



2015

THE INVESTMENT
ATTRACTIVENESS
OF THE REGIONS
AND THE SUB-REGIONS
OF POLAND 2015





THE GDAŃSK INSTITUTE FOR MARKET ECONOMICS

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

2015

EDITED BY

MACIEJ TARKOWSKI

AUTHORS

MARCIN NOWICKI

PRZEMYSŁAW SUSMARSKI

MACIEJ TARKOWSKI

MARCIN WANDAŁOWSKI

WOJCIECH WOŹNIAK

GDAŃSK 2015

EDITORIAL STAFF

MACIEJ TARKOWSKI

TEAM OF CONTRIBUTORS

MARCIN NOWICKI
PRZEMYSŁAW SUSMARSKI
MACIEJ TARKOWSKI
MARCIN WANDAŁOWSKI
WOJCIECH WOŹNIAK



THE GDAŃSK INSTITUTE FOR MARKET ECONOMICS
63, Do Studzienki Str., 80-227 GDAŃSK
POLAND
PHONE +48 58 524 49 00
FAX +48 58 524 49 08
IBNGR@IBNGR.PL
WWW.IBNGR.PL

KONRAD-ADENAUER-STIFTUNG
POLAND OFFICE
63, J. DĄBROWSKIEGO STR., 02-561 WARSAW
POLAND
PHONE +48 22 845 93 30
FAX +48 22 848 54 37
KAS@KAS.PL
WWW.KAS.PL, WWW.KAS.DE

**THIS REPORT IS AN EFFECT OF THE ANNUAL RESEARCH PROJECT CARRIED OUT BY THE TEAM OF GIME
IN COOPERATION WITH THE KONRAD ADENAUER FOUNDATION**

FREE COPY

| | |
|---|----|
| SUMMARY | 5 |
| 1. INTRODUCTION..... | 9 |
| 2. OBJECTIVES, SCOPE AND METHODS OF RESEARCH | 11 |
| 2.1. Objectives of the report | 11 |
| 2.2. Scope of the research | 11 |
| 2.3. Source data and methodology of the research | 13 |
| 3. FACTORS OF INVESTMENT ATTRACTIVENESS IN THE REGIONAL PERSPECTIVE | 15 |
| 3.1. Transport accesibility..... | 15 |
| 3.2. Labour resources..... | 15 |
| 3.3. Absorption capacity of markets | 16 |
| 3.4. Economic infrastructure..... | 16 |
| 3.5. Social infrastructure | 16 |
| 3.6. Level of economic development..... | 17 |
| 3.7. Condition of the natural environment | 17 |
| 3.8. Level of public safety..... | 17 |
| 3.9. Investor-oriented activities of the voivodships | 18 |
| 4. INVESTMENT ATTRACTIVENESS OF SUB-REGIONS..... | 19 |
| 4.1. Industrial activity..... | 19 |
| 4.2. Services sector | 25 |
| 4.3. Advanced technologies | 33 |
| 5. INVESTMENT ATTRACTIVENESS OF VOIVODSHIPS..... | 41 |
| 5.1. Significance of individual location factors | 41 |
| 5.2. Labour cost and resources | 41 |
| 5.3. Investor-oriented activities | 43 |
| 5.4. Transport accessibility..... | 46 |
| 5.5. Absorption capacity of market | 48 |
| 5.6. Economic infrastructure | 51 |
| 5.7. Social infrastructure..... | 53 |
| 5.8. Public safety | 56 |
| 5.9. Investment attractiveness – a synthetic perspective | 59 |

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, 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. Considering the fact, that the recent infrastructural investments have significantly improved the accessibility to Western and Central Poland, this difference seems particularly vast. Finishing planned infrastructure in Central and Eastern Poland will clearly improve the transport accessibility of discussed regions.

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 2014 there were no significant differences in investment attractiveness of regions. They were limited to internal changes within two groups of regions (average and weak) and their range was insignificant. Referring to chosen factors of IA, a quite significant change was recorded in the level of public safety. It has increased in all regions, however the tempo of this change was differential. Similar situation was noted in the absorption capacity of labour market. There have also been significant, but less spectacular, changes in labour costs and resources as well as in investor oriented activities.

Sub-regions were also rated from the IA point of view. Among the most attractive sub-regions for industry, 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 (thanks

to the proximity of A4 motorway). 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.

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 2015

| | | 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) | 0,32 | 6 | 1,38 | 1 | 1,34 | 2 | 0,93 | 2 | 2,08 | 2 | -0,70 | 14 | 0,38 | 7 | 0,85 | 1 |
| 2 | Mazovian (mazowieckie) | 0,61 | 1 | -0,19 | 11 | 1,98 | 1 | 0,55 | 3 | 0,39 | 4 | -0,95 | 15 | 0,56 | 4 | 0,51 | 2 |
| 3 | Lower Silesian (dolnośląskie) | 0,41 | 5 | 0,01 | 5 | 0,26 | 5 | 1,50 | 1 | 0,84 | 3 | -1,27 | 16 | 1,04 | 1 | 0,46 | 3 |
| 4 | Małopolskie | 0,03 | 10 | 0,59 | 2 | 0,52 | 4 | 0,49 | 4 | 2,13 | 1 | -0,19 | 9 | 0,16 | 8 | 0,41 | 4 |
| 5 | Wielkopolskie | 0,55 | 2 | 0,21 | 3 | 0,08 | 6 | 0,31 | 5 | -0,43 | 10 | 0,40 | 5 | 0,46 | 5 | 0,30 | 5 |
| 6 | Western Pomeranian (zachodniopomorskie) | 0,51 | 3 | -0,19 | 10 | -0,09 | 7 | 0,06 | 7 | -0,09 | 6 | -0,38 | 10 | 0,83 | 2 | 0,19 | 6 |
| 7 | Pomeranian (pomorskie) | -0,26 | 11 | -0,12 | 9 | 0,78 | 3 | -0,24 | 10 | 0,10 | 5 | -0,58 | 13 | 0,74 | 3 | 0,14 | 7 |
| 8 | Łódzkie | 0,28 | 7 | 0,08 | 4 | -0,11 | 8 | -0,01 | 8 | -0,33 | 8 | -0,44 | 11 | 0,45 | 6 | 0,11 | 8 |
| 9 | Opolskie | 0,11 | 9 | -0,20 | 12 | -0,54 | 11 | 0,15 | 6 | -0,71 | 14 | 0,05 | 8 | 0,05 | 9 | -0,12 | 9 |
| 10 | Kujawsko-Pomorskie | 0,14 | 8 | -0,09 | 7 | -0,38 | 10 | -0,58 | 14 | -0,23 | 7 | 0,35 | 6 | -0,20 | 10 | -0,14 | 10 |
| 11 | Lubuskie | 0,46 | 4 | -0,23 | 13 | -0,15 | 9 | -0,38 | 11 | -0,69 | 13 | -0,53 | 12 | -0,82 | 13 | -0,25 | 11 |
| 12 | Podkarpackie | -0,70 | 14 | -0,04 | 6 | -0,62 | 13 | -0,22 | 9 | -0,46 | 11 | 1,42 | 1 | -0,62 | 12 | -0,34 | 12 |
| 13 | Warmińsko-Mazurskie | -0,73 | 15 | -0,31 | 14 | -0,86 | 16 | -0,46 | 12 | -0,53 | 12 | 0,27 | 7 | -0,28 | 11 | -0,47 | 13 |
| 14 | Świętokrzyskie | -0,29 | 12 | -0,09 | 8 | -0,86 | 15 | -0,87 | 16 | -0,35 | 9 | 0,69 | 4 | -1,01 | 16 | -0,48 | 14 |
| 15 | Lubelskie | -0,66 | 13 | -0,36 | 15 | -0,62 | 12 | -0,48 | 13 | -0,92 | 16 | 1,08 | 2 | -0,83 | 14 | -0,52 | 15 |
| 16 | Podlaskie | -0,79 | 16 | -0,44 | 16 | -0,74 | 14 | -0,75 | 15 | -0,79 | 15 | 0,78 | 3 | -0,90 | 15 | -0,63 | 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 2005-2014, 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 periph-

ery. 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. 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. This 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 informa-



tion 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.

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:

- 2013 – in reference to the size and the structure of value added, workforce in industry, transport and other services and investment outlays,
- 2014 – the majority of indicators obtained from public statistical sources,
- 2015 – 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 (WPHil) 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 voivodship'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. Transport accessibility

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 database 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 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 (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.

