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and Scale of Foreign Investments
During the Years 2005–2006**

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**LEVEL OF INVESTMENT ATTRACTIVENESS
AND SCALE OF FOREIGN INVESTMENTS
DURING THE YEARS 2005–2006**

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Key words: investments, regional development, investment attractiveness.

A b s t r a c t

Investment attraction of regions demonstrates the ability of areas to attract investment capital. The level of attractiveness alters on account of changing criteria that entrepreneurs consider before establishing a company. These are triggered by the access to factors of production, new technologies, subjective preferences of investors as well as the competition between regions in investment attractiveness.

The aim of the article is to present changes in investment attractiveness of regions in Poland, to demonstrate dependence between investment attractiveness and the number of economic entities with foreign capital as well as an attempt to state conditions of future foreign investment inflow to regions.

The presented calculations have demonstrated that there is a strong statistical dependency between investment attractiveness and the number of economic entities located in a region. Enterprises with foreign capital were less sensitive to investment attractiveness than enterprises without foreign capital. The investment attractiveness index design methodology, which disallows specific industry location factors being considered as well as the way foreign capital is being attracted, might be the reason for this. Well-prepared sites, having good access to means of transport, preferably with tax relieves are vital to foreign investors for particular investments that are developed. The future inflow of foreign investments may be determined by the investment attractiveness of a region and the level and number of prepared locations where foreign investors will be able to establish an economic entity easily.

**POZIOM ATRAKCYJNOŚCI INWESTYCYJNEJ A SKALA INWESTYCJI
ZAGRANICZNYCH W LATACH 2005–2006**

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Słowa kluczowe: inwestycje, rozwój regionalny, atrakcyjność inwestycyjna.

Abstrakt

Atrakcyjność inwestycyjna regionów obrazuje zdolność określonych obszarów do pozyskania kapitału inwestycyjnego. Jej poziom nie jest stały w czasie, podobnie jak zmienne są preferencje przedsiębiorców, będące m.in. odzwierciedleniem dostępu do czynników produkcji, technologii wytwarzania, kosztów produkcji, subiektywnych odczuć inwestorów czy konkurencji ze strony innych regionów pod względem atrakcyjności inwestycyjnej.

Celem artykułu było przedstawienie zmian, jakie nastąpiły w atrakcyjności inwestycyjnej regionów Polski, ukazanie zależności między atrakcyjnością inwestycyjną a liczbą podmiotów gospodarczych z kapitałem zagranicznym w regionie oraz próba określenia warunków przyszłego napływu tych inwestycji do regionów.

Wyniki uzyskanych badań wskazały, że istnieje silna statystyczna zależność między atrakcyjnością inwestycyjną a liczbą podmiotów zlokalizowanych w regionach. Lokalizacja przedsiębiorstw z kapitałem zagranicznym zależała jednak w mniejszym stopniu od atrakcyjności inwestycyjnej regionu niż krajowych podmiotów. Przyczyną tego może być metoda konstrukcji syntetycznego wskaźnika atrakcyjności inwestycyjnej, która nie pozwala na uwzględnianie specyfiki branżowej lokalizowanych inwestycji oraz sposób przyciągania inwestycji zagranicznych. Dla przedsiębiorców zagranicznych istotne są dobrze przygotowane miejsca pod konkretne inwestycje, uzbrojone, z dobrym dostępem do sieci transportowej, najlepiej ze zwolnieniami lub ulgami od podatków. Przyszły napływ inwestycji zagranicznych może zależeć od atrakcyjności określonych terenów, a także od stopnia przygotowania i liczby miejsc, w których przedsiębiorcy zagraniczni będą mogli bez przeszkód rozpocząć działalność gospodarczą.

Introduction

Investors, in the process of selecting the location for business projects consider numerous factors influencing the taking of a positive decision on location of the future investment project. The criteria applied by entrepreneurs are highly dependent on specifics of the business they operate in or intend to start operation as well as general profitability of the project located in a specific area. Factors not related directly to activities of the enterprise called the soft location factors describing, among others: the social climate, safety, saturation with recreation, sports and cultural facilities in a given area also seem important from the perspective of the investor.

