

Chapter 2: Industrial Competitiveness: Beyond Path-Dependence

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Evolutionary Change and Regional Industrial Development

While the brave new world of post-Fordism – the global transformation of production, labour and consumption – is nothing less than a revolutionary force, it has involved much evolution: achievements in social sciences in the last decades have shown that the development patterns of global and local economies are as much rooted in embedded history, routines and traditions as on the disruptive influence of technological, economic and social change. Originating from Veblen and Schumpeter, the formative article of Nelson and Winter (1982) on evolutionary economics, Paul A. David's reflections on path dependence (revisited in David 2007), and heterodox non-equilibrium economics (Boschma and Martin, 2010), the idea of an evolutionary investigation of socio-economic development has borne rich fruits in social sciences just as they were undergoing an 'institutional turn' (Martin, 2000). The spatial interpretation of social dynamics '*characterised by positive feedbacks and self-reinforcing dynamics*' (David, 2007, p.92) has led to the rise of evolutionary economic geography, which has integrated a number of strains in regional studies, coming up with its own explanations for the inner workings and long-term development of complex phenomena.

Industrial development has been one of the major study areas of evolutionary economic geography, particularly when the long-term success or failure of companies and industrial regions (milieus) are examined. Researchers have focused their interest on multiple areas; among others:

- The role of economic traditions, variety, exploratory behaviour and 'historical accidents' in forming the evolutionary paths of technologies, industries and regions, from path creation to selection, maturity and eventual decline (Martin and Sunley, 2010; 2011; Menzel and Fornahl, 2009).
- The consequences of bounded rationality in institutional dynamics for local industrial development (Boschma and Frenken, 2009; MacKinnon, et al., 2009).
- The role of knowledge-based development (Asheim, 1996) and socio-economic networks (Markusen, 1996; Zeitlin, 2008; Potter and Watts, 2011) in the model of 'organised space', dominated by mutual dependences and a mixture of co-operation and rivalry instead of atomistic competition (Belussi and Sedita, 2009).
- The decline and eventual transformation of traditional industrial growth areas ('*Old Industrial Regions*' or OIRs), explained by structural deficiencies, institutional sclerosis or evolutionary cycles (Steiner, 2003), as well as overspecialisation and network-agglomeration-related models (Grabher, 1993; Grabher and Stark, 1997; Boschma and Lambooy, 1999).

A perspective stressing the importance of adaptation and adaptability is very important in a world facing many uncertainties. The fate of industrial regions under post-Fordism has not always been promising in the advanced market economies either. Formerly prosperous OIRs

had often undergone decades of malaise attempting to approach their previous level of employment, only to discover that the new service economy has brought low-wage jobs and part-time or ‘flexible’ employment for the new generation of employees. Low entry barriers in mass production have resulted in massive competition with newly industrialised countries (NICs), challenging traditional industrial heartlands in Europe and North America. Freeman (2008) writes about ‘the great doubling’ of the world’s globally integrated labour force from 1.46 to 2.93 billion people since the 1990s, and calls attention to the resulting change in the global capital/labour balance which decreased to 61% of its previous level during the same time span.

However, the ability to adapt is but one side of development. It contrasts with the power of path-dependence whose trajectories carry the burden of history and institutions. This is both a curse and a blessing, as its self-reinforcing processes can create virtuous and vicious circles alike. The co-evolution of industry, governance and knowledge (the components of the well-known Triple Helix model) takes place in a strongly localised regional context, in which the mutual dependences and interactions create socio-economic networks that can greatly increase the competitiveness of economic actors; or, in the case of most OIRs, hinder them and prevent their renewal. These localities matter increasingly when we discuss competitiveness, as they affect the global value chains as well as the perspectives of locally embedded endogenous development.

Building on the results of Chapter 2, the present study is concerned with the regional development of manufacturing in Central and Eastern Europe (CEE) in the post-socialist era. Relying on the analytical framework of evolutionary economic geography, it analyses how the structural crisis of the Fordist–post-Fordist shift unfolded in the context of systemic change, and how post-socialist economies integrated into the global division of labour under the dominance of Foreign Direct Investments (FDI). It is argued that these developments were less radical and much more path-dependent than it might seem, and that the underpinnings of the success stories can usually be found in the recovery and long-term evolution of pre-existing industrial milieus. We also argue that FDI-based development has had significant opportunity costs, too, and there are clear limits to its sustainable growth. Meanwhile, alternative paths towards competitive manufacturing – endogenous development, place-specific location advantages, focusing on empowering domestic entrepreneurship and building effective socio-economic networks – have been neglected, so their outcomes still leave much to be desired.

