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THE INVESTMENT ATTRACTIVENESS OF THE REGIONS AND THE SUB-REGIONS OF POLAND 2014

THE GDAŃSK INSTITUTE FOR MARKET ECONOMICS

Konrad Adenauer Stiftung

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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 viral 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, Świętokrzyskie, Warmińsko-Mazurskie, Lubelskie, 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 2013 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.

Sub-regions were also rated from the IA point of view. Among the most attractive sub-regions one particular area located around Upper Silesia (Górny Śląsk) and the Western part of Małopolska stands out from the others. It is characterised by long-standing industrial traditions and a well-developed production sector, a specialised labour market and a relatively high transport accessibility. There are only five sub-regions outside this area that show a relatively high level of industrial development and a good access to transport, i.e. the sub-regions of Łódź, Wrocław, Poznań, Bydgoszcz-Toruń and Stargard Szczeciński.

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 2014

		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	Śląskie	0,34	7	1,33	1	1,42	2	1,02	2	2,16	1	-0,78	15	0,31	6	0,85	1
2	Mazowieckie	0,62	1	-0,22	13	1,82	1	0,60	3	0,50	4	-0,76	14	0,81	2	0,55	2
3	Dolnośląskie	0,36	5	0,05	5	0,28	5	1,39	1	0,82	3	-1,18	16	1,05	1	0,46	3
4	Małopolskie	0,12	9	0,58	2	0,56	4	0,49	4	1,80	2	-0,34	10	0,10	8	0,39	4
5	Wielkopolskie	0,56	2	0,20	3	0,14	6	0,21	6	-0,47	10	0,47	5	0,58	5	0,32	5
6	Pomorskie	-0,27	11	-0,13	9	1,07	3	-0,20	9	0,10	5	-0,63	13	0,74	3	0,18	6
7	Zachodniopomorskie	0,53	3	-0,20	11	-0,31	8	0,06	7	-0,07	6	-0,23	9	0,61	4	0,12	7
8	Łódzkie	0,36	6	0,07	4	-0,05	7	-0,11	8	-0,09	7	-0,40	11	0,24	7	0,10	8
9	Opolskie	0,12	8	-0,21	12	-0,37	10	0,24	5	-0,70	14	0,04	8	-0,10	9	-0,11	9
10	Kujawsko-Pomorskie	0,12	10	-0,03	6	-0,53	11	-0,57	14	-0,22	8	0,14	7	-0,22	10	-0,17	10
11	Lubuskie	0,45	4	-0,18	10	-0,34	9	-0,39	11	-0,67	13	-0,57	12	-0,73	13	-0,25	11
12	Podkarpackie	-0,74	14	-0,07	7	-0,67	13	-0,37	10	-0,49	11	1,27	1	-0,49	12	-0,36	12
13	Świętokrzyskie	-0,34	12	-0,10	8	-0,58	12	-0,64	15	-0,41	9	1,03	2	-0,91	16	-0,39	13
14	Warmińsko-Mazurskie	-0,79	16	-0,32	14	-1,02	16	-0,45	12	-0,53	12	0,26	6	-0,35	11	-0,52	14
15	Lubelskie	-0,68	13	-0,35	15	-0,72	15	-0,51	13	-0,97	16	0,80	4	-0,80	14	-0,55	15
16	Podlaskie	-0,77	15	-0,44	16	-0,69	14	-0,77	16	-0,77	15	0,90	3	-0,84	15	-0,61	16

Source: GIME research

1. Introduction

The Gdańsk Institute for Market Economics (GIME) completed its tenth consecutive 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 2005-2013, 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 economic 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. This jubilee edition of the report was cofinanced by Energa SA.

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 broad spectrum 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:

- 2012 – in reference to the size and the structure of value added, of-town road destiny, workforce in industry, transport and other services and investment outlays,

- 2013 – the majority of indicators obtained from public statistical sources,
- 2014 – mainly in case of 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 (WPHiI) at the Polish embassies in the countries with the highest share of foreign investment in Poland.

The 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.

As well as in last year's edition, the evaluation of investor-oriented activities of the regions was enriched with the Polish Agency's for Information and Foreign Investment (PAIiIZ) rating of Regional Investors Assistance Centers (IAC) - primarily conducted in 2013 and performed in a three-year interval. Since last edition of the report was published, Lubuskie viovodship's ROIC has been certified and this fact has been included in current analysis.

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.

3. Factors of investment attractiveness in the regional perspective

3.1. Accessibility to transport

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 (PAIiIZ),
- information and promotional activities targeting 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 (WPHiI).

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 The scope, the form and the intensity of their activity are, to some extent, idividualised.

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:

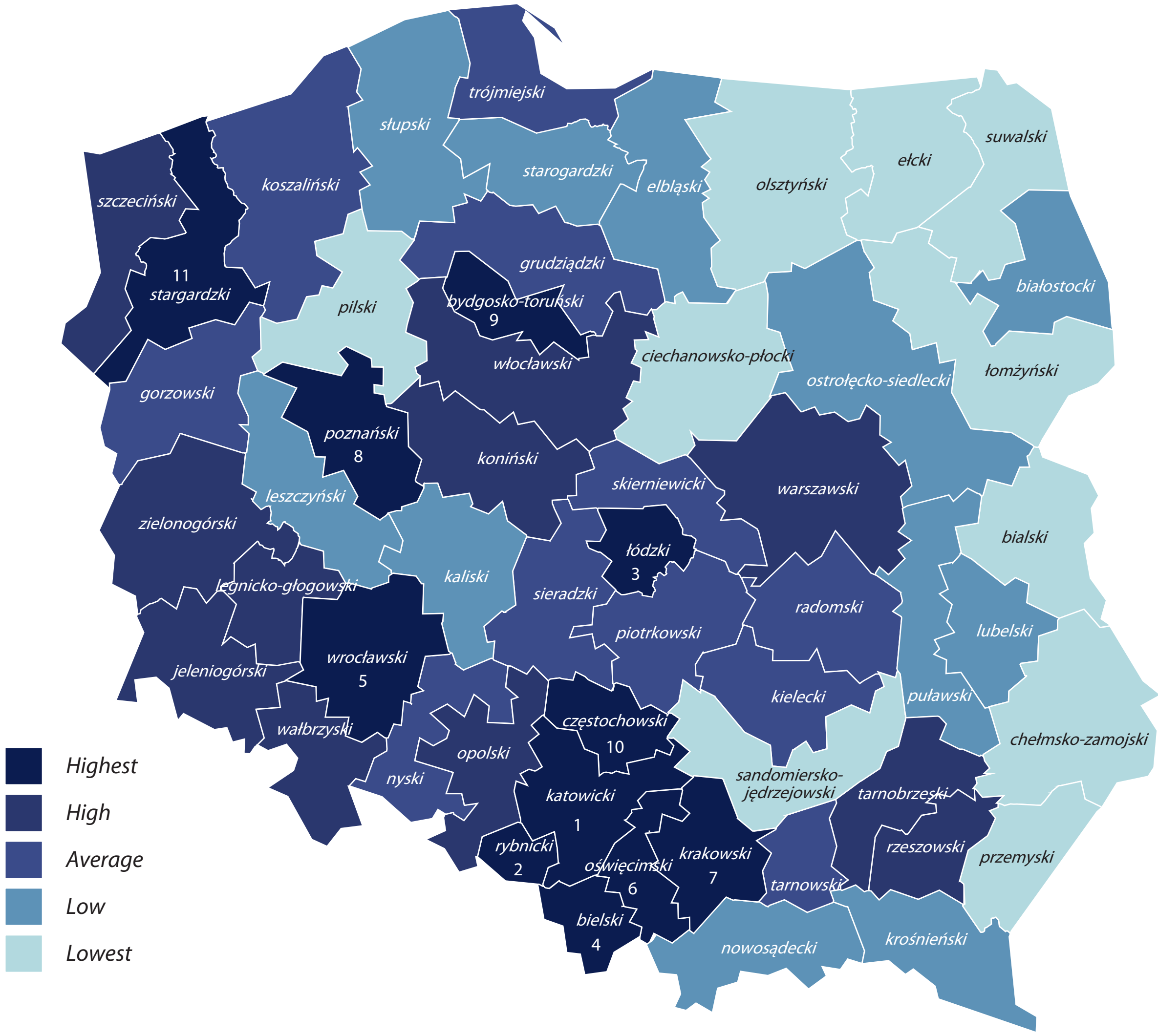
- level of protection of the natural environment;
- level of public safety;
- level of economic development.

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.

The lead of polish the most attractive sub-regions for industrial activity remain unchanged in comparison to last year's edition of the research. The best industry-friendly conditions can traditionally be found in Upper Silesia conurbation and in the nearby Rybnicki sub-region. Łódzki, Bielski and Wrocławski sub-regions held their high positions in the ranking, whereas Krakowski sub-region moved up by 3 positions. It is worth noting, that the areas in which industry has particularly good development conditions, are those characterised by long-standing industrial traditions and a well-developed production sector, a specialised labour market and a relatively high transport accessibility. One sub-region stands out of this scheme. Stargardzki sub-region (which moved up by 5 positions) bases on low labour costs, high transport accessibility to western boarder, seaport and extensive land avaliable for investments.

Map 1. Sub-regional investment attractiveness with respect to industrial activities in 2014.



