CHANGING PRINCIPLES HOW TO DEFINE AND REGULATE THE TERM ‘INDUSTRIAL PARK’: 
THE CASE OF HUNGARY, ROMANIA AND BULGARIA

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Abstract

The development of industrial parks began in the 1960s with the transformation of previous production systems and the technological change. Initially, the first industrial areas were developed spontaneously when positive externalities rose from the close spatial proximity of companies. Therefore, the producing plants started to build common infrastructure and a variety of special facilities within the industrial areas which resulted in the concentration of production and creating the first industrial parks. The industrial spatial structure has changed and taking the positive benefits of proximity in mind, the creation of industrial parks has become conscious.

This trend has reached the Central and Eastern European countries later, consequently the first initiatives were realized at the beginning of the 1990s after the collapse of the soviet bloc. The post-socialist countries have tried to take over the methods and strategies used in Western European countries but due to the different economic, political, social backgrounds in these states diverse development dimensions can be observed in the case of industrial parks. In the present study, the authors will introduce a historical overview of industrial parks’ development, the characterization of parks and the characteristics of certain park types. Moreover, the paper will review the main terminological information related to the parks. The parks will be examined in three Central and Eastern European countries (Hungary, Romania and Bulgaria), looking for similarities and differences between industrial parks in the listed states.

Keywords: Industrial park, Central and Eastern Europe, historical overview, different development paths

INTRODUCTION

The establishment of industrial parks was begun at the beginning of the 1990s in Central and Eastern European countries. The post-socialist countries tried to adapt methods which had been used and had stood the test of time in Western-European countries. In the Central and Eastern European region, the role of central government was much stronger than in the western part of Europe and regional differences were also embodied in the establishment period and the development path of industrial parks.

Though the pace of industrial park creation has slowed in Hungary (Kiss, 2013), they still appear as depositories of the domestic economic development. Since 1997 until the
millennium more than one hundred industrial parks were established in the country (Kiss, 2013, p. 14). Taking the simplest definition, industrial parks are "areas prepared for industrial use" (Kiss, 2013, p. 13), however in the 21st century it is not entirely true as most of the parks are not limited to industrial production.

The main purpose of this paper is to give an overview of industrial parks, their different types and their main attributes. The research study focuses on the term ‘industrial park’ and give a conceptual theoretical framework on the term used in Hungary, in Romania and in Bulgaria.

The first section of the study reviews the Hungarian theoretical background of industrial parks and describes their characterization. There are many aspects in regional science how industrial parks can be differentiated – the authors focus on the classification based on the different region types where the parks are situated. The second and the third chapters provide a brief overview of the Bulgarian and the Romanian industrial park terms and regulation. Finally, the findings are summarized in a table which shows the main results of the research.

LITERATURE REVIEW

Historical Overview of Industrial Park’ Development

After the “Fordism” mass production was unable to find a respond to the challenges of the 1970s, so a new system approach was needed. It was the era of the development of decentralized and flexible systems that also gave place to industrial areas (Kumar, 2005; Tylecote, 1995). In the beginning, positive externalities were launched between firms located geographically close to each other spontaneously; therefore the production plants began to set up a variety of common infrastructure facilities within the industrial area. It was a period when the first industrial parks were established (Rechnitzer, 2002).

The term ‘industrial park’ has changed

In Hungary the majority of studies and pieces of research regarding industrial areas were published at the beginning of the 2000s, which examined the parks from different aspects. The term is an umbrella term that refers to a very complex concept (Markó, 1999, p. 4) and was introduced into the Hungarian language as a loan word of the English word ‘industrial park’ (Lengyel et al., 2002) which also contributed to the difficult interpretation of the term.

According to Rakusz (2001) “the industrial park is an estate-wise established group of industrial and service facilities which is able to provide essential conditions for the

1 Translated by the authors.
production of state of the art products and for the application of modern technologies mainly for small- and medium sized companies” (Rakusz, 2001, p. 21). The park provides not only physical infrastructure but also a variety of services for companies located inside the park helping their daily activities. In many cases parks appear as the results of real estate development projects when the letting of built properties and the services provided for settling companies come to the focus (Rakusz, 2001). Parks are also mentioned as “important tools for regional development” (Tiner, 2011, p. 291).

Müggenborg and Bruns (2003) delivered a similar definition in the German literature, they stated that industrial parks are “industrially used sites, where, on a restricted area, mostly legally independent enterprises have established close cooperation in terms of goods and services and at which the users of the park typically share different infrastructural facilities such as sewage system, (...) pipeline network, etc. based on private sector agreements” (Müggenborg and Bruns, 2003, p. 14).

