Path Dependencies and Economic Transformation in Industrial Cities In Czechia

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Growth, decline and transformation of old (traditional) industrial regions or cities are *"the main source of empirical evidence for regional path dependence"* (Henning et al., 2015, p. 1358). Particularly the issue of transformation of historical industrial regions is tightly connected with the concept of path dependency, since new growth paths in regions do not start from scratch but are strongly rooted in the historical economic structure of a region (Neffke et al. 2011, p. 261), or *"new paths do not emerge in a vacuum, but always in the contexts of existing structures and paths of technology, industry and institutional arrangements"* (Martin & Simmie 2008, p. 186). Historical development of old industrial regions shows a strong negative lock-in (Grabher, 1993, Hassink, 2010) that more constrains than enables the environment (Martin, 2010). Martin and Sunley (2006) identify possible scenarios of escape from the lock-in. Trippl and Otto (2009) distinguish three types of development trajectories of historical industrial regions restoration. Despite significant benefit of evolution-oriented analyses there are several limitations. Firstly, the evolution perspective tends to ignore the role and importance of institutions (Mackinnon, 2009, Drahokoupil 2012), and secondly, as Birch et al. (2010, p. 50) explicitly state in their research of historical industrial regions *"the relationship between regional and national factors is one key avenue for investigation, requiring both further quantitative analysis of performance and in-depth qualitative studies of adaptation process"*. However, the authors' empirical findings point out the fact that the varieties of capitalism affected the change of industries in historical industrial regions (see similar arguments in Birch Mykhnenko 2009), which is also confirmed by recent research activities in the field of evolutionary economic geography (EEG) (Boschma, Capone 2015). Although there persist certain doubts whether the concepts of evolutionary economic geography are applicable in post-socialist context (Bathelt 2009, Drahokoupil 2012), empirical studies suggest that, when put in the right context the concept of path-dependency provides a relevant basis for understanding the development of regions (Ženka et al., 2015, Gwosdz 2016).

In accordance with the outlined brief discussion the principal aim of the submitted paper is to analyse, identify and evaluate long-term restructuring and transformation of three historical industrial cities in the Czech Republic, particularly Ostrava, Plzeň and Ústí nad Labem, in case studies and comparison thereof. At the close of communist era in 1989 the selected cities had been the largest industrial centres and has maintained their industrial character to date. At the same time they had been distinguished by their respective dominant specialty (coal-steel, engineering, chemical industry in the same order). According to typology developed by Wiechmann and Pallagst (2012) the analysed cities may be characterised – in simplified manner and with a great deal of cautiousness – so that Plzeň represents growth pole, Ostrava approaches the transition areas and Ústí nad Labem fulfils the criteria of downgrading areas, although along with severe economic decline and low demographic loss the latter may be perceived as a variety of urban gravitation centre.

Empirical part of the text concentrates on detailed explanation of differences in their development and may be divided in several parts. The first part with the help of various statistical methods analyses and evaluates the changes in industrial structures in time sections through census data (Czech Statistical Office) in 1991, 2001 and 2011. Concurrently it compares the changes in industrial structures in analysed cities with other regions of the Czech Republic, without ignoring the transformation of the country and discussions regarding the varieties of capitalism (viz e.g. Nölke, Vliegenthart 2009; Drahokoupil, Myant 2014). The second part provides, with the help of necessary contextualisation of institutional environment of the analysed cities, a more detailed view of drivers of the change in economic development after 1989. This part concentrates particularly on the roles of involved persons and institutions in influencing the path development in selected industries beyond the time sections and analyses the changes in the industries during the post-crisis development 2009-2013. Contrary to the national dimension the text outlines the evolution before 1989 as well as other aspects of restructuring – e.g. improved physical environment etc. (see Boschma, Lambooy 1999). The third part concentrates on comparing trajectories and the effect of path dependency on development of the analysed cities and attempts in line with the relation geography to formulate general findings resulting from economic transformation of industrial cities in the Czech Republic after 1989 and identify the most significant drivers of the change, discuss their extent, benefits, intensity and effects and critically evaluate the applied policies and strategies aimed to support the economic transformation.