Structural Crisis and Transition

In Central and Eastern Europe, state socialism applied homogeneous development policies and dual isolation, from both market economies and one another. The lion’s share of development funding went into industry, by way of redistributing resources from agriculture, infrastructure and civilian consumption. By the end of the period of forced industrialisation – the end of the 1950s in the more developed socialist states, and the following decades elsewhere – the new heavy industrial complexes had been established, and they overwhelmingly focused on producing investment goods (means of production) instead of consumption goods.¹ The resulting economic profile was formed as much by catching-up attempts as by political and military pressure, and was ab ovo burdened with severe problems and contradictions. This chapter does not seek to provide an in-depth critique of the dysfunctions plaguing planned economies (q.v. Jánosy, 1971; Kornai, 1980; 1992; Winiecki

1986 and others); rather, it provides a summary of its regional operating mechanisms, its structural crisis from the 1970s and its similarities to the transformation of OIRs, particularly its socio-economic legacies which continue to influence modern development paths whether they are characterised by path dependence or discontinuity.

One of the most crucial spatial consequences of socialist industrialisation lies in its *disruption of spatial networks*. In the 1950s and 1960s, visions of industrialisation and catching-up (not unique to socialist states, but a common goal of peripheral countries) were formulated on the basis of stressing the need of national self-sufficiency. Cross-border trade was limited to large package deals, never reaching the volume of the myriad small trades of market exchange: in practice, the bulk of trade within the COMECON was carried out through bilateral agreements between the individual CEE socialist states and the Soviet Union, trading manufactured goods for raw materials and energy. Attempts on part of the Soviets and the more developed states to increase national specialisation and establish a COMECON-wide division of labour were firmly rejected by the less developed countries, especially Romania (Valev, 1964; Turnock, 1986), which finally led to limited specialisation in differentiated industrial profiles.² This arrangement resulted in the emergence of parallel industrial structures, isolated from competitive pressure and innovation flows.

Directed from national capitals and following a vertical, top-down design of territorial integration, centralised development policies decoupled or greatly reduced local and regional linkages. The creation of large-scale manufacturing complexes achieved vast economies of scale, but deliberately constructed monofunctional productive milieus, suppressing local socio-economic variety and horizontal connections. At the local level, single enterprises dominated the economy of city regions to an unprecedented degree. Already by the 1960s, supplemental investments were needed in heavy industrial regions to combat massive hidden (informal) unemployment, particularly among women. The consolidation of heavy industrial plants required substantial follow-up investments which locked in national and regional development paths, and limited decision-making in economic planning. Heavy dependence on existing production profiles curtailed even the rarely formulated restructuring strategies. Moreover, the ever-present shortage of development resources at national level led to a development trap by considering the industrialised regions to be developed which thus did not receive further assistance to modernise and diversify their economies. Without complex policy interventions, ‘modernisation’ stalled and even concealed deeper layers of socio-economic underdevelopment which remained untreated until transition.

Poland and Hungary were exceptions to some extent, as they experimented with regional policy in the 1960s and 1970s, involving the industrialisation of peripheral regions (mostly smaller towns) via light and food industries (Bartke, 1971; Lijewski, 1985). These experiments, often reviving smaller-scale pre-war industries, were limited in scope and especially funding, and were cut short by the emerging crises of the 1970s, but they contributed to decentralising the industrial networks and diversifying the economy of the peripheries. Most importantly, they became seeds of innovative local development through path creation, and their legacies have continued to influence industrial trajectories and local entrepreneurship up to the present day.

By the late 1970s, the crisis of socialist industry became undeniable; and in the following decade it produced symptoms very similar to those of the Old Industrial Regions in market economies. The question can be raised whether these similarities are incidental (superficial)

and it is not reasonable to compare the evolution of separate economic systems as they are too different, or they indicate a deeper resemblance common to the transition from Fordism to post-Fordism. It should be noted that it was not public intervention, rapid industrialisation or support for strategic sectors that had separated socialist and market economies, since these were also widespread under the Keynesian development model. Likewise, there were also substantial parallels when the crisis was unfolding:

- *In general*, we can speak of soft budget constraints (weak or missing ‘natural selection’ mechanisms), rent-seeking behaviour and ‘non-market rationality’ (defence-related, political and social concerns) in corporate decision-making and development policy. These are not system-specific, as they have been observed in the behaviour and restructuring of firms and regions in Fordist market economies, too.
- *Specifically*, we can easily and mostly successfully apply the relevant crisis theories explaining the restructuring problems of OIRs to the conditions of late socialism and transition – the details may be different, but the underlying mechanisms are easy to identify. Low economic diversity, overspecialisation and decline in adaptability; institutional, technological and political lock-in; as well as weak collective learning and institutional sclerosis are all well known in socialist and post-socialist OIRs.

