EFFECTS OF DIRECT INVESTMENTS ON THE REGIONAL DEVELOPMENT

G. Chmelíková, R. Redlichová

Abstract

CHMELÍKOVÁ, G., REDLICHOVÁ, R.: *Effects of direct investments on the regional development.* Acta univ. agric. et silvic. Mendel. Brun., 2012, LX, No. 7, pp. 119–126

This article discusses the problems of exogenous approach to regional development and tries to evaluate the impacts of such regional politics. Specifically, it is focused on the evaluation of investments efficiency in the hard infrastructure of municipalities. The main contribution of this paper lies in establishing a methodical basis for the evaluation of investments in the hard infrastructure of municipalities, both from the view of economic impacts on the economy of respective municipalities and also from the view of wider social context, concerning mainly the employment and economic base structure. Subsequently, the impact of majority of industrial zones in the Czech Republic on regional development is tested using this methodological approach.

regional development, industrial zones, evaluation of public benefit projects

The quality of each economy is determined by particular factors of development distributed unequally throughout the area of this economy. To stimulate these factors of development, many theoretical approaches have been invented, generally referred to as a theory of regional development. The goal of the theories of regional development is to describe on the basis of selected methodological approach the behaviour of social system and provide the creators of regional politics with a predication tool for application of their measures. According to Wokoun (2008), these theories of regional development are traditionally divided into two basic groups – convergent and divergent theories. The theories in the first group suppose that a natural attribute of each social system is the tendency to reduce differences among regions. The second group contains divergent theories which on the contrary consider the increase of regional differences as a basic tendency of the system. The key difference is the amount of weight these theories give to the differentiation and equalizing mechanisms. One of the basic and equalizing mechanisms is a stabilizing role of fiscal politics in the form of the redistribution of income from prospering developing areas. According to OECD, it is possible to see this process as a common tendency to reduce regional disparities primarily by promoting economic activities in particular regions. Thus regional politics seeking to achieve this goal in the past were focused on the infrastructure development which should lead to the increase of region attractiveness and the influx of investments. Not all research evaluating the efficiency of regional politics showed the positive impact on disparities reduction among particular regions, so it provoked wide discussion about the change of approach to regional development.

In the Czech Republic, the promotion of infrastructure development was realized by a so called programme of industrial zones. The term industrial zone is generally explained as a complex of universal compact objects suitable for a simple production with efficiently solved transport and a large proportion of greenery among individual objects. It is a complex of industry and services integrating many special functions. Such a complex makes maximum possible use of mutual support of individual companies to exchange information, advisory work, joint presentation and international contacts.

In 1997 the promotion programme for the development of new industrial zones, administered by Czech Invest agency, was initiated in the Czech

Republic. It produced continuous annual increase in the number of industrial zones. In 2006 the Programme for the promotion of real estates and infrastructure continued this programme. Relatively significant number of industrial zones in the Czech Republic (in 2009 535 new companies invested here and employed almost 98 thousand people in total, Czech Invest 91) together with the high-quality database of the economy of municipalities provided by the Ministry of Finance of the Czech Republic, make it possible to realize relevant empirical research. The research is focused on efficiency evaluation of selected regional politics tools both from the view of impacts on budget of affected municipalities and impacts on the employment and economic base structure of a particular municipality.

The aim of this article is to evaluate the efficiency of municipalities' investments in the hard infrastructure both from the view of economic impacts on economy of respective municipalities and the view of wider social context, concerning mainly the employment and economic base structure. For this reason, it is first necessary to establish a methodological basis, wherein the main determinant of the research quality will be the adequate estimation of industrial zones' impact on the region.

Direct investments in the regional development

The theories of regional development represent more or less coherent system explaining the effect of basic factors, subjects, mechanisms and other consequences of regional development. At the same time, the choice of theory represents the basis for the formation of regional politics and adequate choice of its tools.[1] As was already mentioned the theories of regional development are traditionally divided into two basic groups – convergent and divergent theories. It is also possible to talk about for example episodic theories or to divide them on the basis of methodological approach: positivistic theories (e.g. localisation theories), hermeneutic theories (e.g. theory of industrial districts, theory of learning regions), structural theories, theories influenced by realism.[2] The development of society is based on the interaction among individual actors, where the change in behaviour of one of them causes a chain of reactions in the behaviour of others. The foremost reason for the development

of such theories was and is the effort to understand the function of mutual relations among individual economic subjects and outer and inner effects which have an impact on regional development.