Source: GIME research

The least attractive for industrial activity are areas with low transport accessibility, deficit of qualified workforce and low level of economic development. Environmental protection is also a significant obstacle for industrial development. Above mentioned characteristics are common for sub-regions based in north-east and east of Poland. Their only advantages in the context of developing industrial activity are low labour costs and relatively high level of public safety, although they are insufficient to compete with Upper Silesia, Western Małopolska or Łódzki sub-region.

Table 3 Sub-regional investment attractiveness with respect to industrial activities between 2013 and 2014

Sub-region	Ranking in 2014	Ranking in 2013
Katowicki	1	1
Rybnicki	2	2
Łódzki	3	3
Bielski	4	4
Wrocławski	5	5
Oświęcimski	6	7
Krakowski	7	10
Poznański	8	6
Bydgosko-Toruński	9	9
Częstochowski	10	8
Stargardzki	11	16

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**	
	Transport accessibility	Transport node of national importance, very high density of road infrastructure, proximity to A4 motorway, above average access to Western border, well-developed transport and logistics sector
	Labour resources	Vast number of qualified employees, vocational schools graduates and the unemployed
	Economic infrastructure	Very extensive land available in Special Economic Zone (SEZ), very high investor activity in SEZ
	Level of economic development	Very large number of business entities with foreign capital, very beneficial structure of the economy, very high labour productivity
	Environment protection	Very low share of protected areas
	Weaknesses	
	Cost of labour	Very High wages
	Public safety	Very high level of criminality, very low crime detection rate
2. Rybnicki sub-region	**Strengths**	
	Labour resources	Vast number of qualified employees, vocational schools graduates and the unemployed
	Economic Infrastructure	Extensive land available in Special Economic Zone, very high investor activity in SEZ
	Level of economic development	Very beneficial structure of the economy, very high labour productivity
	Weaknesses	
	Cost of labour	Very high wages
3. Łódzki sub-region	**Strengths**	
	Transport accessibility	Major transport node of supra-regional importance with access to international airport, A1 and A2 motorways node, proximity to Warsaw metropolis, very high density of road infrastructure
	Labour resources	Very large number of qualified workers, vocational schools graduates and the unemployed
	Level of economic development	Very beneficial structure of the economy, very large number of enterprises with foreign capital, high labour productivity,

Industrial activity		
	Weaknesses	
	Level of public safety	Very high level of criminality and very low crime detection rate
4. Bielski sub-region	**Strengths**	
	Labour resources	Very large number of qualified employees, unemployed and vocational schools graduates
	Economic infrastructure	Very high investor activity in SEZ
	Weaknesses	
	Cost of labour	High wages
5. Wrocławski sub-region	**Strengths**	
	Transport accessibility	Transport node of supra-regional importance and access to international airport, proximity to Western border, proximity to A4 motorway
	Economic infrastructure	Very extensive areas available in SEZ, very high investor activity in SEZ
	Level of economic development	Very beneficial structure of the economy, very large number of enterprises with foreign capital, high labour productivity
	Protection of natural environment	Low percentage of protected land
	Weaknesses	
	Cost of labour	High wages
	Level of public safety	Very high level of criminality, very low crime detection rate
7. Oświęcimski sub-region	**Strengths**	
	Labour resources	Very large number of qualified workers, unemployed and vocational schools graduates
	Weaknesses	

Industrial activity		
7. Krakowski sub-region	Strenghts	
	Transport accessibility	Transport node of supra-regional importance with access to international airport, well-developed transport and logistics sector, very high destiny of road infrastructure
	Labour resources	Very high number of qualified workers, unemployed and vocational schools graduates
	Level of economic development	Very beneficial structure of the economy, very high number of enterprises with foreign capital, high productivity of labour in industry
	Weaknesses	
	Cost of labour	High wages
	Level of public safety	High level of criminality, very low rate of crime detection
8. Poznański sub-region	Strengths	
	Transport accessibility	Transport node of supra-regional importance with access to international airport, proximity to Western boarder, proximity to A2 motorway
	Labour resources	Very large number of qualified workers and vocational schools graduates
	Protection of natural environment	Low percentage of protected land
	Level of economic development	Beneficial structure of the economy, very high labour productivity, large number of enterprises with foreign capital
	Weaknesses	
	Cost of labour	Very high wages
	Level of public safety	Very high level of criminality, very low rate of crime detection
9. Bydgosko-Toruński sub-region	Strenghts	
	Transport accessibility	Transport node of regional importance with access to international airport, proximity to a large seaport and A1 motorway, well-developed transport and logistics sector
	Labour resources	Very large number of qualified workers, unemployed amd vocational schools graduates

Industrial activity		
	Weaknesses	
	Level of public safety	High level of criminality, very low crime detection rate
10. Częstochowski sub-region	**Strenghts**	
	Labour resources	High number of qualified workers, unemployed and vocational schools graduates
	Weaknesses	
	--------------------	
11. Stargardzki sub-region	**Strenghts**	
	Transport accessibility	Proximity to Western boarder, proximity to a large seaport, proximity to an international airport
	Cost of labour	Low wages
	Economic infrastricture	Very extensive land available in SEZ
	Weaknesses	
	Labour resources	Very low small number of qualified workers

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 2013–2014

Sub-region	Ranking in 2014	Ranking in 2013
Warszawski	1	1
Łódzki	2	2
Katowicki	3	3
Krakowski	4	4
Poznański	5	5
Wrocławski	6	6
Trójmiejski (Tri-City)	7	8
Bydgosko-Toruński	8	7
Bielski	9	9
Rybnicki	10	22
Rzeszowski	11	10

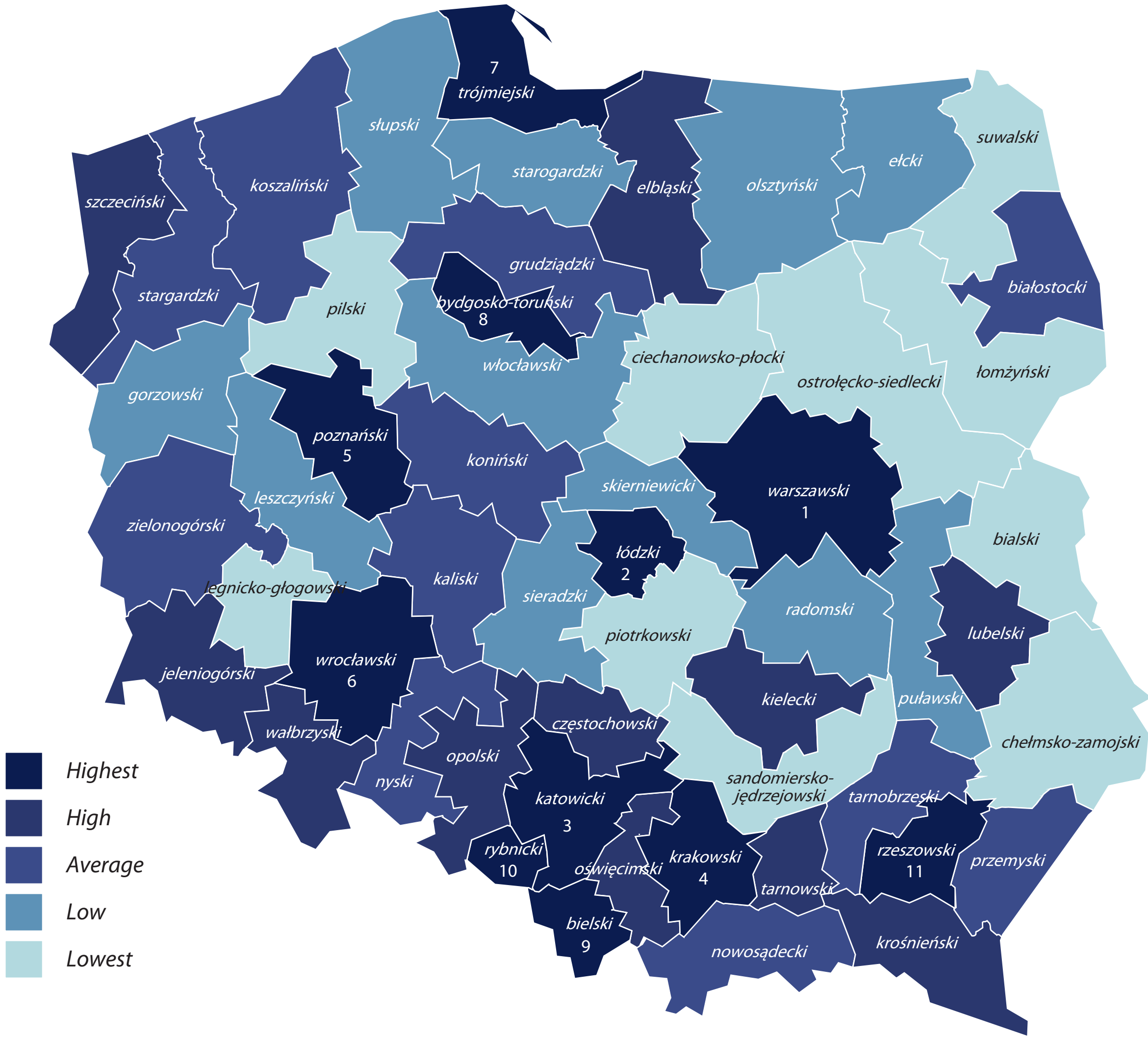
Source: GIME research

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 2014



Source: GIME research

Compared to 2013 there have not been any important changes at the top of the IA ranking list with respect to services. The top six remained the same. The two following sub-regions have swiched places: Tri-City (Trójmiejski) moved up and the Bydgosko-Toruński moved down by one position. A significant improvement was made by Rybnicki sub-region, which has moved from 22th to 10th position, dropping the Rzeszowski sub-region at the very bottom of top 11.

