**TEME**, г. XLI, бр. 2, април – јун 2017, стр. 457–473

Оригинални научни рад DOI: 10.22190/TEME1702457S
Примљено: 22. 2. 2016. UDK 330.322:352](497.11)
Одобрено за штампу: 15. 6. 2017.

# THE ROLE OF BUSINESS ENVIRONMENT IN THE PROMOTION OF INVESTMENT ACTIVITIES: CASE STUDY OF CITIES AND MUNICIPALITIES IN THE REPUBLIC OF SERBIA

**Jelena Stanković*, Dragana Radenković-Jocić**

University of Niš, Faculty of Economics, Niš, Serbia
**jelena.stankovic@eknfak.ni.ac.rs*

**Abstract**

Many municipalities and cities face certain problems in attracting local and foreign investors and one of them is ineffective local administration, as well as the lack of transparency of rules and procedures start-ups and enterprises, branches and the like. Many local governments are not even aware of what is causing the problem and the lack of investment and investor preferences for other municipalities and cities. To be able to clearly state the causes of the problem, a program of certification of cities and municipalities has been initiated in many countries, including Serbia. This program involves evaluating the quality of services of municipalities and cities in terms of those elements that are particularly relevant to existing and potential investors. On the basis of the data on the level of quality of certain elements, one can realize what the local government of a city or municipality must change in order to be a convenient area for investment, and that would provide a friendly environment for potential investors. In addition, the program ends with a certification in case the municipality or city meets the minimum requirements in each of the elements of assessment. Since the evaluation of the conditions represents the basis for gaining the certificate confirming that the city or municipality is a favorable environment for investors, a very important issue is to determine the significance of the elements, and appropriate criteria, bearing in mind that not all elements are equally important from the perspective of investors. The aim of this paper is to establish a link between the level of fulfillment of the criteria in the process of certification of cities and municipalities and the ability to attract investors, and the acceleration of investment activity at the local level. The paper presents the current way of conducting the procedure of certification of cities and municipalities, and based on the results of the correlation analysis and *DEA* (Data Envelopment Analysis) method an insufficient influence on the fulfillment of these criteria to attract and activate investments at the local level was found.

**Key words**: business environment, cities certification, investment, improvement, DEA method.

# УЛОГА ПОСЛОВНОГ АМБИЈЕНТА У УНАПРЕЂЕЊУ ИНВЕСТИЦИОНИХ АКТИВНОСТИ: СТУДИЈА СЛУЧАЈА ГРАДОВА И ОПШТИНА У РЕПУБЛИЦИ СРБИЈИ

**Апстракт**

Један од проблема са којима се општине и градови суочавају у области привлачења домаћих и страних инвеститора јесте неефикасна локална администрација, као и нетранспарентност правила и процедура покретања бизниса и отварања предузећа, филијала и слично. Многе локалне самоуправе нису ни свесне шта је узрок проблема и изостанка инвестиција, односно опредељења инвеститора за неке друге општине и градове. Да би се јасно истакло који су узроци проблема, покренут је програм сертификације градова и општина у многим земљама, па и у Србији. Овај програм подразумева вредновање квалитета услуга општина и градова са аспекта оних елемената који су посебно важни постојећим и потенцијалним инвеститорима. На основу података о нивоу квалитета појединих елемената, може се увидети шта локална самоуправа града или општине мора да промени да би била повољно подручје за инвестирање, односно да би пружала пријатељско окружење потенцијалним инвеститорима. При томе, програм се завршава сертификацијом у случају да општина или град испуњавају минимум захтева у сваком од елемената оцене. С обзиром на то да је оцењивање услов и основ добијања сертификата којим се потврђује да је град или општина повољно окружење за инвеститоре, веома значајно питање јесте одређивање значаја елемената, односно одговарајућих критеријума, имајући у виду да нису сви елементи једнако значајни из угла инвеститора. Циљ овог рада је успоставити везу између нивоа испуњености критеријума у процесу сертификације градова и општина, те способности у привлачењу инвеститора, односно убрзања инвестиционих активности на локалном нивоу. У раду је приказан постојећи начин спровођења поступка сертификације градова и општина, а на основу резултата корелационе анализе и *ДЕА* (*Data Envelopment Analysis*) метода утврђен је недовољан утицај испуњености ових критеријума на привлачење и активацију инвестиција на локалном нивоу.

**Кључне речи**: инвестиције, програм евалуације, сертификација, инвестиције, унапређење, ДЕА метод.

## *INTRODUCTION*

Countries in transition, Serbia being one of them, have the problem of the lack of capital, on the one hand, and redundancy of free labor or large unemployment rate, on the other hand. Therefore, it is of great importance to create a favorable business climate in such countries and attract investors, especially from other countries, but also from developed to underdeveloped areas of the country. In this context, the problem is greater in the countries where there is uneven regional development, and such is the Republic of Serbia. For this reason, it is even more challenging to identify the factors that influence the investors in these countries, in the sense that they opt for a particular city or municipality. As companies

fight for market or for attracting a greater number of consumers, but also as the countries fight as a greater share in world trade, so do the regions, cities and municipalities struggle to attract investments. Aware of the fact that only new investments are the way to reduce unemployment, the representatives of cities and municipalities must do their best in order for investors to assess their offers and services as favorable and friendly.

The first condition to achieve this is for the local governments to identify what investors consider attractive, in other words, what they require from the cities and municipalities in order to choose them as a location for the investment. This can be detected if the local governments engage in the collection of data on the requirements of potential investors or if they opt for the assessment of their advantages with respect to investors, based on the existing evaluation program. In Serbia, the evaluation of cities and municipalities is conducted on the basis of NALED methodology (National Alliance for Local Economic Development), consisting of a set of criteria for assessing the adequacy of cities and municipalities.

Regardless of whether the evaluation is favorable or not for cities and municipalities, it would be beneficial to meet the elements that are important to potential investors, which is important information for the future time period. Therefore, even if cities and municipalities do not satisfy the minimum specified by the initial process of certification, they will be motivated to obtain the certificate that would confirm their quality to the potential investors. At the same time, this is a basis for expecting balanced regional development in the future, for reducing unemployment and increasing the purchasing power and living standards.

