PILOT STUDY OF FOREIGN FIRMS AND THEIR MENTAL MAPS OF THE CZECH REPUBLIC'S REGIONS

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Abstract: The aim of the paper is to indicate the image of Czech regions that foreign entrepreneurs construct, to understand the character of spatial perceptions of foreign entrepreneurs from various points of view in order to find out what main factors are influencing location decisions of foreign investors in the country. The firms of foreign investors have been asked to rate Czech regions in terms of high and low scores on the suitability of the regions for the place of a firm ideal location in the Czech Republic.

The paper gives a summary of first results of the survey. It provides current mental maps of foreign entrepreneurs and gives the most important results of explanatory statistical analyses. The paper indicates main factors explaining the regional structure of mental maps of foreign entrepreneurs in the Czech Republic.

Key words: foreign direct investment, environmental perception, localisation factors, statistical analysis, mental maps

1. INTRODUCTION

Foreign investments are of great importance particularly in countries undergoing a far-reaching economic transformation. A suitable type and mainly channelling of foreign investments within a country are very important and can have radical consequences not only for economical situation of the country, but above all for further regional development of regions receiving these investments or, on the contrary, of those neglected by foreign investors. In the global economy, foreign investments play the role of an efficient tool which can increase the productivity of labour, affect the unemployment rate, enhance production capacities, stimulate restructuralisation, increase exportations and contribute to the total increase of the GDP (see e.g. Oxelheim, 1993, Dunning, 1988, Viturka, 2000, 2002, Rajdlová, 2003). Nevertheless, the effect of foreign direct investments can also initiate "dual economy" and deepen the current serious differences between the developed and the lagging behind regions.

The study of location decisions of economic actors has a long-time tradition in economic geography (Von Thünen, 1826; Weber, 1928, Christaller, 1933). Neo-classical location theories stemmed from the conception of entrepreneur perceived as a fully informed and economically thinking agent, who chooses an optimal location for his firm in order to maximize his profit. Many works inspired by behavioural theories of location decisions (Wolpert, 1964) showed that a entrepreneur does not always act as "optimiser". His location decisions are influenced by various factors. It is rather obvious that behind location decisions there is always a lack of information or a distorted view of potential locations and regions for investment. In this context, the research into perceptions and subjective evaluation of location factors becomes the key direction of research activities (Törnqvist, 1979; Dostál, 1984). It is therefore important to investigate how spatial perceptions of a foreign entrepreneur are formed from fragments of information from various interconnected areas in his environment and to find out what main factors are influencing his location decisions, including e.g. the origin of the entrepreneur and other various "soft" factors (subjective preferences, confidence, experience, personally perceived image of regions etc.). Spatial images, their contents, differences caused by the origin of entrepreneurs and various spatial characteristics should be thoroughly investigated and then used for defining aims and objectives of local, regional and national economical and regional policy.

The aim of this paper is to understand the character of spatial perceptions and spatial images of foreign entrepreneurs from various points of view in order to find out what are the main factors influencing their location decisions in our country.

2. DATA COLLECTION AND METHODOLOGY

In order to obtain data on environmental perception of foreign investors, a survey questioning firms with foreign participation in the Czech Republic has been conducted. The staff of studied firms was selected out of the Commercial Intelligence Service (CIS) database. The firms were chosen proportionally according to the population size of districts to avoid an uneven representation of foreign firms in each region. In spite of a careful selection there are inevitably some peripheral regions with fewer respondents than in large agglomerations or regions close to the German and Austrian border.

It is necessary to bring forward that such a survey is rather unique in Czech social geography. There are some studies concerning mental maps (Drbohlav, 1990, 1991, Siwek, 1988), these are, however, studies on residential preferences of Czech citizens. Relevant for our study is therefore foreign literature, above all studies on long-time monitoring of location preferences of Dutch entrepreneurs (Meester, 2004; Pellenbarg, Meester, 1984; Meester, Pellenbarg, 2004). When drafting our questionnaire we were thus led by the desire to gather as much information as possible but at the same time by the necessity to have the questionnaire as simple and concise as possible. A map (with a short profile of the respondent) was chosen for the questionnaire.

The Czech Republic was divided into seventy regions (former districts, Prague, Plzeň and Brno were put together with their surrounding districts ; Ostrava with Karviná district and Šumperk with Jeseník district). The firms of foreign investors were asked to rate individual Czech regions in terms of their high or low suitability for locating their

firm branch in Czechia. In brief, it was a sort of game in which the entrepreneur can (without any restrictions) pretend that he is starting his business in Czechia again. So he can freely, according to his knowledge, experience, references, prejudices etc., evaluate particular areas on a six-point scale from "the worst" location through "rather improper", "neutral" and "quite good" to "the best" one.

Pilot testing revealed however a very low response rate and a very frequent misunderstanding or improper filling out of the questionnaire. Consequently, the questionnaire was prepared in bilingual form, shortened and made easier to follow. Nevertheless , the usable response did not rise significantly. Despite the fact that such a low response rate is quite usual in this type of surveys, we presume that in the Czech entrepreneurial environment, similar surveys are considered a novelty and most of the entrepreneurs or their employees still remain quite reticent. In spite of all these obstacles, the response rate of 16 % (usable response 13.4 %, that means 155 questionnaires) can be considered as representative.

The data obtained from the questionnaires were transferred into numerical form, linked with the database on responding firms and then processed by statistical and GIS analysis. The results of these analyses are presented in the following chapters.
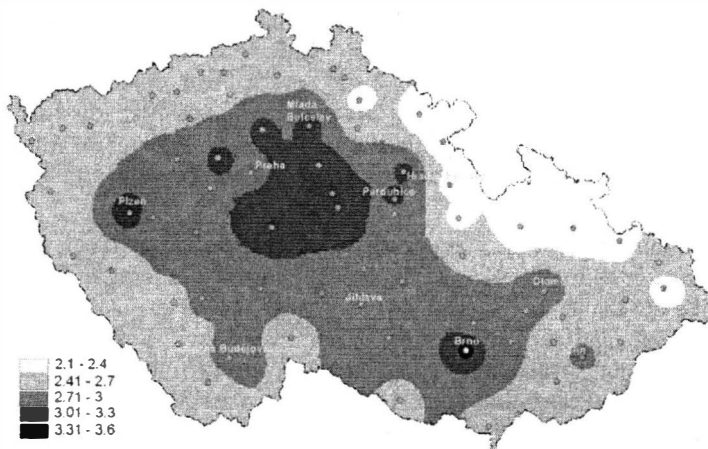
3. RATING OF REGIONS

The questionnaire was based on evaluation of individual Czech regions according to their high or low suitability for placement of a firm branch of a foreign investor. The first aim was to find out the general pattern of preferences of foreign entrepreneurs. For each region the average and the total rating of all respondents were calculated. In the following pictures this evaluation is depicted by isopleths (lines connecting equally evaluated places) for the whole Czech Republic. Such isopleths are called isopercepts when relating to environmental perception (Meester, 2004).

