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DIVERGENT PATTERNS OF ADAPTATION AMONG CENTRAL EUROPEAN OLD INDUSTRIAL REGIONS

1. INTRODUCTION

With the fall of the socialist system, Central European¹ economies underwent a strong industrial crisis, which was particularly damaging to concentrated spaces of mining, heavy industry and mass production. Referred to as Old Industrial Regions (OIRs) or sometimes Old Industrial Areas in regional studies (cf. Steiner, 1985, 2003; Cooke, 1995; Boschma and Lambooy, 1999), these regions experienced widespread economic, social and environmental degradation, and were widely considered the losers of transition processes with prospects of long-term stagnation (Gorzela, 1998). The failure of socialist economies was strongly associated with images of industrial dereliction and decay; criticisms of the planning system often focused on industrial policy as a central dilemma (e.g. Jánosy, 1969; Kornai, 1980; Winiecki, 1986), and some of the early democratic movements also included an environmentalist, anti-industrial element.

If we examine the industrial crisis from a comparative perspective, we can find that many of the symptoms which surfaced in post-socialist OIRs had clear antecedents in Western European examples from the 1970s and 1980s, just as the industrialisation of the 1950s and 1960s was comparable to similar, although much less brutal western development campaigns such as in the Italian Mezzogiorno or France's rural peripheries. Furthermore, it is also possible to speak of

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¹ In this paper, this geographic term is used to refer to all European post-socialist states except the German Democratic Republic and the successor states of the Soviet Union.

similarities in the commonly cited causes of decline: monofunctional regional economies, lagging innovation and institutional sclerosis (or ‘institutional, technological and political lock-in’) were no strangers to socialist industrial regions; rather, the differences manifested themselves in the greater geographical scope and severity of the resulting problems.