Examples of the most frequently used theories include the neoclassical theory, the theory of economic base, the sector theory, the centre-periphery theory or the input-output analysis.[3] Of course, the list is not comprehensive, however theories mentioned above could be considered as the most common. For planned analysis of the impact of industrial zones on locally and administratively relevant municipalities, it is probably best to apply the theory of economic base or combine it with a slightly modified model of centre-periphery and input-output analysis.

The principle of economic base theory is the division of all activities in the region to so-called "basic" and "non-basic" categories.[4] Basic activities are such activities whose output is realized outside the region and thus they represent the source of income originating from the outside region. These "transferred" incomes allow people in the region to purchase goods and services for their own use, and/or increase their consumption. This newly created (or increased) demand gives rise to a need for additional factors of production, including work, which are necessary for the production of requested goods. Production of goods intended for consumption in the region is called "non-basic activity". By the increase in employment, further increase of purchasing power of people of the region occurs. In this context, the Myrdal's model of cumulative causality can be mentioned and taken into account.[5]

The centre-periphery model is based on the assumption that developing centre has a primarily negative impact on the periphery because it concentrates the use of majority of free production factors, which might otherwise be used for the development of the periphery. However, the expanding centre subsequently absorbs the periphery and thus outweighs the positive effects.[6] Its application on the industrial zones requires a certain adaptation, where the "centre" (i.e. the industrial zone) is not in the centre, but at the edge of a municipality.

Input-output analysis is widely used not only in the examination of regional development. The basis for this analysis was established by W. Leontief at the

1 Wokoun, R. a kol.: *Regionální rozvoj* (2008), p. 220.
2 For further information see Wokoun, R. a kol.: Regionální rozvoj (2008), str. 221.
3 See for example Matoušková Z. (ed.): Regionální a municipální ekonomika (2000), p. 106 and further; Blakely, E. J., Green Leigh, N.: Planning Local Economic Development (2010), p. 76 and further Miškolci, S. (2011).
4 Clear division of all activities in the region into these two dichotomous groups represents relatively complicated issue, which solution is in principle either based on performed or theoretical approach (see, e.g. Matoušková Z. (ed.): Regionální a municipální ekonomika (2000), p. 103 or Sabolovič, M. (2011).
5 See, e.g. Ježek, J.: Prostorová a regionální ekonomika, 2002, p. 171.
6 It concludes the Perroux theory of growth poles. However, Myrdal or Hirschman consider that prevailing effects are negative. (Čadil, J., 2010).

turn of 20's and 30's of the 20th century. This theory examines the cumulative impact of increase (or decrease) of production in a sector, which uses for its production inputs from another sector and the "supply" sector at the same time uses reciprocally for its production inputs and outputs from the first one. Overall impact of the principal change is then significantly higher. How much the principal change will be multiplied depends on the level of reciprocal use of inputs between sectors.[7]

Hypothesis and methodology

The objective of this research was the evaluation of direct investment effects in the development of a region. Because of the fact that the question of approach to regional development and subsequently to regional policy is still intensively discussed, the formulation of tested hypotheses is focused mainly on the verification of efficiency of the current regional policy principles in the Czech Republic. In order to fulfil the objectives of this article, the tested hypothesis was therefore defined like this:

The hypothesis: *The investments in the industrial zones positively affect the development of the respective region.*

The economic impact of the investment into hard infrastructure was examined by a lot of authors. Even if these studies are focused mainly on the investment into core infrastructure like motorways construction or energy supplies, it is possible to find some common relations. Except of the impact on economic growth also the reduction of unemployment was observed.

According to the Asian Development Bank, 2012 could expenditure on infrastructure itself stimulate economic activity, but the improvement in economic opportunity further creates employment. Moreover, infrastructure investments stimulate the economy by creating jobs in the construction and manufacturing sectors and generate considerable spinoff activity in the rest of the economy.

Michaels, 2006 demonstrate the effects of investment on The United States (US) interstate highway system that connects the US to Canada and Mexico that reduced trade barriers and costs. As a result, the Canada-U.S. and Mexico-U.S. trade flows grew 7–10 percentage points per capita. Most significantly, by increasing trade, the highways raised the relative demand for skilled manufacturing workers in counties with a high endowment of human capital.