From the point of context the paper is based on social and economic changes taking place in the Czech Republic since 1989. Regional differentiation of originally rather homogenous environment is included in the changes. We understand the process of economic transformation as a continuous natural process of development of economic structures. Hampl (1996, 2001) observes that locally we notice two types of transformation processes – a post-communist transformation represented by transition from planned economy to market capitalism, and more general post-industrial transformation from extensive to intensive character of production. Since 1989 we have witnessed in the Czech Republic significant structural changes both in the national economy and individual regional economies. However, the changes are not without ambiguities. On one hand, particularly due to application of the most general trends in post-industrial transformation, we have observed significant growth of tertiary sector off the first and second economy sectors, intensified with implications of post-communist transformation that in its early years had been symbolised by reduction of overlarge primary and later also secondary sector of economy (see e.g. Birch, Mykhnenko. 2009). On the other hand, in the secondary sector (in industry particularly) the transformation and restructuring processes had been taking place for the whole monitored period; as a result many establishments and even industries have ceased to exist, but often the original enterprises have thrived, retained their specialties, the industry has grown or even new production capacities have been created or new industries have occurred. In contrast with corporate environment where the changes during transformation may be characterised as radical, the character of industrial and structural changes in regional economies is observed as progressive evolution that includes parallel mechanisms of continuity and change. Drahokoupil (2012) in this context uses the expression *punctuated co-evolution*.

The three regions analysed in the paper represent different transformation stories and in fact they are symbolic demonstrations of three possible development trajectories. Ostrava and its wider urbanised neighbourhood (districts Karviná and Nový Jičín) used to be the Czechoslovak economic and population fountain and significantly contributed to national economy in the fields of coal mining and processing, heavy engineering, chemical and metallurgy industries. Transformation period had brought a relative decline in significance and economic performance and generally there had been observed higher occurrence of social and economic issues and deprivation and signs of urban shrinkage (Rumpel, Slach, 2012). However, since approximately the middle of the analysed period, 2004 precisely, the economy has gradually bounced back and the city has been reclaiming its position among the most significant regions hosting many important industries and enterprises. Plzeň regional economy represents both in the Czech Republic and Central Europe an important and successful economical space. Transformation process has strengthened the already strong position of Plzeň and in the past 25 year the region only emphasised its relative distance from remaining parts of the country. Plzeň follows Prague and Brno on the third place of economically most successful economic regions in the Czech Republic. Moreover, its success is all the more to be applauded since Plzeň, contrary to the other two cities, is a comparatively smaller stream territory without so many administrative capacities that significantly enhance the job market. It must be pointed out that the initial character of its regional economy at the beginning of transformation featured several potentially problematic aspects connected with restructuring of local strong industrial environment. And it must be further noted that the city and its economy had been for political reasons ostensibly neglected from the point of investments by the state administration in 1970s and 1980s which has brought out both negative and positive outcome. The result of transformation of economy in Plzeň is unambiguously positive, regardless some troublesome sub-issues (e.g. Baštová, Dokoupil, 2010).

Ústí nad Labem is located in a coherent urban settlement of con-urban type between Chomutov and Děčín. Comprehensively, this region of the Czech Republic is an economically significant area with high concentration of population, infrastructure and economic structures in form of strategic industries and enterprises. The position of local centre brings larger number of administrative, education and state administration features, regional branches of public offices, organisation and companies and creates the basis of local job market and job commuting direction. The process of economy transformation in Ústí nad Labem since 1989 must be viewed critically, since in comparison with other regions of the Czech Republic its significance as a regional economy has declined.

As has been mentioned already, the subject of the first part of this paper is to follow the path dependencies of regional economies in Ostrava, Plzeň and Ústí nad Labem. We have applied indicators with stronger feedback and applications used in broader economically oriented research that are both internationally accepted, quoted and used, and concurrently are purposefully applicable on the data available in the Czech environment and required territorial dimensions. For the purpose of empirical analysis we have selected Herfidahl-Hirschman index of regional economy specialisation, Krugman index of variety of regional economy and

index of structural changes in regional economy. The paper also evaluates both the development of analysed regions from the point of the above indicators, and changes in their positions within their respective metropolitan areas and the whole country. The analysis is again based on data obtained in national censuses 1991, 2001, 2011 with the key indicator being occupied jobs in individual industries. Data has been recalculated by a special method in order to get representative absolute values for the analysed regions. For further details about the data calculation please refer to the methodology note in previous chapter. Moreover, to be able to compare industrial structures of economy there must have been created comparable categories across the censuses. The second part that concentrates on the institutional environment and drivers of the change of economic regeneration is based on theory and methodology of case studies in regional disciplines (e.g. Ženka, Kofroň, 2012). Emphasize is put on analysis of involved players and initiatives that significantly reflected in transformation processes of traditional industries and economy as such. The third part, on the contrary, aims at decontextualizing the facts gathered before and through synthetic and generalizing approaches to formulate generally applicable conclusions.