# COMPETITIVENESS OF THE REGION AND ITS POSSIBLE INFLUENCE ON LOCATION DECISION-MAKING PROCESS

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### Abstract

The aim of this paper is to try to define competitiveness and its possible link with localization of business entities. The article presents results of empirical research, which was carried out in small and medium-sized enterprises. The aim of the research was to determine, among other things, whether the competitiveness of the region may somehow affect location decision-making process. In the theoretical part, competitiveness of the region with the impact of location factors is briefly described at first. Identifying important location factors can actually help to attract new businesses. New business could then help the region to increase his regional competitiveness. It is therefore important to identify the relationship between location factors and regional competitiveness. The second part defines the methodology and examined hypotheses. The data collected in the empirical research were used to test the hypothesis "*the relationship between location decision and the competitiveness of the region does exist*". Last part includes the results and some suggestions for further research.

**Key words:** regional competitiveness, location factors, location decision-making process

**JEL Code:** C12, R 10, R 53

## Introduction

For many years a lot of economists have been trying to figure out what is behind the divergent evolution of the economic situation of each region[1] and why differences arise between them. Increased global economic integration, globalization, environmental system and ability to settle business almost anywhere could be the reasons why every region wants to provide the best conditions for businesses. The correlation between competitiveness and the world wide globalization states Viturka (2007) in his work. Movements of labour, capital flows and institutional changes have become crucial factors of success and competitiveness (Fárek,

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[1] Region can be understood as a complex dynamic spatial system which is formed by certain characters. These features distinguish it from its surroundings. (Anděl)

2006) of regions. Rumpel (2008, s. 11) considers as the main factors of regional competitiveness the impact of new technological, political and economic changes.

OECD defines competitiveness as *„the degree to which a country generates, while beány and remaining exposed to international competition, relatively high factor income and factor employment levels"* (Fara a kol., 2011, s. 10). According to The World Economic Forum the regional competitiveness could be defined as a "*set of institutions, policies, and factors that determine the level of productivity of a country"* (Schwab, 2010, s. 18). Regional competitiveness is in the Czech Republic monitored by for example Tvrdoň (2005), Skokan (2004), Wokoun (2010) or Viturka (2007). At the international field of regional competitiveness is the main author M. Porter (1992, 1990).

## 1    Location and Competitiveness

The competitiveness of the region is  a current issue. The main problem is already the concept of regional competitiveness, which is a subject of many scientific discussions. Krugman defines the regional competitiveness as a combination of favourable business performance and something extra (Krugman 1997, str. 7). But on the other hand, Krugman like other authors does not agree with the use of this concept of competitiveness at the territorial level (Krugman, 1994). The basic question is whether the cities, regions or states may compete at all. Camagni (2002) and Kitson, etc. (2004, s. 992) argue that there is neither theoretical nor empirical universal framework for regional competitiveness. These authors have identified the main problem in inappropriate indicators, poorly defined conditions and not completely specific terms. In contrast, for example Wokoun et. al. (2010) expresses that regions are competing mainly in the construction of an appropriate business environment and subsequently attract labour and capital.

It could not be said, that the region is competitive only because it contains plenty of competing firms. Generally, in each region there are competitive and uncompetitive firms that determine the common factors of the territory[2].

In connection with location factors can be assumed that the more advanced regions, the easier it is to deal with the implementation of possible improvements to attract new businesses.

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[2] These factors include, for example, physical and social infrastructure, workforce qualification, effectiveness of public institutions, etc.

Beneš (2006, s. 22) explains the regional competitiveness as the ability to increase rate of employment, product diversification, product added value so that the business relationship could be developed in balanced way. Also here could be seen the difference between regional competitiveness and localization. The definition implies that **the more developed regions, the more new businesses it will locate**. From above the following hypotheses were verified:

Ho: "*examination factor is independent of the competitiveness of selected region*".

H1: "*examination factor is dependent of the competitiveness of selected region*".