Average ratings of regions are depicted in Figure 1. It is quite obvious that the highest ratings are found for the capital city of Prague and its surroundings and basically for the whole Central Bohemia. The area of high rating embraces also Hradec Králové and Pardubice region. Other places of high rating are large agglomerations with their outskirts – Brno, Plzeň, Zlín, Jihlava, České Budějovice, Olomouc, Ostrava and Liberec. Low ratings can be found on the periphery of the Czech Republic, mainly in the Jeseník and Trutnov regions. It is surprising that areas alongside the German border, which used to be the favourite destination of many foreign (above all German) firms from the manufacturing industry (Blažek, 2003), do not have high ratings. Even the regions near to the Austrian border are better evaluated.

The main feature of the mental map of foreign investors is therefore quite obvious preference for the central part of the Czech Republic and also of the largest agglomerations of regional centres, with the exception of Karlovy Vary and Ústí nad Labem cities. How will however the mental map of foreign entrepreneurs look if we filter out the "self-preference" effect (that is if we eliminate higher ratings for the regions where the respondent already has his branch office)? This means some kind of "objectivisation" of the preferential map. The preferences purified of the self-preference effect are shown in Figure 2.
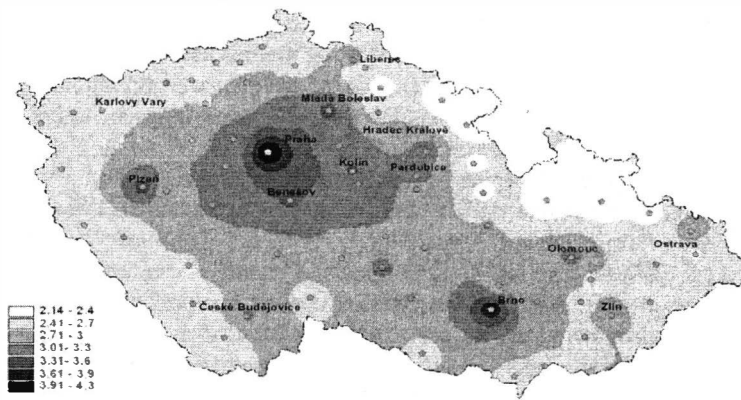
Figure 1 Average rating of Czech regions by foreign firms (n = 155). Legend: 1 – evidently unsuitable location, 6 – the most desirable location

Figure 2 Average rating of Czech regions by foreign firms without the influence of self-preference effect (n = 155). Legend: 1 – evidently unsuitable location, 6 – the most desirable location

The main feature – preference for the central part – remains the same, but Prague itself looses its position. It is presumably the outcome of so-called negative externalities (polluted environment, frequent traffic problems, socio-pathological phenomenon, etc.). It means that Prague city itself is not perceived as the best place for business, meanwhile the central part of the Czech Republic, beyond any doubt, is. Finally, the city of Brno and its surroundings, due to this filtered out evaluation, become the best evaluated region.

## 4. RATING OF REGIONS INFLUENCED BY FIRMS' CHARACTERISTICS

One of the main aims of the research into the foreign entrepreneurs´ preferences is to find out if and how the firms´ characteristics are affecting their perception of Czech

regions as potential regions for locating their branches. During the survey we recorded the data on the respondents´ characteristics together with the ratings of regions. These characteristics were – the current place of business in the Czech Republic, the size of the firm expressed in number of workers, type of activity, whether the firm has branches in other states, not only in the Czech Republic, etc. The answers were encoded which ensured sufficient number of respondents in more categories. When examining the impact of characteristics on the rating of regions, the analysis of variance – ANOVA – was used. For each characteristic, a separate ANOVA test was performed. Meester (2004) introduces an easy method to express the influence of particular characteristics on the total ratings. Within separate ANOVA tests, we can count the number of regions with significant results (or better, where we accept the hypothesis that there are differences between the distinguished categories in the ratings given to the regions). The share of these regions serves as rough indicator of the degree to which the characteristic influences the rating of regions. The results are given in Table 1.

Table 1 The number of regions where firms´ characteristics explain the rating of regions

Characteristic	F significant for ratings
Location in Czechia	14 districts
Branches in other countries	8 districts
Type of activity	3 districts
Size of firm	2 districts
Country of origin of investor	1 district