Entrepreneurs search for locations where they could use their capital in the most effective ways, i.e. locations where the rate of return on capital invested would be the highest. Processes of integration involving an increasing number of countries as well as membership of countries in various integrating communities (e.g. the EU), force entities operating within global economy to adjust the governing law to the global standards. Tighter integration of financial institutions takes place; in many cases common foreign policy is conducted; barriers to trade are liquidated; common technical and quality standards are introduced. Changes occurring in global economy manifesting through the increased mobility of goods and factors of production cause that it is increasingly easy for the investors to start-up and conduct business activities in

different regions, sometimes distant from the initial locations of their investments (NAZARCZUK 2007, p. 104).

Increasing, as a consequence of globalisation process, freedom of capital movement results in the situation where it is not the capital competing for the most favourable location but the regions (towns, municipalities, counties and voivodships) compete with one another for new investments (KOSIEDOWSKI, POTOCZEK 2001, pp. 9–10). Regions compete with one another by applying different instruments. For the investors, however, investment attractiveness of a given area (for this paper the authors assumed that the region corresponds to the area of a voivodship) is crucial from the perspective of location of their investment.

It should be remembered that attractiveness of the region is not a permanent characteristic of a given area. Both the region and its environment are subject to continual transformations (changes involve the level of infrastructure development, transport access, tax deductions and credits for entrepreneurs, competition of local enterprises increases, etc.) causing the situation that in the future the region, compared to other regions, can be less or more attractive to the investors.

This paper aims at determining the changes in investment attractiveness of Polish regions, and showing the dependences between investment attractiveness and the number of business entities in Polish regions as well as indicating the conditions for inflow of foreign direct investments.

Investment attractiveness and competitiveness of the region in acquisition of capital

In the synthetic way, investment attractiveness can be understood in the categories of ability to persuade investors to choose the region as the place for the investment location (KALINOWSKI 2006, p. 13). However, attractiveness seen in this way would be narrowed to the volume of investment outlays only while the issue is much more complex and it requires more detailed analysis. It also seems reasonable to specify the factors influencing perception of a given region as attractive for investment.

For sure the following factors play an important role in creating the image of the region for the investors (GONTARZ, REMISIEWICZ 2003, p. 27):

- market factors: market size, population growth, gross domestic product growth rate and its to *per capita* value, distance and access to exports markets;
- cost factors: labour costs/productivity, availability of raw materials, cooperation opportunities, quality of business infrastructure (roads, telecommunication, business support institutions), possibilities of profits transfer;

- investment climate: political stability, macroeconomic stability, tax system, legal system, incentives for investors.

The factors presented in many cases determine the investment risk that the entrepreneur will have to cover locating his project in a given area. In many cases they will also influence the profitability of the project itself. Those determining factors, nevertheless, do not appear and are not analysed individually. The investment attractiveness of a given area is determined by the combination of location factors. Areas offering the optimal combination of the location factors are attractive for investments as they allow reducing investment outlays and current operational costs of the enterprise facilitating maximization of profits and decreasing the risk of project failure (KALINOWSKI 2005, pp. 9–10).

The criteria considered by potential investors are subject to continual changes. They are also dependent frequently on the type of planned business or even subjective likes and dislikes of people planning the project. Currently the attractiveness of the region is determined by its characteristics describing (GORZELAK 2002, pp. 63–64):

- availability of efficient and reliable transport and communication infrastructure, including that of international character allowing maintenance of *just-in-time* regime of supplies;
- saturation with business service institutions as well as rich in research and development facilities and institutions supporting transfer of innovation to production process and technology transfer;
- high, diversified and flexible qualifications of labour allowing gradual change in the work profile as well as labour motivation and discipline;
- economy diversification, possibility of establishing direct cooperation links (*contracting-out, outsourcing*) and obtaining high quality “business environment services”;
- good living conditions (safety, recreation possibilities, high quality of educational and cultural offer, landscape beauty) tempting highest qualified personnel (scientists, managers, owners, people of culture, journalists) to settle in the given area.