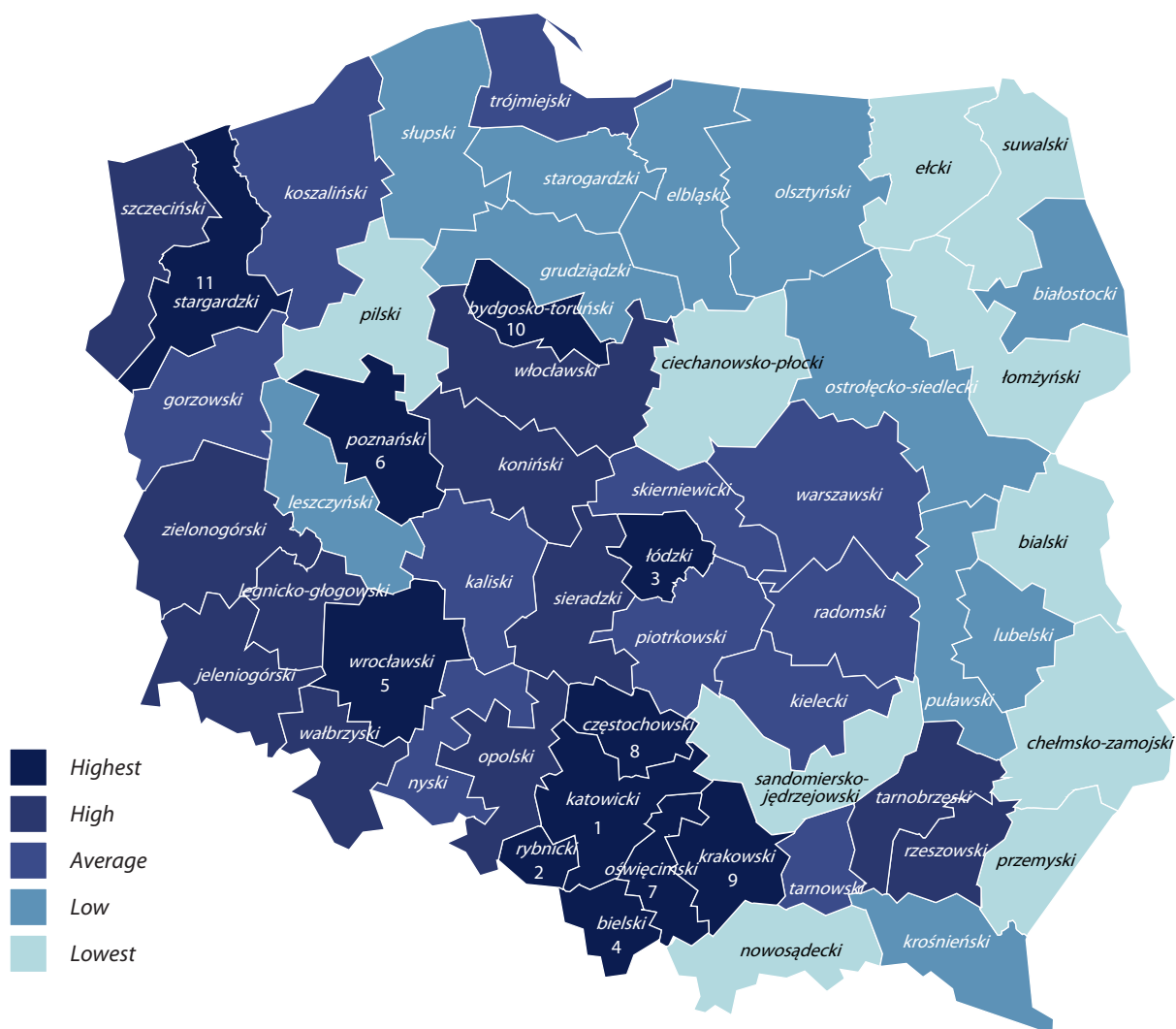
Geographical diversification of investment attractiveness

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.

The top 5 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 in Katowicki, Rybnicki and Bielski sub-regions. Łódzki and Wrocławski sub-regions held their high positions in the ranking. Poznański sub-region made the biggest leap in comparison to 2014 (moving up from 8th to 6th place), while Częstochowski moved up by 2 positions (from 10th to 8th). The biggest decrease was recorded in Krakowski sub-region, which resulted in moving down by 2 positions (from 7th to 9th). There was no new sub-region in the top 11. 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. The biggest downside in the discussed group of sub-regions is the fact, that the salary levels are among the highest

in the country, which results from the high added value generated by the local businesses. Just like in 2015 Stargardzki sub-region (which moved up by 5 positions) stands out of this scheme, basing on low labour costs, high transport accessibility to western border and proximity to Germany, seaport and extensive land available for investments in SEZ.

Map 1. Sub-regional investment attractiveness with respect to industrial activities in 2015.



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. 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 compensate for the deficiencies that they have.

Table 3 Sub-regional investment attractiveness with respect to industrial activities between 2014 and 2015

| Sub-region | Ranking in 2015 | Ranking in 2014 |
|-------------------|-----------------|-----------------|
| Katowicki | 1 | 1 |
| Rybnicki | 2 | 2 |
| Łódzki | 3 | 3 |
| Bielski | 4 | 4 |
| Wrocławski | 5 | 5 |
| Poznański | 6 | 8 |
| Oświęcimski | 7 | 6 |
| Częstochowski | 8 | 10 |
| Krakowski | 9 | 7 |
| Bydgosko-toruński | 10 | 9 |
| Stargardzki | 11 | 11 |

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, |
| | Quantity and quality of labour resource | Vast number of qualified employees, vast number of vocational schools graduates and vast number of the unemployed |
| | Economic infrastructure | Very extensive land available in Special Economic Zone (SEZ), high investor activity in SEZ |
| | Level of economic development | Very large number of business entities with foreign capital, very beneficial structure of the economy |
| | Environment protection | Very low share of protected areas |
| | Weaknesses | |
| | Cost of labour | Very High wages |
| | Public safety | Very high level of criminality |
| 2. Rybnicki sub-region | Strengths | |
| | Quantity and quality of labour resource | Vast number of qualified employees, vast number of vocational schools graduates and vast number of the unemployed |
| | Economic Infrastructure | Very high investor activity in SEZ |
| | Level of economic development | Very beneficial structure of the economy, 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 |
| | Quantity and quality of labour resource | Very large number of qualified employees, very large number of the unemployed |
| | Level of economic development | Very beneficial structure of the economy, very large number of enterprises with foreign capital |

| Industrial activity | | |
|--------------------------------|---|--|
| | Weaknesses | |
| | Level of public safety | Very low crime detection rate |
| 4. Bielski sub-region | Strengths | |
| | Quantity and quality of labour resource | Very large number of qualified employees, large number of unemployed and large number of vocational schools graduates |
| | Economic infrastructure | Very high investor activity in SEZ |
| | Weaknesses | |
| | Cost of labour | Above average 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 | The biggest among sub-regions area available in SEZ, very high investor activity in SEZ |
| | Level of economic development | Beneficial structure of the economy, 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 |
| 6. Poznański sub-region | Strengths | |
| | Transport accessibility | Transport node of supra-regional importance with access to international airport, proximity to Western border, proximity to A2 motorway, high density of road infrastructure |
| | Quantity and quality of labour resource | Large number of qualified workers |
| | Protection of natural environment | Low percentage of protected land |
| | Level of economic development | Large number of enterprises with foreign capital, high labour productivity |

| Industrial activity | | |
|-------------------------------------|---|--|
| | Weaknesses | |
| | Cost of labour | High wages |
| | Level of public safety | Very high level of criminality, very low rate of crime detection |
| 7. Oświęcimski sub-region | Strengths | |
| | Quantity and quality of labour resource | Large number of qualified workers, large number of unemployed and very large number of vocational schools graduates |
| | Weaknesses | |
| 8. Częstochowski sub-region | Strengths | |
| | Economic infrastructure | Above average investor activity in SEZ |
| | Weaknesses | |
| 9. Krakowski sub-region | Strengths | |
| | Quantity and quality of labour resource | Very high number of qualified workers, high number of unemployed and very high number of vocational schools graduates |
| | Level of economic development | Very beneficial structure of the economy, very high number of enterprises with foreign capital |
| | Weaknesses | |
| | Cost of labour | High wages |
| | Level of public safety | Very low rate of crime detection |
| 10. Bydgosko-Toruński sub-region | Strengths | |
| | Transport accessibility | Transport node of regional importance with access to international airport, proximity to a large seaport and A1 motorway |

| Industrial activity | | |
|-------------------------------|---|--|
| | Quantity and quality of labour resource | Large number of qualified workers, large number of unemployed and large number of vocational schools graduates |
| | Weaknesses | |
| | ----- | |
| 11. Stargardzki sub-region | Strengths | |
| | Transport accessibility | Proximity to Western border, proximity to a large seaport, proximity to an international airport |
| | Cost of labour | Low wages |
| | Economic infrastructure | Very extensive land available in SEZ |
| | Weaknesses | |
| | Quantity and quality of labour resource | 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 2014–2015

| Sub-region | Ranking in 2015 | Ranking in 2014 |
|-------------------|-----------------|-----------------|
| Warszawski | 1 | 1 |
| Łódzki | 2 | 2 |
| Katowicki | 3 | 3 |
| Krakowski | 4 | 4 |
| Poznański | 5 | 5 |
| Bydgosko-Toruński | 6 | 8 |
| Trójmiejski | 7 | 7 |
| Wrocławski | 8 | 6 |
| Bielski | 9 | 9 |
| Rzeszowski | 10 | 11 |
| Lubelski | 11 | 12 |