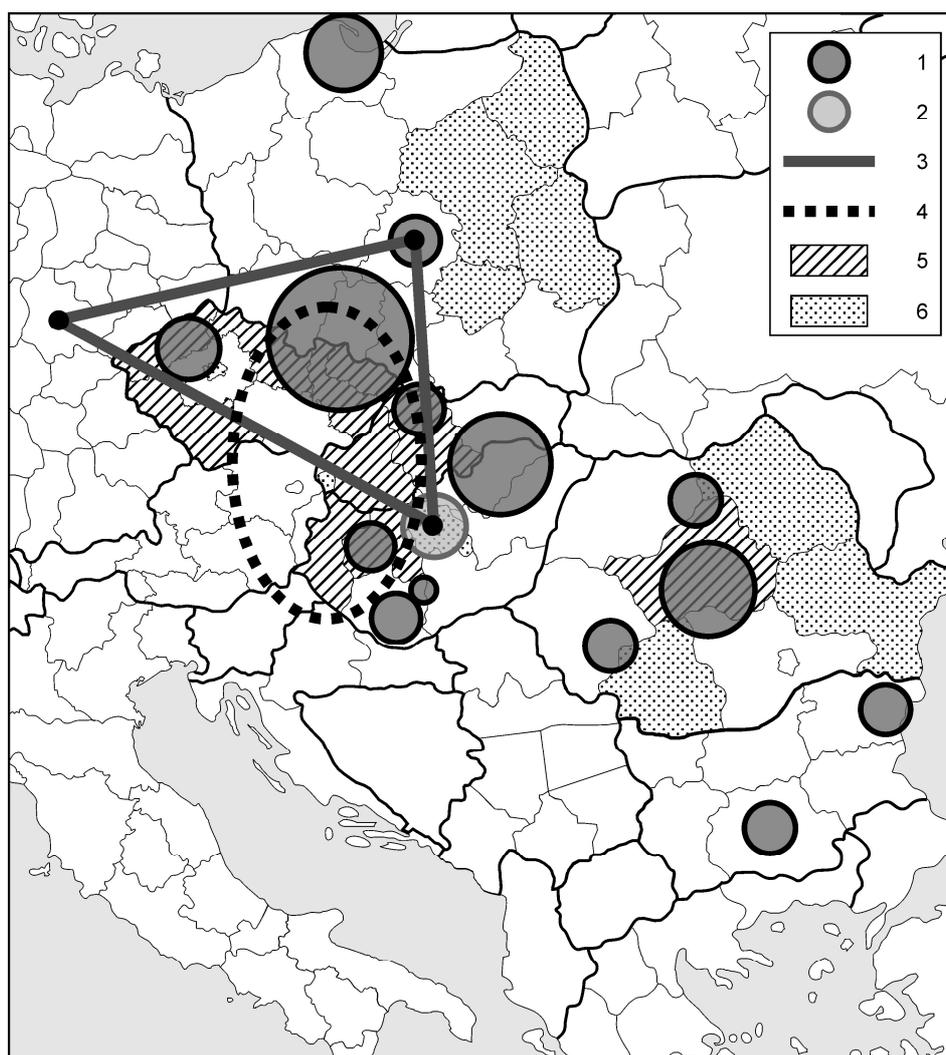


Fig. 1. The industrial landscape of post-socialist Central Europe
 Legend: 1 – major Old Industrial Region, 2 – metropolitan region with some OIR characteristics,
 3 – traditional industrial core, 4 – new manufacturing zone, 5–6 – highest and lowest levels of
 industrial employment (PL, CZ, SK, HU, SI, RO and BG, 2004)
 Source: 5–6 based on Eurostat

Even when we factor in early policy responses after 1989, there are clear parallels: focus on environmental cleanup, infrastructural projects and decreasing the social costs of transformation. These steps are consistent with the typical behaviour in western economies (see *Ex Post Evaluation of 1994–1999 Objective 2 Programmes*, 2003), and went hand-in-hand with the associated dilemmas of potentially sacrificing economic growth for the postponement of substantial restructuring efforts (Audretsch *et al.*, 2000). In the end, the restructuring process was predominantly market- instead of policy-driven, with increased regional differentiation as the ultimate outcome.

OIRs are spread over Central European space. The most extensive examples are found within the boundaries of the Łódź–Erfurt–Budapest ‘triangle’, the heartland of 19th century industrialisation which was still a dominant element in the early 1970s, as well as some other centres scattered across the board (Košice and the polycentric Borsod industrial region, Southern Transylvania and the Jiu valley etc.). The new industrial development of Central Europe mostly took place in a new growth zone ranging from Western and Central Transdanubia in Hungary to Upper Silesia, Poland: this area encompasses the highest levels of industrial employment, while the eastern peripheries of the EU-27 are still characterised by a low industrialisation level (figure 1).

This paper aims to assess the highly variable ways Old Industrial Regions have reinvented themselves in the new economic geographies of post-socialist, and according to some, post-transition Central Europe. In spite of gloomy predictions with regards to their future, there are numerous examples of regions where the restructuring process, if not painless, was mostly successful; the solutions, however, were far from uniform. Strategies to cope with an adverse economic, social and environmental heritage started with similar objectives across post-socialist OIRs, but soon evolved into divergent patterns of adaptation, as elaborated in section 2. Although local and regional factors make for a unique set of circumstances in each case, it is possible to identify three main ways to look at the restructuring process, which in turn can be divided into more positive and more negative outcomes. Some OIRs can be considered purer representatives of these patterns; others, especially large, complex regions, show a more heterogeneous picture.

The role of industrial growth in regional performance is another issue to consider. Although tertiary development and urban economies are cited as the pre-eminent source of prosperity in the modern world, ‘industrial production and employment remain central to national and regional well-being’ in the global context (Turnock, 2001, p. 849) as well as in Central Europe, where they are an even more significant dynamising force. However, as section 3. discusses, the manifestation of this force is different in central, intermediate and peripheral region types, and has far-reaching consequences for the elaboration of regional policies.