Factors determining attractiveness of the region are nothing else but investment location factors. For sure the spectrum of their influence, however, is much wider. Opinions that competitiveness of regions is influenced by the diversity of their economic structures, transport access, existence of scientific-research background and business environment institutions are common (KLAMUT 1999, p. 10). That opinion could confirm cohesion of those two terms.

Sometimes, instead of the competitive of the regions the notion of attractiveness, which considers the conditions for location of investment projects is used. Competitiveness and attractiveness are notions of similar meaning as it can be believed that regions compete with each other on the level of their

attractiveness for entrepreneurs (BUDNER 2004, p. 47). Use of the term attractiveness can also aim at showing the subjective nature of the region as a part of the economic space within which processes of movement and distribution of enterprises take place.

Investment attractiveness, as a consequence, is closely linked to the possibilities of the region to compete in the combat for winning investors. Competitiveness, generally defined in the economy as the ability to achieve success in economic competition, in the field of regional development is understood as the ability of regions to adjust to changing conditions as concerns retaining and improving the position in the competition taking place also among the regions (KLAMUT 1999, p. 9). An area characterized by the potential of human knowledge allowing it to be ahead of the needs and to find new opportunities for use of available resources for the purpose of generating advantage can be called a competitive region.

There are at least two interpretations of the issue of competitiveness of the regions – direct and indirect. Direct competition of the regions should be understood as existence (or development) of conditions of the regional environment for businesses operating within it that allow obtaining competitive advantage in the components that are beyond their operational control (BOJAR 2001, p. 12). Indirect competition, on the other hand, should rather be interpreted as rivalry of territorial units for benefits of various types, i.e. bringing in foreign investors, retaining capital in the region, access to funding, etc.

Globalisation of the economies contributes to intensification of competition among regions for location of enterprises. Capital can make a choice of location from a much wider range of option than it was possible in the industrial economy strongly dependent on resources of raw materials and energy in the world divided into influence zones of two dominating ideologies (GORZELAK, JAŁOWIECKI 2000, p. 7).

Regions differ from each other. Each region has its own characteristics resulting from its natural resources and historical conditions (MAKULSKA 2004, p. 141). They are also diversified by the opportunities to gain possible benefits. That is why undertaking appropriate actions that would result in competitiveness of regions and closing the gaps existing between them is of key importance.

Differences in competitiveness of regions result in diversification of their development dynamics (KLAMUT 1999, p. 13). It depends on investment attractiveness of the area, i.e. the ability of the region to attract investors, which in turn conditions the competitiveness of those areas in the race for capital and translates into their further development.

Changes in investment attractiveness of Polish regions

Attractiveness of a given region depends largely on the type of business that the entrepreneur is involved in or intends to start-up. That is why it is not recommended to treat investment attractiveness of the given region as the determining factor for all investment projects located in the country as the situation can occur where a given region is highly attractive for, e.g. tourism and recreation activities while it is totally unattractive for location of, let's say, heavy industry.

Investment attractiveness of an area is subject to changes exactly in the same way as preferences and tastes of investors. Changes in the methods of production, manufacturing technologies and the environment influence which factors would play an important role in perception of a given region as more or less attractive because the proportions will change as concerns the use of means of production or changes will take place in the local markets and the investors will apply new criteria, very often subjective ones, which in their opinion at a specific time assure the maximum rate of return on the investment made.

The Gdańsk Institute for Market Economics (IBnGR) prepares reports in which it analyses investment attractiveness of Polish regions. The team of scientists prepares rankings of the regions concerning, among others, their overall attractiveness for winning investment projects – the so-called synthetic investment attractiveness indicator. Those studies are periodic ones. This paper presents an attempt at comparing and listing the changes that took place during three years (Tab. 1).