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	The highest quality of labour resources in Poland, very high number of qualified employees, secondary and tertiary schools graduates, the highest level of economic activity and social activity among all sub-regions
	Market absorption capacity	The highest purchasing power of households and enterprises
	Transport accessibility	Main international airport in Poland, key transport hub in Poland
	Economic infrastructure	The most developed sector of business support institutions
	Level of economic development	Very high labour productivity, advantageous structure of the economy, very large number of enterprises with foreign capital
	Weaknesses	
	Cost of labour	Very high wages
	Level of public safety	Very low crime detection, very high level of criminality
2. Łódzki sub-region	Strengths	
	Quantity and quality of labour resourcesy	Very large number of qualified workers, tertiary schools' graduates, students and potential employees, very high level of economic activity
	Market absorption capacity	Very high purchasing power of households and enterprises
	Transport accessibility	Supra-regional transport node of major importance with access to international airport, A-1 and A-2 motorway node, advantageous location in relation to Warsaw (main Polish transport node)

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

Services		
	Weaknesses	
	Cost of labour	High wages
	Level of public safety	High level of criminality, very low crime detection rate
5. Poznański sub-region	**Strengths**	
	Quantity and quality of labour resources	Very high number of qualified workers and trietary schools students and graduates. Very high level of economic and social activity
	Market absorption capacity	Very high purchasing power of households and enterprises
	Transport accessibility	Very good transport accessibility, proximity of Western markets. Key transport node of supra-regional importance with access to international airport
	Economic infrastructure	High destiny of business support institutions, above average investment opportunities in SEZ
	Level of economic environment	Large number of enterprises with foreign capital, 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	Large number of qualified workers and tertiary schools students and graduates, high level of entrepreneurship and social activity
	Market absorption capacity	High purchasing power of households and enterprises
	Transport accessibility	Transport node of supra-regional importance with access to international airport
	Economic infrastructure	Very well-developed sector of business support institutions, extensive investment opportunities in SEZ

Services		
	Level of economic environment	Large number of enterprises with foreign capital, high labour productivity in services, beneficial structure of local economy
	Weaknesses	
	Cost of labour	Very high wages
	Level of public safety	Very high level of criminality
7. Tri-City (Trójmiejski) sub-region	Strengths	
	Quantity and quality of labour resources	High quality of labour resources. Very high number of tertiary schools' students and graduates, very high level economic activity
	Market absorption capacity	High purchasing power of households and enterprises
	Quality of natural environment	The highest percentage of population using sewege-treatment plant in Poland, high percentage of protected areas
	Level of economic development	High labour productivity, beneficial structure of the economy, large number of enterprises with foreign capital
	Weaknesses	
	Cost of labour	High wages
	Level of public safety	Very high level of criminality
8. Bydgosko-Toruński sub-region	Strengths	
	Quantity and quality of labour resources	Large number of tertiary schools students and graduates, high level of economic activity
	Market absorption capacity	High purchasing power of households and enterprises
	Transport accessibility	Transport node of regional importance, proximity to A1 motorway, access to international airport
	Weaknesses	
	Level of public safety	High level of criminality

Services		
	Cost of labour	High wages
9. Bielski sub-region	Strengths	
	Quantity and quality of labour resources	High level of economic activity, above average number of tertiary schools graduates
	Market absorption capacity	Above average purchasing power of households and enterprises
	Level of economic development	Above average labour productivity in services, advantageous structure of the economy,
	Weaknesses	
	Cost of labour	Above average wages
10. Rybnicki sub-region	Strengths	
	Market absorption capacity	Very high purchasing power of households and enterprises
	Level of economic development	High labour productivity, advantageous structure of the local economy,
	Weaknesses	
	Quality of natural environment	The highest emission of dusts and gases in Poland
11. Rzeszowski sub-region	Strengths	
	Quantity and quality of labour resources	Above average number of tertiary schools students
	Market absorption capacity	Above average purchasing power of enterprises
	Weaknesses	

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:

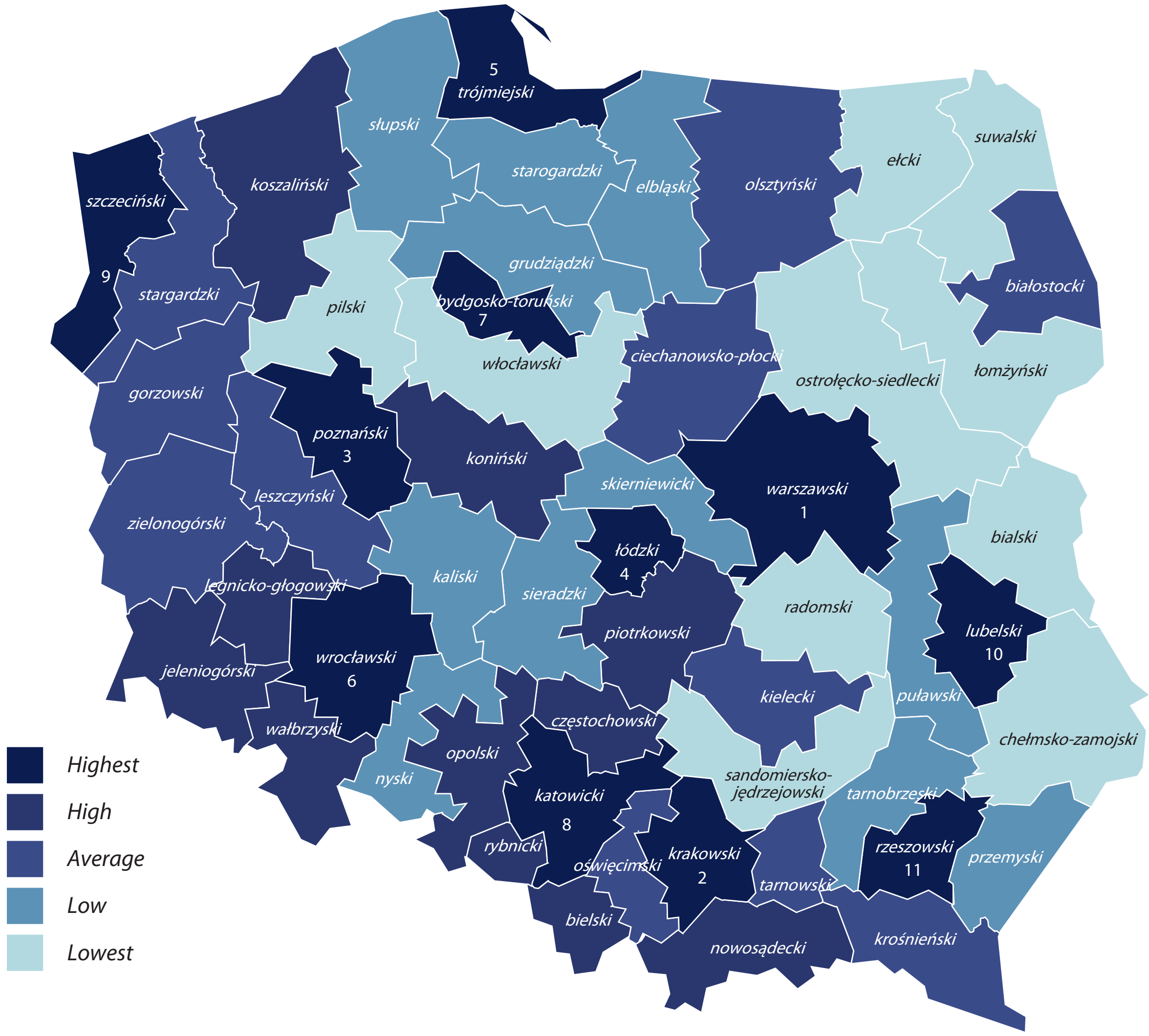
- the level of economic development
- the quality of natural environment
- social infrastructure
- the level of public safety.

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.

In comparison to 2013, the lead of sub-regions characterised by the highest IA in advanced technologies remained the same. Metropolitan sub-regions are still the most attractive places for this kind of 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. These sub-regions are also a kind of Polish "window on the world", which also plays in favour of local emerging and already operating enterprises in the context of international expansion.

Map 3 Sub-regional attractiveness with respect to advanced technologies sector in 2014 r.