The table shows that the majority of firms´ characteristics only feebly influence the rating of regions. Out of the characteristics mentioned, the current location of the firm in Czechia has the strongest influence on the rating of regions. Other important characteristic is the firm's activity at foreign markets – enterprising also in other countries or branch offices only in the Czech Republic. Other characteristics have significant effects only in a small number of regions. Nevertheless, the cartographic analysis of ratings of regions per particular firm's characteristics reveals some significant results. The most interesting ones are presented in Figures 3 – 6.
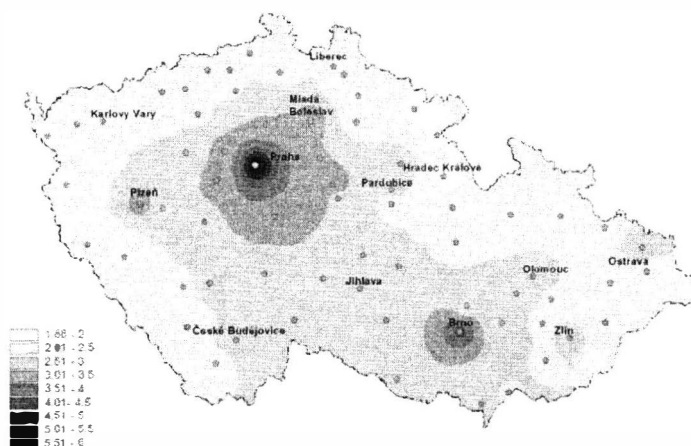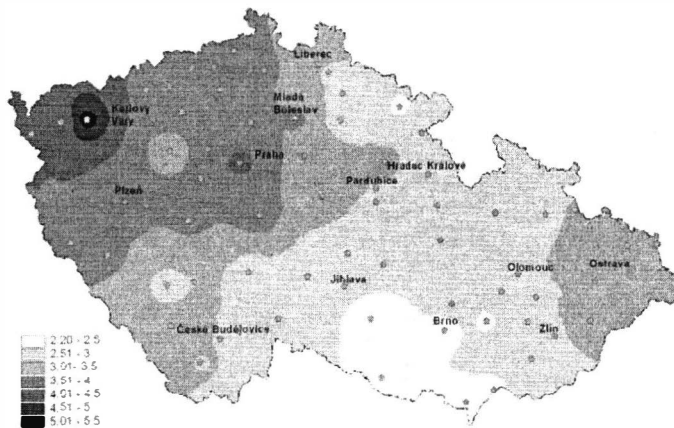

Figure 3a Average rating of Czech regions by foreign firms according to the current location of the firm – firms residing in Prague and surroundings (n = 37). Legend: 1 – evidently unsuitable location, 6 – the most desirable location

As stated above, the current location of a branch in Czechia has the strongest influence among the given characteristics. On maps of ratings per current location of the firm in the Czech Republic we can always discover very strong preferences for one's own region, that means for the area that the entrepreneurs know the best, and then also a preference for large agglomerations. Therefore, for the entrepreneurs from Prague, the Central Bohemia is preferred and so are Brno and its surroundings. There are also higher ratings for bigger cities – Plzeň, Zlín, Ostrava and Olomouc (3a).
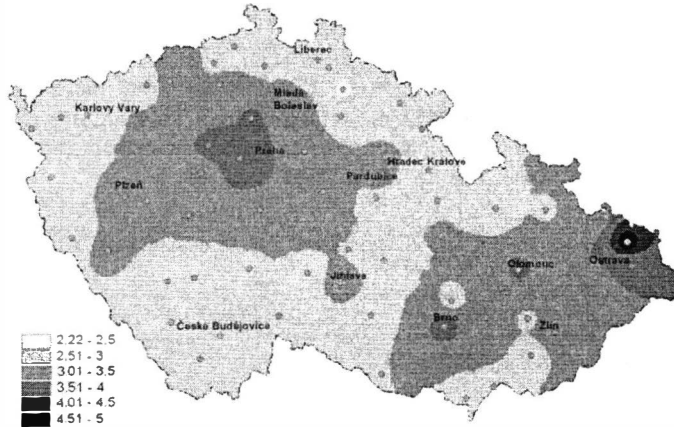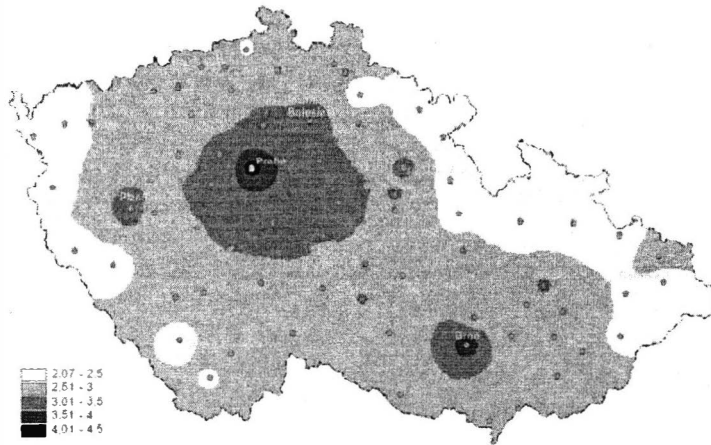

Figure 3b Average rating of Czech regions by foreign firms according to the current location of the firm – firms residing in Moravian-Silesian region (n = 12). Legend: 1 – evidently unsuitable location, 6 – the most desirable location

The same is true also for entrepreneurs residing in the peripheral areas of the Czech Republic. For example the entrepreneurs from the Moravian-Silesian region (3b) prefer also their own area – Ostrava and surroundings – with high scores also for the rest of Moravia. The second peak rises again in the central part of Czechia – Central Bohemia, Prague and larger agglomerations there – Plzeň, Mladá Boleslav, Hradec Králové, Pardubice and even Jihlava.
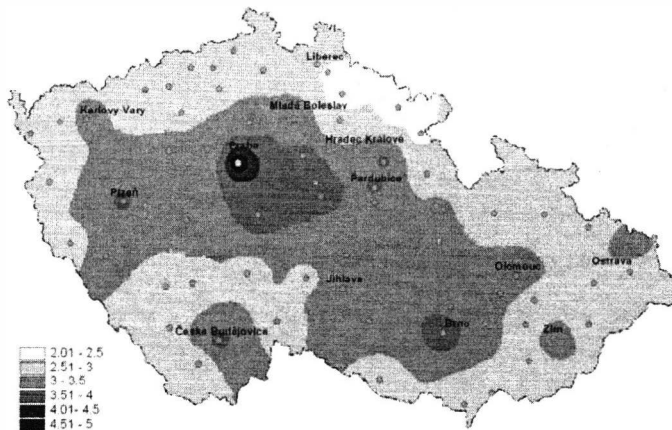

Figure 3c Average rating of Czech regions by foreign firms according to the current location of the firm – firms residing in Karlovy Vary region (n = 5). Legend: 1 – evidently unsuitable location, 6 – the most desirable location

Figure 4a Average rating of Czech regions by foreign firms according to their activities in other countries – firms, which do not have branches in other countries but in Czechia (n = 22). Legend: 1 – evidently unsuitable location, 6 – the most desirable location

Strong preferences for one's own area are obvious also on the map of preferences of foreign entrepreneurs from Karlovy Vary region (3c). The highest ratings are reached in the area of Western Bohemia and they decrease zonally eastwards. The area of decreasing ratings embraces also the agglomerations of Liberec, Hradec Králové, Pardubice and České Budějovice. It is quite interesting that the second peak of high ratings for the firms from Western Bohemia emerges in the remote Ostrava area. Brno and its outskirts (which normally occupy the second place in preferences) get the lowest ratings among all the Czech regions.