Many cities and municipalities in the Republic of Serbia have started or completed the certification process, considering that it has been in process for seven years. The greatest number of problems include: administration inefficiency, lack of criteria transparency, inadequate infrastructure, bureaucratization, the burden of documentation and similar. A large number of cities and municipalities have already received a certificate, but it is necessary to maintain and continuously improve the local business environment because, with the certification of other cities, the competition grows, which enables potential investors to choose locations.

By studying the phenomenon of certification, the authors have discovered data that cause suspicion in the adequacy of evaluation and determination of the significance of the criteria to be taken into account in the certification process. For this reason, the paper points out the deficiencies of the existing certification process and, based on quantitative methods, concludes that there is no direct link between the fulfillment of the criteria and the amount of investments in fixed assets that have been attracted by certified cities and municipalities. In order to justify the results of the application of quantitative methods, in addition to data on existing certification criteria and their fulfillment, the variable in the analysis was

also the amount of investments at the level of cities and municipalities in the year following certification. Given the nature of the problem, the authors considered relevant the methods of correlation analysis and DEA methods (Data Envelopment Analysis).

## *THE CREATION OF FRIENDLY BUSINESS ENVIRONMENT*

The development of the economy is an important topic in all countries in transition, including Serbia. Therefore, certain state-level activities are undertaken to provide economic restructuring, that is, restructuring of the existing economic capacities and their empowerment, as well as attracting new investments. However, during the transition process, gap between regions, cities and municipalities appears or increases for various reasons, and it cannot be influenced by the state (Aranđelović and Marjanovic, 2011). Therefore, it is necessary for cities and municipalities to be actively involved in the promotion of their development, without relying too much on the state (Cvetanović and Mladenovic, 2012). As companies struggle for consumers on the market, trying to achieve and demonstrate their competitive advantage, so do the cities and municipalities fight for investors, trying to highlight their advantages over other competing cities and municipalities.

As noted, one of the ways that cities and municipalities can identify their advantages and disadvantages in comparison to other cities and municipalities, but also in comparison to what potential investors expect from them, is to accept the program introduced by NALED. This association of corporations, local governments and non-governmental organizations has already existed in Serbia for seven years. During this period, the program of certification was accepted by more than 50 cities and municipalities, many of which had received the certificate. However, it is important to emphasize that once obtained, the certificate does not guarantee a long - lasting advantage, the environment needs to be monitored continuously and, more importantly, it should be improved regularly, maintaining its "investor-friendly" status. According to NALED, certification of cities and municipalities with favorable business environment (Business Friendly Certication - BFC) represents a process that promotes the standards of local administration and evaluates the quality of services and information which cities and municipalities offer to investors and businessmen (www.naled-serbia.org).

In order for a city or a municipality to receive a certificate it is necessary to contact NALED, which is the first step in the certification process. The representatives of NALED will then provide the representatives of local governments all the information needed to decide on whether to even begin this process. If the representatives of a city or a municipality decide to continue the procedure, the next step is signing an agreement. An important step at the very beginning of the certification process is training of the local government employees who make up a team for the implementation of the

certification process. An integral part of the training is instruction as to what documentation is needed, i.e. how a city or municipality would prove that they meet certain certification criteria. Although team members themselves can assess the level of fulfillment of certain criteria, the final decision will be made by the evaluator. The evaluator prepares a report, acording to which we can see whether the criteria are met and in what percentage. Based on this, it is decided whether a certain city or municipality deserves to be given a positive assessment of the business environment or not. In the latter case, NALED makes recommendations for improvement, i.e. suggests what a city or a municipality should improve in order for it to obtain the certificate next time and be promoted as a favorable business environment. A more specific evaluation process consists of the following phases: preparation for certification, certification check, certificate appropriation, promotion, surveillance audit after one year, and recertification after two years (www.naled-serbia.org).

Twelve criteria are applied in the evaluation process, where each of them has a number of certain sub- criteria (Figure 1). The criteria do not have the same importance, that is, some are more and some are less significant from the investors' point of view as well as from the evaluators' point of view. The importance of the criteria, and their fulfilment, is defined in three levels and therefore the number of points a city or a municipality achieves. In addition, the evaluation is first done with the sub-criteria and then with the criteria. The fulfillment of the criteria is expressed in percentages.

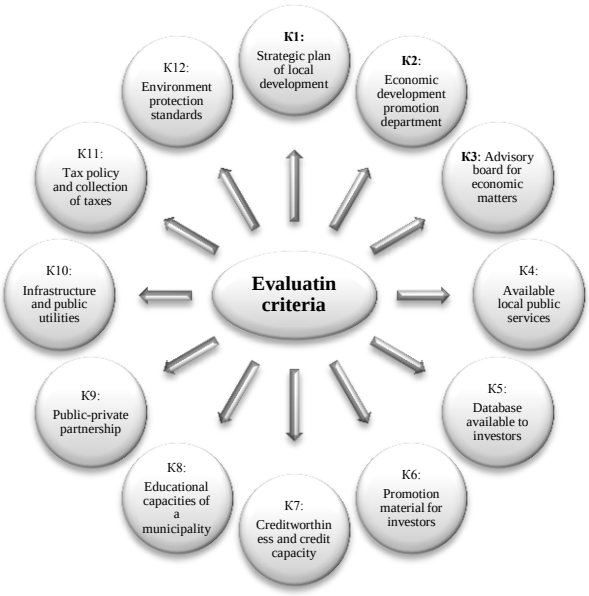


*Figure 1. The criteria for cities and municipalities certification according to NALED methodology*

Based on the percentage of fulfillment of all twelve criteria, the average level of fulfillment is determined, also expressed in percentages. If this percentage is above 75% a city or a municipality will obtain the certificate and will be declared a favorable business environment. Having in mind that the limit expressed in percentage can be questioned, what is considered a more important disadvantage of this kind of evaluation is the fact that in case some of the individual criteria do not meet the critical 75%, requirement, a higher percentage achieved with other criteria can result in a city or municipality to obtain a positive assessment, and consequently obtain the certificate that they represent a favorable business environment.