2. FORMS OF ADAPTATION IN OLD INDUSTRIAL REGIONS

Restructuring efforts in Central European OIRs initially focused on the renewal of old industries through attracting capital, support for small and medium enterprises (SMEs), diversification into new industrial branches and company structures, as well as physical infrastructure-building and environmental cleanup. These goals are common to almost all regions hit by industrial decline, and in fact show strong continuity with the adjustment strategies proposed in the late socialist period. It is from the mid-1990s that we are seeing the major divergence of development trajectories. There are examples of adaptation where the key to success was the innovative restructuring of traditional branches; elsewhere, it was embracing service-based growth (although the results here are somewhat ambiguous) or new types of industry. There are of course also failures – urban centres and regions which have been marginalised through a destructive loss of industry or long stagnation with deficient entrepreneurship.

With the breakdown of national planning systems after the dissolution of the socialist system, much of the evolution was spontaneous, based on market processes and several path-dependent factors. In some cases, regional actors were successful in formulating workable strategies from the mid-1990s and onwards (previous initiatives often remained on paper). Planning under the aegis of EU-integration became instrumental in encouraging both central governments and sub-national elites to rethink their positions and goals; it also provided increasing funds to assist the process.

Adaptation patterns, or strategies, may be grouped into three distinct types, with possible positive and negative outcomes (table 1). Transformation is of course a complex process, where public and private initiatives, colluding or colliding interests, external forces and endogenous resources come into play; therefore, most regions show the influence of all three to various extents – but most often, one or two become distinct, or sometimes even dominant. Adaptation patterns are also future images – their content may be judged very differently. De-industrialisation is a classic example, as it is seen both as a promise of modernity (post-industrial development) and as a threat (the disappearance of a region's economic base).

Table 1. Successful and unsuccessful adaptation patterns

Pattern type	a.	Successful outcome	b.	Unsuccessful outcome
I.	+	Innovative restructuring	–	Peripheral reintegration
II.	+	Service economy	–	Industrial collapse
III.	+	Diversification	–	Sustenance economy

The first pattern is linked to the reconstruction or renewal of the industrial base. The desired effect is *innovative restructuring* in the Schumpeterian sense through creative destruction (the market-driven ‘natural selection’ of industrial enterprises) and adaptive restructuring (the ability of enterprises to benefit from process innovation²); essentially, a rejuvenated and competitive industry which can withstand rivalry on the global scale. Social costs (structural and frictional unemployment) are initially high, but they are eventually offset by jobs created in industry and services. As a benefit to the long-term growth potential of the region, much of the technical know-how and human potential is retained in this scenario. It must be emphasised that development is still driven by exogenous factors, which may lead to a certain level of dependence.

In contrast with the successful outcome is *peripheral reintegration*. In this case, the monostructure or its majority survives, as do its deficiencies. It can be integrated into the global economy by keeping down production costs, but with low innovation and retaining its outdated production and institutional structure, it can only do so as a part of the periphery. Long-term results are a postponement of more serious trouble, since there is no guarantee that the same structural problems will not resurface in the future, or changes in the world market will not lead to more serious upheaval. Social costs are medium to high, since labour costs cannot be globally competitive, and unemployment remains significant. Know-how and human potential does not disappear, but a decline in quality is probable – making later regeneration efforts more challenging.

The second pattern is the loss of industry as a driving force behind regional economic growth. The positive outcome is a *service economy* conforming to the ideal of post-industrial society. Conscious tertiarisation is not usually mentioned as a possibility in works discussing industrial restructuring (Cooke, 1995; Horváth, 1998; Boschma and Lambooy, 1999; Steiner, 1985, 2003); likely because if the strategy is successful, the region’s growth is subsequently influenced by non-industrial factors. On the other hand, it crops up frequently in urban studies, as the physical reconfiguration of the abandoned industrial environment is a common challenge in the current urban renaissance; a host of new functions for abandoned real estate is possible, and the reimagined Industrial landscape may even become a valued asset.

