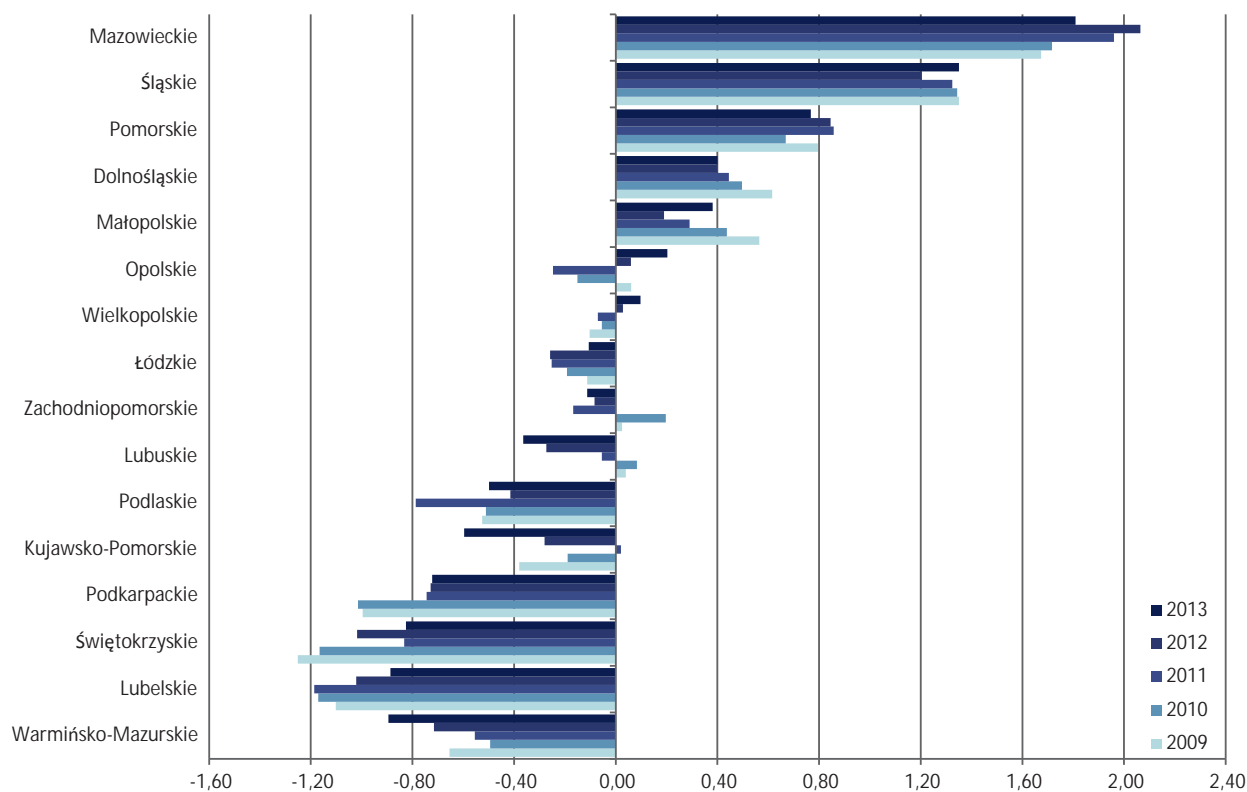


Chart 4. Assessment of voivodships with respect to market absorption capacity

Source: GIME research

The most attractive voivodships

As mentioned before, the three leaders in the market absorption capacity have certain features in common, but they also differ with respect to investment demand of enterprises.