However, we can also speak of symptomatic and systemic differences:

- The *dual economic isolation* in state socialism reduced selection pressures and isolated firms and regions from innovation, and most crucially from the paradigm shift of post-Fordist transformation, which led to a major transition shock.
- The previously discussed *regional dysfunctions* of state socialist development policy, the absence of local and regional economic diversification, and the dominance of large companies fostered a culture of dependence which not only extended to employment, but involved companies providing services, consumption goods and infrastructure as well.
- The *new conditions of transition* also prevented effective restructuring strategies. The sudden collapse of the socialist system brought about a confluence of several different, untreated crises, each requiring enormous funding, in a period when public planning and industrial policy had lost much of their political legitimacy and public support.

Altogether, the similarities are stronger than the differences, which are more of degree than kind. However, these differences still had important consequences for industrial transformation: post-socialist crises were broader, affected more regions, and they had deeper socio-economic consequences than in the west, and most importantly, were not followed by the kind of complex, in-depth restructuring policies as happened in Western and Southern Europe. As Rugraff (2008) notes, post-socialist countries had dismantled their own instruments which could have served as a basis for a strategic industrial policy, and placed their fate in the hands of TNCs and international organisations. Transition was quickly followed by the elimination of trade barriers, the privatisation of high-performing state-owned companies (potential national champions) and the banking system which could have been harnessed to finance domestic industrial development. Industrial restructuring was *dominantly market-driven instead of being managed*, with only marginal, mainly preventive policy interventions in selected crisis areas to forestall a socio-economic catastrophe. Comparative data from Illés (1994) show that industrial production was the main victim of the transformation recession in all post-socialist states, particularly in the South-Eastern

countries. But export volumes also declined sharply between 1989 and 1993, by 20% in Hungary, 54% in Bulgaria and 70% in Romania.

More successful manufacturing regions demonstrated *strongly path-dependent evolution*, the industrial legacies of state socialism having been ‘reused’ and reconfigured through privatisation and large-scale Foreign Direct Investment inflows. Meanwhile, less successful manufacturing regions (typically OIRs and mining areas) as well as peripheral regions faced *destructive de-industrialisation and hollowing out* (cf. Chapter 2) as previously dominant industries were shuttered or became marginalised without being replaced by competitive alternatives. The first years of the transformation recession were characterised by a selection process that can only partially be described as Schumpeterian creative destruction (disintegration followed by reorganisation, new economic functions filling emptied niches, and the decline of low value-added industries such as textiles, leatherworking and woodworking). It was simultaneously an extinction process showing negative hysteresis (Martin, 2012) and the disappearance of state-owned and newly privatised companies.³ With the disintegration of productive networks and the westward reorientation of export activity (pursued most aggressively and certainly over-eagerly in Hungary), inter- and intra-industrial linkages loosened, bringing about further bankruptcies. The survival strategies of the remaining companies were often rooted in ‘defensive restructuring’ (Pavlínek and Smith, 1998) and ‘peripheral reintegration’ (Lux, 2009), retreating from high-complexity own-brand production, shedding knowledge-intensive R&D functions, jettisoning subsidiaries, and re-specialising with a focus on low-value added subcontracting work and basic assembly. These had prepared the ground for investments by TNCs that could now find an abundance of ‘loose’ production factors on the cheap, but had destroyed domestic corporate innovation and led to de-specialisation and the demise of previously important industries such as Hungary’s autobus manufacturing (from over 13,000 units sold annually to 8000 in 1990, 1500 in 1995, and 1000 in 2005) and telecom sector (the loss of 2000 R&D staff in the flagship company Videoton alone), or Czechia’s heavy machinery manufacturers. This loss was not considered in the first decades of transition; today, looking at these enormous opportunity costs, we can only shake our heads.