A significant turnaround like moving from industry- to service-based economy is of course hard to undertake. There are high social costs early on, which must be treated through retirement packages, retraining and other schemes. Monofunctional industrial regions may lack the diversity of potential growth factors (e.g. culture, education and developed urban services) to succeed at

² Szalavetz (2003) points out that mature branches, while they no longer generate new innovations, are capable of adapting the innovative practices of other branches (e.g. more capital-intensive production, efficient management solutions).

service-based regeneration. Successful western examples exist (e.g. the textile town Leeds, which has reinvented itself as a university hub with 50,000 students), but in Central Europe, results have so far been mixed. The case of the Mecsek Old Industrial Region in Southern Transdanubia, Hungary, should serve as a good example, as well as a cautionary note. With the downsizing and later liquidation of coal and uranium mining, the regional centre, Pécs has adopted various development strategies oriented at service-based growth; however, attempts to create a 'market city' failed due to civil war in Yugoslavia and weak cross-border links, while education- and culture-led regeneration, the most recent manifestation of which is the 2010 European Capital of Culture project, could only alleviate economic stagnation, not counteract it. In the satellite town of Komló (a product of 1950s industrialisation), the same processes have resulted in a collapse of industry with economic hardship and social disintegration: Pécs at least had a strong university with 35,000 students and a cultural life that could stabilise the economy; Komló had none of that and suffered the consequences. It appears that outside of central regions, service-based growth (especially if it is based on non-tradeable services) is still inadequate to drive a complex regional economy, and in former monofunctional industrial areas, its possibilities are strongly limited.

The negative outcome of the pattern is *industrial collapse*. While the common interpretation of 'de-industrialisation' suggests modernisation, in Central Europe's crisis areas, another form, the loss of industry with no replacement is also visible. Deep depression follows, where social costs are tremendous, and due to long-term unemployment and consequent de-skilling, even the possibility of reindustrialisation becomes uncertain.³ As typical of Central European crisis regions, local municipalities may become the primary employers. Industrial collapse is generally coupled with a sustenance economy: tertiary employment is high, but not in a healthy way.⁴ These regions need strong public intervention to be regenerated; first and foremost by social/labour-market reintegration measures.

Diversification involves the development of a vigorous SME sphere to replace or complement the old monostructure: new industries, but also services. As a concept, it is built on the understanding that smaller, more adaptive entrepreneurial structures may be better at competition, and may utilise regional resources more efficiently. Dismembering large companies by function and

³ The author's interviews with entrepreneurs and decision-makers in two Hungarian OIRs have drawn attention to the problem that the main impediment before new industrial investment is no longer the lack of available capital or infrastructure, but the scarcity of adequate local/regional human resources.

⁴ For a long time, Hungary's poorest counties led the rankings in the share of tertiary employment; similar phenomena may be seen in other post-socialist countries.

individual privatisation is a potential solution – some surviving satellites may continue to be active in industry, while others can become the basis for an emerging business services sector. Diversification is not a sectoral solution: it cannot hope to solve the troubles of problem industries. What it can encourage is higher institutional flexibility and the gradual easing of lock-in effects. The social costs of diversification are low to medium, since jobs are transferred into alternate activities, although certain groups, primarily deprived ones, may experience adverse consequences during the process. Knowledge and skills also remain relatively intact. Diversification is a common element of restructuring scenarios and was particularly relevant in the early transition period; the majority of the successful intermediate regions whose economy is still industry-based show a strong presence of this pattern.