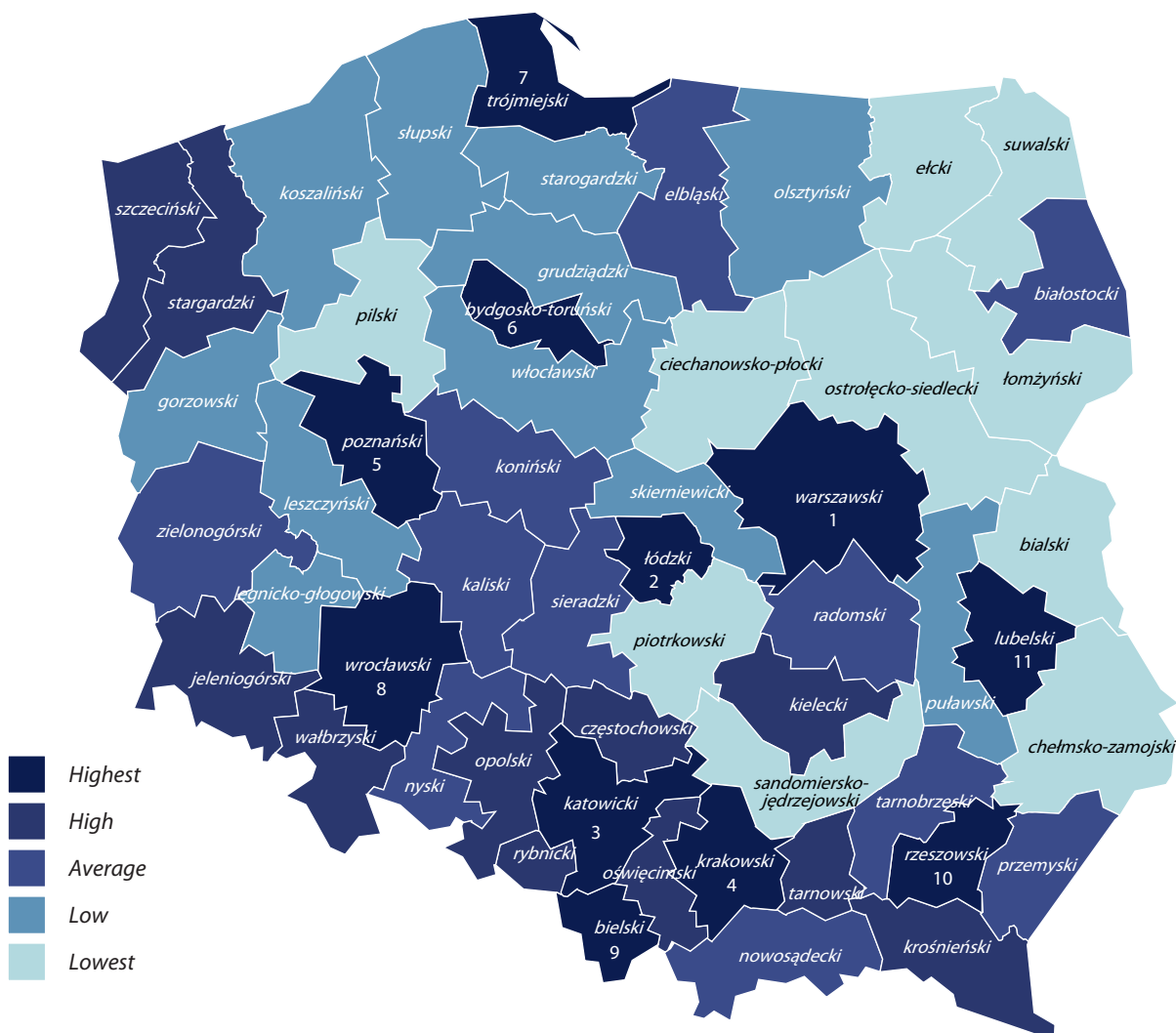
Source: GIME research

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 in services sector. 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 air transport, which positively affects the local service sector (used by foreign guests) and a well-developed economic infrastructure. Similarly to 2014, especially good conditions are offered by Warszawa, Łódź, Katowice, Kraków and Poznań. In comparison to last year Bydgosko-Toruński sub-region moved up by 2 positions (from 8th to 6th), which switched places with Wrocławski sub-region. The only newcomer was Lubelski sub-region, which replaced Rzeszowski sub-region in the top 11 group.

The least attractive to investment in services are sub-regions which are deprived of major cities and natural or cultural resources that can attract external interest. The expansion of services in these areas is also influenced by low transport accessibility and low domestic demand. This set of characteristics can be found in sub-regions placed in North East and East of Poland.

Map 2 Sub-regional investment attractiveness with respect to services in 2015



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 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, very large number of secondary schools graduates, very large number of students, very high level of economic activity and the highest level of social activity among all sub-regions |
| | Market absorption capacity | The highest among sub-regions investment outlays in enterprises |
| | Transport accessibility | Main international airport in Poland, key transport hub in Poland, high density of road infrastructure, proximity to A2 motorway |
| | Economic infrastructure | The highest density of business support institutions among sub-regions |
| | Level of economic development | Very beneficial structure of the economy, the highest number of enterprises with foreign capital, very high labour productivity |
| | Weaknesses | |
| | Cost of labour | The highest wages among sub-regions |
| | Level of public safety | Very low crime detection rate |
| 2. Łódzki sub-region | Strengths | |
| | Quantity and quality of labour resources | Very large number of qualified workers, very large number of secondary schools' graduates, very large number of students, very high level of economic activity |
| | Market absorption capacity | Very high investment outlays in enterprises |
| | Level of economic development | Very beneficial structure of the economy, very large number of enterprises with foreign capital |
| | 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) |
| | Weaknesses | |
| | Level of public safety | Very low crime detection rate |

| Services | | |
|--------------------------------|--|--|
| 3. Katowicki sub-region | Strengths | |
| | Market absorption capacity | Very high investment outlays in enterprises |
| | Quantity and quality of labour resources | Very large number of qualified workers, very large number of secondary schools graduates, large number of students |
| | Transport accessibility | Transport node of supra-regional importance with access to international airport, very high road infrastructure density, proximity to A4 motorway |
| | Economic infrastructure | Very large area available in SEZ, high activity of investors in SEZ, high density of business support institutions, |
| | Level of economic development | Very beneficial structure of local economy, very large number of enterprises with foreign capital |
| | Weaknesses | |
| | Cost of labour | Very high wages |
| | Level of public safety | Very high level of criminality |
| | Quality of natural environment | Very high air pollution, very low percentage of protected area |
| 4. Krakowski sub-region | Strengths | |
| | Quantity and quality of labour resources | Very large number of qualified workers, very large numbers of secondary schools graduates, very large number number of students, high level of economic activity, very high level of social activity |
| | Market absorption capacity | High investment outlays in enterprises |
| | Transport accessibility | Transport hub of supra-regional importance with access to international airport, very high density of road infrastructure, proximity to A4 motorway |
| | Level of economic development | Very beneficial structure of the economy, very large number of enterprises with foreign capital |
| | Economic infrastructure | High density of business support institutions |

| Services | | |
|---|--|---|
| | Weaknesses | |
| | Cost of labour | High wages |
| | Level of public safety | Very low crime detection rate |
| 5. Poznański sub-region | Strengths | |
| | Quantity and quality of labour resources | Large number of qualified workers, large number of students, the highest level of economic activity among sub-regions, very high level of social activity |
| | Market absorption capacity | High investment outlays in enterprises |
| | Transport accessibility | Transport node of supra-regional importance with access to international airport, proximity of Western border. |
| | Economic infrastructure | Very high density of business support institutions, large investment area available in SEZ |
| | Level of economic environment | Very large number of enterprises with foreign capital, very high labour productivity |
| | Weaknesses | |
| | Cost of labour | High wages |
| | Level of public safety | Very high level of criminality, low level of crime detection rate |
| 6. Bydgosko-Toruński sub-region | Strengths | |
| | Quantity and quality of labour resources | Large number of qualified workers, large number of secondary schools graduates, very high number of students, high level of economic activity |
| | Market absorption capacity | High investment outlays in enterprises |
| | Transport accessibility | Transport node of regional importance, proximity to A1 motorway, access to international airport |
| | Weaknesses | |
| ----- | | |

| Services | | |
|---|--|--|
| 7. Tri-City (Trójmiejski) sub-region | Strengths | |
| | Quantity and quality of labour resources | Large number of qualified workers, large number of secondary schools graduates, large number of students, very high level economic activity, high level of social activity |
| | Market absorption capacity | Very high investment outlays in enterprises |
| | Quality of natural environment | High percentage of protected areas, very low level of sewage pollution emitted by households |
| | Level of economic development | Very high labour productivity, beneficial structure of the economy, large number of enterprises with foreign capital |
| | Transport accessibility | Transport node of supra-regional importance with access to international airport and seaport, proximity of A1 motorway |
| | Weaknesses | |
| | Cost of labour | Very high wages |
| | Level of public safety | High level of criminality, low crime detection rate |
| | 8. Wrocławski sub-region | Strengths |
| Quantity and quality of labour resources | | Large number of qualified workers, large number of students, very high level of economic and social activity |
| Market absorption capacity | | High investment outlays in enterprises |
| Transport accessibility | | Transport node of supra-regional importance with access to international airport, proximity to A4 motorway |
| Economic infrastructure | | The largest among sub-regions land available for investment in SEZ, very high activity of investors in SEZ, very high density of business support institutions |
| Level of economic environment | | Beneficial structure of local economy, large number of enterprises with foreign capital, high labour productivity |

| Services | | |
|------------------------------|--|---|
| | Weaknesses | |
| | Cost of labour | High wages |
| | Level of public safety | Very high level of criminality, very low crime detection rate |
| 9. Bielski sub-region | Strengths | |
| | Quantity and quality of labour resources | Large number of qualified workers, large number of secondary schools graduates, high level of economic activity |
| | Market absorption capacity | High investment outlays in enterprises |
| | Level of economic development | Beneficial structure of local economy, large number of enterprises with foreign capital |
| | Weaknesses | |
| | Cost of labour | Above average wages |
| 10. Rzeszowski sub-region | Strengths | |
| | Quantity and quality of labour resources | Above average number of qualified workers, above average number of students |
| | Weaknesses | |
| | ----- | |
| 11. Lubelski sub-region | Strengths | |
| | Transport accessibility | Transport node of regional importance with access to international airport |
| | Quantity and quality of labour resources | Large number of secondary schools graduates, large number of students, very high level of social activity |
| | Weaknesses | |
| | Cost of labour | High wages |

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:

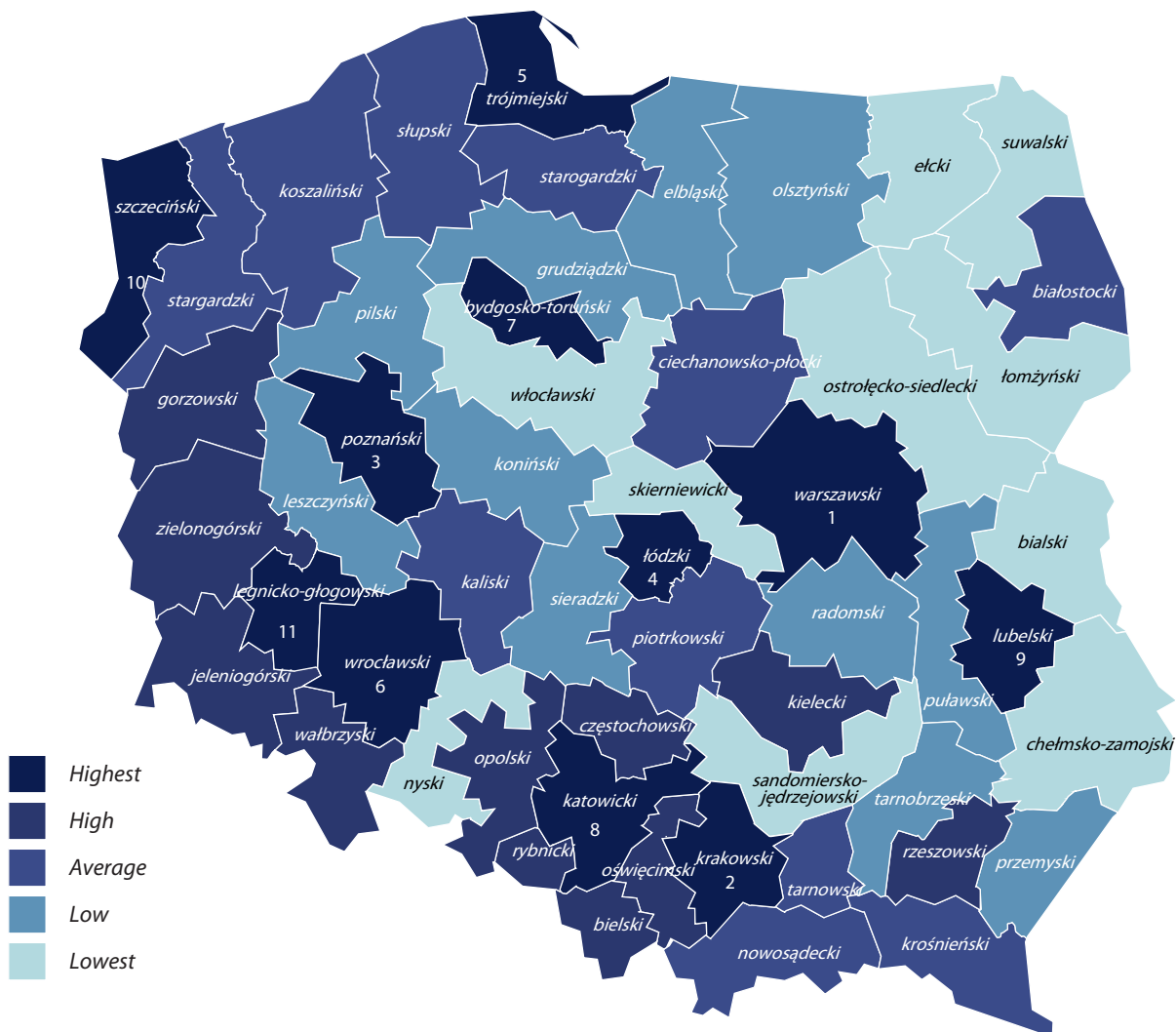
- the level of economic development
- the quality of natural environment
- social infrastructure
- the level of public safety.

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 2014, the lead of sub-regions characterised by the highest IA in advanced technologies remained mostly the same. The top 8 was identical with the last year edition of the research. The group of the most attractive sub-regions is led by Warsaw metropolitan area, followed by Kraków, Łódź, Poznań and Tri-City (Trójmiasto). Lublin came 9th and switched places with 10th Szczecin. The only newcomer was Legnicko-Głogowski sub-region, which replaced Rzeszów in the top 11 group of sub-regions. This configuration shows, that metropolitan sub-regions are still the most attractive places for high-tech investments. 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 2015 r.



Source: GIME research

Table 5. Sub-regional attractiveness with respect to advanced technologies activity in 2014–2015

| Sub-region | Ranking in 2015 | Ranking in 2014 |
|------------------------|-----------------|-----------------|
| 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 |
| Lubelski | 9 | 10 |
| Szczeciński | 10 | 9 |
| Legnicko-Głogowski | 11 | 13 |

Source: GIME research

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 | The capital of Poland, transport hub of international importance with access to two international airports and A2 motorway |
| | Absorption capacity of institutional market | The highest among sub-regions investment outlays of enterprises |
| | Quality of labour resources | Large number of qualified workers, very large number of secondary schools graduates very large number of students, very high level of economic activity and the highest level of social activity among sub-regions |

| Advanced technologies | | |
|----------------------------|---|---|
| | Economic infrastructure | The highest in Poland density of business support institutions |
| | Level of economic development | Very beneficial structure of the economy, the largest number of enterprises with foreign capital in Poland, very high productivity of labour, |
| | Quality of natural environment | Low level of pollution with household sewage |
| | Social infrastructure | Highly developed cultural infrastructure, well-developed accommodation infrastructure, very high outlays on local public infrastructure |
| | Weaknesses | |
| | Level of public safety | 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 | High investment outlays of enterprises |
| | Quality of labour resources | Very large number of qualified employees, very large number of secondary schools graduates, very large number of students, high level of economic activity and very high level of social activity |
| | Economic infrastructure | High density of business support institutions |
| | Social infrastructure | Very well-developed cultural infrastructure, well-developed accommodation infrastructure |
| | Weaknesses | |
| | Level of public safety | 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 |
| | Absorption capacity of institutional market | High investment outlays of enterprises |

| Advanced technologies | | |
|---|---|---|
| | Quality of labour resources | Large number of qualified workers, very large number students, the highest level of economic activity among sub-regions, very high level of social activity |
| | Economic infrastructure | Very large area of land available in SEZ, very high density of business support institutions |
| | Level of economic development | Very large number of enterprises with foreign capital, high productivity of labour |
| | Social infrastructure | Very well-developed cultural infrastructure |
| | Weaknesses | |
| | Public safety | Very high level of criminality, 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, very large number of secondary schools graduates very large number of students, very high level of economic activity, high level of social activity |
| | Weaknesses | |
| | Level of public safety | Very low rate of crime detection |
| 5. Tri-City (Trójmiejski) sub-region | Strengths | |
| | Absorption capacity of institutional market | Very high investment outlays of enterprises |
| | Quality of labour resources | Large number of qualified workers, large number of secondary school graduates, large number of students, very high level of economic activity, high level of social activity |
| | Economic infrastructure | Very high density of business support institutions |

| Advanced technologies | | |
|------------------------------------|---|--|
| | Level of economic development | Beneficial structure of the economy, 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 outlays 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 | High rate of criminality, 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 | High investment outlays of enterprises |
| | Quality of labour resources | Large number of students, very high level of economic and social activity |
| | Economic infrastructure | The largest among sub-regions area of land available in SEZ, very high investors activity in SEZ, very high density of business support institutions |
| | Level of economic development | Beneficial structure of the economy, large number of enterprises with foreign capital, high labour productivity |
| | Social infrastructure | Very well-developed cultural infrastructure , high outlays on local public infrastructure |
| | Weaknesses | |
| | Level of public safety | Very high level of criminality, very low crime detection rate |
| 7. Bydgosko-Toruński sub-region | Strengths | |
| | Absorption capacity of institutional market | High investment outlays of enterprises |

| Advanced technologies | | |
|----------------------------|---|---|
| | 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 | Large number of qualified workers, large number of secondary schools graduates, very large number of students, high level of economic activity |
| | Social infrastructure | Very well-developed cultural infrastructure, 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 | |
| | Transport accessibility | Transport node of national importance with access to international airport, above average proximity to 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, very large number of secondary schools graduates, large number of students |
| | Economic infrastructure | Very large area of land available in SEZ, high investors activity in SEZ, 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 |
| | Weaknesses | |
| | Quality of natural environment | Very high air pollution, very low share of protected areas |
| | Public safety | Very high level of criminality, very low crime detection rate |



| Advanced technologies | | |
|--|---|--|
| 9. Lubelski sub-region | Strengths | |
| | Quality of labour resources | Large number of secondary schools graduates, large number of students, very high level of social activity |
| | Weaknesses | |
| | ----- | |
| 10. Szczeciński sub-region | Strengths | |
| | Transport accessibility | Transport node of supra-regional importance with access to international airport, proximity to Western boarder |
| | Quality of labour resources | Very high level of economic activity, high level of social activity |
| | Economic infrastructure | Large area of land available in SEZ, high density of business support institutions, |
| | Level of economic development | Large number of enterprises with foreign capitalr |
| | Social infrastructure | very well-developed accomodation infrastructure |
| | Weaknesses | |
| | Level of public safety | High level of criminality, low rate of crime detection |
| 11. Legnicko-Głogowski sub-region | Strengths | |
| | Absorption capacity of institutional market | High investment outlays of enterprises |
| | Economic infrastructure | The highest among sub-regions investors activity in SEZ |
| | Level of economic development | Beneficial structure of local economy, very high labour productivity |
| | Weaknesses | |
| | Level of public safety | Very high level of criminality |

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 advantage 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.