Figure 4b Average rating of Czech regions by foreign firms according to their activities in other countries – firms active also in other countries apart from Czechia (n = 133). Legend: 1 – evidently unsuitable location, 6 – the most desirable location

It seems that foreign firms active only in Czechia, without any experience with enterprising in other countries, copy the general spatial pattern of preferences – the

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highest peaks are in Prague, Brno with surroundings and other big cities, mainly Plzeň (4a). It is possible, that these firms do not have enough information so far and therefore prefer "safe" areas – large agglomerations and the central part of the republic – and avoid peripheral regions, about which they have only scarce information.
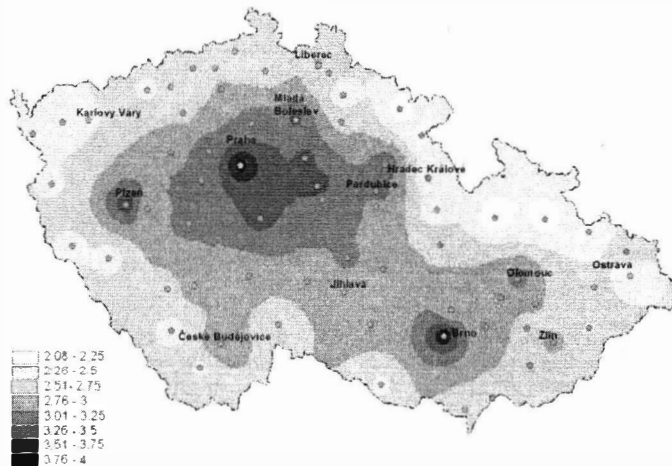
Figure 5a Average rating of Czech regions by foreign firms according to the type of activity – manufacturing industry (n = 97). Legend: 1 – evidently unsuitable location, 6 – the most desirable location

It is obvious that the foreign firms active in more foreign countries have a more differentiated view of the Czech Republic (4b).

It can be supposed that these firms have enough experience with entering foreign markets and are able to conduct a thorough market analysis before entering any foreign market.
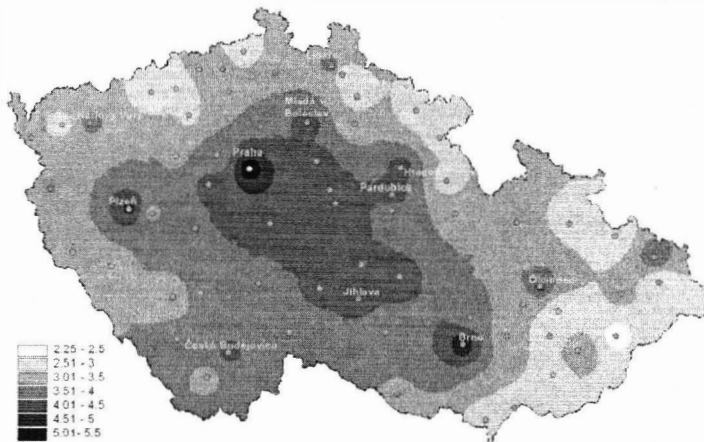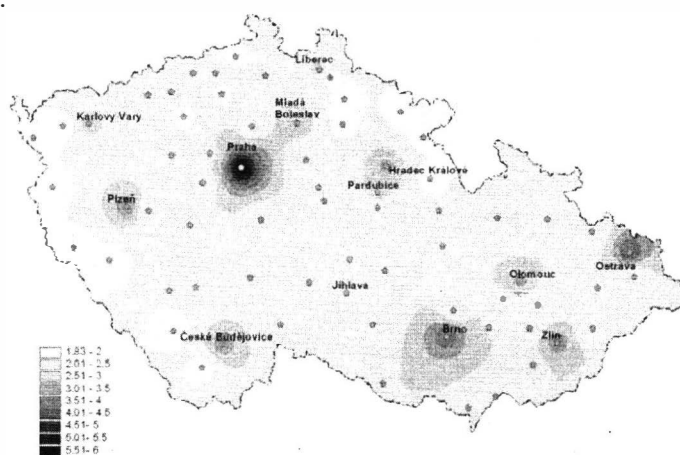

Figure 5b Average rating of Czech regions by foreign firms according to the type of activity – producer services (n = 20). Legend: 1 – evidently unsuitable location, 6 – the most desirable location

In the map we can see that the most attractive areas are not only those around the large cities, but also some specific regions in the periphery (Klatovy region etc.). The delimitation of preference peripheries is also more sensitive – see for example the belt of regions in the South Bohemia or the area of Central Moravia.

Statistics of foreign investment inflows show that the manufacturing industry received the highest share of the total FDI flows during the transformation period (1991 – 2001). The preferential map of foreign firms from this industry copies again the spatial pattern of preferences with a clear preference for Prague, Brno and larger agglomerations (except Ostrava). The ratings are decreasing zonally from the central part of Czechia to the Czech periphery (5a).

The entrepreneurs from the progressive tertiary sector – producer services (5b) – also prefer Prague, its surroundings and large cities. Generally, the central part of Czechia is preferred, whereas the ratings decrease zonally in the direction to peripheries. The only more notable difference from the general pattern is the strongest decrease of preferences in the Moravian area, where only the Brno agglomeration gets high rating and finally the Moravian preferences are lower (even lower than those of Czech peripheries).

Figure 5c Average rating of Czech regions by foreign firms according to the type of activity – financial industry (n = 11). Legend: 1 – evidently unsuitable location, 6 – the most desirable location

The preference map of firms active in the financial industry (5c) quite clearly corresponds to the main characteristics of this industry itself. Financial services represent the summit of the progressive tertiary sector, which is characterized by its concentration in the peaks of residential hierarchy – the biggest cities. But this industry very carefully distinguishes even within these agglomerations. The highest rating is of course found in Prague, behind which the other agglomerations are lagging. All the rest of Czechia is perceived by financial industry as a periphery.