The negative outcome of the third pattern is the development of a *sustenance economy*. The distinction is subtle but important: in this case, SMEs are only preferred because the alternatives are much worse: enterprises are not instruments of growth or competitiveness; merely existing as domestic or collective survival mechanisms whose aim is simple self-sustenance. While the owners of these SMEs are technically ‘entrepreneurs’, what they lack is precisely *entrepreneurship*: neither knowledge, nor capital or trust exist; activities produce little added value and are weak against external threats. Stagnation results and there are high social costs – maybe not in the form of unemployment, but economic stagnation and social dysfunctions such as high mortality, crime etc. Peripheral industrial regions often experienced the negative effects of this scenario; it is questionable how much of an asset deficient entrepreneurship can be for future growth: likely, thorough institutional and even social changes are needed to turn them into competitive and innovative entities.

3. THE ROLE OF INDUSTRY UNDER THE NEW SPATIAL DIFFERENTIATION

In addition to considering the divergent forms of adaptation among Old Industrial regions, the significance of industry in the wider economic context also needs to be addressed. Today, industry plays a role all over Central Europe, but this role is not uniform. When we examine industry’s significance in Central European economies, we have to discriminate on the basis of space, and consider the questions of development and modernisation in the regional context. Looking at regional GDP rankings across Central Europe, it is visible that the highest spots are taken by both service- and industry-dominated regions, and these mostly separate into distinct categories (figure 2). While the most prosperous positions belong to service-based central regions, the others owe most of

their current rank to their manufacturing role. Even a number of OIRs are present on the list: Közép-Dunántúl (Central Transdanubia), Moravskoslezsko (Moravian Silesia), Śląskie (Upper Silesia) and Pomorskie (Pomerania).

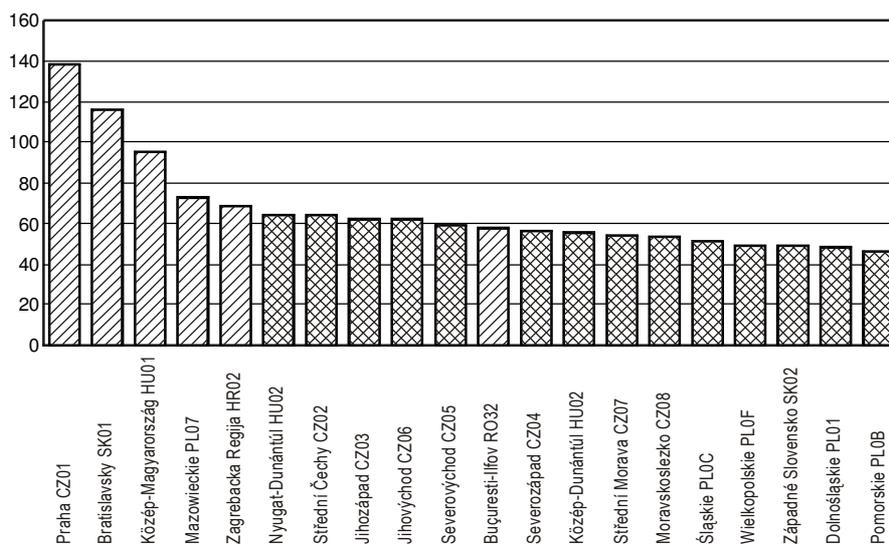


Fig. 2. The top 20 Central European regions ranked by *per capita* GDP (2004, PPP, % of EU-27 average)

Note: White columns indicate service-based central regions; black columns indicate intermediate regions, whose growth is primarily based on manufacturing

Source: based on data from Eurostat

Therefore, while the dominant phenomenon of the post-socialist economic landscape has been an increasing share of the tertiary sector, only some regions can function well as genuinely ‘post-industrial’ economies. Elsewhere, it is still industrial investment which serves as the main vehicle of spatial differentiation. Accordingly, we may distinguish central, intermediate and peripheral regions, all three with a different set of circumstances and needs. Planning and public policy should take these differences into account, and formulate different strategies for distinct region types instead of falling back on uniform growth formulas which are typically based on the preferences and needs of national centres.⁵ OIRs are typically intermediate or peripheral regions, but some of their issues are also applicable to central ones.

