The examination of the sustainability of brownfield investments paying special attention to public policies and EU support

Ágnes Hegyi-Kéri

Summary

According to the economics of welfare the need (or necessity) for state intervention starts when people experience market failures [Pigou, 1920], the goal and reason for state intervention is usually to develop the welfare of people. Studies of actual state interventions show that not only the market but state interventions can fail as well [Wolf, 1988].

The rehabilitation and revitalization of the unused industrial sites represent new development possibilities and a serious challenge to public policies. The question is how to minimize the cost of industrial changes, when industry has lost its function in some areas and it had a negative effect on people.

In my study I will try to show the value of the effect and success of these policies without which economic growth is impossible, and which make brown field investments sustainable. In my opinion rehabilitation requires an interdisciplinary approach and one need to pay special attention to the rule of the local and country governance, and the ways of redistribution and financial support both from the European Union and the national state. For long term sustainability it is essential to avert the environmental damage, but without any government help it will not be successful and sustainable.

Keywords: revitalization, public policies, sustainability
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Introduction

The most conspicuous accompanying phenomenon of economic growth and development is the structural reorganization of economic function [Szalavetz, 2003]. In this study I aim to unravel the effects of the changes in the struc-

1 This research was carried out as part of the TAMOP-4.2.1.B-10/2/KONV-2010-0001 project with support by the European Union, co-financed by the European Social Fund.
ture of industry. Since the 1950s industry has had an ever decreasing role in economy, but at the same time there is a proven correlation between the input of processing industry and economic growth [Thirlwall, 2003]. I would like to highlight Schumpeter’s work from the economic theoretical framework theories that deal with the transformation of industrial structure, who, when speaking of innovation and new combinations, points out the role of “constructive destruction” in the economic growth: “one perishes and another is formed”. At the same time evolutionary economics reminds us of the difficulties posed by “path dependence” which, acting as inertia [Lux, 2010], delay structure change within industry. The industrial life circle theory emphasizes the capital intensity of a given industry, which is accompanied by growing labor-intensity in the downward cycle.

In Hungary the transformation of economy has been enhanced by the transition from planned economy to market economy and brought the flaws of the closed economic system to light. The intensity of development in the once socialist countries was enhanced by a separate economic policy and belated development [Enyedi, 1998]. Gábor Lux [Lux, 2010] includes problems in coordination, an underdeveloped financial sector and the difficult adjustment to consumer market in the list of catalysts.

Regions of industrial depression came into being in the wake of these structural changes in the Hungarian industry as a consequence of meager means and half-baked industrial politics. In 2000 six Hungarian subregions were placed in this category based on the following indicators:

- the ratio of industrial workers was more than 150% of the country’s average in 1990;
- between 1990 and 1999 employment in the industrial sector declined;
- the rate of unemployment was above average.

In 2009 Ballabás-Volter added migrational differences (instead of the unemployment rate) to the indicators, thus enlarging the number of subregions to 11. The following indicators were used: in 1990 the amount of industrial and building industry workers was above 45%, the rate of declination of industrial occupation per 1000 inhabitants was above the national average (54%), the annual migration difference between 1990 and 1997 was negative.

The aforementioned categories did not take the newly emerging brownfields into consideration, whose appearance mainly focused in two regions: Northern Hungary and Southern Transdanubia. My main hypothesis is that the existence of such rust belts is in rapport with the development of the economic and social relations in the affected regions.

I suggest taking the size of such brownfields into consideration at determining the boundaries of depressed subregions. All the more since there is a medium correlation (correlation coefficient $r = 0.4347$) between the size of brownfields and the rate of unemployment according to my calculations (2009). Thus I suppose that the prevalence of brownfields and the chance of finding a job for unemployed industrial workers is very low. The chance/willingness to mobility of those working in the secondary segment in the Northern regions is extremely
limited. The correlation coefficient between brownfields and the migration margin coefficient in Southern Transdanubia \( r = 0.2965 \) is somewhat smaller. In this subregion the employees are more willing to commute, as there is a strong correlation between the inland migration margin and the rate of steadily unemployed \( r = -0.5294 \). Based on these findings I suggest the integrating the number of steadily unemployed into the indicator system of the industrially depressed areas, too.

**International outlook**

Whilst constructing my model I studied a few successful international examples. In this study I do not aim to provide an extended international outlook. However, I find incorporating a few relevant examples important, as I aim to depict the revitalizing dimension of the labor market through them, and on the other hand it is not possible to correspond to sustainability without including social aspects as well. The example of Pittsburgh (USA) was the first proper model [Biczó, 2011] where the economic and social aspects were treated and developed equally. The research conducted by L. Babock and M.E. Benedict [Babock, Benedict, Engberg, 1998] proved that the structural change in the county including the city of Pittsburgh yielded different results in the dual labor market. If we interpret the industrial transformation to the point and identify the economic factors on the local level, we must integrate the regional employment policy and the special labor market stimuli into the revitalization. An example of such actions is Aquilippa (USA), where they treated the revitalization of “tired communities” through

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**Figure 1. Extension of brownfields**

Source: own construction.