One of the ways to improve the certification process is to demand a minimum of 75% fulfilment of each criteria, whereby it will be ensured that those cities and municipalities that meet this requirement automatically have the right to obtain the certificate. Almost a third of local governments is currently in the process of certification. Although some of them had received the certificate, it does not mean that they are guaranteed a permanent positive position on the list of potential investors. In the review process, some cities and municipalities have lost their previously received certificate. Certainly, they have the right to re-launch the certification process. According to the data from the end of 2013, Serbia has 25 cities and municipalities that have the certificate which is supported not only by NALED but also by the Ministry of Economy and Regional Development, which, as the official state institution, inspires confidence in potential investors.

The positive side of the certification process is that, even if you do not get certified, local governments can learn the disadvantages of their cities or municipalities compared to others, what needs to be improved in order to create favorable climate for potential investors. On the other hand, a local government also discovers what it is that makes it better than others, what makes it recognizable or what can become a competitive advantage, a feature that would make investors opt for it rather than some other city or municipality. Such positive characteristics of cities and municipalities should be promoted and it should be make certain that potential investors know about them.

## *THE SAMPLE OF MUNICIPALITIES AND CITIES AND THE RESEARCH METHODOLOGY*

For the purposes of the research conducted in this study, the sample included 21 municipalities and a total of 25 municipalities and cities that have received certificates of favorable business environment by the end of 2013. Since the data[1] on the fulfilment of the criteria from 2012 and

[1] Data were available to the authors by courtesy of NALED, within cooperation with the researchers in the project III 44007 financed by the Ministry of education, science

2013 are available, the investment activities will also monitor the period after the certificates on favorable business environment have been granted. Cities or municipalities covered by the sample are: Čačak, Loznica, Kragujevac, Zrenjanin, Užice, Niš, Paraćin, Pirot, Sremska Mitrovica, Valjevo, Stara Pazova, Subotica, Zaječar, Bujanovac, Vranje, Indjija, Leskovac, Ruma, Kruševac, Novi Sad, Smederevo (Table 1). In order to protect the interests of cities and municipalities that have accepted to participate in this survey, the information about the certification results will be disclosed without stating the name of the city or municipality. Characteristics of the criteria from K1 to K12 indicate the criteria as presented in Figure 1.

*Table 1. The level of criteria fulfilment of municipalities observed in accordance with the program of the certification*

| | K1 | K2 | K3 | K4 | K5 | K6 | K7 | K8 | K9 | K10 | K11 | K12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Municipality 1 | 0,800 | 1,000 | 1,000 | 0,732 | 0,875 | 1,000 | 1,000 | 0,733 | 0,636 | 0,829 | 1,000 | 1,000 |
| Municipality 2 | 1,000 | 0,824 | 0,750 | 1,000 | 0,925 | 1,000 | 1,000 | 0,933 | 1,000 | 0,878 | 1,000 | 1,000 |
| Municipality 3 | 0,625 | 0,947 | 0,800 | 0,941 | 0,857 | 1,000 | 0,900 | 0,750 | 0,667 | 0,940 | 0,929 | 1,000 |
| Municipality 4 | 0,900 | 0,824 | 0,875 | 1,000 | 0,950 | 1,000 | 1,000 | 0,700 | 0,682 | 0,756 | 1,000 | 0,750 |
| Municipality 5 | 1,000 | 0,618 | 1,000 | 0,780 | 0,600 | 0,667 | 1,000 | 0,600 | 0,591 | 0,976 | 0,833 | 1,000 |
| Municipality 6 | 1,000 | 1,059 | 0,750 | 0,939 | 0,900 | 0,944 | 1,000 | 0,867 | 0,909 | 0,793 | 1,000 | 1,000 |
| Municipality 7 | 1,000 | 0,941 | 1,000 | 0,780 | 0,700 | 0,778 | 1,000 | 0,567 | 0,727 | 0,695 | 1,000 | 0,500 |
| Municipality 8 | 1,000 | 0,824 | 1,000 | 0,890 | 1,000 | 1,000 | 1,000 | 0,833 | 0,545 | 0,878 | 1,000 | 1,000 |
| Municipality 9 | 1,000 | 0,824 | 1,000 | 0,671 | 0,650 | 1,000 | 1,000 | 0,867 | 0,955 | 0,805 | 0,833 | 1,000 |
| Municipality 10 | 1,000 | 0,941 | 0,750 | 0,808 | 0,625 | 0,944 | 1,000 | 0,667 | 0,909 | 0,793 | 1,000 | 1,000 |
| Municipality 11 | 1,000 | 0,765 | 0,750 | 0,829 | 0,725 | 1,000 | 1,000 | 0,533 | 0,636 | 0,756 | 0,833 | 1,000 |
| Municipality 12 | 0,800 | 1,000 | 0,750 | 0,890 | 0,900 | 1,000 | 1,000 | 0,533 | 0,727 | 0,732 | 0,833 | 0,750 |
| Municipality 13 | 0,800 | 1,000 | 1,000 | 0,744 | 0,725 | 1,000 | 1,000 | 0,767 | 0,455 | 0,768 | 1,000 | 1,000 |
| Municipality 14 | 1,000 | 0,941 | 1,000 | 0,866 | 0,725 | 1,000 | 1,000 | 0,833 | 0,545 | 0,683 | 1,000 | 0,875 |
| Municipality 15 | 1,000 | 0,941 | 1,000 | 1,000 | 0,900 | 1,000 | 1,000 | 1,000 | 1,000 | 0,939 | 1,000 | 0,623 |
| Municipality 16 | 1,000 | 0,824 | 1,000 | 0,890 | 0,775 | 1,000 | 1,000 | 0,800 | 0,909 | 0,780 | 1,000 | 1,000 |
| Municipality 17 | 1,000 | 0,824 | 1,000 | 0,780 | 0,875 | 0,889 | 1,000 | 0,667 | 0,545 | 0,829 | 0,667 | 0,750 |
| Municipality 18 | 1,000 | 0,882 | 1,000 | 1,000 | 0,900 | 0,944 | 1,000 | 0,867 | 1,000 | 0,927 | 1,000 | 1,000 |
| Municipality 19 | 0,938 | 1,000 | 1,000 | 0,944 | 0,929 | 1,000 | 1,000 | 0,850 | 0,833 | 0,780 | 1,000 | 1,000 |
| Municipality 20 | 1,000 | 0,947 | 0,600 | 0,972 | 0,929 | 1,000 | 1,000 | 0,850 | 0,583 | 0,940 | 1,000 | 1,000 |
| Municipality 21 | 1,000 | 0,765 | 0,875 | 0,805 | 0,800 | 1,000 | 1,000 | 0,733 | 0,818 | 0,768 | 1,000 | 1,000 |

Source: Authors' review according to NALED

On the basis of the assessment for each of the 12 criteria for each municipality in the certification process it is possible to determine the average level of the criteria fulfillment, as shown in Table 2. For ease of

and technological development of the Republic of Serbia. Hereby we would like to thank them for the help in the preparation of this paper.

comparison, along with the data on the average level of criteria fulfillment, the quantity of the investment in the observed city or municipality is shown in the same table.