Source: GIME research

The lowest IA in the advanced technologies sector is typical of the sub-regions located around minor urban centers (at most of sub-regional importance). In Poland the vast majority of towns of medium size and some bigger 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 2013–2014

Sub-region	Ranking in 2014	Ranking in 2013
Warszawski	1	1
Krakowski	2	2
Poznański	3	3
Łódzki	4	4
Tri-City (trójmiejski)	5	5
Wrocławski	6	6
Bydgosko-Toruński	7	7
Katowicki	8	8
Szczeciński	9	9
Lubelski	10	10
Rzeszowski	11	11

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	
	Transport accessibility	Transport hub of international importance with access to two international airports and A2 motorway
	Absorption capacity of institutional market	Very high investment outlays of enterprises
	Quality of labour resources	Very large number of qualified workers, college graduates and students, high level of economic activity and the highest level of social activity among sub-regions

Advanced technologies		
	Economic infrastructure	Very high density of business support institutions, high investors activity in SEZ
	Level of economic development	Very advantageous structure of the economy, the largest number of enterprises with foreign capital in Poland, very high productivity of labour,
	Quality of natural environment	Very low level of pollution with household sewage, high percentage of protected areas
	Social infrastructure	Highly developed cultural infrastructure, well-developed accomodation infrastructure, very high outlays on local public infrastructure
	Weaknesses	
	Level of public safety	Very high level of criminality, very low crime detection rate
2. Krakowski sub-region	Strengths	
	Transport accessibility	Transport node of supra-regional importance with access to international airport, proximity of A4 motorway
	Absorption capacity of institutional market	Very high investment outlays of enterprises
	Quality of labour resources	Very large number of qualified employees, collage graduates and students, very high level of economic and social activities
	Economic infrastructure	Large area of land available in SEZ, very high density of business support institutions
	Level of economic development	Very beneficial structure of the economy, very large number of enterprises with foreign capital, high productivity of labour
	Social infrastructure	Very well-developed cultural infrastructure, well-developed accomodation infrastructure
	Weaknesses	
	Level of public safety	High level of criminality, very low rate of crime detection
3. Poznański sub-region	Strengths	
	Transport accessibility	Transport node of supra-regional importance with access to international airport, proximity of western border, proximity of A2 motorway

Advanced technologies

	Absorption capacity of institutional market	Very high investment outlays of enterprises
	Quality of labour resources	Very large number of qualified workers, large number of collage graduates and students, very high level of economic and social activity
	Economic infrastructure	Very large area of land available in SEZ, very high density of business support institutions
	Level of economic development	Beneficial structure of the economy, very large number of enterprises with foreign capital, very high productivity of labour
	Social infrastructure	Very well-developed cultural infrastructure, well-developed accomodation infrastructure, high spending on local public infrastructure
	Weaknesses	
	Public safety	Very high level of criminality, very low crime detection rate
4. Łódzki sub-region	Strengths	
	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 institutional market	Very high investment outlays of enterprises
	Quality of labour resources	Very large number of qualified workers, collage graduates and students, very high level of economic activity, high level of social activity
	Level of economic development	Very beneficial structure of the economy, very large number of enterprises with foreign capital, high productivity of labour
	Weaknesses	
	Level of public safety	Very high level of criminality, very low rate of crime detection
5. Tri-City (Trójmiejski) sub-region	Strengths	
	Absorption capacity of institutional market	Very high investment outlays of enterprises

Advanced technologies		
	Quality of labour resources	Very high number of qualified workers, collage graduates and students, very high level of economic, high level of social activity
	Economic infrastructure	High density of business support institutions
	Level of economic development	Very beneficial structure of the economy, very large number of enterprises with foreign capital, very high productivity of labour
	Social infrastructure	Highly developed cultural infrastructure, extensive hotel and catering base, very high spending on local public infrastructure
	Quality of natural environment	Very low level of pollution with household sewage, high percentage of protected areas
	Weaknesses	
	Level of public safety	Very high rate of criminality, very low crime detection rate
6. Wrocławski sub-region	Strengths	
	Transport accessibility	Transport node of supra-regional importance with access to international airport, proximity of western border, proximity of A4 motorway
	Absorption capacity of institutional market	Very high investment outlays of enterprises
	Quality of labour resources	Very large number of qualified workers and students, large number of collage graduates, very high level of economic and social activity
	Economic infrastructure	Very large area of land available in SEZ, very high investors activity in SEZ, very high destiny of business support institutions
	Level of economic development	Very beneficial structure of the economy, very large number of enterprises with foreign capital, high labour productivity
	Social infrastructure	Very well-developed cultural infrastructure, well-developed accomodation infrastructure, high spending on local public infrastructure
	Weaknesses	
	Level of public safety	Very high level of criminality, very low crime detection rate

Advanced technologies		
7. Bydgosko-Toruński sub-region	Strengths	
	Absorption capacity of institutional market	High investment outlays of enterprises
	Transport accessibility	Transport node of regional importance with access to international airport, proximity to A1 motorway, above average accessibility to Warsaw metropolitan area
	Quality of labour resources	Very large number of qualified workers, collage graduates and students, very high level of economic activity, high level of social activity
	Social infrastructure	Very well-developed cultural infrastructure, very high outlays on local public infrastructure
	Weaknesses	
	Level of public safety	High level of criminality, very low crime detection rate
8. Katowicki sub-region	Strengths	
	Quality of labour resources	High number of ertiary schools' students
	Transport accessibility	Important transport node of national importance with access to international airport
	Economic infrastructure	High destiny 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 is a large number of working and jobseekers. 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.

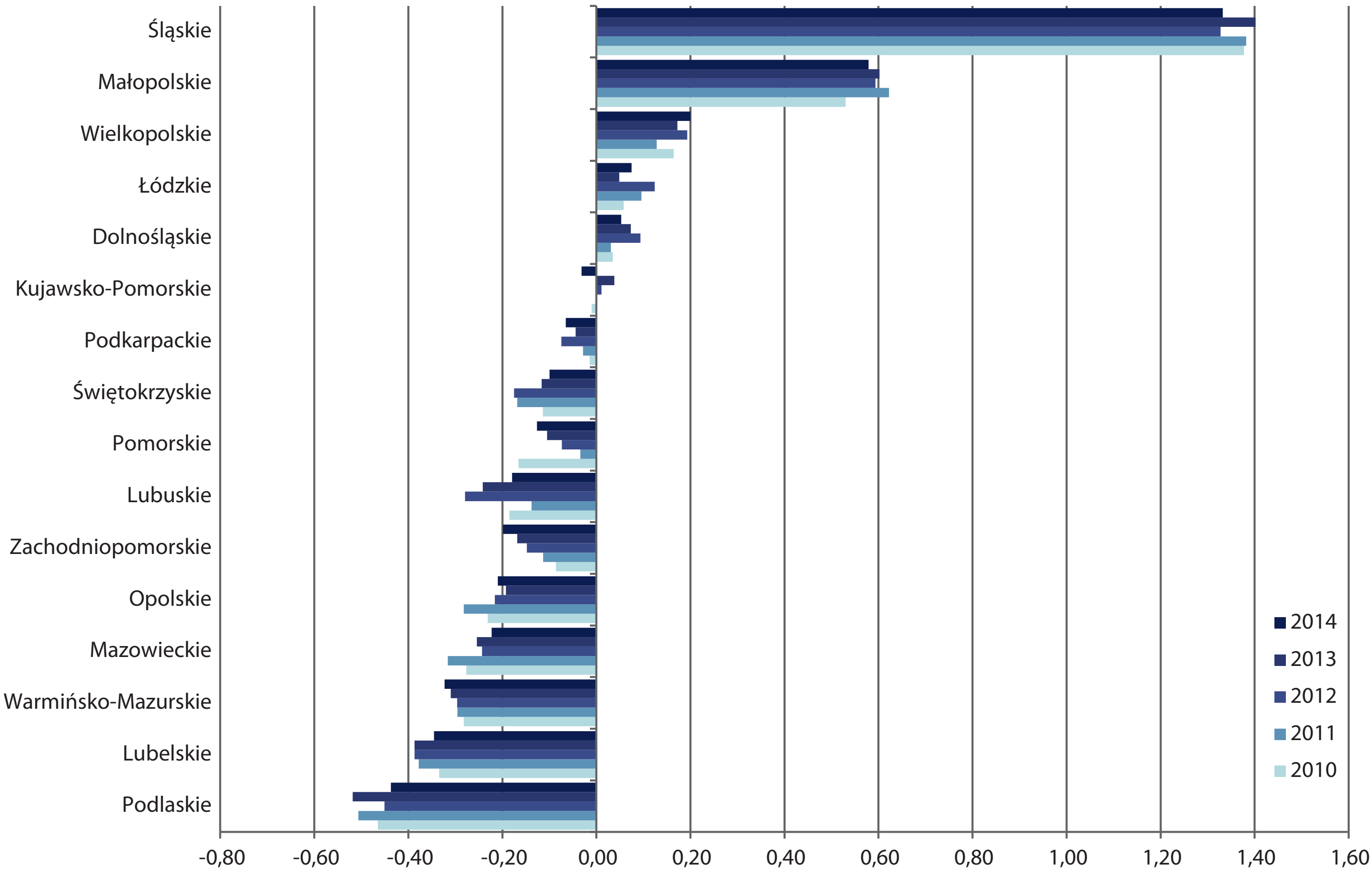


Chart 1 Assessment of voivodships with respect to labour cost and resources
Source: GIME research

Three regions clearly exhibit the lowest labour cost or resources (or both); these are: Warmińsko-Mazurskie, Lubelskie and Podlaskie voivodships. Their main weakness is: very small labour resources in every aspect: workers, unemployede and graduates. There are also some qualitative deficits such as a low level of entrepreneurship. Low cost of labour is a common feature of all above-mentioned regions – a key factors for most of investors, which does not, however, compensate the difficulties with low labour supply.

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, unemployed and graduates
	Weaknesses
	Quality of labour resources below average, high cost of labour
	Changes
	No significant changes over 5 years; decline in comparison to 2013, as a consequence of higher deficit of qualified labour resources
2. Małopolskie voivodship	Strengths
	Above average labour resources, especially secondary schools graduates and tertiary schools students, low deficit of qualified workforce
	Weaknesses

	Changes
	Improvement over 5 years. Compared to 2013 no significant changes.