⁵ As an example, the main documents of Hungarian development policy neglect to make mention of industry; outside a few generic remarks, the word is only used in reference to encouraging traditional crafts as an instrument of rural development in backwards areas; itself a highly dubious idea.

Central regions (national capitals), although not often thought of as industrial, were major manufacturing hubs in the socialist period, preferred by economic development policy.⁶ During transformation, several of their companies closed down, and their place was taken by services: they became efficient post-industrial economies. The most innovative service activities, especially business services, are strongly concentrated here, as are administrative/political functions, R&D and higher education. This does not mean development lacks an industrial component: some of the highest value added branches, such as pharmaceuticals, precision machinery and optics, are still often located in central regions. Finally, even when manufacturing is found in intermediate regions, corporate headquarters or branch offices are often maintained elsewhere – out of country or in capital cities.

Central regions have only had to face some of the problems of industrial restructuring. In their case, the transformation was rapid and mostly successful, with high short-term unemployment and a legacy of abandoned sites (the ‘intermediate zone’ of Budapest is a prime example – cf. Barta *et al.*, 2006). The spaces of former industry are extensive elements of the urban fabric; facing problems of dereliction, pollution, crime and segregation etc. They have started to see numerous forms of reuse in recent years, and are increasingly considered worthy of conservation as an element of cultural heritage (Graham *et al.*, 2000).

Industry continues to be a strong dynamising force in *intermediate regions* – regions with an average urbanisation level but without the problems of peripheries. They benefit from service-based growth, but available evidence suggests that this in itself is insufficient for prosperity, and a mixture of industrial and tertiary activities is optimal. Western border regions are typically mentioned as winners of transition; the growth of automotive and machine industry in the Vienna–Győr–Bratislava trans-border area is just one example (Grosz, 2006). On the other hand, they are not the only ones to belong to the category. OIRs which have been successful in their adaptation by diversification or the innovative restructuring of traditional branches start to become very strong contenders even if they do not benefit from an ideal geographic position. Their main strength is an established industrial milieu, with skilled workforce, technical education and supporting institutions.

The role of these factors is becoming more and more important as pools of skilled labour are depleted across Central Europe and competition for employees in the previously preferred western border areas drives up wages. Adaptation in Upper Silesia, which has been based on a mixture of revitalising the ailing coal-

⁶ In 1971, Budapest accounted for 34% of the national industrial employment and 23% of investments. Sofia City (16%) and Bucharest (16%) were also major employment concentrations in this period.

and-steel industries,⁷ diversifying into new branches (especially automotive industry) and exploiting the Katowice conurbation's growing metropolitan functions, has been largely based on turning these strongly path-dependent factors from liabilities into assets (Klasik and Heffner, 2001; Geisler *et al.*, 2005), although symptoms of peripheral reintegration are also apparent, and may represent a future threat.

Intermediate regions are perhaps in the strongest need of comprehensive industrial policies. Although their present situation is favourable, they need to undertake significant industrial upgrading to counteract sliding towards peripheral reintegration by encouraging stronger reinvestment and embeddedness. The current source of competitiveness in intermediate regions is predominantly neofordist manufacturing activity with low to moderate added value; it is vital that they start adjusting towards more extensive knowledge-using, and in the longer term, knowledge producing activities (Lengyel, 2003). Institution-building within networks (supply chains, but also education and training, knowledge transfer, chambers of commerce etc.), the support of concentrated economic development units such as industrial estates and technology parks, as well as the development of business services is the best area of public intervention. The best actors to undertake this task is regionally established agencies, which need empowerment and financial means to facilitate the upgrading process. The top-down, centralised philosophy of planning in Central Europe still poses problems in this field.