Raihan, 2011 explored the relationship between infrastructure and growth and poverty in the context of the Bangladesh economy and in this context the paper has used three different techniques. The general conclusion was that infrastructure plays extremely significant role in promoting growth and alleviating poverty in Bangladesh.

Roland Holst, 2006 suggest, according to the FHWA (US Federal Highway administration) evidence, that beyond a certain point, maintenance and management of existing infrastructure become more attractive than new investment in additional capacity, which tends to be more costly. For example, these data indicate that efficient resurfacing projects not involving shoulder improvements have a benefit–cost ratio of 6.0, averaged over all types of roads, compared with an average ratio of 3.2 for efficient projects that add new lanes.

Amirahmadi and Saff, 1993 have made a research on science park in Switzerland. The results showed that successful parks often have taken a decade or more to become economically viable, their failure rate is high, and their regional and national economic impacts have been exaggerated. In the conclusion they pointed out the importance of the localization of a park near certain urban features-good transportation linkages, a high-quality residential environment, a university, and a pleasant working environment. Only since the early 1990s, when unemployment rates in Switzerland soared to unprecedented levels, has federal technology and innovation policy begun to design their activities with regard to employment and the establishment of new forms. Now, all across the country, private as well as public incubator facilities and technology and innovation centers have begun to spring up.

Thierstein and Wilhelm, 2001 mentioned Sternberg *et al.* (1996) reached similar results in their evaluation of 108 technology and incubation centers in Germany. Although the authors found some successful technology centers in Germany, still most of the evaluated centers do not live up to their expectations and do not have an observable effect on either the local or regional economy, or on the labor market and structural change within a region. An important reason for this fact is the sub-critical size of these centers in order to have visible effects.

It is possible to classify the effect of investments in the hard infrastructure on the basis of knowledge of theories characterized in the previous part direct or indirect. As a direct effect is in the framework of this research considered the impact on the economic situation of a city and as indirect the impact on the social sphere and on the structure of economic base. As a so-called direct effect will be examined the total costs incurred in the establishment of a zone in comparison to the revenue flowing to the municipal budgets as a direct consequence of the zone operation. Among direct effects can be included

---

7 See, e.g.: Miller, R.: Regional over interregional input-output analysis, in: Isard, W. *et al.*: Methods of Interregional and regional analysis, 1998, pp. 41–135., 1998, pp. 41–135 or also: Isard, W.: Interregional and regional input-output analysis. A model of space-economy, in: The review of Economics and statistics, Vol. 33, No. 4 (Nov., 1951), pp. 318–328, published by: The MIT Press.

revenues from the sale of land and increase in tax revenues in the area of shared personal income tax from dependent activities. According to the currently valid budgetary determination of taxes in the Czech Republic, [8] this type of tax is the only tax income, whose amount depends on the place of performance of the economic activities, expected in established industrial zones. The other type of direct non-property income tax derived from the place of business is the self-employment tax paid by people who are not expected to be the users of industrial zones. Impact on the amount of this type of revenue cannot be ignored, since it may be indirectly influenced by the existence of industrial zone and the increase in employment arising from industrial zone will raise the demand for production of self-employed individuals. As a so-called indirect (subsequent) impact are therefore considered changes in the self-employment tax and also changes in the employment rate.

The hypothesis introduced above was tested on the basis of analysis of the tightness of relation between the development of characteristics of the economic situation of municipalities described above and the socio-economic sphere of the region with the same characteristics on the closest higher regional level. For the confirmation of the hypothesis, it is expected that the tightness of the relationship after the investment will be lower than before launching the industrial zone. A precondition for the confirmation of the hypothesis is that, e.g. the development of employment in the region will be affected by industrial zone construction and the relationship in the trends of employment in the region and selected municipality will have lower tightness. The tax yield described above will be influenced by the construction of industrial zone as well, and it is assumed that after its start there will be a diversion from the general trend of tax yield in the Czech Republic.

To test the tightness of a relation, correlation analysis will be used. This type of analysis determines the level of dependency between two variables. These variables are correlated, if certain values of one variable tend to be present concurrently with certain values of another. The level of this tendency can extend from non-existence of the correlation, when all variables occur in a completely independent way, to the absolute correlation, when with the value of one variable occurs just one value of the other. To express the strength of dependency, the correlation coefficient (r) is used and it allows the evaluation of this strength or tightness:

r < 0.3 low tightness
0.3 r < 0.5 mild tightness
0.5 r < 0.7 significant tightness
0.7 r < 0.9 high tightness
0.9 r very high tightness.