5.3. Investor-oriented activities

Geographical diversification of investment attractiveness

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

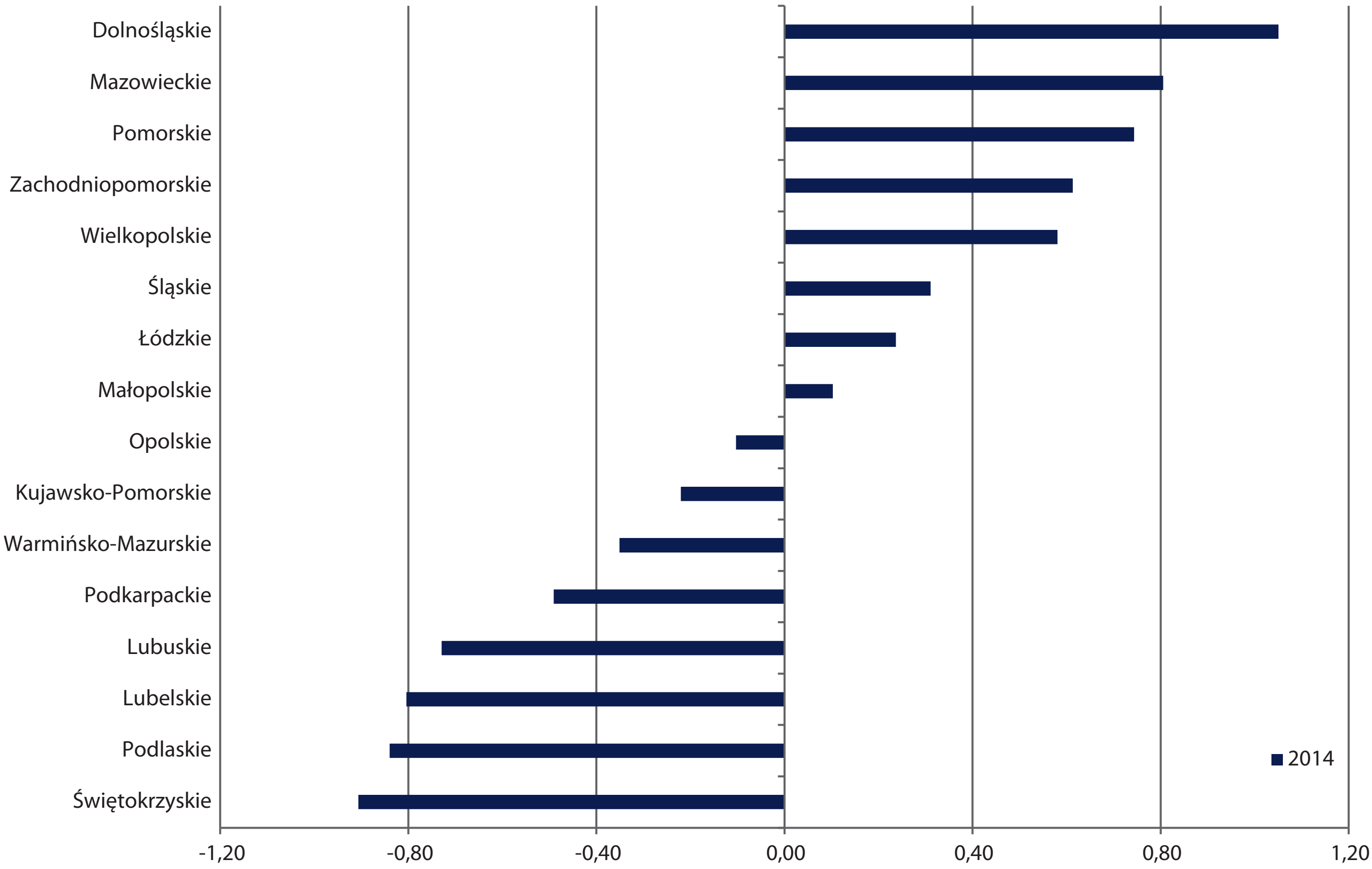


Chart 2 Assessment of voivodships with respect to investor-oriented activities
Source: GIME research

The rating of regions is being closed by five voivodships: Podkarpackie, Lubelskie, Lubuskie, Podlaskie and Świętokrzyskie. All of these regions present below average scores in all three analysed fields of activity. Podlaskie voivodship's IAC has, however, beed rated within all regions average, while Lubelskie has not stood out negetively in the field of information activity conducted in cooperation with Polish embassies.

The most attractive voivodships

Despite main features in common, some differences between the regions can be indicated. Five 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. Mazovian (mazowieckie) voivodship	Strengths
	High intensity of information activity
	Weaknesses
	––––––––––
3. Pomeranian (pomorskie) voivodship	Strengths
	Above average information activity, best rated IAC
	Weaknesses
	––––––––––
4. Western Pomeranian (zachodniopomorskie) voivodship	Strengths
	Significantly above average intensity of information activity, distincted IAC
	Weaknesses
	––––––––––

Investor-oriented activities	
5. Wielkopolskie voivodship	Strengths
	High number of investment offers
	Weaknesses
	__________

5.4. Transport accessibility

Geographical diversification of investment attractiveness

The highest level of transport accessibility characterises seven voivodships, placed manly in the western (Lower Silesian, Wielkopolskie, Western Pomeranian, Lubuskie),central (Mazovian, Łódzkie) or southern (Silesian) parts of Poland. 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 four voivodships of Eastern Poland. In addition to a long distance to the western border, this area is characterized by the lack (or a small number) of international air links and a poorly developed transport and logistics sector. A potential advantage of three regions (Lubelskie, Podlaskie and Warminsko-Mazurskie), 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 the capital city.

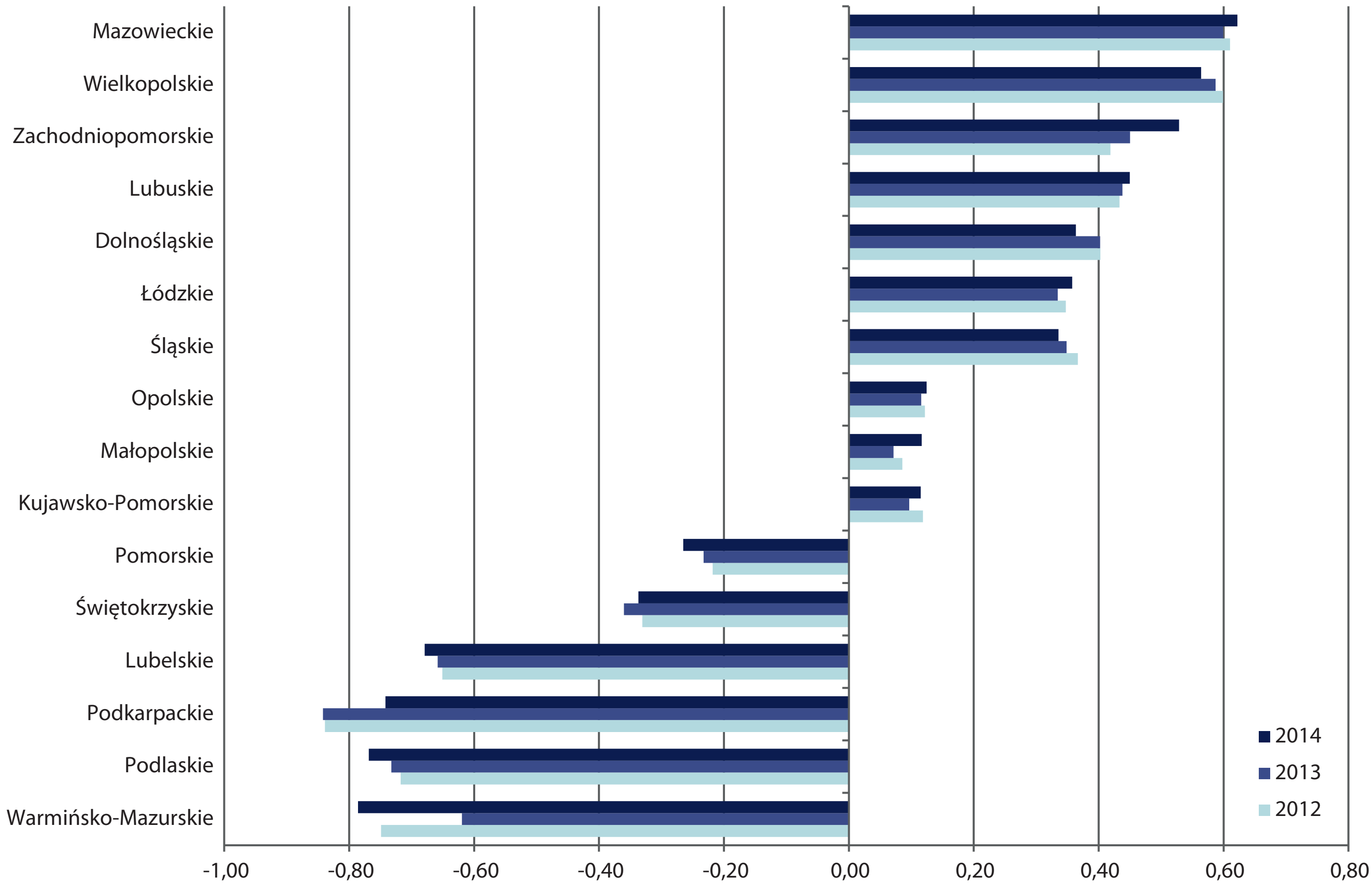


Chart 3 Assessment of voivodships with respect to transport accessibility
Source: GIME research

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. Mazovian (mazowieckie) voivodship	Strengths	Key transport hub in Poland, above average level of development of transport and logistics' sector, high intensity of air transport
	Weaknesses	__________
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, highly developed 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

Transport accessibility	
5. Lower Silesian (dolnośląskie) voivodship	Strengths
	Proximity to Western border
	Weaknesses
	Above average distance to Warsaw
6. Łódzkie voivodship	Strengths
	Proximity to Warsaw, no weaknesses
	Weaknesses
	__________
7. 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

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).