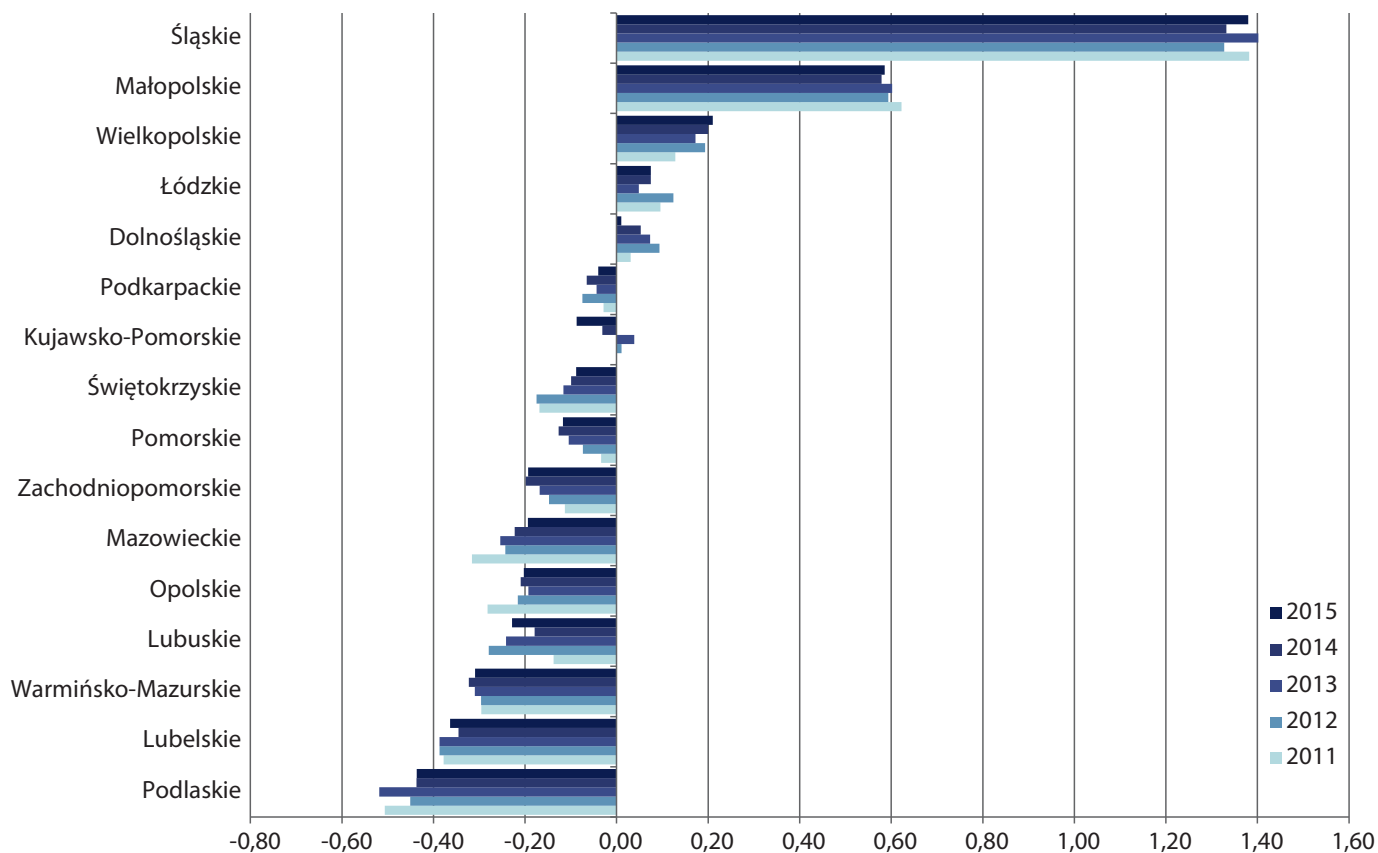


Chart 1 Assessment of voivodships with respect to labour cost and resources

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, unemployed 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 factor 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; slight improvement in comparison to 2014 |
| 2. Małopolskie voivodship | Strengths |
| | Above average labour resources, especially secondary schools graduates and tertiary schools students |
| | Weaknesses |
| | ----- |
| | Changes |
| | Slight decline over 5 years. Compared to 2014 no significant changes. |

5.3. Investor-oriented activities

Geographical diversification of investment attractiveness

As regards investor-oriented activities of the voivodships, three regions exhibit a clear leadership: Lower Silesian (dolnośląskie), Western Pomeranian (zachodniopomorskie) and Pomeranian (pomorskie). Lower Silesian (dolnośląskie) – offer a vast investment area, while Western Pomeranian (zachodniopomorskie) and Pomeranian (pomorskie) 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). Regional Investors Assistance Centers (IACs) in: Lower Silesian (dolnośląskie), Pomeranian (pomorskie) and Western Pomeranian (zachodniopomorskie) have been distinguished by PAIiZ for hitherto investors assistance, substantive and technical preparation and the region’s investment offer presentation.

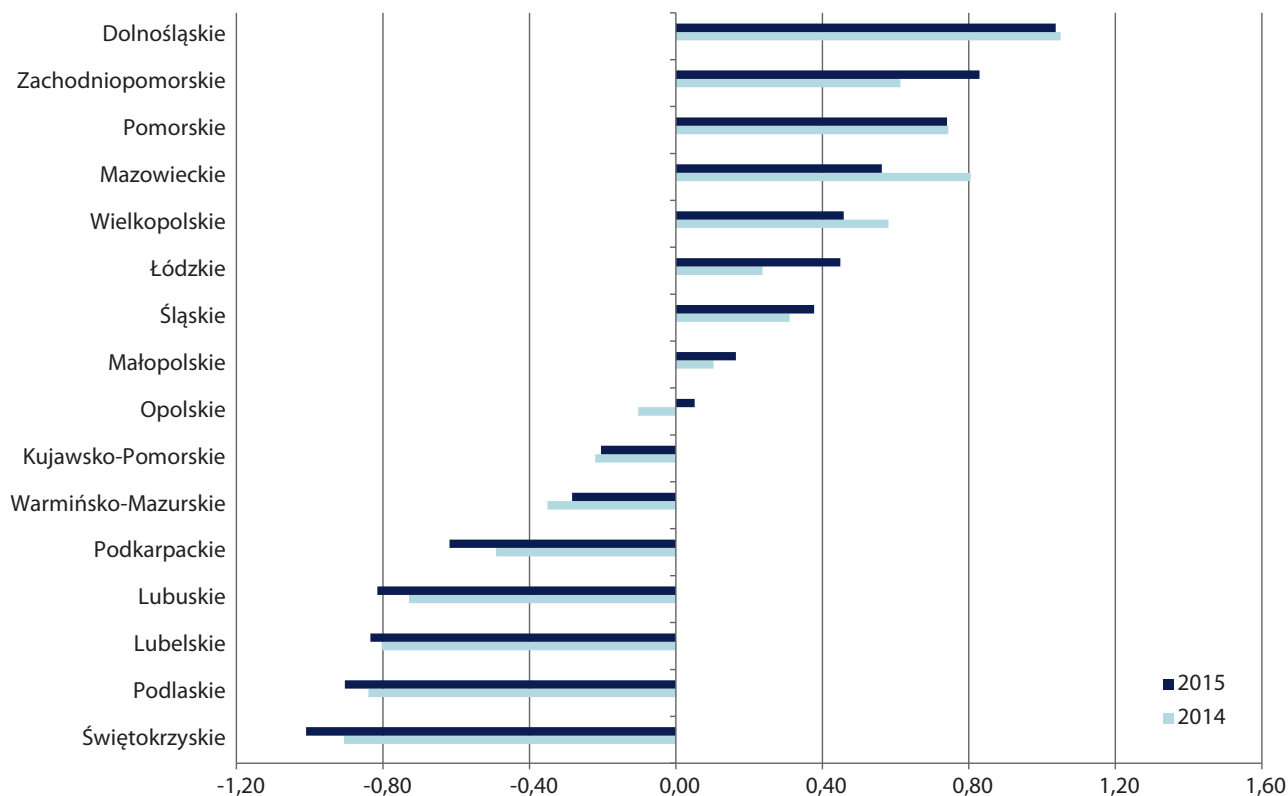


Chart 2 Assessment of voivodships with respect to investor-oriented activities

Source: GIME research

The rating of regions is being closed by four voivodships: 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, been rated within all regions average, while Lubelskie has not stood out negatively 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, above average intensity of information activity |
| | Weaknesses |
| | ----- |
| | Changes |
| No significant changes in comparison to 2014 | |
| 2. Western Pomeranian (zachodniopomorskie) voivodship | Strengths |
| | High intensity of information activity, distincted IAC |
| | Weaknesses |
| | ----- |
| | Changes |
| Improvement in comparison to 2014, due to higher intensity of information activity | |
| 3. Pomeranian (pomorskie) voivodship | Strengths |
| | Above average information activity, best rated IAC |
| | Weaknesses |
| | ----- |
| | Changes |
| No significant changes in comparison to 2014 | |

5.4. Transport accessibility

Geographical diversification of investment attractiveness

The highest level of transport accessibility characterises seven voivodships, placed mainly 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 Warmińsko-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.

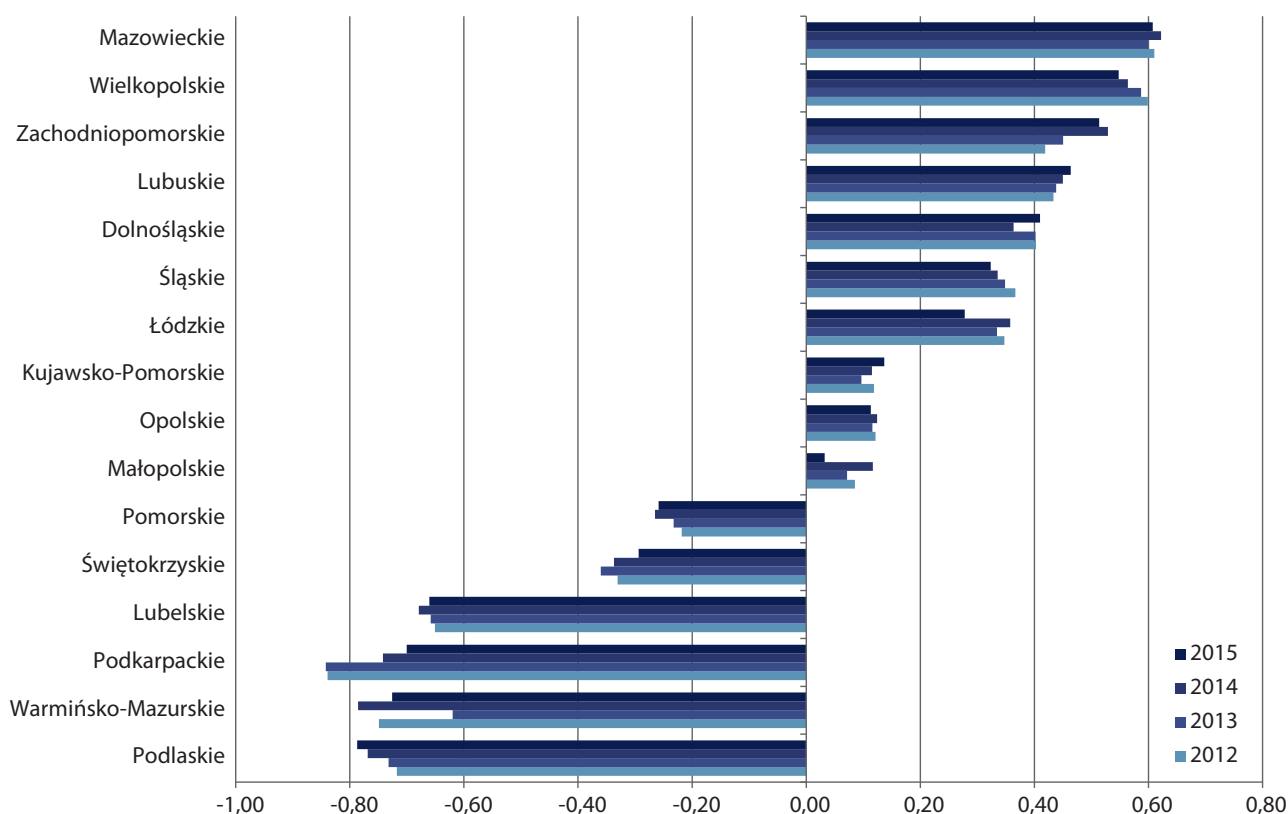


Chart 3 Assessment of voivodships with respect to transport accessibility

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, above average level of development of transport and logistics sector |
| | Weaknesses |
| | ----- |
| 3. Western Pomeranian (zachodniopomorskie) voivodship | Strengths |
| | Proximity to Western border, 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, very well-developed transport and logistics sector |
| | Weaknesses |
| | Low density of road network; long distance to Warsaw; low accessibility by air transport |

| Transport accessibility | |
|--|--|
| 5. Lower Silesian (dolnośląskie) voivodship | Strengths |
| | Proximity to Western border, above average accessibility by air transport |
| | Weaknesses |
| | ----- |
| 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).