If we take a look at definitions used in other countries, we will face some similarities with the Hungarian term usage. In Finland, industrial parks also play an important role and as the existing definitions of industrial areas did not totally cover the features of parks, some Finnish researchers (Malmén et al., 2008) decided to create a new definition. “An industrial park consists of independent production companies operating inside the same fence and thus sharing infrastructure and sometimes even buildings with each other. (...) Another basic feature is that none of the main operating companies has a dominating role over the others, which means that none of the companies can be considered as hosting the site. This is one of the main differences compared to traditional industrial areas” (Heikkilä et al., 2010, p. 432).

In contrast to the Finnish concept, none of the Hungarian definitions considers the cooperation of companies within the park.

Similarly to the previous Finnish term, Ben and Wang (2011) hold the view that “industrial park development is an important policy tool adopted in many industrialized countries (...) creates job opportunities, improves urban productivity, and maintains the country’s competitive environment” (Ben and Wang, 2011, p. 57).

According to the diversity of definitions – especially when taking into account the international variations of park terms – we can refer to Salonen (2010) who identifies that “due to the varying development backgrounds and purposes of industrial parks in different countries several synonyms are used for them” (Salonen, 2010, p. 80).

The main aim of this study is to present a comparison of industrial areas in three analyzed countries in the Central and Eastern European region, i. e. in Bulgaria, Hungary and Romania.
AIM, METHOD AND RESEARCH QUESTIONS

We have chosen to analyze the above mentioned 3 countries because they had to restructure their economies and industries after the period of the communist regime. They faced similar tasks and difficulties in the past in this restructuring period and today, they also have some similarities regarding their economies.

They are all European Union members states, Hungary joined the EU in 2004, Bulgaria and Romania in 2007.

If we take a look at the GDP per capita (PPP based)\textsuperscript{2} data in 2012, we find that all the three analyzed countries can be found in the last 5 with the lowest rates – see Appendix 1. Comparing the data to the EU28-average (100), Hungary’s GDP per capita (PPP based) is around 65, Romania a little bit over the half of the average and Bulgaria is under the half of the EU28-average.

If comparing the FDI inflows in 2013, after the Checz Republic (3760 million EUR), Romania (2725 million EUR), Hungary (2317 million EUR) and Bulgaria (1092 million EUR) has the highest FDI inflow rates (Popescu, 2014, p. 8151).

The study focuses on industrial parks which are seen as important tools and facilities in the studied states. As the EU tries to enhance innovation, R&D activities, competitive clusters and networks, different types of industrial areas (industrial districts, business incubators and e.g. industrial parks) came to the fore. The analyzed post-socialist countries also support such entities by attracting primarily foreign capital. Although these facilities are mostly production-related sites, they act as relevant factors in the economy and their development paths should be analyzed.

The authors of the paper use document analysis to get a deeper insight into the terminology of the term ‘industrial park’. The main objective is to compare the Hungarian, the Romanian and the Bulgarian term usage, regulation and the main conditions of industrial areas, both in the literature and also on the level of law.

At the beginning of the research, the authors defined two main research questions which are answered in the next part of the study.

- Q\textsubscript{1}: What are the main differences of industrial park’ regulation in the analyzed countries?

\textsuperscript{2} The GDP per capita (PPP based) is gross domestic product converted to international dollars using purchasing power parity rates and divided by total population. This data is useful to compare nations’ living standards. (Source: http://data.worldbank.org/indicator/NY.GDP.PCAP.PP.CD, Downloaded: 02.08.2015.)
• Q2: How diverse are the conditions of industrial areas in Hungary, in Bulgaria and in Romania?

RESULTS AND DISCUSSION

Industrial Parks in Hungary, in Bulgaria and in Romania

In Hungary, there is a governmental ordinance (23/2013 (II. 1.)) which determines the conceptual framework and types of industrial parks and specifies the conditions of gaining the title ‘industrial park’. According to the governmental edict, industrial park “is an institution which deals with general industry- and regional development, has an area supplied by infrastructure, and runs production, development and service activity, aspires to improve innovation activity and has got the title ‘Industrial Park’.”\(^3\) According to this act, a new term was introduced, the science and technology park, i.e. *an industrial park which was established or is now functioning with the aim to give support to primarily knowledge-intensive companies dealing with technological innovation for their development*” (23/2013 (II. 1.) Gov. ordinance).\(^4\)

In Bulgaria, industrial areas are called *industrial zones*. These zones are areas that have been designed for industrial development and creation of logistics, commercial and business parks (Industrial-zones, 2015). These industrial zones provide attractive conditions for both, national and international companies ensuring the area for production, trade and logistics. All these incentives are supported by the Government, by the local authorities and by the Chamber of Commerce and Industry ((Ilieva, 2002).