Data

In the research sample were included municipalities and industrial zones from all regions of the Czech Republic with the exception of the Prague region. The total number of examined municipalities and relevant industrial zones stabilized at 51. The criterion for the inclusion in the sample was the size of the municipality, because together with its size the intensity of industrial zones' effects in the sample characteristics is dropping. Therefore, only municipalities with up to 30 000 inhabitants were studied and almost half of them had less than 10 000 inhabitants. Another criterion for inclusion in the sample was the functionality of an industrial zone. The municipalities where an industrial zone was established, but remained unused, were excluded. The above mentioned methodology for the evaluation of investments in the hard infrastructure of municipalities was applied on all 51 industrial zones from the tested sample, however due to space limits only Nošovice industrial zone has been chosen for graphic depiction of the zones' effects.

The information about industrial zones was drawn from the regional information service (RISY)[9] and from the public database of the Czech Invest agency. [10] Regional information service provides information about industrial zones, which are not fully used, and are available for potential investors. Czech Invest contains records of industrial zones, where subsidies were allocated under the Programme for the Promotion of Development in Industrial Zones between 1998 and 2005, regardless of whether their capacity was fulfilled or not. The available information about industrial zones was transferred into our own database mainly in order to determine the year when the activity of industrial zone commenced, the costs of the industrial zone construction and the occupancy of the zone. These as well as some additional items of information were subsequently verified by the staff of the appropriate departments of the particular municipality or city. For the verification of the hypotheses, the data from the Ministry of Finance of the Czech Republic

---

8   According to the currently valid text of law on the budgetary determination of taxes the following tax revenue in accordance with the geographical position is derived:
     100 % of the National tax revenue from the income tax of legal persons paid by municipalities,
     100 % of the National tax revenue from real estate,
     30 % of the National tax revenue from the income of self-employed persons,
     1.5 % of the National tax revenue from dependent activities of individuals.
9   http://www.risy.cz/cs/vyhledavace/rozvojove-plochy
10 http://www.czechinvest.org/pz [cit. 28.8.2011]

was also used – the application ARISweb,[11] which was set up to support the data areas of accounting and financial reporting of organizational units of the state, chapters of the national budget, national contribution organizations, state funds, regional self-governing units and the contribution organizations and regional councils of the cohesion regions in the Czech Republic established by them.

RESULTS AND DISCUSSION

The effect of investments in the hard infrastructure can be classified as direct or indirect on the basis of the knowledge of theories mentioned above. In the framework of this research, the impact on the economic situation of a city is considered as a direct effect and the impact on the social sphere and the structure economic base as indirect. Both types of effects were analysed in the following order – direct and indirect.

Because of the fact that neither the costs of construction of an industrial zone nor revenues from the sale of land of cities could be identified from public accounts, it was necessary to direct the query to the responsible staff of a given municipality or city. However, in some cases not even the staffs at respective departments was able to distinguish the costs needed for construction of an industrial zone from other costs and quantify the revenues from sale of land situated in the industrial zone. Nevertheless, most of them stated that the revenue from the sale of land was at least enough to cover the cost incurred in preparation of the industrial zone. The main effect is usually considered to be the influx of new investors aiming to revitalize the town and reduce unemployment. The primary return on deposited funds is essentially considered as a side-effect of

establishment of an industrial zone, and is not the decisive criterion for the assessment of success.

Another significant direct effect of industrial zones on the management of municipalities is the increase in tax revenues of personal income tax from dependent activities. The personal income tax from dependent activities is partly distributed according to the place of business, and/or place of residence (30% of the yield), in part according to the number of inhabitants of the municipality.[12] Due to the budgetary determination of taxes and the change in number of employees working in the village, the income tax is going to have the largest direct impact on the municipality. At this stage of the survey, it was necessary to prepare the review of municipality revenues development resulting from this tax title and compare it with the overall development of the tax yield on the national level. Fig 1 shows the development of tax yield from this type of tax in the representative region on the national level. The arrows in the charts indicate years when the industrial zone started to operate.