Traditional and new peripheral regions are still coping with inherited and new backwardness. They were either under-industrialised in the past, or their previous capacities have been eroded so strongly that they can be considered lost. Most of the former are rural and/or eastern border areas, whose traditional light and food industries suffered during transition, and are losing further ground to global competitors. A large share of Old Industrial Regions is found in the latter category. In them, de-industrialisation was not counteracted by competitive tertiary growth, and they remain in various stages of stagnation or underdevelopment – characterised by collapsed industries, sustenance economies and struggling traditional branches. The result is a low level equilibrium trap, which, as per Rosenstein-Rodan and Hirschman, can be

[...] thought of as a massive coordination failure: several investments do not occur simply because other complementary investments are not made, and similarly, these latter investments are not forthcoming simply because the former are missing (Szalavetz, 2003, p. 180).

⁷ After more than a decade of decline, coal mining in the region has experienced some resurgence; Polish coal production accounted for approximately one half of the enlarged European Union's output in 2004, and it was mainly being mined in Upper Silesia (Daviet, 2004); meanwhile, steelmaking is increasingly being integrated into global production networks with growing product sophistication and an emerging cluster formation process.

Peripheral regions need public intervention to re-industrialise, and these measures must be accompanied by social regeneration – first and foremost to reduce inactivity. Even semi-peripheral branches can be useful in retaining or developing the knowledge and social fabric of the region. With the increasing scarcity of labour in Central European states, even peripheral regions can be realistically considered locales for Foreign Direct Investment – if they have the manpower, and a certain level of accessibility. Some eastern border areas have been successful in this respect: traditional light industry (textiles) increasingly serving the needs of international supplier networks has experienced new growth in Eastern Slovakia, Hungary, Bulgaria and Transcarpathia, Ukraine (Kalan-taridis *et al.*, 2003; Smith *et al.*, 2005); and there is also a sort of industrial renaissance along the Ukrainian-Hungarian border, where a number of manufacturing and assembly units, primarily car parts and electronics producers, have chosen to locate. What planning has to take into account; however, is not just re-industrialisation, but also its sustainability. As cost advantages are further eroded, peripheries must diversify into higher value added activities to withstand European and global competition.

4. DISCUSSION

The future development of Old Industrial Regions in Central Europe poses a number of challenging dilemmas. In the preceding decade, a number of OIRs have belied pessimistic suggestions and joined the ranks of growth regions through a combination of different adaptation patterns: they are not national leaders, but occupy favourable positions in the landscape of macroregional competition. Still, others are lagging behind or have been swept to the peripheries; their redevelopment remains a question to be answered by regional policy.

But even successfully restructured regions must continually try to improve their positions. To a large extent, their success is by virtue of positive path-dependent factors which have in turn encouraged investment capital to consider them as good location choices. It is easy to foresee the time when this will no longer be adequate; a more conscious approach is going to be needed to identify and bolster the productive environment in a sustainable manner. As Central European industry is being ever more deeply integrated into the wider European economic networks, it must prepare for the post-transition period by constant upgrading. As ‘post-socialism’ gives way to ‘post-transition’, and the distinctive features Central European space start to merge into western structures, losing their separateness, the adoption of new institutional setups and spatial management solutions should also be considered.

What can states and regions do to favourably influence their industrial development and treat the remaining problems of Old Industrial Regions? First, they have to recognise how different regions require different forms of industrial policy. But they also have to acknowledge their limitations. Policy should provide assistance in institution-building and prepare the ground for investments which will come from the private sector if the appropriate conditions are present. But to be efficient, this also requires a degree of administrative decentralisation, especially in the realm of economic policy. Excessive centralisation may mean squandered opportunities for regions, since if they cannot make meaningful decisions and have the financial instruments to put them into effect, they will be unable to live up to the bottom-up development potential only they can exploit. The same thing means needless administrative burden for central bureaucracies, who are now overwhelmed by the micromanagement of individual tenders (Horváth, 2007). On the other hand, where the cooperation of central and regional elites could create a balance of power between top-down and bottom-up development concerns, the results have been more successful. These challenges are still to be answered by most Central European planning systems.

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