It is also very interesting to observe the differences in preferences according to the country of origin of the investor. The first figure shows the preference map of German entrepreneurs. It is quite surprising that exactly this map does not differ more significantly from the general preference pattern. Again, the central part of Czechia is preferred (Prague and surroundings) and then come other larger cities. The lowest scores can be found on the periphery.
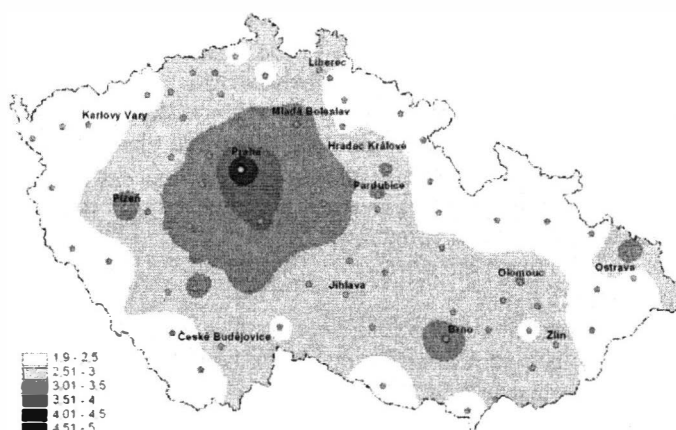
Figure 6a Average rating of Czech regions by foreign firms according to their country of origin – German firms (n = 28). Legend: 1 – evidently unsuitable location, 6 – the most desirable location

The most striking result is that there are low scores also on the periphery alongside the German border. This used to be the area attracting a high share of German investments from the manufacturing industry. It appears that German firms have changed their investment strategy from the so-called "low cost" strategy to the "market penetration" one (e.g. Blažek, 2003) and they copy the general pattern of location preferences (6a).
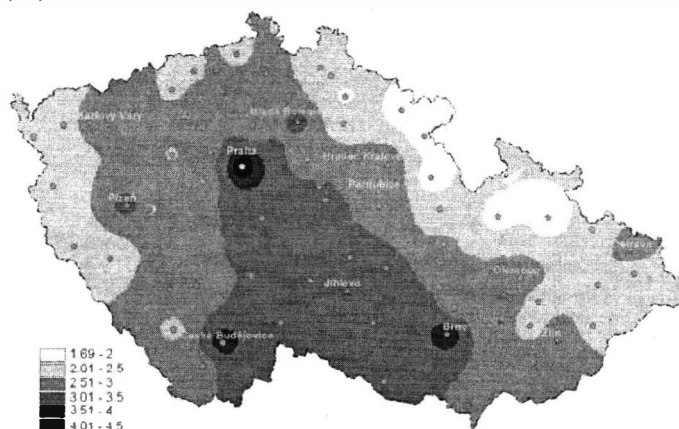
Figure 6b Average rating of Czech regions by foreign firms according to their country of origin – Austrian firms (n = 13). Legend: 1 – evidently unsuitable location, 6 – the most desirable location

At the first sight, striking results are seen also in the preference map of Austrian entrepreneurs (6b). It could be anticipated that their spatial pattern of preferences would be similar to the German entrepreneurs (thanks to similar entrepreneurial culture, same industries etc.). Their preference map is nevertheless quite different. Prague and its surroundings still form the highest peak, but the most preferred areas forms a triangle

delimited by Prague, České Budějovice and Brno (the areas alongside the Austrian border proceeding to the centre of the republic). The ratings then decrease zonally in the direction to the peripheries. It seems that Austrian firms attach much more importance to the zonal (horizontal) geographical location than to the hierarchical (vertical) location.

5. REGRESSION ANALYSIS – INFLUENCE OF LOCATION FACTORS ON THE RATINGS

Regression analysis generally investigates how one or more explanatory variables affect one dependent variable. Despite the fact, that the respondents had to evaluate regions and not particular location factors, with the help of linear regression analysis we can find out which characteristics play the major role when deciding about the location of firm branch in the Czech Republic. The average rating of a region serves as dependent variable and the characteristics of regions from a large database of geographical data as independent variables. The aim of regression analysis is to explore which variables can explain the variation in the final rating of regions.

When applying regression analysis we used various methods. With the stepwise method the variables having significant effects on the rating were chosen. These variables were then combined into different regression equations and regression lines graphs of individual partial regressions were checked in graphs to obtain the most illustrative multiple regression equation which could the best explain the influence of place characteristics on the variance in ratings by foreign firms.

Table 2 Table of regression coefficients

	Unstandardised Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	349.532	108.162		3.232	0.002
Distance from Prague [1]	-14.556	3.232	-0.415	-4.503	0.000
The increase of university level graduated in 1991 – 2001 UNI9101	61.270	17.336	0.435	3.534	0.001
University graduated UNIV91 [2]	16.579	4.654	0.489	3.562	0.001
Average wage in 2002 WAGE02CR	1.774	0.616	0.241	2.881	0.005
Secondary level graduated SECOED01 2)	-9.246	4.009	-0.293	-2.306	0.024
Distance from Bavarian border [1]	-4.915	2.467	-0.182	-1.992	0.051
Vocational trained VOCED01 [2]	2.582	1.745	0.114	1.480	0.144
a Dependent Variable: SUM OF PERCEPTION BY FOREIGN FIRMS 2004					

[1] Typological distance
[2] Percentage of educational categories in the population of the region aged 15+

The multiple regression analysis revealed that 74 % of variance in the ratings of regions could be explained with a small number of explanatory variables. Location variables – distance to Prague and less important distance to Bavarian border – appeared to be important explanatory variables. The variables indicating the educational level of

regional population in major educational categories and also increasing number of university level graduates during the transformation period are also of great importance. Last but not least, average wages in regions (as indicator of socio-economical level) affect the final evaluation of regions as well.