From above definitions and approaches could be determined a conclusion that **finding some competitive advantages could be understood as a basis for regional competitiveness.**

Therefore, only the dependence of evaluated location factors associated with the region on the level of competitiveness will be investigated. These factors can be taken as explanatory variables for region´s competitiveness:

- economic situation in the region,
- image of the region,
- presence of foreign companies
- availability of skilled human resources.

For these factors, it is assumed that they are mainly in more competitive regions. These factors may be there for being taken as a basis for evaluating the competitiveness of the region.

## 2    Methodology

The main goal of the article is to identify the interdependence between the assessment of location factors and the level of competitiveness of the region. In other words, whether contacted economic entities more considered their location decisions-making process, have set up their business into regions that can be considered as more competitive. And whether there is a certain relationship between these two variables. A problem is that localization decision-making of companies is often very subjective matter, it is complicated to measure them in any way. The problem of mutual relations between the localization decisions and the competitiveness of the region was solved by adding specific dates:

- **location decisions were quantified in the survey on a scale from 1 to 5** (1 is absolutely insignificant factor for location decisions - 5 absolutely important factor for location decisions).
- regional competitiveness was quantified by **foreign direct investment.** FDI can be considered as a key indicator of development of the region (Hlavacek, 2009, p 7).

The biggest problem in evaluating the above stated hypotheses was to define the appropriate explanatory factor for the competitiveness of the region. The factor should explain the best the attractiveness of the selected region. Among the possible comparison base include:

- **Regional Competitiveness Index;**
- **Competitiveness index** (Huggins, 2003), created by R. Huggins and representing a dynamic tool that reflects measurable criteria for local competitiveness.
- **Regional Innovation Index;**
- **MasterCard** *project 2009* **Czech Development Centres** - created at the University in the project Czech MasterCard development center, which operates on the basis of comparing the values of the region (or country) with the most favorable value (the best regions). Best region and reaches 100%.
- **Gross Domestic Product by Region** - considered as a basic indicator for comparing regional competitiveness and socio-economic level of regions.

Rating the regional level is also possible by the unemployment, the average gross wage, the average annual population growth, the number of registered businesses and also according to the proportion of highly educated population to the entire population, long-term unemployment or labor productivity (Wokoun, et al., 2012). Considering the available data will be as independent variable gate size FDI, which will for ease of processing be divided into intervals, wherein for selecting the number of intervals will be used in the Sturges rule (1),

$k \approx 1 + 3,3log(n)$ (1)

"k" is the number of class intervals, and n is the sample size. Because of the large spread between the amounts of FDI due to possible bias, outliers were removed and the final selection of respondents received only 208 MSE.

**Tab. 1: Distribution of regions according to the amount of FDI**

| Class | The amount of competitiveness of the region | The class interval | The absolute frequency of regions in the interval | The absolute frequency of respondents in the interval |
|---|---|---|---|---|
| 1 | Very low | <816 771; 4 397 101> | 18 | 49 |
| 2 | Middle low | (4 397 101; 7 877 431> | 19 | 43 |
| 3 | Low | (7 877 431; 11 557 761> | 13 | 49 |
| 4 | Middle | (11 557 76; 15 138 091> | 6 | 25 |
| 5 | High | (15 138 091; 18 718 421> | 3 | 14 |
| 6 | Middle high | (18 718 421; 22 298 751> | 5 | 22 |
| 7 | Very high | (22 298 751;25 879 081> | 3 | 6 |

Self processed

As seen from Table. 1, each region was assigned a class above competitive factor that has been given to the interdependence of the evaluation of selected factors. Since not verified the hypothesis of normality of the distribution of the obtained data, the hypothesis was tested using the Kruskal-Wallis test. Prerequisite Kruskal-Wallis test is ordinal scale measurements with the same distribution. This test is useful especially in cases where it is not possible to use one-way analysis of variance, since the condition is not met by normal distribution and equality of variances or homoscedasticity, which can be verified using the Levenova test: The following hypotheses for Levens' test were tested in the first stage:

*$H_0$: variances in all classes are the same.*

*$H_1$: variances in all classes can be considered as statistically significant.*

If the value of P-value test Levenova is greater than 0.05, we will not reject the null hypothesis of conformity variances N violation of the conditions of homoscedasticity and so dependency evaluation  localization factor for the competitiveness of the region can be

examined by using the non-parametric alternative analysis of variance, Kruskal-Wallis test. Generally hypothesis for the Kruskal-Wallis test could be defined:

$H_0$: *Medians in all groups are equal.*

$H_1$: *Medians of at least two groups differ.*

## 3    Results and Discussion

As seen from Table. 2, set hypothesis was not confirmed in any of the factors examined. Therefore, we could not confirm that the evaluation of selected localization factors related to the level of competitiveness. Rejection of the hypotheses was assumed, since the factors were evaluated by individual respondents hypothetically. The weaknesses of this hypothesis could be a stimulus for further research, where it could be already in the broader context examined the success of a business entity that is thinking about localization.

**Tab. 2: Test hypotheses about addiction of location factors on the level of competitiveness of the region.**

| Factor | Normal distribution | The test criterion of Levens test of homoscedasticity (F) | P-value for Levens test of homoscedasticity | The test criterion of Kruskal-Wallis test (K) | P-value for Kruskal-Wallis test | The dependence exist? YES/NO |
|---|---|---|---|---|---|---|
| Economic situation in the region, | NO | 0,780 | 0,585 | 5,970 | 0,425 | **NO** |
| Image of the region | NO | 0,528 | 0,786 | 8,171 | 0,225 | **NO** |
| Presence of foreign companies | NO | 0,678 | 0,667 | 7,231 | 0,299 | **NO** |
| Availability of skilled human resources. | NO | 0,769 | 0,594 | 8,403 | 0,209 | **NO** |

Self processed

The region's competitiveness should be enhanced primarily by attracting new businesses that is why it is important to know which factors affect these entities in their localization decision-making process. The greatest benefits in the entry of new firms and the allocation of capital in backward areas can be seen especially in alleviating the problems of unemployment, transfer of new technologies and the rejuvenation of the productive structure. However, it is important to realize that the arrival of new investors in underdeveloped areas may not have positive influence for current situation in the region. There is a real possibility that these newly coming companies will dangerously compete with present companies in the region and thus threaten their viability. The differences between individual regions are in some states more and in some less noticeable. From the perspective of the Czech Republic can be stated that in 1989 large disparity between regions were recorded. But this situation has changed over time due to a large number of new start-ups and also due to structural changes that Czech economy in the last few years has passed.

**Conclusion**

Some of them tend the influence of variety of natural and demographic conditions in each region. Awareness of the region, its history and economic status also play an important role in the development of the region. The general rule is that in more developed regions the evaluation of money in short term is faster and more efficient than in the weaker regions. (Žižka a Jirásková)

Not only in the Czech Republic but all over the world each year is invested large amounts of funds into business development and support. From current point of view on economic development over the last few years it has become clear that not all funds are spent effectively. It is therefore necessary to consider whether it would be a better solution for current economy not to invest such funds in the amount of incentives for new businesses, but rather to focus on location factors, which affect the business and then invest to improvements of conditions in individual areas.

Although it is not possible to affirm that the evaluation of chosen localization factors depends on an extend of  a region competitive ability, it is not possible to refuse the thought that the more extended will be the region competitive ability, the more economic subjects from abroad

will localize into it. Therefore it is supposed farther comparing of results acquired by means of a questionnaire inquiry of domestic respondents with an empirical inquiry of foreign companies that are planning investment construction in the Czech Republic in the future. The identification of factors that are perceived by foreign investors as barriers of the entrance to the Czech market appears crucial.

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