Absorption capacity of market	
1. Mazovian (mazowieckie) voivodship	Strengths
	High purchasing power of households and investment demand of enterprises
	Weaknesses

	Changes
	Significant improvement over 5 years; deterioration in comparison to 2012 – reduction of investment demand
2. Silesian (śląskie) voivodship	Strengths
	Very high density of population; high investment demand of enterprises
	Weaknesses

	Changes
	No changes over 5 years, slight improvement in comparison to 2012 – relatively higher investment demand
3. Pomeranian (pomorskie) voivodship	Strengths
	Above average purchasing power of households
	Weaknesses

	Changes
	No significant changes over 5 years; no significant changes in comparison to 2012

5.6. Economic infrastructure

Geographical diversification of attractiveness

The highest level of economic infrastructure is found in four voivodships: Małopolskie, Mazovian, Silesian and Lower Silesian. The characteristic they have in common is a well-developed R&D sector and business environment. As regards other parameters of economic infrastructure, the regions present different pictures.

The lowest level of economic infrastructure was identified in the following voivodships: Podlaskie, Świętokrzyskie, Warmińsko-Mazurskie, Lubelskie and Kujawsko-Pomorskie. The R&D infrastructure is poorly developed in all those regions, however the Kujawsko-Pomorskie and Lubuskie positively stand out a bit from this picture. Another drawback is a relatively small size of the land available in the Special Economic Zones (SEZ). The only asset is a high ranking (2nd position) of the Świętokrzyskie region in the fairs and exhibitions sector which, however, is not sufficient to improve the position of the voivodship.