The ratings of regions are therefore affected mainly by their relative location, above all by their location to Prague, and less strongly by their distance from Bavarian border (that means from the "ex-West"). Then we have to mention the role of the variable highlighting the importance of labour market indicators, the offer of labour force and its quality in regions – the increase of university level graduated during the transformational period and the percentage of university graduated in total. Foreign firms also prefer regions with a high percentage of vocationally trained people, i.e. qualified workers. On the other hand, it is very interesting that secondary education with A-level examinations does not attract foreign firms (negative effect). The last variable affecting the evaluation of regions is a qualitative one – average wage in the region. Thus besides the typical factors of geographical location, we have revealed that location factors representing agglomeration advantages in the modern sense (good local environment, good endogenous resources etc.) are more important than the quality of the region evaluated by exogenous resources and other "hard" economic indicators. It is also interesting that foreign firms prefer good endogenous resources even to agglomerations with other foreign firms or to concentration in regions with a high business activity.
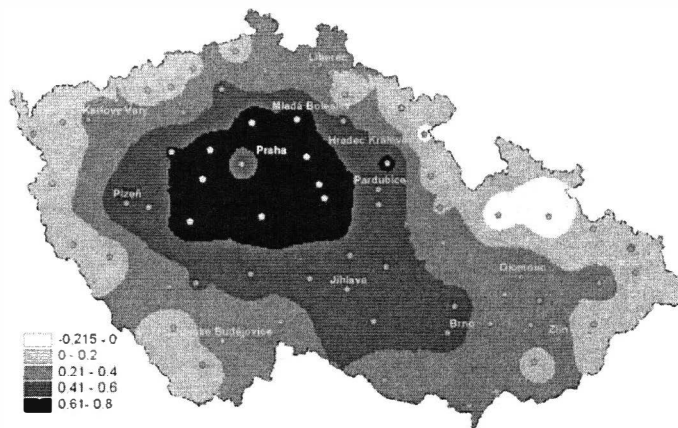
6. PRINCIPAL COMPONENT ANALYSIS

Total rating of regions and cartographical method are sufficient tools to inform about general preference trends of foreign investors in the Czech Republic. Nevertheless, if we want to reveal the patterns, which are hidden in the data from each respondent, and to discover the factors forming the preference patterns, neither GIS analysis nor linear regression can serve as suitable method. In the next section, the former (non-transposed) data matrix was subjected to principal component analysis. Ratings for particular regions were treated as variables and respondents as cases. The Varimax method of rotation was chosen as it maximizes the variance between the extracted components. In the matrix of component loadings we can more often find higher values and the total result of rotation is better interpretable.

The problem may arise how many components to extract. In the case of foreign entrepreneurs´ preferences of Czech regions, rotation of five components gave a clear picture. Three extracted components did not lead to a good interpretation as they did not reveal any spatial pattern (three relatively big and heterogeneous areas). The same situation occurred also with rotation four components, where different areas melted under the heading of only one component. Thus the rotation of five components at the end gives the best solution for interpretation of each component by a specific location factor or group of location factors.

Component loadings are used to group the regions, which more or less belong together. The loadings shown on the maps (Figure 8) should not be interpreted in terms of high or low ratings. The loading means that the respondents tended to give the same rating to all places showing a high loading on a particular component, no matter if a

positive or a negative one. The areas delimited on the basis of component loadings for each component are rather typical areas of evaluation, which have some common denominator for the respondents or show some kind of opposition between certain types of areas within the Czech Republic.

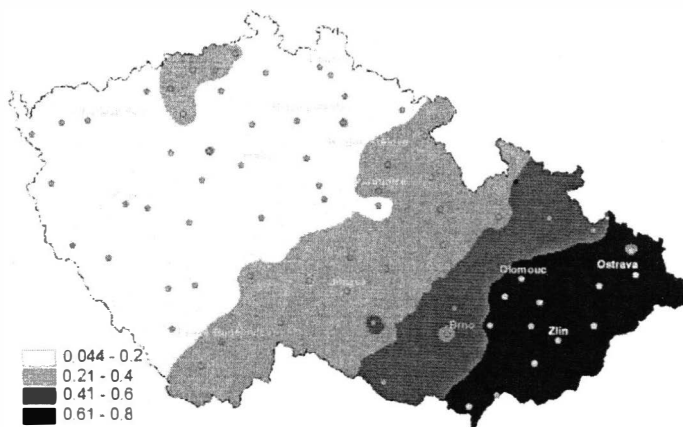**Figure 7a** Results of principal component analysis – loadings on component 1

The first component depicted in Figure 7a represents the pattern that strongly resembles the map of total ratings of Czech regions and expresses opposition between the centre and the periphery. It highlights very clearly the importance or the relative location with respect to Prague. It also partly reflects the peripherality of regions connected with their general socio-economical level.
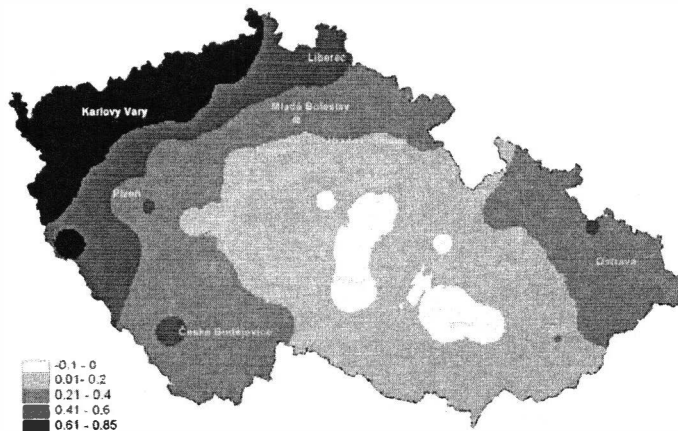
Figure 7b Results of principal component analysis – loadings on component 2