Nošovice municipality, chosen to illustrate the impact effect of an industrial zone on the municipal budget, is one the best functioning industrial zones in the Czech Republic. For this reason, the change in tightness is perceptible just by visual assessment of the income development relationship acquired from this type of tax at the municipal and national level. At the national level the decrease in revenues occurs after 2007, while the income from this type of tax to the municipal budget of Nošovice was increasing significantly. The tightness of relationship was statistically tested for all 51 examined industrial zones and the results of correlation analysis have shown the lower dependence of development of these quantities after the construction of industrial zone than before that. The regression analysis was
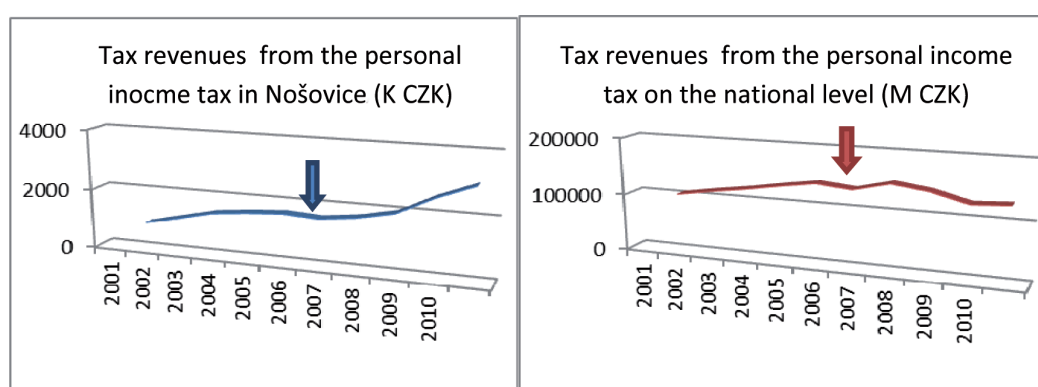
1: *The comparison of tax revenues from the personal income tax from dependent activities in Nošovice municipality and on the national level*
Resource: Own calculations

---

11 http://wwwinfo.mfcr.cz/aris/
12 60% of the national revenue is divided among regions, municipalities and national budget. To municipalities belongs 21.4% of this amount, which is consequently distributed by individual municipalities in accordance to the number of inhabitants.

applied on 156 observations before launching the industrial zones and 328 observations after implementation. This is why the results are not graphically depicted, however the results in numbers were following: the coefficient correlation (r) reached the value of 0.87 before the implementation zones construction, while at the time of their operation it was only 0.68. Both values were determined at the required significance level of 0.05. The Results of the correlation analysis prove the existence of a positive impact on the municipalities' management and support the formulated hypothesis, that the investments in the industrial zones do have an impact on the development of the appropriate region.

In the framework of the methodology described above, the tax revenues from self-employment tax are considered as indirect effects. This is another type of non-property income tax depending on the place of origin. Of course, self-employed individuals cannot be considered as direct users of industrial zones infrastructure, but the impact on the amount of this type of revenue cannot be ignored. These effects can be influenced by the industrial zone operation, but it is rather its indirect impact in the form of increased demand occurring as consequence of new jobs creation and subsequently induced offer. Fig. 2 shows the development of tax revenues of this type of tax in representative municipality in comparison with revenues on the national level. The arrows in charts show years when the industrial zone started to operate.

From the chart, is apparent the zero reflection of industrial zone operation in impact on the tax revenues of this type of tax. On average, this conclusion was also confirmed in other municipalities from the research sample. The role of industrial zone has not influenced the tightness of the tax revenues relation of this type of tax on the national and municipal level. The regression analysis was applied on 156 observations before launching the industrial zones and 328 observations after implementation. This is why the results are not graphically depicted, however the numbers

have reached following values. In both stages, the correlation coefficient (r) occurred on the very similar level of 0.59 and 0.61, again on the required tax revenues level of 0.05. This result also implies an important conclusion, that, on average, the industrial zones in the Czech Republic do not change the regional economic base structure. That defies one of the basic regional development theories – the theory of economic base.