Six voivodships: Kujawsko-Pomorskie, Świętokrzyskie, Podkarpackie, Podlaskie, Lubelskie and Warmińsko-Mazurskie exhibit the lowest absorption capacity of the market. These areas are sparsely populated and the demand generated by households and businesses is significantly lower.

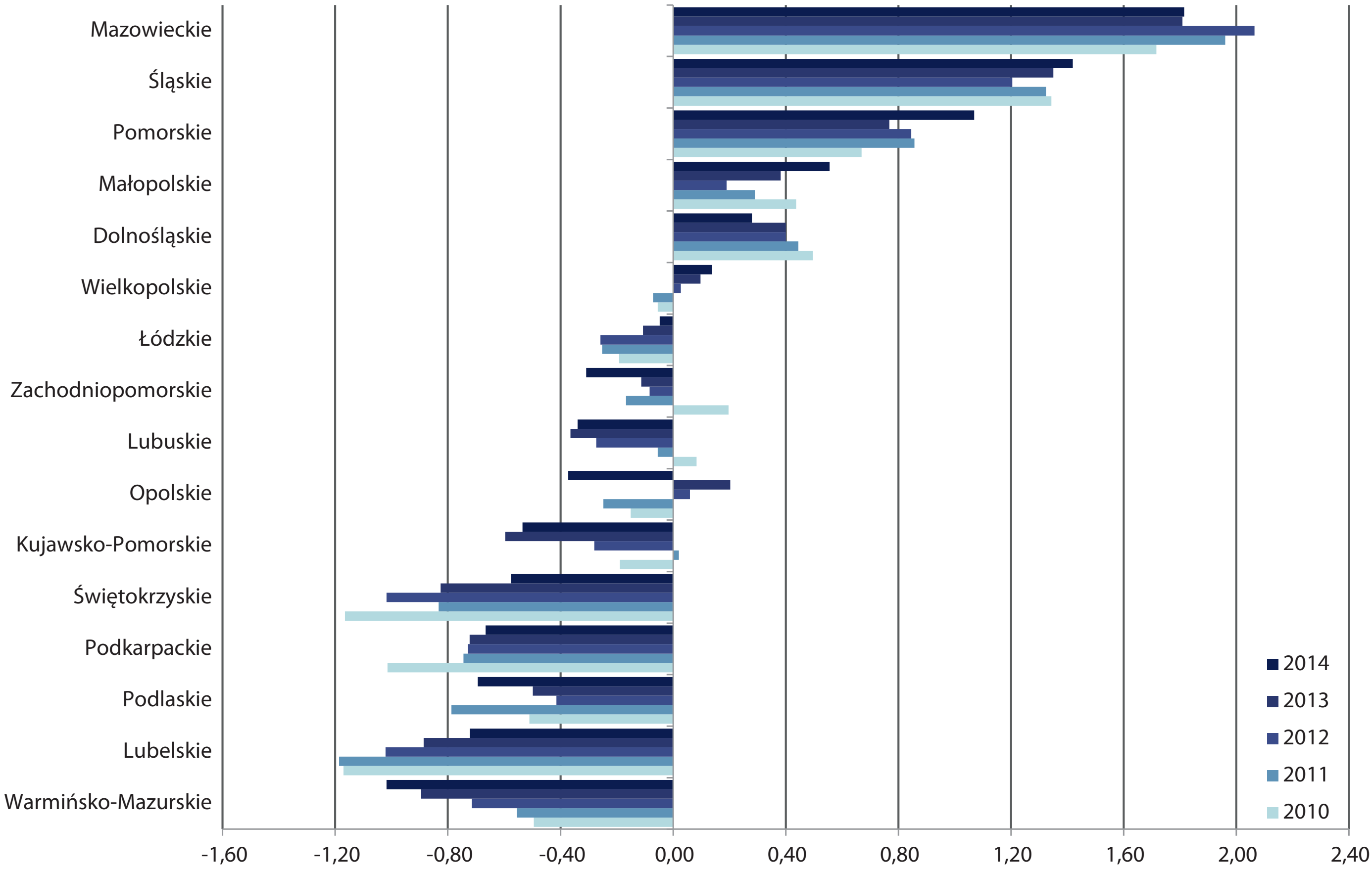


Chart 4. Assessment of voivodships with respect to market absorption capacity
Source: GIME research

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
	Slight improvement over 5 years; no significant changes in comparison to 2013
2. Silesian (śląskie) voivodship	Strengths
	Very high density of population and above average wealth of households, high investment demand of enterprises
	Weaknesses

	Changes
	Slight improvement over 5 years and in comparison to 2013 – relatively higher households wealth
3. Pomeranian (pomorskie) voivodship	Strengths
	Above average purchasing power of households
	Weaknesses

	Changes
	Significant improvement over 5 years and in comparison to 2013. Annual improvement caused mainly by the higher household wealth

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: Podkarpackie, Lubuskie, Warmińsko-Mazurskie, Lubelskie and Kujawsko-Pomorskie. The R&D infrastructure is poorly developed in all those regions, however Podkarpackie positively stands out a bit from this picture. Another drawback is a relatively small area 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 general position of the voivodship.

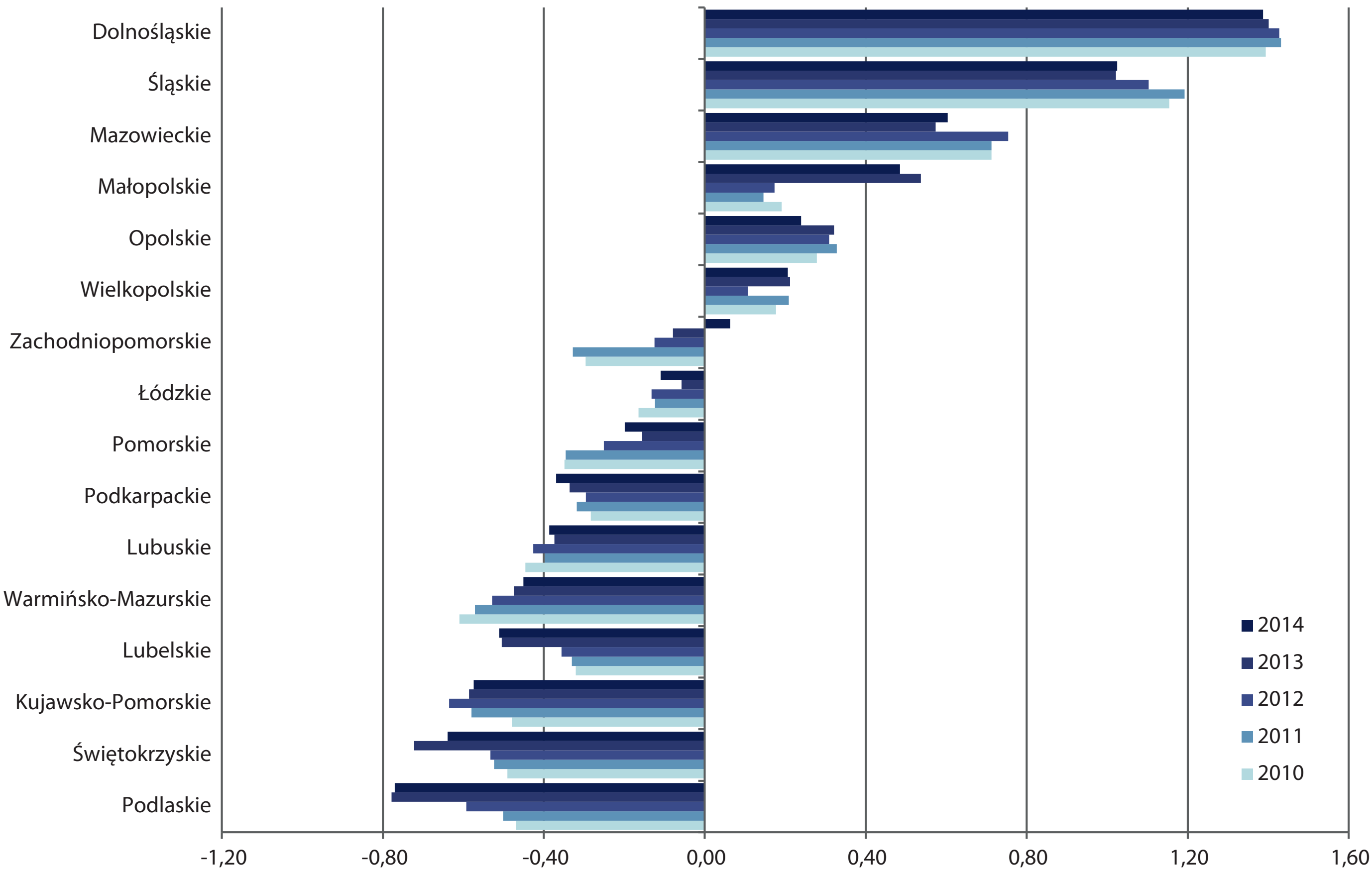


Chart 5 Assessment of voivodships with respect to economic infrastructure

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 support environment, above average development of R&D sector, larg area of land available for investment and significant investors activity in SEZ
	Weaknesses
	Low fair and exhibitions activity
	Changes
	No significant changes over 5 years; no changes from the annual perspective
2. Silesian (śląskie) voivodship	Strengths
	Well-developed R&D sector, high investors activity in SEZ
	Weaknesses
	――――――――――
	Changes
	A significant decrease in the period of 5 years, annually no significant changes

Economic infrastructure	
3. Mazovian (mazowieckie) voivodship	Strengths
	Well-developed business support environment and R&D sector
	Weaknesses
	Below average area of land available for investment in SEZ
	Changes
	Significant deterioration in the period of 5 years, annually no sifnificant changes
4. Województwo małopolskie	Strengths
	Well-developed R&D sector, above average investors activity in SEZ in the field of creating new jobs
	Weaknesses
	Below average area of land available for investment in SEZ
	Changes
	Very significant improvement over 5 years, no significant changes in relation to 2013.