*Table 2. The level of satisfaction of the relevant criteria in the surveyed municipalities*

| City or municipality | Average fulfillment of all criteria | Investments: € per capita |
|---|---|---|
| Municipality 1 | 88,38% | 520,020 |
| Municipality 2 | 94,25% | 686,570 |
| Municipality 3 | 86,30% | 580,643 |
| Municipality 4 | 86,98% | 464,159 |
| Municipality 5 | 80,54% | 315,938 |
| Municipality 6 | 93,01% | 942,362 |
| Municipality 7 | 80,73% | 879,200 |
| Municipality 8 | 91,42% | 415,966 |
| Municipality 9 | 88,38% | 622,949 |
| Municipality 10 | 86,98% | 754,088 |
| Municipality 11 | 81,89% | 687,333 |
| Municipality 12 | 82,63% | 200,005 |
| Municipality 13 | 85,49% | 111,779 |
| Municipality 14 | 87,23% | 368,210 |
| Municipality 15 | 95,03% | 995,817 |
| Municipality 16 | 91,48% | 208,676 |
| Municipality 17 | 81,88% | 306,580 |
| Municipality 18 | 96,00% | 295,825 |
| Municipality 19 | 93,95% | 2.429,776 |
| Municipality 20 | 90,18% | 432,214 |
| Municipality 21 | 88,03% | 697,118 |

Source: Authors' review according to NALED and the Statistical Office of the Republic of Serbia

In order to gain insight into the level of fulfillment of the criteria in the sample, descriptive statistics of all relevant parameters – certification criteria, as well as *per capita* investments are given in Table 3.

The results of the descriptive statistics indicate that the criteria in the observed cities and municipalities are met at a relatively high level - from 74.63% K9 criteria fulfillment– municipality develops partnership between the public and private sectors, to 99.52% K7 criteria fulfillment– municipality documents their credit ability and calculates their credit capacity. The average amount of the investments in fixed assets per capita in the sample is 615.0109 Euro.

*Table 3. Descriptive statistics of certification criteria fulfillment and the amount of the investment in a sample of cities and municipalities*

| | N | Range | Minimum | Maximum | Mean | | Standard deviation | Variant |
|---|---|---|---|---|---|---|---|---|
| | Statistics | Statistics | Statistics | Statistics | Statistics | Standard error | Statistics | Statistics. |
| K1 | 21 | 0,38 | 0,63 | 1,00 | 0,9459 | 0,02251 | 0,10318 | 0,011 |
| K2 | 21 | 0,38 | 0,62 | 1,00 | 0,8872 | 0,02229 | 0,10215 | 0,010 |
| K3 | 21 | 0,40 | 0,60 | 1,00 | 0,9000 | 0,02819 | 0,12918 | 0,017 |
| K4 | 21 | 0,33 | 0,67 | 1,00 | 0,8696 | 0,02199 | 0,10076 | 0,010 |
| K5 | 21 | 0,40 | 0,60 | 1,00 | 0,8221 | 0,02565 | 0,11752 | 0,014 |
| K6 | 21 | 0,33 | 0,67 | 1,00 | 0,9603 | 0,01882 | 0,08625 | 0,007 |
| K7 | 21 | 0,10 | 0,90 | 1,00 | 0,9952 | 0,00476 | 0,02182 | 0,000 |
| K8 | 21 | 0,47 | 0,53 | 1,00 | 0,7595 | 0,02840 | 0,13014 | 0,017 |
| K9 | 21 | 0,54 | 0,46 | 1,00 | 0,7463 | 0,03847 | 0,17627 | 0,031 |
| K10 | 21 | 0,29 | 0,68 | 0,98 | 0,8212 | 0,01866 | 0,08551 | 0,007 |
| K11 | 21 | 0,33 | 0,67 | 1,00 | 0,9490 | 0,02028 | 0,09294 | 0,009 |
| K12 | 21 | 0,50 | 0,50 | 1,00 | 0,9166 | 0,03270 | 0,14985 | 0,022 |
| Invest-ments | 21 | 2.318,00 | 111,78 | 2.429,78 | 615,0109 | 105,73752 | 484,55018 | 234.788,882 |

Source: The author's calculations using the software package SPSS

## *THE ESTABLIHSMENT OF THE RELATIONSHIP BETWEEN THE LEVEL OF CERTIFICATION CRITERIA FULFILLMENT AND THE INVESTMENT ACTIVITIES*

In order to establish the correlation between the fulfillment of the certification criteria and the performance of cities and municipalities in terms of attracting the investment, two independent quantitative analyses have been carried out: (1) the correlation analysis and (2) the efficiency analysis, using the DEA. As a reference parameter of criteria efficiency, the amount of investments that the observed cities have attracted in 2013 (the year after obtaining the certificates of favorable business environment) was determined.

The correlation analysis shows a degree of dependence between variables, that is, the correlation measures the strength of the connection between two or more variables. The objective of correlation analysis is to determine the strength of the connection between the level of criteria fulfillment for the certification of cities and municipalities in the Republic of Serbia and the amount of investment in fixed assets per capita which the local governments had attracted in the period immediately after the completion of the certification process. The correlation results are given in Table 4.