In Bulgaria, the industrial zones are regulated by the Investment Promotion Act (seen as IPA) which also gives a definition: “*industrial zone shall be a set of one or several adjoining lots with similar characteristics and prevailing assigned use for manufacturing activities, projected by an effective detailed plan, according to the Spatial Development Act*” (IPA, 2004).

The main purpose of the Bulgarian state is to establish and develop industrial zones and provide special support for settling companies in order to make the established/or emerging industrial areas more attractive. 14 functioning industrial zones can be found in the country and 48 areas are under development stage today. As it can be seen in Fig. 1, there are zones of which infrastructure has been already developed and are ready to invest (21 zones), the other 27 zones are going to be developed in the future.

\(^3\) Translated by the authors.
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The trend of the differentiation between industrial parks and science and technology parks – appears in the Bulgarian terms. According to the IPA, “technology park shall be a park which satisfies the requirements for an industrial zone but with a prevailing scientific research and development activity and/or education, and/or information technologies and for innovative activities for technological renovation of manufacturing products and technologies” (IPA, 2004).

In Romania, the development of industrial parks has started later than in Bulgaria. “The first legal industrial park status was granted in 2002” (Dumitrescu, 2009, p. 1). The Industrial Park Program (based on 1116/2001 decision) developed by the Romanian Government was introduced in 2002 with the aim to improve business environment by developing and modernizing the physical infrastructure and encouraging domestic and foreign capital investments.

In 2001, a governmental ordinance (65/2001) was implemented that defines the term ‘industrial park’. According to this regulation, “the industrial park represents a delimited area in which economic activities, scientific activities, industrial production activities, services and scientific research and/or technological development valorisation are developed, in specific facilitating working conditions, to render valuable the human and material zone potential” (65/2001 Gov. ordinance). The definition also gives some requirements which have to be satisfied:

- a minimum of 10 hectares area,
Based on available data of 2010, 63 registered industrial parks are in industrial towns in Romania but not all the parks are operating (Dodescu and Chirilă, 2012, p. 333.). As in the Hungarian legislation, the Romanian Government also took into consideration the international trend of modernization of industrial parks. According to the act mentioned above, scientific and technological (S&T) parks are defined as “zones where activities of learning, research and technology transfer are performed. The S&T park is set up based on a joint venture contract concluded between universities and/or a R&D organization, on one hand, and national companies, commercial companies, local public administration authorities, employers’ or professional association, individuals, Romanian or foreign investors, on the other hand” (50/2003 Gov. ordinance).

Comparison of parks in the analyzed countries

Based on the interpretation of the European Union, industrial parks are able to adapt to changing needs which also leads to their diversity (EESC 2006). In parallel to the economic development, industrial areas are also changing, as it is also observed in the case of industrial parks. In addition to the fundamental attributes of parks, park types are allocated according to the basic functions and activities inside the area (e. g. Benko, 1992, Rakusz, 2001, Pálmai, 1996, Scandizzo, 2001).

Industrial parks have different types according to the regions they are located in. Basically, there are three types of regions, based on the competitive strategy they use, where different types of industrial areas can be found:

1. Neofordist region: where mass production has the main role and which are specialized in routine activities. The level of innovation and R&D activities is low, and the relationships between companies are weak or completely absent. Regions are seen as “production sites” (Lengyel, 2009, p. 27).

2. Knowledge transfer region: is able to accommodate new technologies and production processes, thus their competitive advantages are well qualified labour, strong networking and innovation.

3. Knowledge creation region: where the focus is on high value-added services, where the latest technologies and trends appear and strong integration can be observed between companies. Regions are the “hubs of knowledge” (Lengyel, 2009, p. 27).
In the former socialist bloc countries, including the analyzed countries, the first type of regions, i.e. industrial zones/parks can be found, although some exceptions also exist which can be classified as knowledge transfer regions. Such examples are

- the International Industrial Park of Győr, in Hungary,
- the high-tech parks of Sofía and Plovdiv in Bulgaria and
- the most advanced park in Romania is the Oradea Industrial Park in Oradea.