The Śląskie voivodship, which for three years has been ranked ahead of Dolnośląskie and Mazowieckie voivodships, was the unquestioned leader in investment attractiveness in 2007. Voivodships Małopolskie, Wielkopolskie, Łódzkie and Pomorskie were ranked in the further positions. According to IBnGR, Świętokrzyskie, Lubelskie and Podlaskie voivodships were the weakest ones. Investment attractiveness is not a permanent characteristic of the given voivodship. Voivodships develop at different rates; also the preferences of the investors change. Following the trends in changes in the ranking of regions according to their attractiveness allows selecting those developing in the most dynamic way as well as those that do not catch up with the other voivodships.

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Table 1

Investment attractiveness of Polish regions 2005–2007

Voivodship	Investment attractiveness of voivodships – ranking of the voivodship			Changes in investment attractiveness		
	2005	2006	2007	2005–2006	2006–2007	2005–2007
Dolnośląskie	4	3	2	1	1	2
Kujawsko-Pomorskie	12	11	11	1	0	1
Lubelskie	15	15	15	0	0	0
Lubuskie	10	10	10	0	0	0
Łódzkie	6	7	6	-1	1	0
Małopolskie	3	4	4	-1	0	-1
Mazowieckie	2	2	3	0	-1	-1
Opolskie	9	9	9	0	0	0
Podkarpackie	11	13	12	-2	1	-1
Podlaskie	16	16	16	0	0	0
Pomorskie	7	6	7	1	-1	0
Śląskie	1	1	1	0	0	0
Świętokrzyskie	14	14	14	0	0	0
Warmińsko-Mazurskie	13	12	13	1	-1	0
Wielkopolskie	5	5	5	0	0	0
Zachodniopomorskie	8	8	8	0	0	0

Source: Own work based on: *Atrakcyjność inwestycyjna regionów i podregionów Polski 2007* (2007, p. 68), *Atrakcyjność inwestycyjna regionów i podregionów Polski 2006* (2006, p. 93), *Atrakcyjność inwestycyjna regionów i podregionów Polski 2005* (2005, p. 77).

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During the years 2005–2007, the largest changes were recorded in case of the Dolnośląskie voivodship. Its ranking among all Polish voivodships improved by two positions, from number 4 in 2005 to 2 in 2007 (by 1 position every year). This is the best result recorded during the analysed period. That situation was influenced by a systematic improvement in the partial factors included in the synthetic indicator of investment attractiveness, i.e. transport access (mainly commissioning of the sections of A2 and A4 motorways), economic infrastructure (business environment institutions, opportunities for investing in special economic zones, level of development in research and development facilities), activities of the voivodship targeted at the investors

(preparation of investment project offers, information and promotion activities). The other regions of the country increased their investment attractiveness less.

The Kujawsko-Pomorskie voivodship was the only region in the country that improved its ranking by one position. Małopolskie, Mazowieckie and Podkarpackie voivodships on the other hand dropped by one position in the ranking during the period covered while the others maintained their positions.

The data contained in table 1 allows concluding that investment attractiveness is characterized by low variability over a short period of time. It happens so because the design of the synthetic indicator of investment attractiveness considers, among others, indicators representing the level of socio-economic development of the regions, which usually changes over long or medium periods of time.

Methodology of studies

Foreign investments are defined in different ways in the subject literature, which can result in differences in interpretation of different data sets. According to the concept of the Central Statistical Office (GUS) the foreign investors are those projects or entities that possess foreign capital and conduct business activity. In case of the NBP (OECD) acceptance of the limit of 10% foreign partner share narrows significantly the research sample as compared to the concept by GUS, which does not make such a limitation (UMIŃSKI 2002, pp. 21–22). That is why, for assessment of the influence of investment attractiveness and its implications for location of companies with foreign capital the GUS data and definition were applied. As commercial companies represent the most frequent form of foreign investments in Poland, it was decided to analyse those business entities.