Five voivodships: 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.

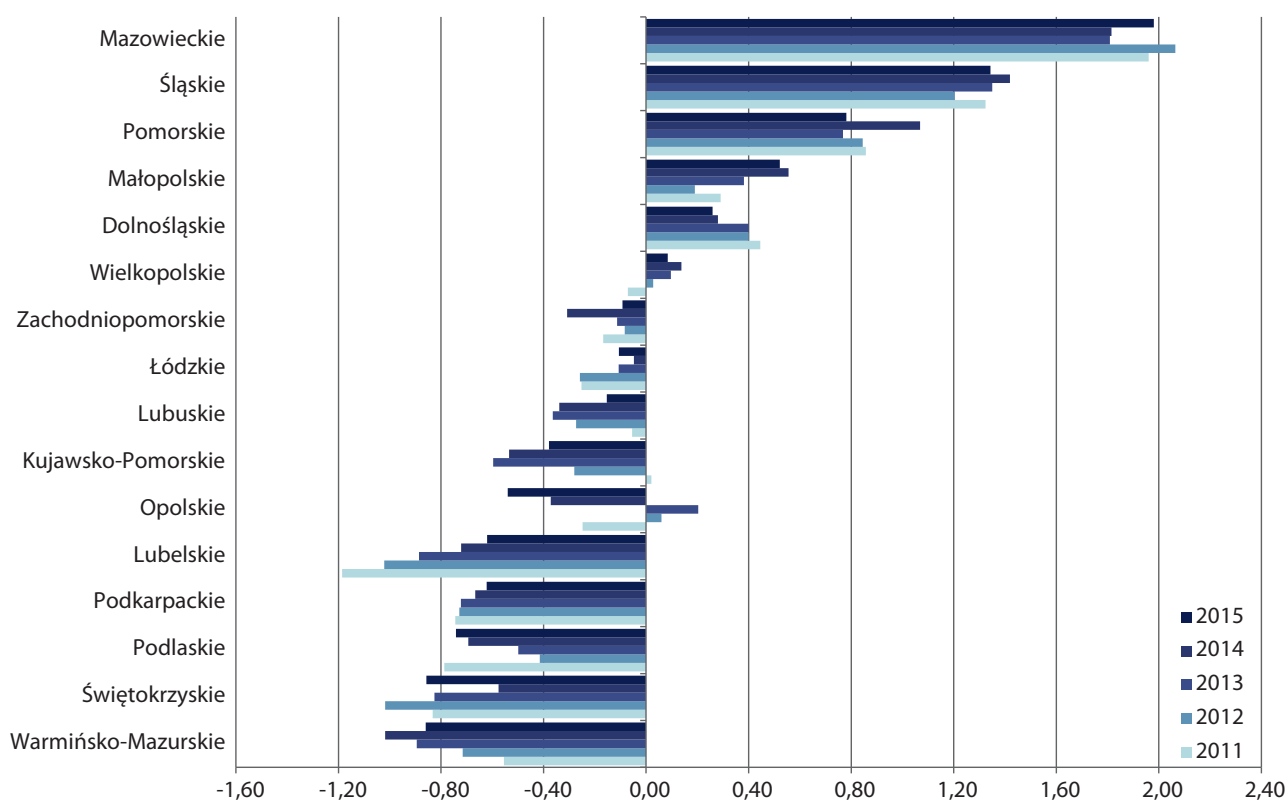


Chart 4. Assessment of voivodships with respect to market absorption capacity

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, no weaknesses |
| | Weaknesses |
| | ----- |
| | Changes |
| Slight improvement over 5 years; improvement in comparison to 2014, due to steady growth of households and growing investment demand | |
| 2. Silesian (śląskie) voivodship | Strengths |
| | Very high density of population and above average wealth of households, very high investment demand of enterprises |
| | Weaknesses |
| | ----- |
| | Changes |
| No significant changes over 5 years; slight decline in comparison to 2014 | |
| 3. Pomeranian (pomorskie) voivodship | Strengths |
| | Above average purchasing power of households |
| | Weaknesses |
| | ----- |
| | Changes |
| No significant changes over 5 years; significant annual decline caused mainly by the lower household wealth and lower investment demand | |

5.6. Economic infrastructure

Geographical diversification of attractiveness

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

The lowest level of economic infrastructure was identified in the following voivodships: Lubuskie, Warmińsko-Mazurskie, Lubelskie, Kujawsko-Pomorskie, Podlaskie and Świętokrzyskie. The R&D infrastructure is poorly developed in all those regions. Another drawback is a relatively small area of the land available in the Special Economic Zones (SEZ). Low investors activity was also recorded in this group of regions. The only asset is a high ranking (3rd position) of the Lubuskie region in the fairs and exhibitions sector which, however, is not sufficient to improve the general position of this voivodship.

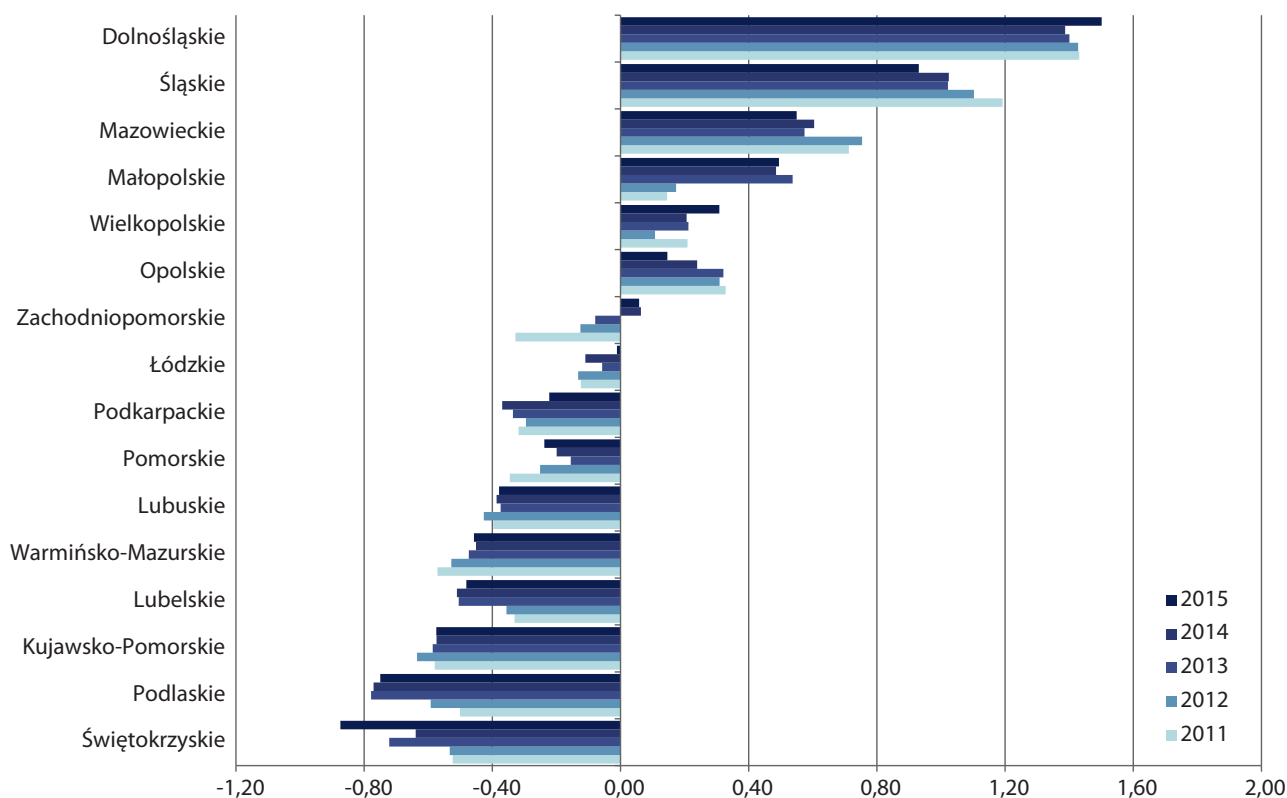


Chart 5 Assessment of voivodships with respect to economic infrastructure

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 four 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, large area of land available for investment and significant investors activity in SEZ |
| | Weaknesses |
| | Low fair and exhibitions activity |
| | Changes |
| Significant improvement over 5 years and from the annual perspective | |
| 2. Silesian (śląskie) voivodship | Strengths |
| | Well-developed R&D sector, high investors activity in SEZ, large area of land available for investment |
| | Weaknesses |
| | ----- |
| | Changes |
| A significant decrease in the period of 5 years, slight annual decline, due to lower investors activity in SEZ | |
| 3. Mazovian (mazowieckie) voivodship | Strengths |
| | Very well-developed business support environment and R&D sector |
| | Weaknesses |
| | Below average area of land available for investment in SEZ |

| Economic infrastructure | |
|--|--|
| 4. Województwo małopolskie | Changes |
| | Significant deterioration in the period of 5 years, slight annual decline due to lower investors activity in SEZ and lower fair and exhibitions activity |
| | Strengths |
| | Well-developed R&D sector, above average investors activity in SEZ in the field of creating new jobs, high fair and exhibitions activity |
| | Weaknesses |
| | Below average area of land available for investment in SEZ |
| Changes | |
| Very significant improvement over 5 years, no significant changes in relation to 2014. | |

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.