The second assumed significant impact of industrial zones on the management of municipalities is a change in the employment rate of a particular region. As the tightness of relation of the employment rate in the municipality in tax revenues, the average regional values before and after the establishment of the industrial zones were in comparison examined in individual analysed municipalities. Similarly to the tax revenue from dependent activities, the impact of industrial zone operation manifested itself in form of untying of this relationship. The regression analysis was applied on 156 observations before launching the industrial zones and 328 observations after implementation. This is why the results are not graphically depicted, however the numbers have reached following values. Before the zones establishment, the correlation coefficient (r) reached the value of 0.68, while at the time of their operation it was only 0.62. Both values were determined at the required significance level 0.05. The results of the correlation analysis prove the presence of positive impacts on the employment rate and hence on the management of municipalities. Thus they support the hypothesis, that the investments in the industrial zones have an impact on the development of a particular region. However, it should be noted that, contrary to expectations, the difference in the value of correlation coefficients is relatively low, which implies the conclusion that in the case of these characteristics the impact of industrial zones operation is low. For easier comprehension the Fig. 3 shows the development of employment on both regional levels - in the Nošovice municipality and in the Moravian-Silesian Region.
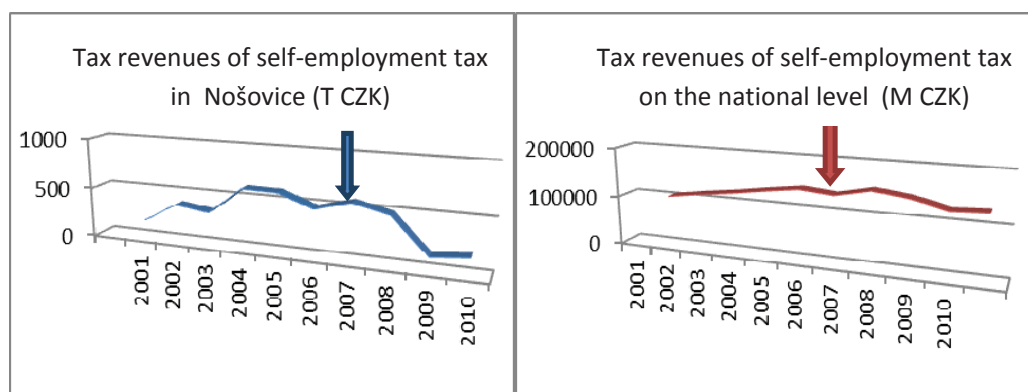
2: *Tax revenues of self-employment tax in the Nošovice municipality compared with the national level*
Source: Own calculations
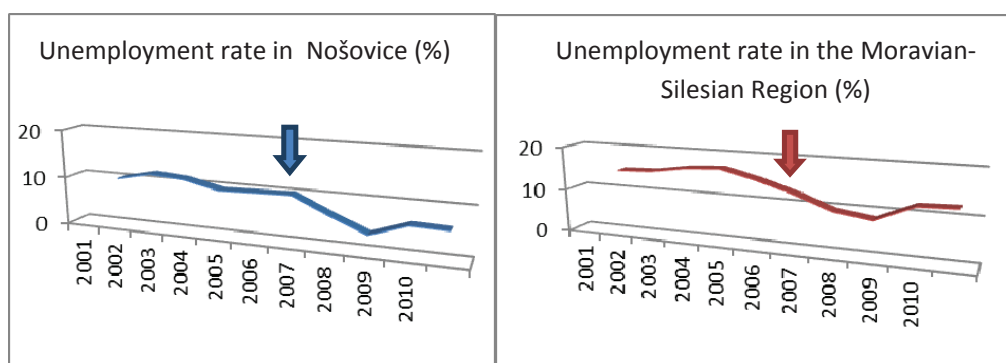
3: *The comparison of the unemployment rate in the Nošovice municipality and in the Moravian-Silesian Region*
Source: Own calculations

CONCLUSION

The aim of this article was to assess the efficiency of municipalities' investments in the hard infrastructure on the basis of selected criteria, both from the view of economic impacts on the management of municipalities, and in a wider social context, mainly in view of employment and economic base structure. The chosen criterion for evaluation of the industrial zones impact on the development of the region was the change in tax revenues of both types of income taxes, partly influenced by the place of the economic activity. As a further criterion for assessing the effectiveness of investments in the industrial zones, the changes of employment rate in examined municipalities were selected. The proposed methodological approach for the assessment of industrial zones impact on the regional development has been verified on a selected sample of industrial zones in the Czech Republic, which included 51 municipalities and relevant industrial zones. The criterion for inclusion in the representative sample was the size of municipality and the use of an industrial zone. On the basis of this sample, the hypothesis stating that *the investments in the industrial zones positively affect the development of the respective region* was tested. According to the first characteristic of the tax revenues from the personal income tax from dependent activities showed the impact of industrial zones on the municipal budgets as very significant and the hypothesis was supported this way. In accordance with the second characteristic, it showed the zero reflection of industrial zones operation on the impact on tax revenues from the self-employment tax. The last and the most important examined characteristic of the employment rate pointed out the difference in tightness on both regional levels before and after the industrial zones establishment. However, the difference was minimal. Thus in two of three examined characteristics, the difference in tightness of development in the period before and after the zone establishment manifested, so it can be concluded that the hypothesis was supported, or that the investments in the industrial zones have an impact on the development of the respective region.