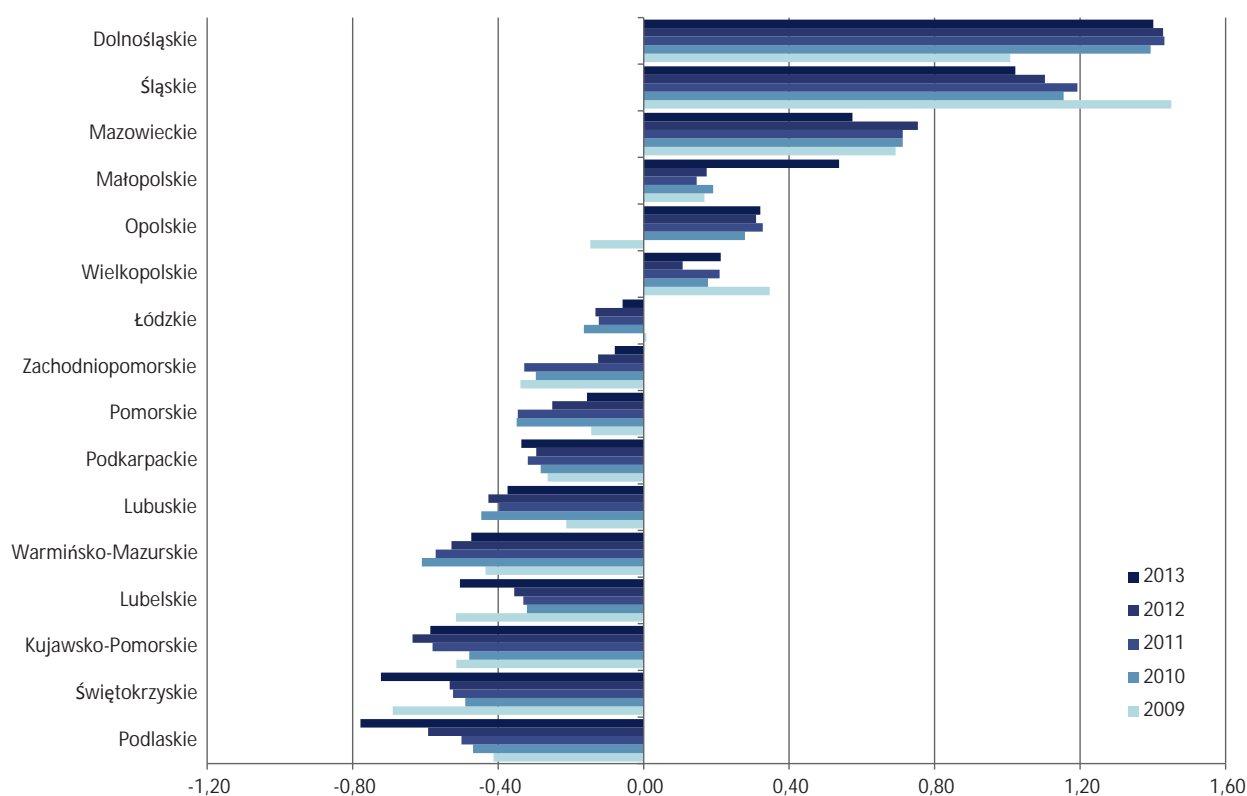


Chart 5 Assessment of voivodships with respect to economic infrastructure

Source: GIME research

The most attractive voivodships

The combination of attraction factors with respect to economic infrastructure is specific to each of the regions. Also, the three best performing regions feature, to some extent, a different profile of strong and weak points in this respect.

Economic infrastructure	
1. Lower Silesian (dolnośląskie) voivodship	Strengths
	Well-developed business environment, above average development of R&D sector, extensive land available for investment and significant investors activity in SEZ
	Weaknesses
	Low fair and exhibitions activity
	Changes
	A significant increase over 5 years; no changes from the annual perspective
2. Silesian (śląskie) voivodship	Strengths
	Well-developed R&D sector, above average size of land available for investment in SEZ, high investors activity in SEZ
	Weaknesses

	Changes
	A significant decrease in the period of 5 years, on an annual basis a slight decrease – relative deterioration of R&D sector
3. Mazovian (mazowieckie) voivodship	Strengths
	Well-developed business environment and R&D sector
	Weaknesses
	Below average size of land available for investment in SEZ

Economic infrastructure	
4. Województwo małopolskie	Zmiany
	Deterioration in the period of 5 years, as well as in relation to the previous year – relative decline in development of R&D sector and lower investors activity in SEZ on an annual basis
	Strengths
	Well-developed business environment, above average investors activity in SEZ
	Weaknesses
	Below average size of land available for investment in SEZ
	Changes
	Very significant improvement over 5 years and in relation to previous year. On an annual basis: relative improvement in R&D's sector development and higher investors activity in SEZ

5.7. Social infrastructure

Geographical diversification of attractiveness

A high level of social infrastructure was identified in four regions. The top scoring voivodships are Silesian (śląskie) and Małopolskie. The Lower Silesian (dolnośląskie) and Mazovian (mazowieckie) falls way behind the two leaders but are well ahead of the next regions down the ladder. The top four voivodships feature a well-developed cultural life and three of them (except the Mazovian) feature an extensive tourist infrastructure.