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 rest of the regions. The top four voivodships feature a well-developed cultural life and three of them (except the Mazovian) feature an extensive tourist infrastructure.

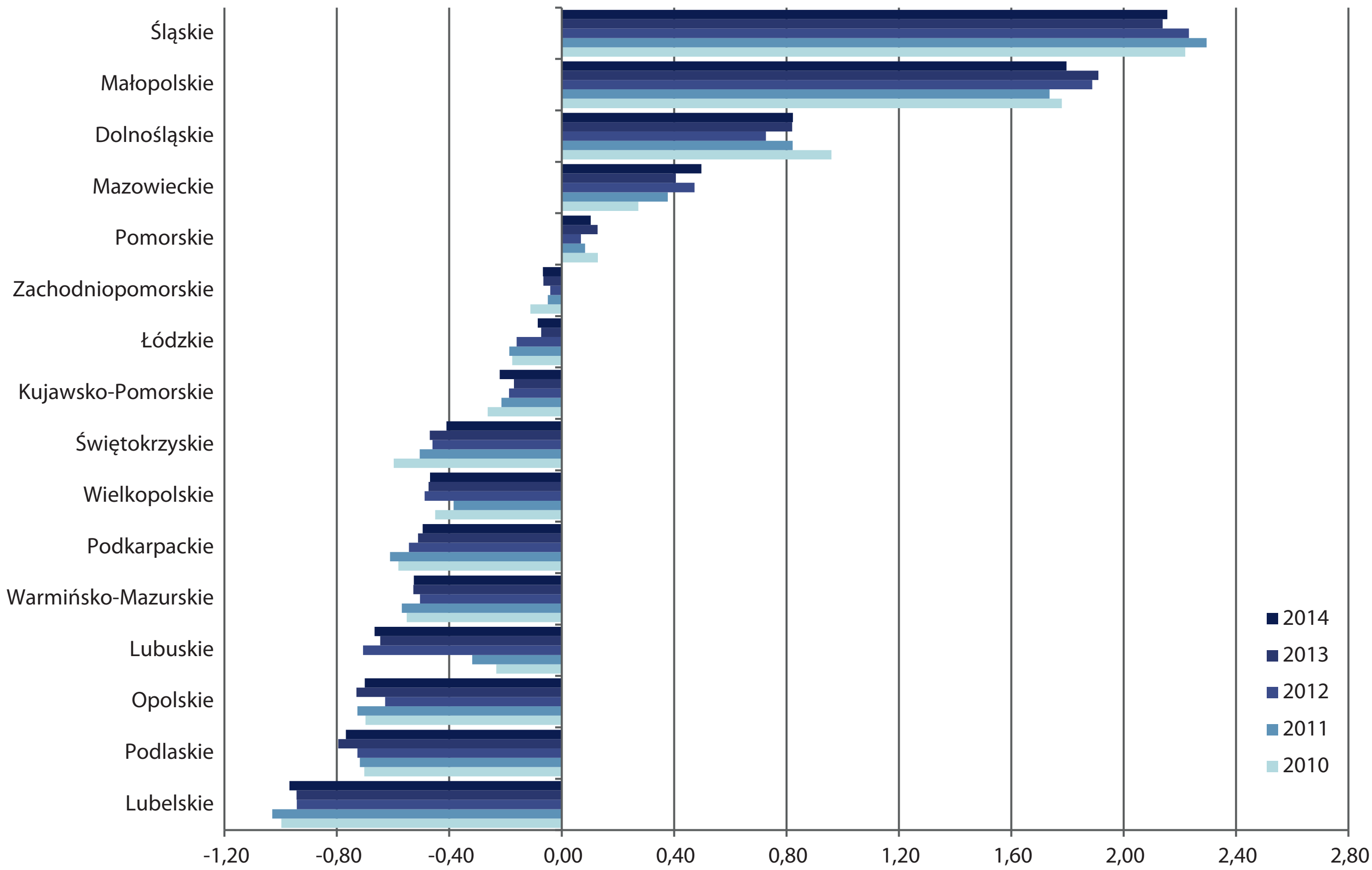


Chart 6 Assessment of voivodships with respect to social infrastructure
Source: GIME research

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 institutions
	Weaknesses

	Changes
	No significant changes either over last 5 years or in comparison to 2013
2. Małopolskie voivodship	Strengths
	High intensity of cultural activities, well-developed hotel and catering infrastructure, high activity of local cultural institutions
	Weaknesses

	Changes
	No significant changes over last 5 years, slight decline on the annual basis, caused by the lower activity of theaters and musical institutions
3. Lower Silesian (dolnośląskie) voivodship	Strengths
	Above average intensity of cultural activities, well-developed hotel infrastructure
	Weaknesses

	Changes
	Minimal deterioration over last 5 years, no significant changes in comparison to 2013

Social infrastructure

4. Mazovian (mazowieckie) voivodship	
	Strengths
	Above average intensity of cultural activities
	Weaknesses
	__________
	Changes
	Improvement over last 5 years as well as in comparison to 2013; the latter being a result of higher intensity of cultural activities

5.8. Public safety

Geographical diversification of attractiveness

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

Three regions found at the bottom of the rating list of public safety are: Mazovian (mazowieckie), Silesian (śląskie) and Lower Silesian (dolnośląskie). They exhibit higher than average level of criminality and a lower rate of crime detection (exept the Silesian region, where the crime detection rate is average).

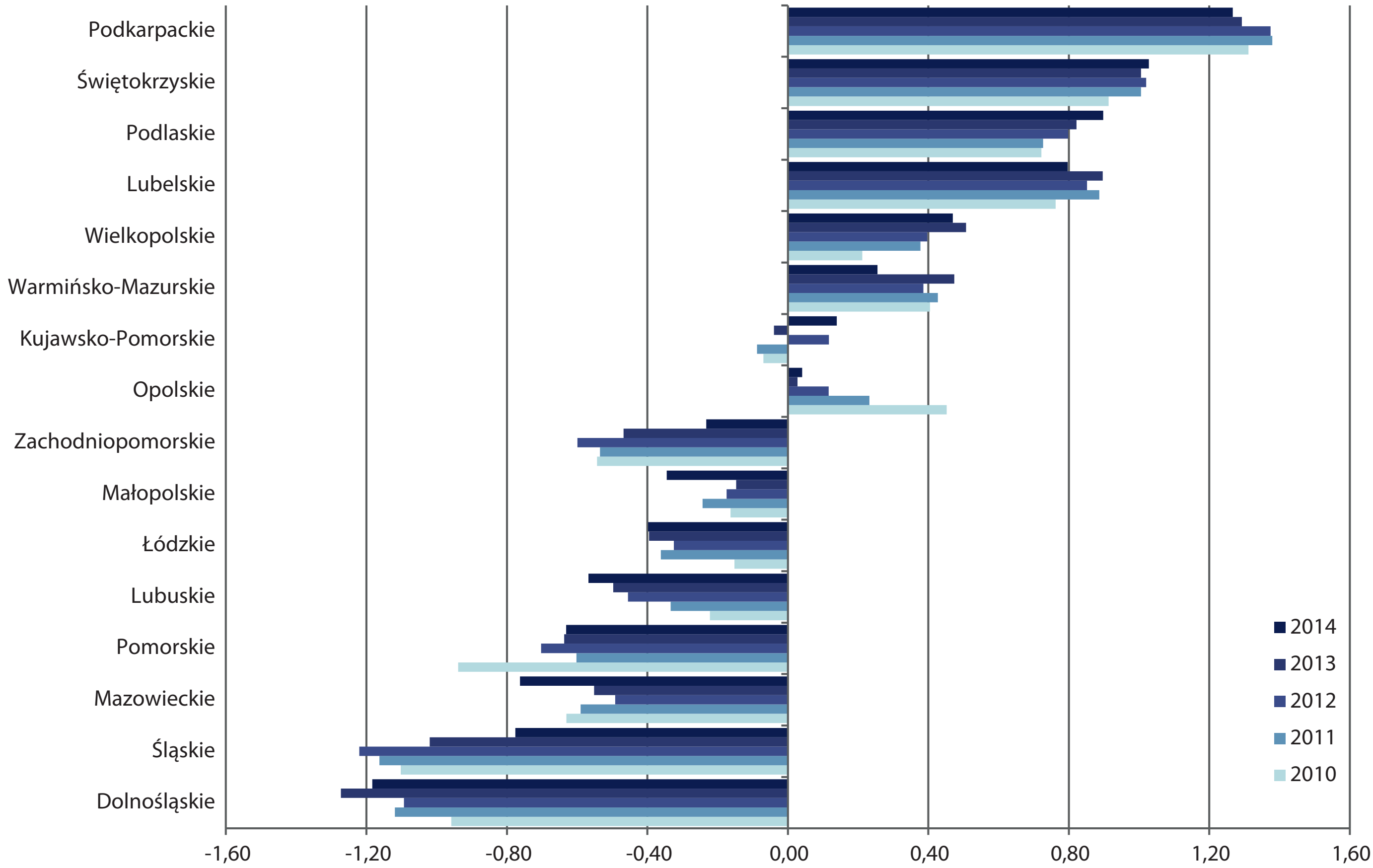


Chart 7. Assessment of voivodships with respect to public safety

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 setup of component parts that describe the level of public safety.