### Table 1 Comparison of industrial parks’ characteristics in the case of Hungary, Bulgaria and Romania

<table>
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<tr>
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<th>Hungary</th>
<th>Bulgaria</th>
<th>Romania</th>
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<tr>
<td><strong>Regulated definition of the term 'industrial park'</strong></td>
<td>An industrial park “is an institution which deals with general industry- and regional development, has an area supplied by infrastructure, and runs production, development and service activity, aspires to improve innovation activity and has got the title ‘Industrial Park’.”</td>
<td>Industrial zone shall be a set of one or several adjoining lots with similar characteristics and prevailing assigned use for manufacturing activities, projected by an effective detailed plan, according to the Spatial Development Act</td>
<td>The industrial park represents a delimited area in which economic activities, scientific activities, industrial production activities, services and scientific research and/or technological development valorisation are developed, in specific facilitating working conditions, to render valuable the human and material zone potential.</td>
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<tr>
<td><strong>Number of industrial parks</strong></td>
<td>220 industrial parks (2012)</td>
<td>14 functioning industrial zones, 21 developed zones, 27 under development zones (2012)</td>
<td>63 registered industrial parks (2012)</td>
</tr>
<tr>
<td><strong>Main conditions</strong></td>
<td>At least 20 hectares area, At least 5 functioning companies at the planned industrial area, totally with at least 100 full-time employees, Further conditions: The number of located companies should be at least 10 and the number of full-time employees should reach 500 until the 5th years’ end since the area has got the industrial park title.</td>
<td>Access to highways, Tax incentives for settled companies, Development phase of physical infrastructure.</td>
<td>Access to highways, At least 10 hectares area, Trading company as owner/user, Physical and human capital utilization based on geographical proximity.</td>
</tr>
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Source: own data (2015) based on the references in the study
Tab. 1 shows that the Bulgarian term and regulation system related to industrial areas differ from the Hungarian and Romanian systems. Although some elements of the terms mean basis for the comparison but in many cases, different scale needs to be considered when analyzing. Compared with the two other countries, the Bulgarian Government puts emphasis on the country’s low tax conditions and, consequently, makes industrial areas more attractive for foreign capital. There is no evidence what the term ‘industrial park’ means whereas it is used in some cases.

Based on the secondary data analysis, the following responses are accurate to the research questions of the paper. The interpretation of the Hungarian and Romanian ‘industrial park’ term use differs from the Bulgarian one – in both cases, all examined dimensions can be interpreted and on their basis the comparison can be performed. In both countries, i.e. in Hungary and in Romania, a clearly articulated definition exists, on the one hand it is related to industrial parks and on the other, scientific and technological parks. While there is a slight difference in the definitions used, the explanation of terms is regulated on a central regulatory level.

Furthermore, beside the marked definitions of industrial parks, Hungary and Romania also defined some criteria related to the terms which more accurately give the conditions for the development and maintenance of parks. While the size of the industrial area is less in Hungary than it is in Romania (10 hectares), it should be also accessed to main national or international highways.

Proximity, i.e. geographical proximity is an important factor in Romania (Popescu and Ungureanu, 2008) – just as it is in Bulgaria and in Hungary but it is not articulated in the ordinance in latter countries. Within Hungarian conditions, further criteria are specified for the regulation of industrial parks being formed in the future, regarding for example the number of companies or of the full-time employees on the area.

The number of industrial parks is the highest in Hungary (220 parks in 2012), future analysis is needed to consider the qualitative attributes of the parks in all three countries.

**CONCLUSION**

In the era of democratic transition, the primary goal of industrial parks was the attraction of foreign capital in all Central and Eastern European countries, especially in Hungary. These parks were primarily related to traditional industrial production activity.

However, during the nearly quarter century since then, these industrial areas have been changing and the focus has moved to services and innovation – the term ‘scientific and
technological parks’ appeared in the Hungarian central regulation and it can be seen that the number of them as an entity is also growing.

In Bulgaria, the establishment of industrial areas started only a few years later and the country focuses on different attractive factors, e. g. tax incentives for foreign investors. In Romania, the industrial park development has a shorter history than in Hungary or Bulgaria but the country tries to put focus on the modernization of existing areas.

The collected definitions and regulations introduced in this study suggest that industrial areas (parks and zones) are handled as priority development territories, however, these countries take different goals and strategies into consideration.

The paper gave a wide-range analysis of industrial park terminology use in three Central and Eastern European countries and showed how the term differs at international level. If we take into consideration other countries then the puzzlement in term usage and meaning is more diverse. Thus, a common and unified term should be used on the level of the European Union. The different park types also have an impact on the terminology.

In the future, statistical data should be also examined when studying industrial parks to observe how these facilities have an impact an economic development. In future studies, the latest industrial park types – science and technology parks, eco-parks, etc. – should be highlighted from a terminological aspect because these parks have spread all around the world and play an important role in the economy of developed countries.

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http://www.europost.bg/article?id=8692 (Retrieved December 12 2014.)


APPENDIX 1

Figure 2 GDP per capita (PPP based) in EU28 countries, 2002 and 2012

(1) Speak in series. GDP per capita in PPP is expressed in this figure relative to the EU-27 average, which by definition has the exact value 100. In this figure the EU-28 value relative to the EU-27 average, rounded to the nearest whole number, is also 100, because the impact of Croatia is relatively small. For the same reason the countries’ and aggregates’ values relative to the EU-28 average would be close to those presented in this figure relative to the EU-27 average.