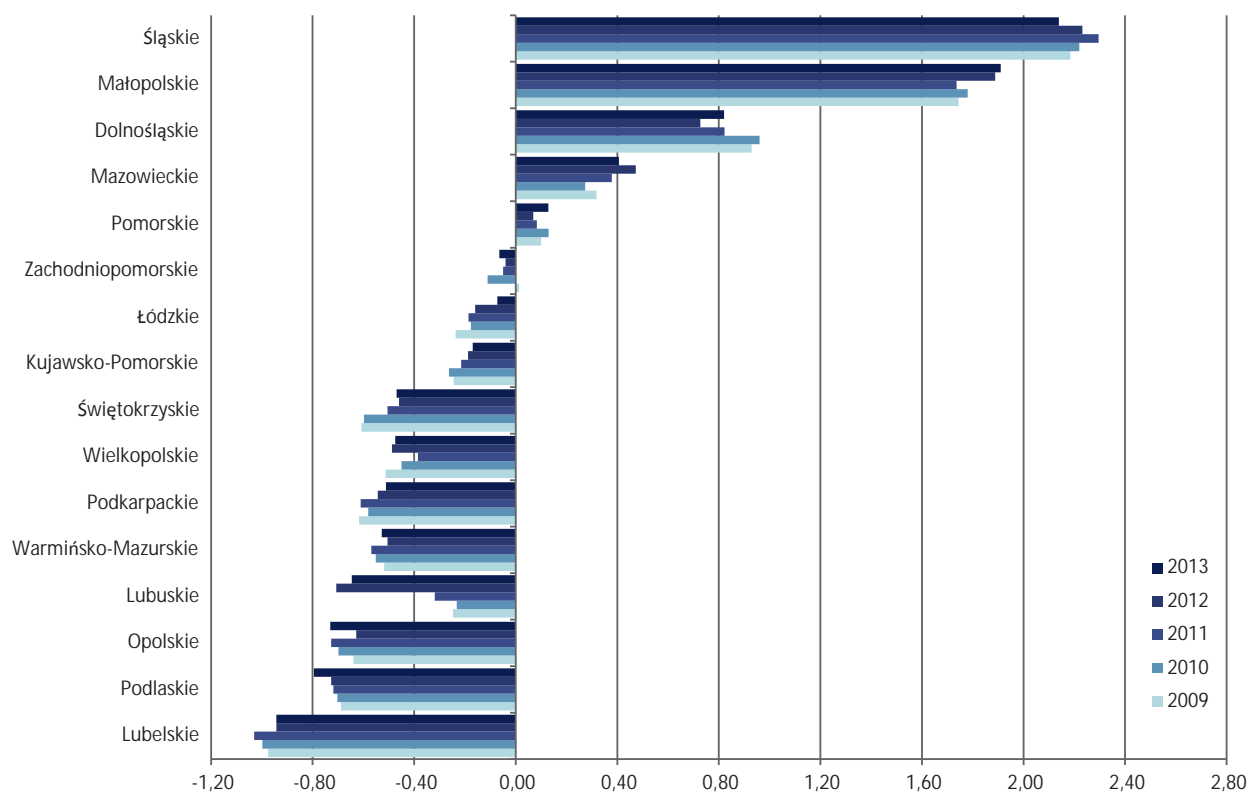


Chart 6 Assessment of voivodships with respect to social infrastructure

Source: GIME research

The group of regions that presents low attractiveness with respect to the social infrastructure is numerous, with the Lubelskie region as a salient example. It is characterized by a relatively low intensity of cultural life and a low level of development of the tourist infrastructure.

The most attractive regions

The level of development of the social infrastructure is a function of various factors whose significance varies across the regions. Also the four leading regions feature different combinations of the component parts of the social infrastructure.

Social infrastructure	
1. Silesian (śląskie) voivodship	Strengths
	High intensity of cultural activities; well-developed hotel and catering infrastructure, high activity of local cultural establishments
	Weaknesses

	Changes
	No significant changes over 5 years; no significant changes in comparison to 2012
2. Małopolskie voivodship	Strengths
	High intensity of cultural activities, well-developed hotel and catering infrastructure, high activity of local cultural establishments
	Weaknesses

	Changes
	Improvement over the 5 years, no changes on an annual basis
3. Lower Silesian (dolnośląskie) voivodship	Strengths
	Above average intensity of cultural activities, well-developed hotel infrastructure
	Weaknesses

	Changes
	Minimal deterioration over 5 years, no significant changes in comparison to 2012

Social infrastructure	
4. Mazovian (mazowieckie) voivodship	Strengths
	Above average intensity of cultural activities
	Weaknesses

	Changes
	A slight improvement over the 5 years; annually – no significant changes

5.8. Public safety

Geographical diversification of attractiveness

The leaders with respect to public safety are the four voivodships of Eastern Poland: Podkarpackie, Świętokrzyskie, Podlaskie and Lubelskie. Their ranking results from a low level of criminality and a high or average rate of crime detection

The two regions found at the bottom of the rating list of public safety are: Lower Silesian (dolnośląskie) and Silesian (śląskie). They exhibit a much higher than average level of criminality and a low rate of crime detection.