*Table 4. The results of the correlation analysis*

| | | K1 | K2 | K3 | K4 | K5 | K6 | K7 | K8 | K9 | K10 | K11 | K12 | Investments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| K1 | Pearson's correlation coefficient | 1 | -,430 | ,089 | ,020 | -,162 | -,254 | ,713** | ,197 | ,316 | -,049 | ,010 | -,064 | ,118 |
| | Significance | | ,051 | ,700 | ,932 | ,484 | ,267 | ,000 | ,391 | ,163 | ,834 | ,965 | ,782 | ,610 |
| | Sum of square and cross product | ,213 | -,091 | ,024 | ,004 | -,039 | -,045 | ,032 | ,053 | ,115 | -,009 | ,002 | -,020 | 118,103 |
| | Covariance | ,011 | -,005 | ,001 | ,000 | -,002 | -,002 | ,002 | ,003 | ,006 | ,000 | ,000 | -,001 | 5,905 |
| | N | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 |
| K2 | Pearson's correlation coefficient. | -,430 | 1 | -,137 | ,162 | ,306 | ,430 | -,134 | ,222 | ,033 | -,263 | ,389 | -,165 | ,272 |
| | Significance | ,051 | | ,554 | ,483 | ,177 | ,052 | ,562 | ,334 | ,887 | ,250 | ,081 | ,475 | ,234 |
| | Sum of square and cross product | -,091 | ,209 | -,036 | ,033 | ,074 | ,076 | -,006 | ,059 | ,012 | -,046 | ,074 | -,050 | 268,819 |
| | Covariance | -,005 | ,010 | -,002 | ,002 | ,004 | ,004 | ,000 | ,003 | ,001 | -,002 | ,004 | -,003 | 13,441 |
| | N | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 |
| K3 | Pearson's correlation coefficient | ,089 | -,137 | 1 | -,357 | -,178 | -,249 | ,177 | ,127 | -,071 | -,081 | -,040 | -,210 | ,032 |
| | Significance | ,700 | ,554 | | ,112 | ,441 | ,277 | ,442 | ,584 | ,761 | ,726 | ,865 | ,360 | ,891 |
| | Sum of square and cross product | ,024 | -,036 | ,334 | -,093 | -,054 | -,055 | ,010 | ,043 | -,032 | -,018 | -,010 | -,081 | 39,759 |
| | Covariance | ,001 | -,002 | ,017 | -,005 | -,003 | -,003 | ,000 | ,002 | -,002 | -,001 | ,000 | -,004 | 1,988 |
| | N | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 |
| K4 | Pearson's correlation coefficient | ,020 | ,162 | -,357 | 1 | ,695** | ,299 | -,162 | ,451* | ,337 | ,325 | ,407 | -,064 | ,208 |
| | Significance | ,932 | ,483 | ,112 | | ,000 | ,188 | ,482 | ,040 | ,136 | ,150 | ,067 | ,784 | ,366 |
| | Sum of square and cross product | ,004 | ,033 | -,093 | ,203 | ,165 | ,052 | -,007 | ,118 | ,120 | ,056 | ,076 | -,019 | 202,986 |
| | Covariance | ,000 | ,002 | -,005 | ,010 | ,008 | ,003 | ,000 | ,006 | ,006 | ,003 | ,004 | -,001 | 10,149 |
| | N | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 |
| K5 | Pearson's correlation coefficient | -,162 | ,306 | -,178 | ,695** | 1 | ,481* | -,068 | ,410 | ,057 | ,232 | ,224 | -,059 | ,168 |
| | Significance | ,484 | ,177 | ,441 | ,000 | | ,027 | ,770 | ,065 | ,807 | ,312 | ,328 | ,799 | ,467 |
| | Sum of square and cross product | -,039 | ,074 | -,054 | ,165 | ,276 | ,098 | -,003 | ,125 | ,023 | ,047 | ,049 | -,021 | 191,066 |
| | Covariance | -,002 | ,004 | -,003 | ,008 | ,014 | ,005 | ,000 | ,006 | ,001 | ,002 | ,002 | -,001 | 9,553 |
| | N | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 |
| K6 | Pearson's correlation coefficient | -,254 | ,430 | -,249 | ,299 | ,481* | 1 | -,106 | ,442* | ,151 | -,184 | ,312 | ,268 | ,080 |
| | Significance | ,267 | ,052 | ,277 | ,188 | ,027 | | ,649 | ,045 | ,514 | ,424 | ,169 | ,241 | ,730 |
| | Sum of square and cross product | -,045 | ,076 | -,055 | ,052 | ,098 | ,149 | -,004 | ,099 | ,046 | -,027 | ,050 | ,069 | 66,932 |
| | Covariance | -,002 | ,004 | -,003 | ,003 | ,005 | ,007 | ,000 | ,005 | ,002 | -,001 | ,003 | ,003 | 3,347 |
| | N | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| K7 | Pearson's correlation coefficient | ,713** | -,134 | ,177 | -,162 | -,068 | -,106 | 1 | ,017 | ,103 | -,318 | ,049 | -,128 | ,016 |
| | Significance | ,000 | ,562 | ,442 | ,482 | ,770 | ,649 | | ,942 | ,657 | ,160 | ,832 | ,582 | ,944 |
| | Sum of square and cross product | ,032 | -,006 | ,010 | -,007 | -,003 | -,004 | ,010 | ,001 | ,008 | -,012 | ,002 | -,008 | 3,437 |
| | Covariance | ,002 | ,000 | ,000 | ,000 | ,000 | ,000 | ,000 | ,000 | ,000 | -,001 | ,000 | ,000 | ,172 |
| | N | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 |
| K8 | Pearson's correlation coefficient | ,197 | ,222 | ,127 | ,451* | ,410 | ,442* | ,017 | 1 | ,451* | ,378 | ,479* | ,233 | ,238 |
| | Significance | ,391 | ,334 | ,584 | ,040 | ,065 | ,045 | ,942 | | ,040 | ,091 | ,028 | ,308 | ,299 |
| | Sum of square and cross product | ,053 | ,059 | ,043 | ,118 | ,125 | ,099 | ,001 | ,339 | ,207 | ,084 | ,116 | ,091 | 300,196 |
| | Covariance | ,003 | ,003 | ,002 | ,006 | ,006 | ,005 | ,000 | ,017 | ,010 | ,004 | ,006 | ,005 | 15,010 |
| | N | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 |
| K9 | Pearson's correlation coefficient | ,316 | ,033 | -,071 | ,337 | ,057 | ,151 | ,103 | ,451* | 1 | ,121 | ,261 | ,020 | ,352 |
| | Significance | ,163 | ,887 | ,761 | ,136 | ,807 | ,514 | ,657 | ,040 | | ,600 | ,254 | ,933 | ,118 |
| | Sum of square and cross product | ,115 | ,012 | -,032 | ,120 | ,023 | ,046 | ,008 | ,207 | ,621 | ,037 | ,085 | ,010 | 601,009 |
| | Covariance | ,006 | ,001 | -,002 | ,006 | ,001 | ,002 | ,000 | ,010 | ,031 | ,002 | ,004 | ,001 | 30,050 |
| | N | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 |
| K10 | Pearson's correlation coefficient | -,049 | -,263 | -,081 | ,325 | ,232 | -,184 | -,318 | ,378 | ,121 | 1 | -,053 | ,283 | -,093 |
| | Significance | ,834 | ,250 | ,726 | ,150 | ,312 | ,424 | ,160 | ,091 | ,600 | | ,820 | ,213 | ,687 |
| | Sum of square and cross product | -,009 | -,046 | -,018 | ,056 | ,047 | -,027 | -,012 | ,084 | ,037 | ,146 | -,008 | ,073 | -77,394 |
| | Covariance | ,000 | -,002 | -,001 | ,003 | ,002 | -,001 | -,001 | ,004 | ,002 | ,007 | ,000 | ,004 | -3,870 |
| | N | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 |
| K11 | Pearson's correlation coefficient | ,010 | ,389 | -,040 | ,407 | ,224 | ,312 | ,049 | ,479* | ,261 | -,053 | 1 | ,128 | ,234 |
| | Significance | ,965 | ,081 | ,865 | ,067 | ,328 | ,169 | ,832 | ,028 | ,254 | ,820 | | ,581 | ,307 |
| | Sum of square and cross product | ,002 | ,074 | -,010 | ,076 | ,049 | ,050 | ,002 | ,116 | ,085 | -,008 | ,173 | ,036 | 210,995 |
| | Covariance | ,000 | ,004 | ,000 | ,004 | ,002 | ,003 | ,000 | ,006 | ,004 | ,000 | ,009 | ,002 | 10,550 |
| | N | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 |
| K12 | Pearson's correlation coefficient | -,064 | -,165 | -,210 | -,064 | -,059 | ,268 | -,128 | ,233 | ,020 | ,283 | ,128 | 1 | -,018 |
| | Significance | ,782 | ,475 | ,360 | ,784 | ,799 | ,241 | ,582 | ,308 | ,933 | ,213 | ,581 | | ,938 |
| | Sum of square and cross product | -,020 | -,050 | -,081 | -,019 | -,021 | ,069 | -,008 | ,091 | ,010 | ,073 | ,036 | ,449 | -26,236 |
| | Covariance | -,001 | -,003 | -,004 | -,001 | -,001 | ,003 | ,000 | ,005 | ,001 | ,004 | ,002 | ,022 | -1,312 |
| | N | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 |
| Invest- | Pearson's correlation coefficient | ,118 | ,272 | ,032 | ,208 | ,168 | ,080 | ,016 | ,238 | ,352 | -,093 | ,234 | -,018 | 1 |
| ment | Significance | ,610 | ,234 | ,891 | ,366 | ,467 | ,730 | ,944 | ,299 | ,118 | ,687 | ,307 | ,938 | |
| | Sum of square and cross product | 118,1 | 268,8 | 39,8 | 202,9 | 191,1 | 66,93 | 3,43 | 300,2 | 601,1 | -77,4 | 210,9 | -26,24 | 4695777,63 |
| | Covariance | 5,90 | 13,44 | 1,988 | 10,15 | 9,553 | 3,347 | ,172 | 15,01 | 30,05 | -3,870 | 10,55 | -1,312 | 234788,882 |
| | N | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 |