The authors of the paper decided to answer the question of how far the number of entities with foreign capital in the voivodship depends on investment attractiveness of that area. As a consequence the hypothesis was formulated that there is dependence between investment attractiveness of the region and the number of business entities operating within it. That would confirm that entrepreneurs (including foreign ones) pay attention to the level of investment attractiveness of the region while taking decisions on location of their investments. To verify whether the hypothesis was true one of statistical measures, i.e. correlation, which allows determining existence of dependence between investigated values, was applied. In this case the number of business entities was paired with the synthetic indicator of investment attractiveness of voivodships prepared by IBnGR, which, using one number indicates the level

Table 2
Investment attractiveness and the number of business entities in regions

Voivodship	Total number of economic entities	Total number of commercial companies	Commercial companies of private domestic capital	Commercial companies with foreign capital	Synthetic investment attractiveness indicator in 2006
Dolnośląskie	303 050	20 021	16 516	5 681	0.73
Kujawsko-Pomorskie	186 949	9 706	8 815	1 512	-0.3
Lubelskie	150 579	7 324	6 805	883	-0.61
Lubuskie	105 559	6 337	4 771	2 436	-0.14
Łódzkie	241 221	11 824	10 306	2 387	0.007
Małopolskie	289 368	17 300	15 386	2 992	0.35
Mazowieckie	609 601	68 365	53 640	20 649	0.75
Opolskie	92 846	4 635	3 816	1 259	-0.09
Podkarpackie	140 656	6 062	5 456	766	-0.45
Podlaskie	88 931	3 851	3 611	437	0.68
Pomorskie	229 010	18 522	16 389	3 664	0.09
Śląskie	425 499	26 762	23 791	4 716	0.92
Świętokrzyskie	106 312	4 123	3 774	528	-0.54
Warmińsko-Mazurskie	111 311	5 239	4 715	881	-0.34
Wielkopolskie	345 669	21 672	18 427	5 155	0.32
Zachodniopomorskie	209 478	11 595	9 344	3 836	0.006
Correlation coefficient	0.8528	0.7313	0.7507	0.6676	-

Source: Own work based on: *Rocznik Statystyczny Województw 2007, Atrakcyjność inwestycyjna województw i podregionów Polski 2006* (2006, p. 93).

of intensity of region attractiveness for investors. The determination coefficient on the other hand allowed presenting the degree to which variability of the dependent variable can be explained by changes in the independent variable, i.e. to what extent investment attractiveness can explain the distribution of enterprises across Polish regions. As a consequence of data on the number of business entities in Polish voivodships for 2007 not being available the further studies used the data for years 2005–2006.

Results of studies

The conducted analysis indicates that there is a statistical dependence between the number of companies with foreign capital in the voivodship and the investment attractiveness of the specific area. This is evidenced by Pearson coefficient of correlation at 0.67 proving that the dependence is strong. If the value obtained, however, is compared to the results of correlation for the number of commercial companies of domestic private capital (0.75), the total number of commercial companies (0.73) and the total number of business entities (0.85), it can be noticed that the value is smaller. The best matching (the highest coefficient of correlation) to the synthetic indicator of investment attractiveness is obtained for the total number of business entities which was presented in Table 2.

Considering the coefficient of determination, which is the square of the coefficient of correlation value in the analysis, allows noticing the following dependence (Tab. 3). Only 44.58% of locations of commercial companies with foreign capital in 2006 can be explained by changes in investment attractiveness (Tab. 3). This is a value much lower than the value of the coefficient of determination for commercial companies of domestic private capital (56.35%), or total number of commercial companies (53.48%) or total number of business entities (72.73%). This indicates again that location of commercial companies with foreign capital is the least of all the studied entities for 2006 dependent on the intensity of the characteristic of investment attractiveness of the voivodship.