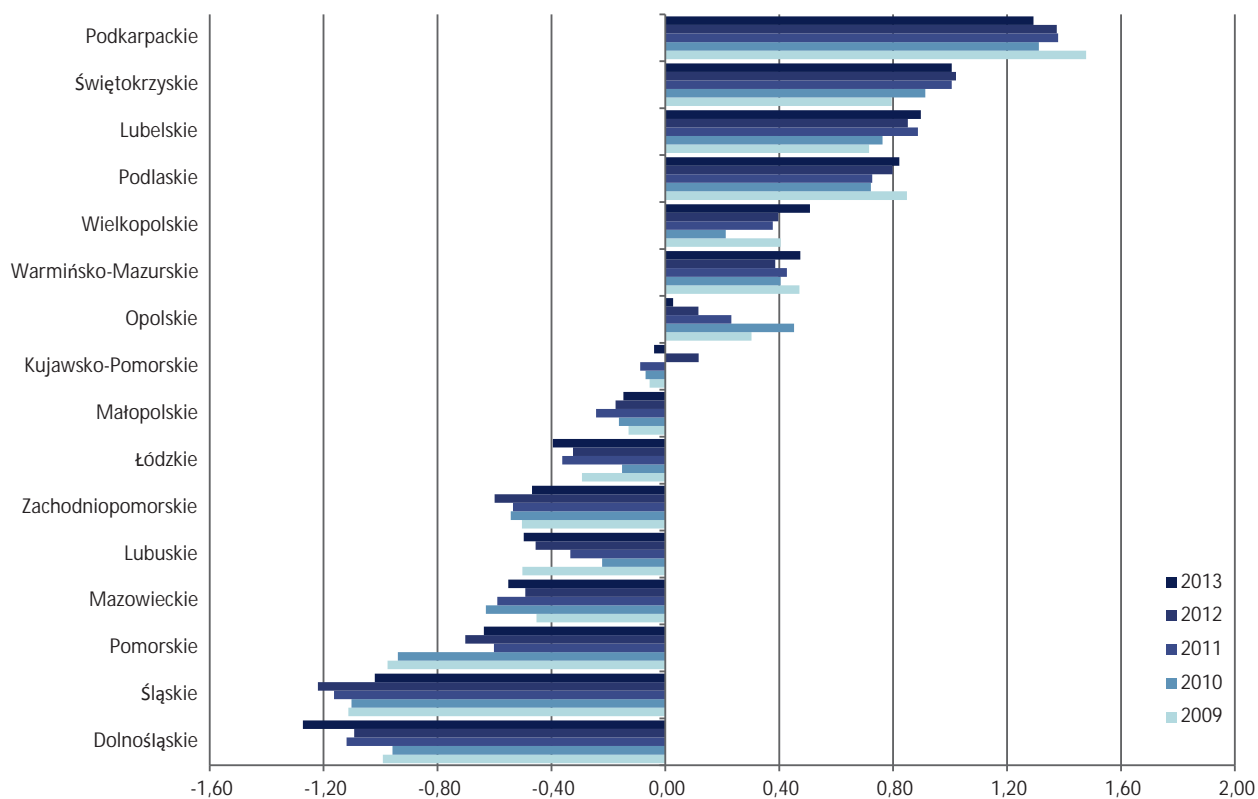


Chart 7. Assessment of voivodships with respect to public safety

Source: GIME research

The most attractive regions

The level of public safety is a function of two factors. Each of them assumes different values depending on the region. The four leading regions differ in the make-up of component parts that describe the level of public safety.

Public safety	
1. Podkarpackie voivodship	Strengths
	The lowest level criminality, above average crime detection
	Weaknesses

	Changes
2. Świętokrzyskie voivodship	Strengths
	The highest crime detection, below average level of criminality i
	Weaknesses

	Zmiany
3. Lubelskie voivodship	Strengths
	Low level of criminality, above average crime detection
	Weaknesses

	Changes
	Improvement over of 5 years; annually – no significant changes

Public safety	
4. Podlaskie voivodship	Strengths
	Low level of criminality
	Weaknesses

	Changes
	No significant changes over 5 years; no significant changes on an annual basis