**. Correlation is significant at the 0.01 level (2-tailed). *. Correlation is significant at the 0.05 level (2-tailed).

Source: Author's calculations using the software package SPSS

The degree of the intensity of the relationships between variables, which are in a linear relation is measured by: (1) the covariance as an absolute measure of intensity of the correlation, and (2) the coefficient of the simple linear correlation, as a relative measure of the intensity of the correlation. The covariance is essentially a common measure of variability of both variables, but can be mathematically represented as the sum of the variances of both variables. The coefficient of simple linear correlation or Pearson's coefficient represents the covariance expressed in units of standard deviation of both variables. Based on the obtained results, it is clear that none of the relevant criteria for the certification of cities and municipalities, i.e. the level of fulfillment are not statistically significantly correlated with the amount of the investments. It should be noted that almost all criteria are positively correlated with the amount of the investments, with the exception of criteria K10 - adequate infrastructure and utilities and K12 - environmental standards, which have very low negative correlation with the amount of the investments. This result shows that the fulfillment of the majority of criteria has a positive impact on attracting the investments, but the impact is not significant.

## *THE ANALYSIS OF DEA MODELS APPLICATION IN EFFICIENCY ASSESSMENT OF CITIES AND MUNICIPALITIES IN ATTRACTING INVESTMENTS*

The assessment of the effectiveness was performed by using the method of data envelopment analysis (Data Envelopment Analysis - DEA). DEA provides the information on the possibility of increasing the efficiency of decision units (Stanković, Anđelković Pešić, 2010), or, in the case of inefficient decision units, it indicates the causes of inefficiency, suggesting a way to increase their efficiency (Cooper, Seiford & Tone, 2005; Bulajić et al., 2011). In the analysis of the efficiency of cities that have received certificates of favorable business environment, the analyzed cities have the status of decision unit. The criteria by which they are judged are inputs in DEA model, while the output for the efficiency evaluation is the amount of the investments in the territory of the observed city (municipality).