The second component shows high loadings in the northwestern and western part of Bohemia: loadings are declining eastwardly. It thus expresses the opposition between the regions near to the German border (generally to the "West") and the eastern parts of the republic. High loading sets are thus bound to the areas which on one hand do not excel in

indicators of economical, educational or employment levels, but on the other hand, these areas have had higher numbers of foreign firms branches, increasing number of jobs, entrepreneurial activity etc. right from the beginning of the transformational period.
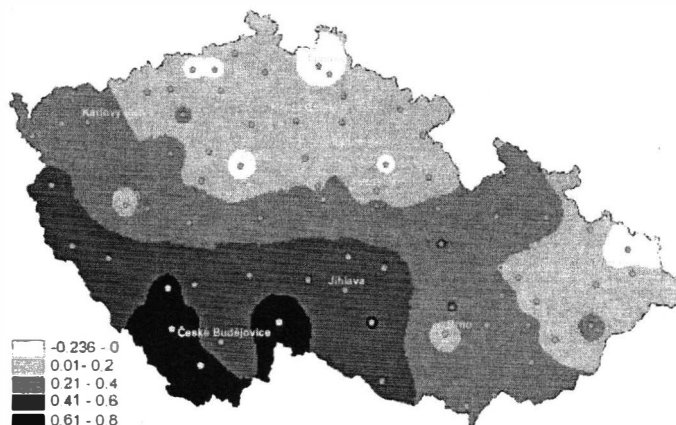

Figure 7c Results of principal component analysis – loadings on component 3

The third component shows high loadings in the east of Bohemia. Loadings are decreasing steadily in the western direction.

This component can be interpreted as factor of cheap, but skilled labour force, which is available to foreign investors – that is a factor of available human and good endogenous resources.

The areas with higher loadings are, according to the regression analysis, those with a higher unemployment rate and rather unfavourable economical indicators, but on the other side also with enough university graduated people and qualified workers, with good natural environment etc.

Figure 7d Results of principal component analysis – loadings on component 4

The fourth component has a clear zonal delimitation as well. It represents the opposition between the southern part of the Czech Republic and its northern regions. The belt of high loadings embraces southern Bohemia and Moravia and continues to Eastern Bohemia including also the mountain region of Jeseníky. We can interpret this factor as a factor of environmental quality and good endogenous resources at the same time.

-0.131 - 0
0.01 - 0.2
0.21 - 0.4
0.41 - 0.6
0.61 - 0.8
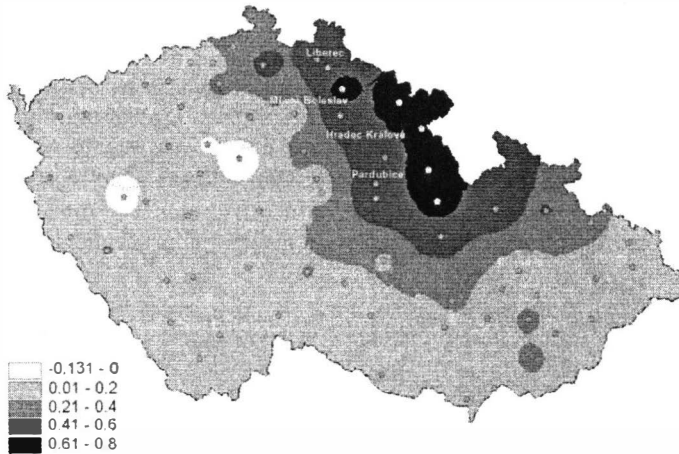
Figure 7e Results of principal component analysis – loadings on component 5

The fifth component is also zonally depicted with the highest loadings in the northeast of the republic, in the mountain regions of Orlické hory, Jeseníky, Krkonoše and their foothills. We can interpret this component in terms of a good and constantly improving natural environment with a strong aesthetic (in the sense of landscape) and recreational function, very likely without any aspiration to become an economically developed area of Czechia. This interpretation is supported also by the negative loadings around the two biggest cities in Bohemia – Prague and Plzeň.

7. CONCLUSIONS

On the basis of the data obtained from our survey, the basic map of ratings of particular Czech regions by firms of foreign investors was drafted. This first map of preferences shows very clear preferences for the central part of the Czech Republic - the capital city of Prague and its wider surroundings. As the second important feature of basic geographical pattern of preferences, there are the larger Czech agglomerations (forming a mezzo-regional hierarchical level) and their outskirts with higher preference scores; however, even some larger cities (located in peripheral parts of the national territory) are given lower preference scores. The third main feature of this basic map is obviously that of very low scores for the peripheral areas of the Czech Republic.

In the subsequent statistical analysis, the impacts of firm characteristics upon the preference scores of Czech regions were investigated. It was established that these characteristics influence the preferences only to a very limited extent and that their

significant influence was always indicated for a small number of regions only. Nevertheless, a further analysis of specific maps concerned with the particular firm characteristics provided some interesting results. The current location of foreign firms in the Czech Republic has the strongest influence on the total ratings of regions. The clearest feature of all the preference maps is, without any doubt, the preference for one's own region and then the preference for large agglomerations and the central part of the Czech Republic. There are also differences between preference maps due to the fact whether a firm has its branches only in Czechia or is active also in other foreign countries. The spatial pattern of preferences is also influenced by the industry to which the firms belong. The manufacturing industry copies the general pattern of preferences – the central part of the country and large agglomerations, whereas the firms from other industries choose more specific regions. The extreme case is the top of the tertiary sector – financial services. The firms from this sector clearly prefer only the leading big cities and the rest of the Czech Republic remains without any interest of the investors from this sector. Some differences in preference scores can be identified also according to the country of origin of the investor. Clearly, there are two larger subgroups: the investors from countries manifesting their preferences in accordance to horizontal geographical positions of regions and the investors from the countries preferring regions on the basis of the hierarchical positions in the national regional system.

The multiple regression analysis exploring the effects of location factors on the total ratings revealed that 74 % of the variance in the ratings of regions (70 district units) could be explained with the help of a small number of explanatory variables. The location variable distance to Prague (less important is the distance to the Bavarian border) appears to be an important explanatory variable. Significant are also the variables indicating the educational level of regional population in major educational categories, mainly the university level and the vocationally training level in 2001 and also an increasing level of university graduates during the transformational period 1991 – 2001. It is also interesting to note that the districts with higher percentage of population with secondary education in 2001 are not evaluated as attractive regions by foreign firms. The common explanatory factor is, therefore, the qualified and skilled human resources, no matter whether specialists or workers – both are primary key endogenous resources. The socio-economic level of particular regions has also some influence. The main factors affecting the preference of regions by the foreign entrepreneurs are therefore: the relative location to Prague and Central Bohemia, endogenous human resources and the socio-economical level of regions (i.e. 70 district units).