REFERENCES

AMIRAHMADI, H., SAFF, G.,1993: Science Parks: A Critical Assessment, Journal of Planning Literature, Vol. 8, No. 2, pp. 107–123.

BLAKELY, E. J., GREEN LEIGH, N., 2010: Planning Local Economic Development, SAGE Publications, Inc. 2010. ISBN 978-1-4129-6093-9.

ČADIL, J., 2010: Regionální ekonomie. C. H. Beck, Praha. ISBN 978-80-7400-191-8.

ISARD, W., 2002: Interregional and regional input-output analysis: a model of space-economy, in: The Review of Economics and statistics, Vol. 33, No. 4 (nov. 1951), pp. 318–328, published by: The MIT Press.

JEŽEK, J., 2002: Prostorová a regionální ekonomika. ZČU v Plzni, Plzeň. ISBN 80-7082-575-8.

MATOUŠKOVÁ, Z. a kol., 2000: Regionální a municipální ekonomika. Vysoká škola ekonomická v Praze. ISBN 80-245-0061-2.

MICHAELS, G., 2006: The Effect of Trade on the Demand for Skill – Evidence from the Interstate Highway System. CEP Discussion Paper. No. 772.

MILLER, R. E., 1998: Regional and interregional input-output analysis, in: Isard, W. et al.: Methods of Interregional and regional analysis, pp. 41–135.

MIŠKOLCI, S., 2011: Consumer Preferences and Willingness to Pay for the Health Aspects of Food. *Acta Universitatis Agriculturae et Silviculturae Mendelianae Brunensis.* 2011. sv. LIX, č. 4, s. 167–176. ISSN 1211-8516.

RAIHAN, S., 2011: Infrastructure and Growth and Poverty in Bangladesh.Online. Paper No. 37882, posted 07. April 2012 / 07:44 http://mpra.ub.uni-muenchen.de/37882/3/MPRA_paper_37882.pdf.

ROLAND HOLST, D., 2006: Infrastructure as a Catalyst for Regional Integration, Growth and Economic Convergence: Scenario Analysis for Asia. ERD Working Paper Series, No. 91, Manila, Philippines: Asian Development Bank.

SABOLOVIČ, M., 2001: An Alternative Methodological Approach to Value Analysis of Regions, Municipal Corporations and Clusters. Acta Universitatis Agriculturae et Silviculturae Mendelianae Brunensis, LIX, 4: 295–301. ISSN 1211-8516.

STERNBERG, R., BEHRENDT, H., SEEGER, H. AND TAMÁSY, C., 1996: Bilanz eines Booms Dortmund: Dortmunder Vertrieb für Bau- und Planungsliteratur.

THIERSTEIN, A., WILHELM, B., 2001: Incubator, technology, and innovation centres in Switzerland: features and policy implications, Entrepreneurship & Regional Development, Vol. 13, pp. 315–331.

WOKOUN, R. a kol., 2008: Regionální rozvoj (Východiska regionálního rozvoje, regionální politika, teorie, strategie a programování). Linde Praha, a. s.. ISBN 978-80-7201-699-0.

Infrastructure for supporting inclusive growth and poverty reduction in Asia.

Mandaluyong City, Philippines: Asian Development Bank, 2012. ISBN 978-92-9092-617-7 [cit.2012-10-25], http://www.iadb.org/intal/intalcdi/pe/2012/12090.pdf.

www.mfcr.cz

www.risy.cz

www.czechinvest.org

www.czso.cz

Address

Ing. Gabriela Chmelíková, Ph.D., Ing. Radka Redlichová, Ph.D., Ústav regionální a podnikové ekonomiky, Mendelova univerzita v Brně, Zemědělská 1, 61300 Brno, Česká repulika, e-mail: gabriela.chmelikova@mendelu.cz; radka.redlichova@mendelu.cz