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

	Changes	
	No significant changes either over last 5 years or on the annual basis	
2. Świętokrzyskie voivodship	Strengths	
	The highest crime detection, below average level of criminality	
	Weaknesses	

	Zmiany	
	Slight improvement over last 5 years; annually – no significant changes	
3. Podlaskie voivodship	Strengths	
	Low level of criminality	
	Weaknesses	

	Changes	
	Improvement over last 5 years as well as on the annual basis; the latter as an effect of a decline in the number of committed crimes and improvement in the crime detection rate	
4. Lubelskie voivodship	Strengths	
	Low level of criminality, above average crime detection	

Public safety	
	Weaknesses
	–––––––––––
	Changes
	No significant changes over last 5 years; slight deterioration on the annual basis as an effect of lower crime detection rate

5.9. Investment attractiveness – a synthetic perspective

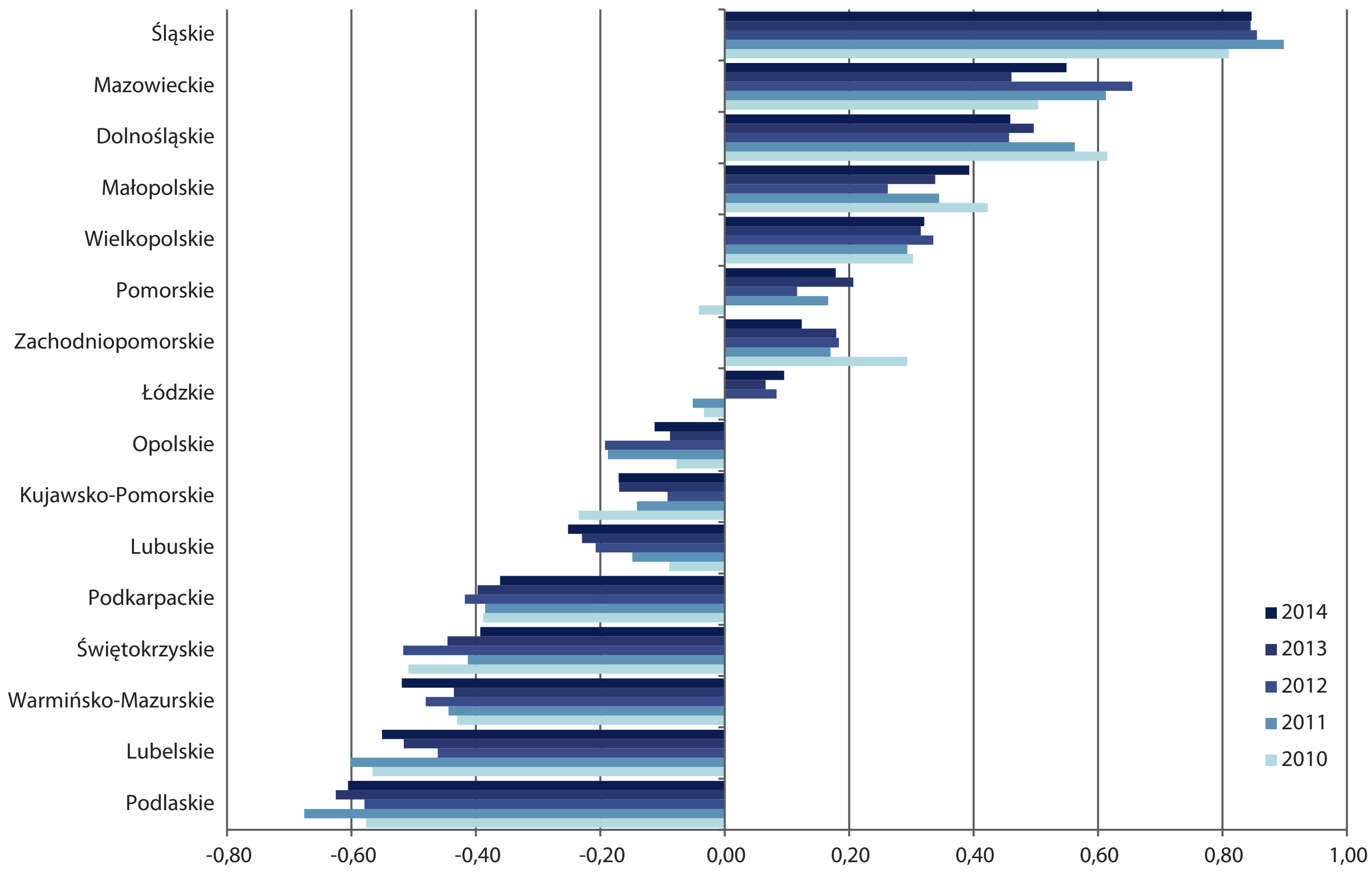


Chart 8. Assessment of voivodships with respect to investment attractiveness

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, Świętokrzyskie, Warmińsko-Mazurskie, Lubuskie 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 necessarily 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 setup 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 significant changes either over last 5 years or on the annual basis
2. Mazovian (mazowieckie) voivodship	Strengths
	Investor-oriented activity, transport accessibility, output market, economic infrastructure, social infrastructure
	Weaknesses
	Cost of labour; level of public safety
	Changes
	No significant changes over last 5 years, improvement in comparison to 2013 as an effect of higher investor-oriented activity
3. Lower Silesian (dolnośląskie)	Strengths
	Investor-oriented activities, economic infrastructure, social infrastructure
	Weaknesses
	Level of public safety
	Changes
	Significant decline over last 5 years; slight deterioration in comparison to 2013 as an effect of lower absorption capacity of local output

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 2013 as an effect of improvement in absorption capacity of local output market
5. Wielkopolskie voivodship	Strengths
	Labour cost and resources, investor-oriented activities, transport accessibility
	Weaknesses
	__________
	Changes
	No significant changes either over last 5 years or on the annual basis -
6. Pomeranian (pomorskie) voivodship	Strengths
	Output market, investor-oriented activity
	Weaknesses
	Level of public safety
	Changes
	Significant improvement over last 5 years; no significant changes on the annual basis

Investment attractiveness	
7. Western Pomeranian (zachodniopomorskie) voivodship	Strengths
	Investor-oriented activity, transport accessibility
	Weaknesses

	Changes
	Decline over last 5 years; slight deterioration in comparison to 2013 as an effect of lower investor-oriented activity and relatively lower labour resources
8. Łódzkie voivodship	Strengths
	Labour costs and resources
	Weaknesses

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

Table 6. Changes in investment attractiveness of voivodships between 2010–2014

Voivodship	Synthetic index in 2010	Ranking in 2010	Synthetic in-dex in. 2011	Ranking in 2011	Synthetic index in 2012	Ranking in 2012	Synthetic index in 2013	Ranking in 2013	Synthetic index in. 2014	Ranking in 2014	Ranking change2013-2014
Silesian (śląskie)	0,81	1	0,90	1	0,86	1	0,85	1	0,85	1	0
Mazovian (mazowieckie)	0,50	3	0,61	2	0,66	2	0,46	3	0,55	2	+1
Lower Silesian (dolnośląskie)	0,61	2	0,56	3	0,46	3	0,50	2	0,46	3	-1
Małopolskie	0,42	4	0,34	4	0,26	5	0,34	4	0,39	4	0
Wielkopolskie	0,30	5	0,29	5	0,33	4	0,32	5	0,32	5	0
Pomeranian (pomorskie)	-0,04	8	0,17	7	0,12	7	0,21	6	0,18	6	0
Western Pomeranian (zach-odniopomorskie)	0,29	6	0,17	6	0,18	6	0,18	7	0,12	7	0
Łódzkie	-0,03	7	-0,05	8	0,08	8	0,07	8	0,10	8	0
Opolskie	-0,08	9	-0,19	11	-0,19	10	-0,09	9	-0,11	9	0
Kujawsko-Pomorskie	-0,23	11	-0,14	9	-0,09	9	-0,17	10	-0,17	10	0
Lubuskie	-0,09	10	-0,15	10	-0,21	11	-0,23	11	-0,25	11	0
Podkarpackie	-0,39	12	-0,39	12	-0,42	12	-0,40	12	-0,36	12	0
Świętokrzyskie	-0,51	14	-0,41	13	-0,52	15	-0,45	14	-0,39	13	+1
Warmińsko-Mazurskie	-0,43	13	-0,44	14	-0,48	14	-0,44	13	-0,52	14	-1
Lubelskie	-0,57	15	-0,60	15	-0,46	13	-0,52	15	-0,55	15	0
Podlaskie	-0,58	16	-0,68	16	-0,58	16	-0,63	16	-0,61	16	0

Source: GIME research

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