5.9. Investment attractiveness – a synthetic perspective

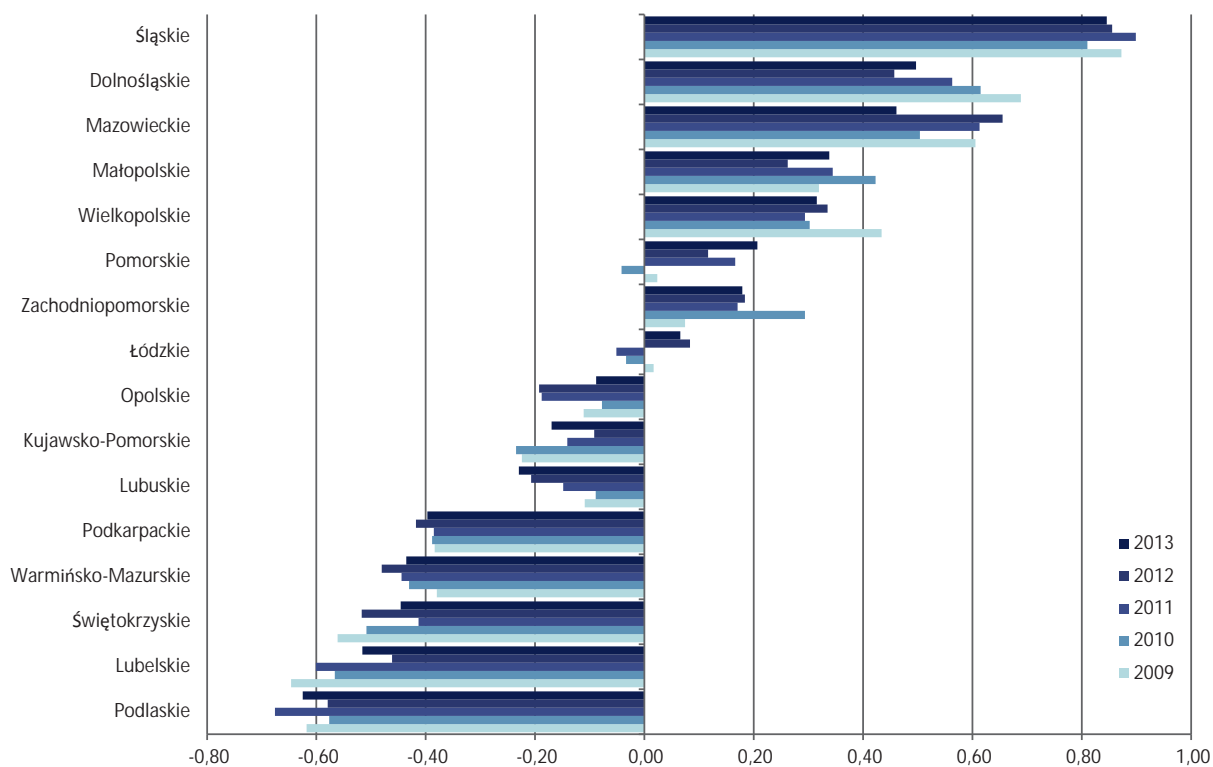


Chart 8. Assessment of voivodships with respect to investment attractiveness

Source: GIME research

Geographical diversification of attractiveness

The Silesian (śląskie) voivodship remains to be the clear leader in investment attractiveness (IA). A high level of IA is observed in the Mazovian (mazowieckie) and Lower Silesian (dolnośląskie) regions. A much above average IA is found in the Małopolskie, Wielkopolskie, Pomeranian (pomorskie), Western Pomeranian (zachodniopomorskie) and Łódzkie regions. All of the aforementioned regions take high or average ranking with respect to individual aspects of IA. However, the configuration of these advantages is quite diversified.

The category of voivodships defined by lower investment attractiveness is comprised of five regions: Podkarpackie, Warmińsko-Mazurskie, Świętokrzyskie, Lubuskie and Podlaskie. The category of voivodships defined by low investment attractiveness is comprised of five regions: Podkarpackie, Świętokrzyskie, Warmińsko-Mazurskie, Lubelskie and Podlaskie. Lower intensity of urbanisation and industrialization, in the period of deep transformation of many European and a few Polish regions based, did not create a „critical mass” (economies of scale and agglomeration) in terms of the most important resources for big investors. Moreover, despite progression in development and modernization of infrastructure of national importance, these areas can still be characterized by low accessibility to transport.