Due to the extensive development of DEA and its implementation in different areas, there is a large number of models (Cook, Seiford, 2009). The DEA method is a mathematical programming technique that uses the data on inputs and outputs to determine whether an entity is effective or not, relative to other entities involved in the analysis. This is a non-parametric approach because it does not require an *a priori* assumption about the analytic function form which describes the functioning of a decision unit (Charnes, Cooper & Rhodes, 1978). While the parametric approaches are oriented towards the central tendencies and

the evaluation of an entity's performances is done in relation to the average performance, DEA is a borderline method which consists of a series of optimizations (one for each entity included in the analysis) (Premachandra 2001; Savić, Martić, 1997). For each decision unit, the maximum rate of performances is calculated, compared to all the other units in the observed population, which must meet the requirements of "laying" on or below the extreme border - envelope, called the limit of efficiency (Adler, Friedman & Sinuany-Stern 2002). The measure of efficiency that DEA provides is relative because it depends on which and how many entities are included in the analysis, as well as on the number and structure of the input and output. The above characterization which includes both the input and output orientation at the same time, may be considered as an extension of the concept of Pareto-Koopmans definition of technical efficiency. In addition, the characterization of the DEA efficiency is an extension of the Pareto- Koopmans efficiency concept (Charnes et al., 1985).

The application of DEA method may provide information about the efficiency of all the surveyed cities and municipalities in the model, as well as the efficiency evaluation of the individual criteria in the context of their contribution to the achieved investment amount (Despotis, Simirlis, 2002). Based on the data of the partial effectiveness of the various cities and municipalities, it is possible to indirectly determine the relative importance of meeting the certification criteria in terms of contributions to the achieved amount of investment. It is, in fact, the individual contribution with respect to the given output parameter. The model is formed in such a way that the cities and municipalities that are certified to have favorable business environment have the status of decision-making units. The input parameters for the assessment of the efficiency of cities and municipalities are the criteria that have been used in the certification process. The coefficients which indicate the level of fulfillment of each criterion by municipalities and cities in the sample are in fact the elements of the matrix input in DEA model. The output parameter for assessing the effectiveness is the amount of investment per capita in these cities and municipalities. In this sense, the results of DEA method are largely specified and they enable the monitoring of municipalities which received a certificate of favorable business environment in future work as well, in terms of efficient attraction of the investments (Table 5). The model created to assess the efficiency of cities and municipalities is the basic output-oriented CCR model with variable return to scale (VRS model-variable return to scale). DEA Frontier software package was used to resolve DEA models. (www.deafrontier.net).

*Table 5.The evaluation of the efficiency of cities and municipalities with respect to the sum of investments using DEA method*

| Градови и општине | The result of efficiency | K1 | K2 | K3 | K4 | K5 | K6 | K7 | K8 | K9 | K10 | K11 | K12 | Investitions: *€ per capita* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ***Општина 1*** | 1 | 0.80000 | 1.05900 | 1.00000 | 0.73200 | 0.87500 | 1.00000 | 1.00000 | 0.73300 | 0.63600 | 0.82900 | 1.00000 | 1.00000 | 520.0202 |
| *Општина 2* | 0 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 |
| *Општина 3* | 0 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 |
| *Општина 4* | 0 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 |
| *Општина 5* | 0 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 |
| *Општина 6* | 0 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 |
| ***Општина 7*** | 1 | 1.00000 | 0.94100 | 1.00000 | 0.78000 | 0.70000 | 0.77800 | 1.00000 | 0.56700 | 0.72700 | 0.69500 | 1.00000 | 0.50000 | 879.2002 |
| *Општина 8* | 0 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 |
| ***Општина 9*** | 1 | 1.00000 | 0.82400 | 1.00000 | 0.67100 | 0.65000 | 1.00000 | 1.00000 | 0.86700 | 0.95500 | 0.80500 | 0.83300 | 1.00000 | 622.9488 |
| *Општина 10* | 0 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 |
| ***Општина 11*** | 1 | 1.00000 | 0.76500 | 0.75000 | 0.82900 | 0.72500 | 1.00000 | 1.00000 | 0.53300 | 0.63600 | 0.75600 | 0.83300 | 1.00000 | 687.3332 |
| *Општина 12* | 0 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 |
| *Општина 13* | 0 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 |
| *Општина 14* | 0 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 |
| *Општина 15* | 0 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 |
| *Општина 16* | 0.987145 | 0.95180 | 0.81341 | 0.79196 | 0.84368 | 0.74052 | 0.98715 | 0.98715 | 0.58813 | 0.63759 | 0.76997 | 0.86907 | 0.97338 | 657.8553 |
| *Општина 17* | 0 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 |
| *Општина 18* | 0 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 |
| *Општина 19* | 0 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 |
| *Општина 20* | 0 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 |
| ***Општина 21*** | 1 | 1.00000 | 0.76500 | 0.87500 | 0.80500 | 0.80000 | 1.00000 | 1.00000 | 0.73300 | 0.81800 | 0.76800 | 1.00000 | 1.00000 | 697.1183 |

*Source*: Calculated by authors using the DEA Frontier software package

It is important to note that, despite the fact that all cities and municipalities in the sample have the certificate of favorable business environment, not all of them are effective in terms of the amount of investments in their territory. According to the results presented in Table 5, only five municipalities (municipalities in bold text) were effective in attracting investments in fixed assets in their territory.

## *CONCLUSION*

Although the process of the certification of cities and municipalities was introduced by NALED, as an association, and not by some official institution, it seems that the representatives of local governments have considerable confidence in this association and are willing to entrust the evaluation of services and activities of their cities and municipalities. However, it is believed that the reason for this is the fact that the corresponding ministry is included in the certification process, and it can be said that this process is carried out through the engagement of civil, private and public sector (www.merr.gov.rs).

During the seven-year period, which is a relatively short period of time in terms of issues discussed –investments and employment, significant results were achieved on the territory of the Republic of Serbia, bearing in mind that many cities and municipalities have already introduced the changes that make them more favorable environments for the investors.

In spite of the relatively good results, there is an obvious lack of efficiency in cities and municipalities to attract investors. Therefore, in order to determine the link between criteria fulfillment and the amount of investments, a correlation analysis and data envelopment analysis (DEA method), were conducted. This method can be used to determine the significance of criteria, depending on the extent to which they determine the efficiency of cities and municipalities in attracting investments. The correlation analysis showed that there is a weak positive correlation between the majority of criteria, i.e. levels of their fulfillment, and the amount of investments in fixed assets in the territory of the observed local government. At the same time, the results of DEA method application showed that only five cities were effecient in attracting investments, although all 21 cities and municipalities were certified as favorable business environments.