Component analysis was used for a more detailed look on the factors hidden behind the data and ratings of regions by individual respondents. The five components extracted seem to best show the situation in the preference map of foreign investors. The areas delimited by the factor loadings thus represent those parts of Czechia that are in opposition from the viewpoint and in perception of the foreign firms. When trying to interpret these components in the sense of location factors, we can characterize the first component as the factor of relative location with respect to Prague and the second component as the factor of relative location with respect to the western Czech boundary. The third component represents the regions with suitable and available endogenous resources. Analogously, the fourth component expresses good residential environment and endogenous resources. The component analysis enriched the results of linear regression also by revealing the fifth "hidden" factor – aesthetical and recreational (residential) quality of the environment.

It is therefore clear, that the Czech Republic should proceed in attracting foreign investors by uprising the educational level and, generally, the quality of human resources. Due to the obvious preference for the central part of the Czech Republic, mainly Prague and surroundings, a massive propagation of other regions, including the peripheries with good endogenous resources, should be initiated immediately. The reinforcement of environmental protection of Czech mountain areas with distinguished residential and aesthetic factor, of course not only for foreign investors, should be taken for granted.

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Pilotní studie zahraničných firem a jejich mentálních map regionů České republiky

Resume

Na základě dat získaných dotazníkovým šetřením byla vytvořena základní mapa hodnocení jednotlivých českých regionů firmami zahraničních investorů. Tato prvotní mapa preferencí ukazuje zcela jasnou favorizaci centrální části České republiky, tj. hlavní město Prahu a jeho širší okolí. Jako další vrcholy vystupují větší české aglomerace (tvořící mezo-regionální hierarchickou úroveň) a jejich okolí s tím, že i větší města, která jsou však v periferních oblastech, jsou hodnocena níže. Třetím hlavním rysem této základní mapy je zcela jasná neoblíbenost periferních oblastí ČR.

Dále bylo zkoumáno, jaký vliv na hodnocení českých regionů mají jednotlivé charakteristiky respondentských firem. Tyto firemní charakteristiky však ovlivňují toto hodnocení jen velmi slabě a signifikantní vliv se vždy projevil jen u některých okresů. Nicméně další rozbor specifických map dle jednotlivých firemních charakteristik odhalil některé zajímavé skutečnosti. Největší vliv na celkové hodnocení regionů mělo současné umístění sídla pobočky zahraniční firmy v České republice. Nejvýraznějším rysem všech preferenčních map dle sídla firmy je bezesporu preferování své vlastní lokality a dále preferování velkých aglomerací a centrální části ČR. Rozdíly v mapách preferencí existují také podle toho, zda daná firma spravuje pobočky jen v ČR nebo i v dalších zemích. Prostorový vzorec preferencí je ovlivněn i odvětvím, ve kterém firmy působí. Zpracovatelský průmysl tak kopíruje obecný vzorec preferencí – střed země a velké aglomerace, zatímco firmy podnikající v dalších odvětvích si již vybírají více specializované regiony. Extrémem je pak vrchol terciéru – odvětví finančnictví – kde firmy preferují v podstatě jen vybraná velká města a zbytek území ČR zůstává bez zájmu investorů tohoto odvětví. Rozdíly nalézáme i v hodnocení regionů ČR dle země původu investora. Zjednodušeně řečeno v této podskupině existují země, které vykazují preference spíše dle horizontální geografické polohy a pak země preferující oblasti na základě rozdílů ve vertikální geografické poloze.

Při regresní analýze lokalizačních faktorů na celkové hodnocení bylo prokázáno, že cca 74 % variance v hodnocení regionů může být vysvětleno s pomocí několika málo explanačních proměnných. Především se jedná o vzdálenost od Prahy (slaběji od Bavorských hranic). Vysoký vliv mají také proměnné vyjadřující míru vzdělanosti v jednotlivých vzdělanostních kategoriích, především VŠ a vyučení, a také s nárůst podílu vysokoškolsky vzdělaného obyvatelstva v transformačním období. Zajímavé je, že oblasti s vyšším podílem středoškolsky vzdělaných obyvatel přitahují zahraniční firmy méně. Společným jmenovatelem jsou tedy kvalifikovaní lidé, ať už odborníci či dělníci, tj. kvalitní lidské a endogenní zdroje.Vliv má také socio-ekonomická úroveň jednotlivých regionů. Hlavními faktory ovlivňujícími hodnocení regionů zahraničními podnikateli jsou tudíž relativní poloha, endogenní zdroje a socio-ekonomická úroveň regionů.

K podrobnějšímu pohledu na faktory, které se skrývají za hodnocením regionů jednotlivými respondenty, byla použita komponentní analýza. Bylo rozhodnuto pro rotaci pěti komponent, které, jak se zdá, nejlépe interpretují situaci v preferenční mapě zahraničních investorů. Oblasti vymezené komponentními zátěžemi tak představují části ČR,

které jsou v opozici z pohledu a vnímání zahraničních firem. Pokud se budeme snažit jednotlivé komponenty interpretovat ve smyslu lokalizačních faktorů, můžeme první vyextrahovanou komponentu označit jako faktor relativní polohy vůči Praze a druhou komponentu jako faktor relativní polohy vůči západní hranici ČR. Třetí komponenta představuje oblasti s vhodnými a disponibilními endogenními zdroji, obdobně pak čtvrtou komponentu interpretujeme kvalitním životním prostředím a endogenními zdroji. Komponentní analýza obohatila výsledky regresní analýzy ještě o další „skrytý" faktor – estetickou a residenční kvalitu prostředí.

Je tedy jasné, že Česká republika by i nadále měla při přitahování zahraničních investorů postupovat cestou zvyšování vzdělanosti a obecně kvality lidských zdrojů. Vzhledem k výrazné preferenci pro střední část republiky, především pak Prahu a okolí, by ale také mělo dojít k masivní propagaci ostatních regionů (včetně periferií) s kvalitními endogenními zdroji a k zesílení ochrany přírody horských oblastí ČR vzhledem k významu residenčního a estetického faktoru nejen pro zahraniční investory.