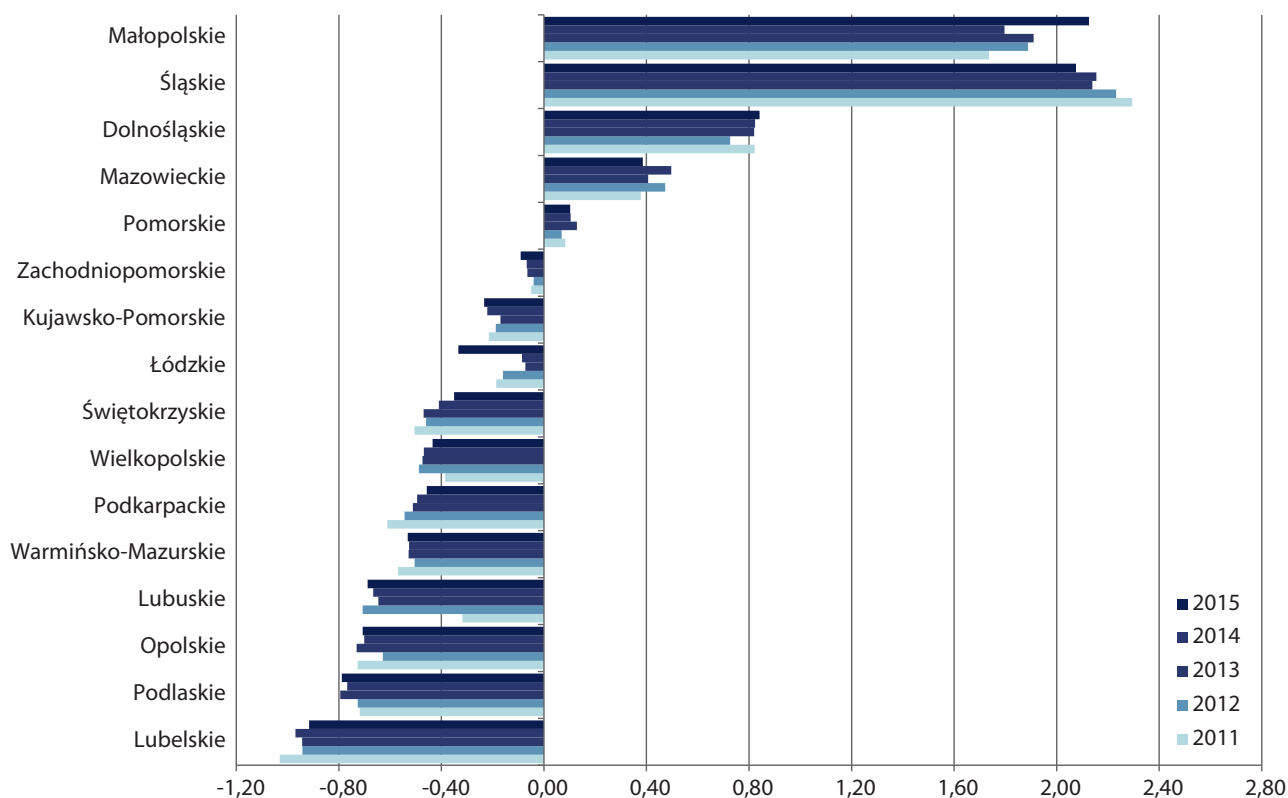


Chart 6 Assessment of voivodships with respect to social infrastructure

Source: GIME research

The group of regions that presents low attractiveness with respect to the social infrastructure is numerous. It includes all voivodships except the abovementioned and the ones characterized by average attractiveness of social infrastructure: Pomeranian and Western Pomeranian..

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. Małopolskie voivodship | Strengths |
| | High intensity of cultural activities; well-developed hotel and catering infrastructure, high activity of local cultural institutions |
| | Weaknesses |
| | ----- |
| | Changes |
| Significant improvement over 5 years and in comparison to 2014, resulting from growth of activity of local cultural institutions | |
| 2. Silesian (śląskie) voivodship | Strengths |
| | High intensity of cultural activities, well-developed hotel and catering infrastructure, high activity of local cultural institutions |
| | Weaknesses |
| | ----- |
| | Changes |
| Decline over last 5 years, slight decline in comparison to 2014 | |
| 3. Lower Silesian (dolnośląskie) voivodship | Strengths |
| | Above average intensity of cultural activities, well-developed hotel infrastructure |
| | Weaknesses |
| | ----- |
| | Changes |
| No significant changes either over last 5 years or in comparison to previous year | |

| Social infrastructure | |
|---|--|
| 4. Mazovian (mazowieckie) voivodship | Strengths |
| | Above average intensity of cultural activities, well-developed hotel infrastructure |
| | Weaknesses |
| | ----- |
| | Changes |
| | No changes over last 5 years; slight decline on the annual basis resulting from lower intensity of cultural activities |

5.8. Public safety

Geographical diversification of attractiveness

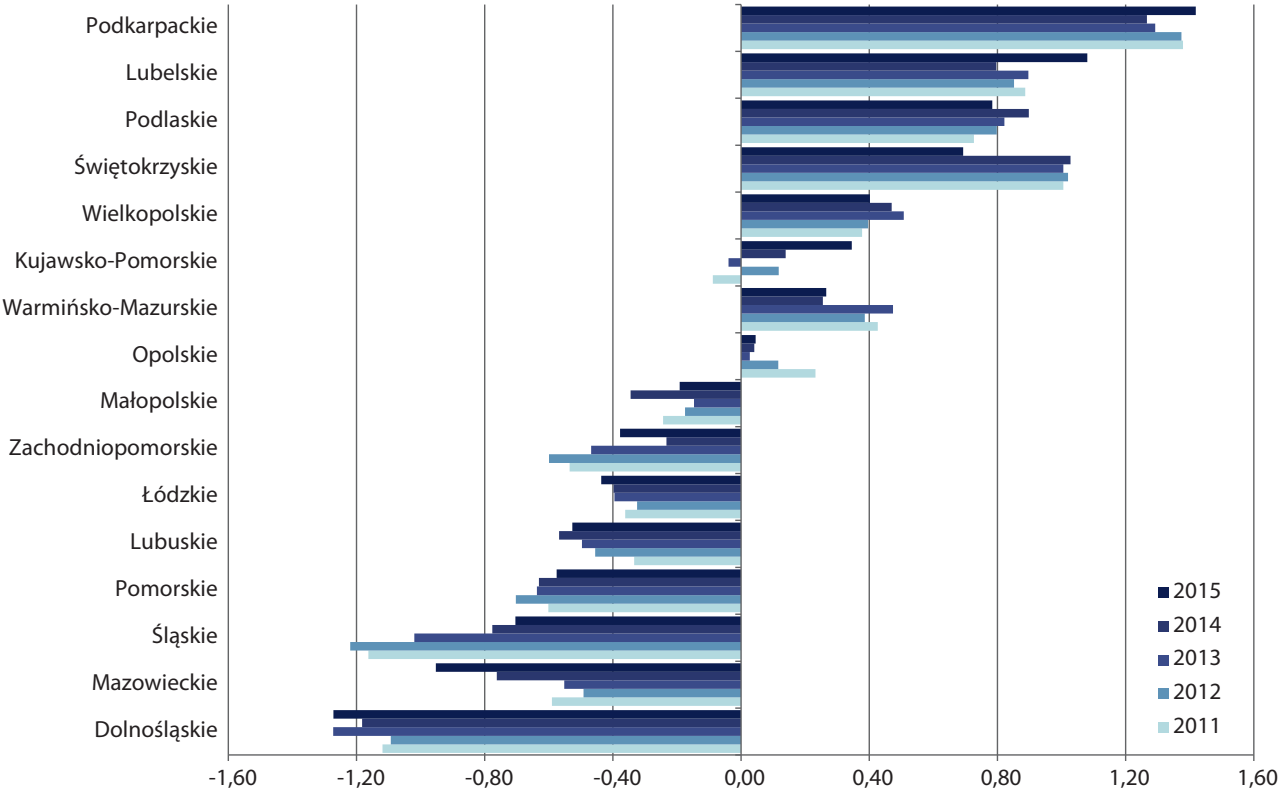


Chart 7. Assessment of voivodships with respect to public safety

Source: GIME research

The leaders with respect to public safety are the four voivodships of Eastern Poland: Podkarpackie, Lubelskie, Podlaskie and Świętokrzyskie. 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: Silesian (śląskie), Mazovian (mazowieckie) and Lower Silesian (dolnośląskie). They exhibit higher than average level of criminality and a lower rate of crime detection (except the Silesian region, where the crime detection rate is average).