Low investment attractiveness of five voivodships does not mean, that they are deprived of opportunities to draw in large investors – the chances exist, however they are smaller than in other voivodships. They can be improved by enhancing investment attractiveness for activities basing on unique resources and assets that, by the force of circumstances, are omitted in this comparative analysis. Therefore not large investors, but these who are able to use local assets, should be a target of regional policy in voivodships characterized by lower IA.

The most attractive voivodships

The attractiveness profile of the eight regions characterized as highest, high and well-above-average in IA differs quite significantly, despite some features in common. Each of them features a slightly different make-up of strong and weak points in this regard.

Investment attractiveness	
1. Silesian (śląskie) voivodship	Strengths
	Labour cost and resources, output market, economic infrastructure, social infrastructure
	Weaknesses
	Level of public safety
	Changes
	No changes in the period of 5 years; no changes on an annual basis
2. Lower Silesian (dolnośląskie)	Strengths
	Investor-oriented activities, , output market, economic infrastructure, social infrastructure
	Weaknesses
	Level of public safety
	Changes
	Significant decline over 5 years; no changes in comparison to 2012
3. Mazovian (mazowieckie) voivodship	Strengths
	Transport accessibility, output market, economic infrastructure, social infrastructure
	Weaknesses
	Cost of labour; level of public safety
	Changes
	Significant relative decline over 5 years; significant decline in comparison to 2012 – less attractive labour resources and lower rate of investor-oriented activity

Investment attractiveness	
4. Małopolskie voivodship	Strengths
	Labour cost and resources, social and economic infrastructure
	Weaknesses

	Changes
	No significant changes over 5 years, slight improvement in comparison to 2012 – economic infrastructure development
5. Wielkopolskie voivodship	Strengths
	Labour cost and resources, transport accessibility, investor-oriented activities
	Weaknesses

	Changes
	Deterioration over 5 years; no changes on an annual basis -
6. Pomeranian (pomorskie) voivodship	Strengths
	Output market, investor-oriented activity
	Weaknesses
	Level of public safety
	Changes
	Improvement over 5 years; improvement on an annual basis – higher rating of investor-oriented activity

Investment attractiveness	
7. Western Pomeranian (zachodniopomorskie) voivodship	Strengths
	Investor-oriented activity, transport accessibility
	Weaknesses
	Changes
	Improvement over 5 years; no significant changes in comparison to 2012
8. Łódzkie voivodship	Strengths
	Labour costs and resources
	Weaknesses

	Changes
	Slight improvement over 5 years; no significant improvement on an annual basis