The dynamic analysis of that issue for 2005 and 2006 allows noticing that both the coefficient of correlation and coefficient of determination for the investigated dependence for commercial companies with foreign capital increased. As a consequence, the dependence between investment attractiveness of the region and the number of commercial companies with foreign capital increased (from 0.63 to 0.67). To an increasing extent then the inflow of companies with foreign capital can be explained by changes in investment attractiveness: 39.27% in 2005 and 44.58% in 2006 respectively.

Table 3

Correlation and determination coefficients for years 2005–2006

Item	Correlation coefficient		Determination coefficient	
	2005	2006	2005	2006
Total number of business entities	0.8575	0.8528	0.7353	0.7273
Total number of commercial companies	0.7125	0.7313	0.5077	0.5348
Commercial companies of private domestic capital	0.7363	0.7507	0.5421	0.5635
Commercial companies with foreign capital	0.6267	0.6676	0.3927	0.4458

Source: Own work based on own computations.

The values of coefficient of correlation and coefficient of determination for the total number of business entities decreased insignificantly during the covered period of time. The values describing the abovementioned dependences for the total number of commercial companies and domestic private capital improved slightly, which indicates an increasing dependence of location of such entities on the investment attractiveness indicator (Tab. 3).

Additionally, no effect of delay by a year of the increase in the number of investment projects in a given region relative to the investment attractiveness indicator for a given year was observed. The correlation results obtained for the data covering the number of business entities in regions for the consecutive year with the attractiveness indicator were lower than the compared values of data on business entities for the same period of time.

The results of analyses presented above indicate that companies with foreign capital base their decisions on location of investment projects to a lesser degree than domestic entities on the level of investment attractiveness of Polish regions. This would suggest that the synthetic indicator of investment attractiveness, because of its design, generalizes the influence of numerous factors, frequently not allowing consideration for business specificity of located investment projects. Additionally, there may be other than investment attractiveness determining factors that in a significant way influence the location decisions by foreign investors.

Special Economic Zones (SEZ) undoubtedly are one of such factors. Investment incentives offered in SEZ taking the forms of exemption from local taxes represent a very important stimulus for foreign enterprises as they allow a significant reduction in business operational costs, which translates into faster and higher return on investment made.

Initially, location of SEZ aimed at closing the gaps between regions and as a consequence SEZ were mainly situated in poor regions of the country. The

currently effective regulations allow including investment projects into a sub-zone of SEZ on the application of the investor anywhere in the country when investment outlays in that area exceed Euro 40 million or where at least 500 jobs are created (SADOWSKI et al. 2006, p. 24). This undoubtedly implicates willingness to locate enterprises with foreign capital in locations more convenient for the investors resulting, among others, from the specifics of business activity conducted, which are less dependent on investment attractiveness of the entire voivodship.

Conclusion

Investment attractiveness determines to a significant extent the inflow of foreign and domestic investments into a given voivodship. Its level informs the entrepreneurs about the general attractiveness of a given area for conducting business there. However, in case of locating a strictly specified business activity the synthetic indicator of attractiveness might be of excessively low precision.

The results of conducted analyses confirm that there is a strong dependence between the level of investment attractiveness and the number of entities located within the voivodship. Among all the groups of business entities analysed, entities with foreign capital were the least sensitive to changes in the level of attractiveness, although the level of correlation of those two values increases.

Foreign capital is frequently attracted to the country by specific incentives offered by local authorities. Those incentives frequently involve tax relieves or exemptions; sometimes they involve offers of improved land prepared for specific investment projects with good access to transport network. That is why foreign investors locate their investment projects in Poland paying less attention to investment attractiveness of regions than the domestic entrepreneurs, although that attractiveness is still a bearing factor. Not infrequently preparation of a specific area allocated for the investment project is more important from their perspective. That is why the further inflow of foreign investments will probably be directed to areas that are attractive and moderately attractive for investment, which will make adequate number of well prepared locations for specific projects available, at best included into areas of sub-zones of the Special Economic Zones, which in turn will increase investment attractiveness of such locations.

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