This conclusion stems from the fact that all cities and municipalities who possess the certificate of favorable business environment are not equally successful in attracting investments. Bearing in mind that the purpose of the certification process is to notify the investors that a certain city or municipality is recommended as a favorable business environment, in order to increase investments and to the ensure faster economic growth, success

in attracting investments is an important indicator of the need for potential modifications of the process of certification criteria that would be adapted to the preferences of foreign and domestic investors.

## *REFERENCES*


Adler, N., Friedman, L., & Sinuany-Stern, Z. (2002). Review of ranking methods in the data envelopment analysis context. *European Journal of Operational Research, 140*(2), 249–265.

Aranđelović, Z., & Marjanović, V. (2011). Strategija i ekonomska politika u regionalnom razvoju Srbije. Regionalni razvoj i demografski tokovi zemalja jugoistočne Evrope[Strategy and Economy Politics in the Regional Development of Serbia. Regional Development and Demographic Currents of the Southeast European Countries]. Niš: Ekonomski fakultet.

Bulajić, M., Savić, G., Savić, S., Mihailović, N., & Martić, M. (2011). Efficiency assessment of banks in Serbia. *Technics Technologies Education Management*, 6(3), 657–662.

Charnes, A., Cooper, W. W., & Rhodes, E. (1978). Measuring the efficiency of decision making units. *European Journal of Operational Research*, 2(6), 429–444.

Charnes A., Cooper, W. W., Golany, B., Seiford, L. M. and Stutz, J. (1985). Foundations of Data Envelopment Analysis for Pareto-Koopmans Efficient Empirical Production Functions. *Journal of Econometrics* 30(1/2): 91–107.

Cooper, W. W., Seiford, L. M., & Tone, K. (2005). Introduction to data envelopment analysis and its uses: with DEA-solver software and references. New York: Springer.

Cook, W. D., & Seiford, L. (2009). Data envelopment analysis (DEA)—Thirty years on. *European Journal of Operational Research*, 192(1), 1–17.

Cooper, W. W., Seiford, L. M., & Zhu, J. (2011). *Data envelopment analysis: History, models, and interpretations*. New York: Springer US.

Cvetanović, S. &, Mladenović, I. (2012). Factors of economic growth in the region: theoretical explication approach with emphasis on new economic geography. *Regional Development and Demographic Trends of South-East Europe* (13–22). Niš: Faculty of Economics.

Despotis, D. K., & Smirlis, Y. G. (2002). Data envelopment analysis with imprecise data. *European Journal of Operational Research*, *140*(1), 24–36.

Premachandra, I. M. (2001). Controlling factor weights in data Envelopment analysis by incorporating decision maker's value judgement: An approach based on AHP. *International journal of information and management sciences, 12*(2), 67–82.

Savić, G., & M. Martić (1997). *Connecting data envelopment analysis and multi-criteria analysis*. SYM-OP-IS ′97, Bečići, Montenegro, p. 811–814.

Stanković, J., & Anđelković Pešić, M. (2010). *Primena kvantitativnih metoda i modela u poslovnom odlučivanju* [Application of Quantity Methods and Models in Business Decission Making]. Vrnjačka Banja: Scientific and Technical Center for Intellectual Property – SaTCIP.

www.naled-serbia.org/certificationmap, taken from 11. 2. 2015.

www.deafrontier.net/software.html, taken from 05. 4. 2013.

www.webrzs.stat.gov.rs, taken from 12. 2. 2015.

www.merr.gov.rs, taken from 19. 4. 2015.

www.deafrontier.net, taken from 23. 5. 2013.

# УЛОГА ПОСЛОВНОГ АМБИЈЕНТА У УНАПРЕЂЕЊУ ИНВЕСТИЦИОНИХ АКТИВНОСТИ: СТУДИЈА СЛУЧАЈА ГРАДОВА И ОПШТИНА У РЕПУБЛИЦИ СРБИЈИ

**Јелена Станковић, Драгана Раденковић-Јоцић**
Универзитет у Нишу, Економски факултет, Нишу, Нишу, Србија

**Резиме**

Да би градови и општине били позитивно оцењени од стране потенцијалних инвеститора, морају познавати стандарде и критеријуме које потенцијални инвеститори вреднују и на основу којих доносе одлуку о томе да ли ће инвестирати на територији одређеног града, односно општине. Посматрано на овај начин, познавање и поштовање критеријума које инвеститори вреднују представља услов обезбеђења локалног пословног развоја, посебно када се градови и општине ослањају на стране инвеститоре. Градови и општине могу проверити своју атрактивност за потенцијалне инвеститоре у процесу сертификације. Сертификација градова врши се на основу одређених критеријума, аналогно мапи за достизање пословне изврсности и критеријума за процену пословања предузећа ради додељивања награде за пословну изврсност. У том смислу, програм сертификације представља својеврсно признавање квалитета функционисања општина у циљу привлачења страних директних инвестиција.

Да би успеле у својој намери да добију сертификат „пријатељски расположених према инвеститорима" локалне самоуправе, морају се знати какве информације и услове ће потенцијални инвеститори тражити, односно морају посматрати своје општине из угла потенцијалних инвеститора. Сертификација је процес који омогућава оцену квалитета услуга и информација које општине пружају инвеститорима и привредницима. Реч је о процесу који има за циљ унапређење привредног амбијента Србије кроз институционалне реформе уз активно учешће и сарадњу привреде, општина и грађана. Једно од кључних питања јесте одређивање значаја критеријума који се сматрају релевантним за евалуацију привлачности општина са аспекта потенцијалних инвеститора. Анализа значаја критеријума релевантних за сертификацију градова и општина са повољним пословним окружењем, приказана у овом раду, има за циљ идентификовање оних који су имали кључну улогу у ефикасности општина и градова у привлачењу директних инвестиција.

У раду су представљена два алтернативна начина анализе повезаности нивоа испуњености критеријума у процесу сертификације градова о повољном пословном окружењу и износа инвестиција у основна средства на територији самог града или општине. Први је корелациона анализа, чији је циљ да оцени да ли постоји икаква веза између ове две посматране категорије. Други начин је оцена ефикасности општина и градова у привлачењу инвестиција применом ДЕА метода. Оба метода показала су да та веза постоји, али да је слаба, те да испуњеност критеријума у процесу сертификације посматраног града или општине не значи нужно и његову ефикасност у привлачењу инвестиција у основна средства.