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 rate |
| | Weaknesses |
| | ----- |
| | Changes |
| No significant changes over last 5 years; improvement on the annual basis, due to lower level of criminality | |
| 2. Lubelskie voivodship | Strengths |
| | Low level of criminality, high crime detection rate |
| | Weaknesses |
| | ----- |
| | Changes |
| Improvement over last 5 years; significant improvement on the annual basis as a result of lower criminality | |



| Public safety | |
|--|---|
| 3. Podlaskie voivodship | Strengths |
| | Low level of criminality |
| | Weaknesses |
| | ----- |
| | Changes |
| | No changes either over last 5 years or on the annual basis |
| 4. Świętokrzyskie voivodship | Strengths |
| | The highest crime detection, below average level of criminality |
| | Weaknesses |
| | ----- |
| | Zmiany |
| | Relative decline over last 5 years as well as on the annual basis |

5.9. Investment attractiveness – a synthetic perspective

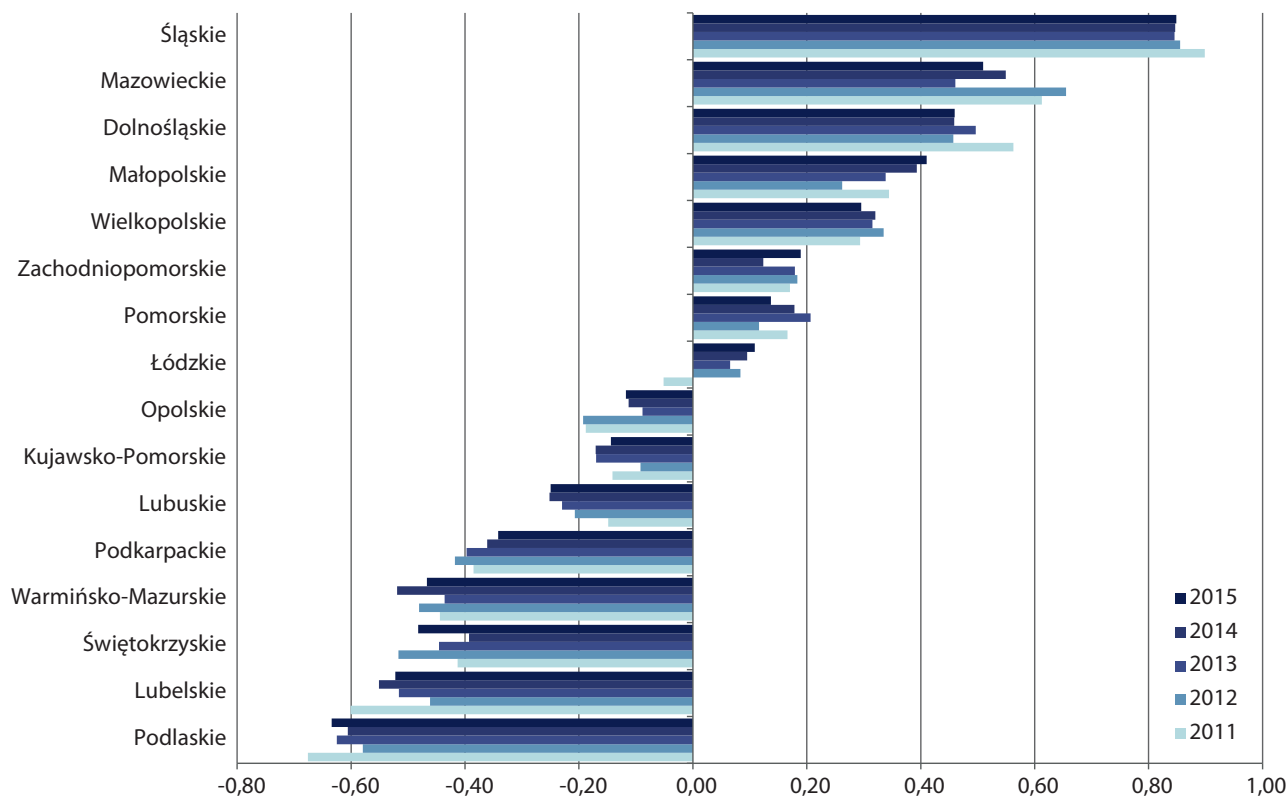


Chart 8. Assessment of voivodships with respect to investment attractiveness

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), Lower Silesian (dolnośląskie) and Małopolskie regions. Above average IA is found in the Wielkopolskie, Western Pomeranian (zachodniopomorskie), Pomeranian (pomorskie) 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, Lubelskie and Podlaskie. Their position is generally a consequence of long-term socio-economic processes. 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 |
| | Slight decline over last 5 years; no significant changes on the annual basis |
| 2. Mazovian (mazowieckie) voivodship | Strengths |
| | Transport accessibility, output market, economic infrastructure, social infrastructure, Investor-oriented activity |
| | Weaknesses |
| | Cost of labour; level of public safety |
| | Changes |
| | Slight decline over last 5 years; no significant changes on the annual basis |

| Investment attractiveness | |
|--|--|
| 3. Lower Silesian (dolnośląskie) | Strengths |
| | Investor-oriented activities, economic infrastructure, social infrastructure, output market, transport accessibility |
| | Weaknesses |
| | Level of public safety |
| | Changes |
| Slight decline over last 5 years; no significant changes on the annual basis | |
| 4. Małopolskie voivodship | Strengths |
| | Social infrastructure, labour cost and resources, output market, economic infrastructure |
| | Weaknesses |
| | ----- |
| | Changes |
| Slight improvement over last 5 years; no significant changes on the annual basis | |
| 5. Wielkopolskie voivodship | Strengths |
| | Transport accessibility, labour cost and resources, investor-oriented activities, economic infrastructure, public safety level |
| | Weaknesses |
| | ----- |
| | Changes |
| No significant changes either over last 5 years or on the annual basis - | |

| Investment attractiveness | |
|--|--|
| 6. Western Pomeranian (zachodniopomorskie) voivodship | Strengths |
| | Transport accessibility, investor-oriented activity, |
| | Weaknesses |
| | ----- |
| | Changes |
| No significant changes over last 5 years; improvement on the annual basis as a result of higher investor-oriented activity | |
| 7. Pomeranian (pomorskie) voivodship | Strengths |
| | Output market, investor-oriented activity, social infrastructure |
| | Weaknesses |
| | Level of public safety |
| | Changes |
| Slight decline over last 5 years; slight decline in comparison to 2014 due to lower market capacity | |
| 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 2011–2015

| Voivodship | Synthetic index 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 | Synthetic index in 2015 | Ranking in 2015 | Ranking change 2014-2015 |
|---|-------------------------|-----------------|-------------------------|-----------------|-------------------------|-----------------|-------------------------|-----------------|-------------------------|-----------------|--------------------------|
| Silesian (śląskie) | 0,90 | 1 | 0,86 | 1 | 0,85 | 1 | 0,85 | 1 | 0,85 | 1 | 0 |
| Mazovian (mazowieckie) | 0,61 | 2 | 0,66 | 2 | 0,46 | 3 | 0,55 | 2 | 0,51 | 2 | 0 |
| Lower Silesian (dolnośląskie) | 0,56 | 3 | 0,46 | 3 | 0,50 | 2 | 0,46 | 3 | 0,46 | 3 | 0 |
| Małopolskie | 0,34 | 4 | 0,26 | 5 | 0,34 | 4 | 0,39 | 4 | 0,41 | 4 | 0 |
| Wielkopolskie | 0,29 | 5 | 0,33 | 4 | 0,32 | 5 | 0,32 | 5 | 0,30 | 5 | 0 |
| Western Pomeranian (zachodniopomorskie) | 0,17 | 6 | 0,18 | 6 | 0,18 | 7 | 0,12 | 7 | 0,19 | 6 | 1 |
| Pomeranian (pomorskie) | 0,17 | 7 | 0,12 | 7 | 0,21 | 6 | 0,18 | 6 | 0,14 | 7 | -1 |
| Łódzkie | -0,05 | 8 | 0,08 | 8 | 0,07 | 8 | 0,10 | 8 | 0,11 | 8 | 0 |
| Opolskie | -0,19 | 11 | -0,19 | 10 | -0,09 | 9 | -0,11 | 9 | -0,12 | 9 | 0 |
| Kujawsko-Pomorskie | -0,14 | 9 | -0,09 | 9 | -0,17 | 10 | -0,17 | 10 | -0,14 | 10 | 0 |
| Lubuskie | -0,15 | 10 | -0,21 | 11 | -0,23 | 11 | -0,25 | 11 | -0,25 | 11 | 0 |
| Podkarpackie | -0,39 | 12 | -0,42 | 12 | -0,40 | 12 | -0,36 | 12 | -0,34 | 12 | 0 |
| Warmińsko-Mazurskie | -0,44 | 14 | -0,48 | 14 | -0,44 | 13 | -0,52 | 14 | -0,47 | 13 | 1 |
| Świętokrzyskie | -0,41 | 13 | -0,52 | 15 | -0,45 | 14 | -0,39 | 13 | -0,48 | 14 | -1 |
| Lubelskie | -0,60 | 15 | -0,46 | 13 | -0,52 | 15 | -0,55 | 15 | -0,52 | 15 | 0 |
| Podlaskie | -0,68 | 16 | -0,58 | 16 | -0,63 | 16 | -0,61 | 16 | -0,63 | 16 | 0 |

Source: GIME research



List of charts

| | |
|---|----|
| Chart 1 Assessment of voivodships with respect to labour cost and resources | 42 |
| Chart 2 Assessment of voivodships with respect to investor-oriented activities..... | 44 |
| Chart 3 Assessment of voivodships with respect to transport accessibility | 46 |
| Chart 4. Assessment of voivodships with respect to market absorption capacity | 49 |
| Chart 5 Assessment of voivodships with respect to economic infrastructure | 51 |
| Chart 6 Assessment of voivodships with respect to social infrastructure..... | 54 |
| Chart 7. Assessment of voivodships with respect to public safety..... | 56 |
| Chart 8. Assessment of voivodships with respect to investment attractiveness | 59 |

List of tables

| | |
|--|----|
| Table 1 Investment attractiveness of voivodships in 2015 | 7 |
| Table 2 Factors and their significance to investment attractiveness of sub-regions and voivodships | 12 |
| Table 3 Sub-regional investment attractiveness with respect to industrial activities between 2014 and 2015 | 21 |
| Table 4 Sub-regional investment attractiveness with respect to services in 2014–2015 | 26 |
| Table 5. Sub-regional attractiveness with respect to advanced technologies activity in 2014–2015 | 35 |
| Table 6. Changes in investment attractiveness of voivodships between 2011–2015 | 63 |

List of maps

| | |
|--|----|
| Map 1. Sub-regional investment attractiveness with respect to industrial activities in 2015..... | 20 |
| Map 2 Sub-regional investment attractiveness with respect to services in 2015 | 27 |
| Map 3 Sub-regional attractiveness with respect to advanced technologies sector in 2015 r..... | 34 |