Table 6 Investment attractiveness of voivodships in 2013

		Transport accessibility		Labour costs and resources		Output market		Economic infrastructure		Social infrastructure		Public safety		Investor-oriented activity		Investment attractiveness of voivodships	
		Value	Rank	Value	Rank	Value	Rank	Value	Rank	Value	Rank	Value	Rank	Value	Rank	Value	Rank
	Weight	20		25		15		10		5		5		20			
1	Silesian (śląskie)	0,35	6	1,40	1	1,35	2	1,02	2	2,14	1	-1,02	15	0,32	6	0,85	1
2	Lower Silesian (dolnośląskie)	0,40	5	0,07	4	0,40	4	1,40	1	0,82	3	-1,27	16	1,10	1	0,50	2
3	Mazovian (mazowieckie)	0,60	1	-0,25	13	1,81	1	0,57	3	0,41	4	-0,55	13	0,42	5	0,46	3
4	Małopolskie	0,07	10	0,60	2	0,38	5	0,54	4	1,91	2	-0,15	9	-0,13	8	0,34	4
5	Wielkopolskie	0,59	2	0,17	3	0,10	7	0,21	6	-0,47	10	0,51	5	0,59	4	0,32	5
6	Pomeranian (pomorskie)	-0,23	11	-0,10	8	0,77	3	-0,16	9	0,13	5	-0,64	14	1,02	2	0,21	6
7	Western Pomeranian (zachodniopomorskie)	0,45	3	-0,17	10	-0,11	9	-0,08	8	-0,06	6	-0,47	11	0,91	3	0,18	7
8	Łódzkie	0,33	7	0,05	5	-0,11	8	-0,06	7	-0,07	7	-0,39	10	0,16	7	0,07	8
9	Opolskie	0,12	8	-0,19	11	0,20	6	0,32	5	-0,73	14	0,03	7	-0,45	11	-0,09	9
10	Kujawsko-Pomorskie	0,10	9	0,04	6	-0,60	12	-0,59	14	-0,17	8	-0,04	8	-0,20	9	-0,17	10
11	Lubuskie	0,44	4	-0,24	12	-0,36	10	-0,37	11	-0,65	13	-0,50	12	-0,54	13	-0,23	11
12	Podkarpackie	-0,84	16	-0,04	7	-0,72	13	-0,34	10	-0,51	11	1,29	1	-0,57	14	-0,40	12
13	Warmińsko-Mazurskie	-0,62	13	-0,31	14	-0,89	16	-0,47	12	-0,53	12	0,47	6	-0,25	10	-0,44	13
14	Świętokrzyskie	-0,36	12	-0,12	9	-0,83	14	-0,72	15	-0,47	9	1,01	2	-0,88	15	-0,45	14
15	Lubelskie	-0,66	14	-0,39	15	-0,89	15	-0,50	13	-0,94	16	0,90	3	-0,51	12	-0,52	15
16	Podlaskie	-0,73	15	-0,52	16	-0,50	11	-0,78	16	-0,80	15	0,82	4	-0,99	16	-0,63	16

Source: GIME research

Table 7. Changes in investment attractiveness of voivodships between 2009–2013

Voivodship	Synthetic index in 2008	Ranking in 2008	Synthetic index in 2009	Ranking in 2009	Synthetic index in 2010	Ranking in 2010	Synthetic index in 2011	Ranking in 2011	Synthetic index in 2012	Ranking in 2012	Ranking change 2013-2012
Silesian (śląskie)	0,87	1	0,81	1	0,90	1	0,86	1	0,85	1	0
Lower Silesian (dolnośląskie)	0,69	2	0,61	2	0,56	3	0,46	3	0,50	2	1
Mazovian (mazowieckie)	0,61	3	0,50	3	0,61	2	0,66	2	0,46	3	-1
Małopolskie	0,32	5	0,42	4	0,34	4	0,26	5	0,34	4	1
Wielkopolskie	0,43	4	0,30	5	0,29	5	0,33	4	0,32	5	-1
Pomeranian (pomorskie)	0,02	7	-0,04	8	0,17	7	0,12	7	0,21	6	1
Western Pomeranian (zachodniopomorskie)	0,07	6	0,29	6	0,17	6	0,18	6	0,18	7	-1
Łódzkie	0,02	8	-0,03	7	-0,05	8	0,08	8	0,07	8	0
Opolskie	-0,11	10	-0,08	9	-0,19	11	-0,19	10	-0,09	9	1
Kujawsko-Pomorskie	-0,22	11	-0,23	11	-0,14	9	-0,09	9	-0,17	10	-1
Lubuskie	-0,11	9	-0,09	10	-0,15	10	-0,21	11	-0,23	11	0
Podkarpackie	-0,38	13	-0,39	12	-0,39	12	-0,42	12	-0,40	12	0
Warmińsko-Mazurskie	-0,38	12	-0,43	13	-0,44	14	-0,48	14	-0,44	13	1
Świętokrzyskie	-0,56	14	-0,51	14	-0,41	13	-0,52	15	-0,45	14	1
Lubelskie	-0,65	16	-0,57	15	-0,60	15	-0,46	13	-0,52	15	-2
Podlaskie	-0,62	15	-0,58	16	-0,68	16	-0,58	16	-0,63	16	0

Source: GIME research

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