Global Industrial Reintegration through Foreign Direct Investment

Under post-socialism and its market-driven restructuring processes, the decline of pre-1990 structures coincided with the new wave of European and global integration. In the absence of effective and well-financed state policies, and as the stock of attractive companies offered up for privatisation dwindled, this change was dominated by the location preferences and space-shaping role of Foreign Direct Investment. As Barta, Czirfusz and Kukely (2008) have shown, overall CEE was a winner of the global relocation processes between 1995 and 2005. At the same time, Kiss (2007b) demonstrates that delocalisation before the crisis was limited, even if it might have had substantial effects on specific local economies (typically small towns which had borne the costs of light industry downsizing).

On the one hand, particularly at the visible level, FDI represents positive discontinuity in regional development (cf. Gorzelak 1998’s regional typology): it has been coupled with substantial technological upgrading, the introduction of modern management methods, access to world markets, and a massive increase in productivity. Having ‘ready-made’ channels of access and standardised recipes for growth, FDI-based companies have found it much easier to integrate into global product markets than the struggling, undercapitalised ones in domestic

ownership. The local actors of global value chains benefit from this competitive but highly specialised and weakly embedded growth path (Humphrey and Schmitz, 2002). On the other hand, looking into the deeper layers of regional economies beyond the firm level, we can see that investment decisions and new manufacturing plants do not emerge from nothingness as Athena sprang from Zeus's head. Investors build on productive legacies, reusing the production factors, the socio-economic networks and the institutions of their predecessors, demonstrating path-dependent behaviour. The 'retreat' and dissolution of domestic companies give way first to a decoupling of production networks, then to new configurations. However, the resulting paths are not independent of regional histories. Where the untrained eye sees random events, the historian often discovers abundant precedents.

The results of FDI-based restructuring have often been described as 'dual economies', characterised by deep imbalances between the capitalisation, knowledge base, market position, export activity and further vital characteristics of foreign and domestic corporations (Barta, 2005; Havlik, 2005; Kiss, 2007a). Therefore, the space-shaping role of manufacturing companies with foreign ownership greatly outstrips that of the domestic ones, and their decisions to locate in or to avoid specific regions have far-reaching consequences on employment, competitiveness, the development of industrial milieus and the emergence of productive networks. FDI has consistently been the major driving force behind reindustrialisation, with the exception of Slovenia that based its development model on endogenous growth, the dominance of local ownership, and a domestically owned banking system. There is a clear and strong relationship between FDI inflows and economic performance. Nölke and Vliegenthart (2009) revealed that among the Visegrad Four, the share of FDI in the 2007 GDP production was the highest in Hungary (51.8%), followed by Czechia (48%), Slovakia (31.5%) and Poland (24.9%), outstripping several developed economies like e.g. Austria (22.7%) and Germany (16.4%). As the EU's industrial structural report (Competing in Global Value Chains, 2013) shows, the industries of Slovakia, Hungary and Czechia have integrated most deeply into global value chains within the European Community, and this also holds true for individual industries (electronics and optical industry, machinery). Due to its robust domestic market and strong domestic entrepreneurship, Poland was close to the median in these rankings. As a hint of warning, the report calls attention to the very high import content of gross manufacturing exports which in 2009 was the highest in Hungary with 52%, followed by Czechia (44%), Slovakia (40%), Poland (33%) and Romania (29%).⁴

There are not only firm-level but also geographic differences in FDI-based 'post-socialist' development paths. Chapter 2 has shown how the industrial-tertiary divide has shaped Central and South-Eastern Europe's economic space. The majority of FDI – indeed, a higher than average level of manufacturing employment – is concentrated in Central Europe's 'manufacturing core', arranged around its manufacturing centres and major transport corridors (Smith and Ferenčíková, 1998; Turnock 2001; Domański, 2003; Kiss, 2007b). This spatial formation is another evidence of path-dependent development: in a way it can be traced back to early capitalism, the 'upwards triangle' drawn among Łódź, Erfurt and Budapest. However, there are also other factors at play: the dominant industries of the 'core' (machine industry and electronics) and the peripheries (traditional light and food industries) form relatively clear spatial divisions, both contributing to competitiveness in their own way (Figure 2.1). The industries of the 'core' are the local manifestations of globally integrated value chains. German automotive manufacturers play a particular role in creating a 'complete space', an integration zone covering the complete range of production activities in broader

Central Europe (Frigant and Layan, 2009). The location patterns of the automotive industry and its suppliers can mostly be found in the ‘core’ area where the pre-1990 machine production hubs had been located (Worrall, Donnelly and Morris, 2003; Pavlínek, Domanski and Guzik, 2009; Molnár, 2012; Krzywdzinski, 2014; Wójtowicz and Rachwał, 2014).

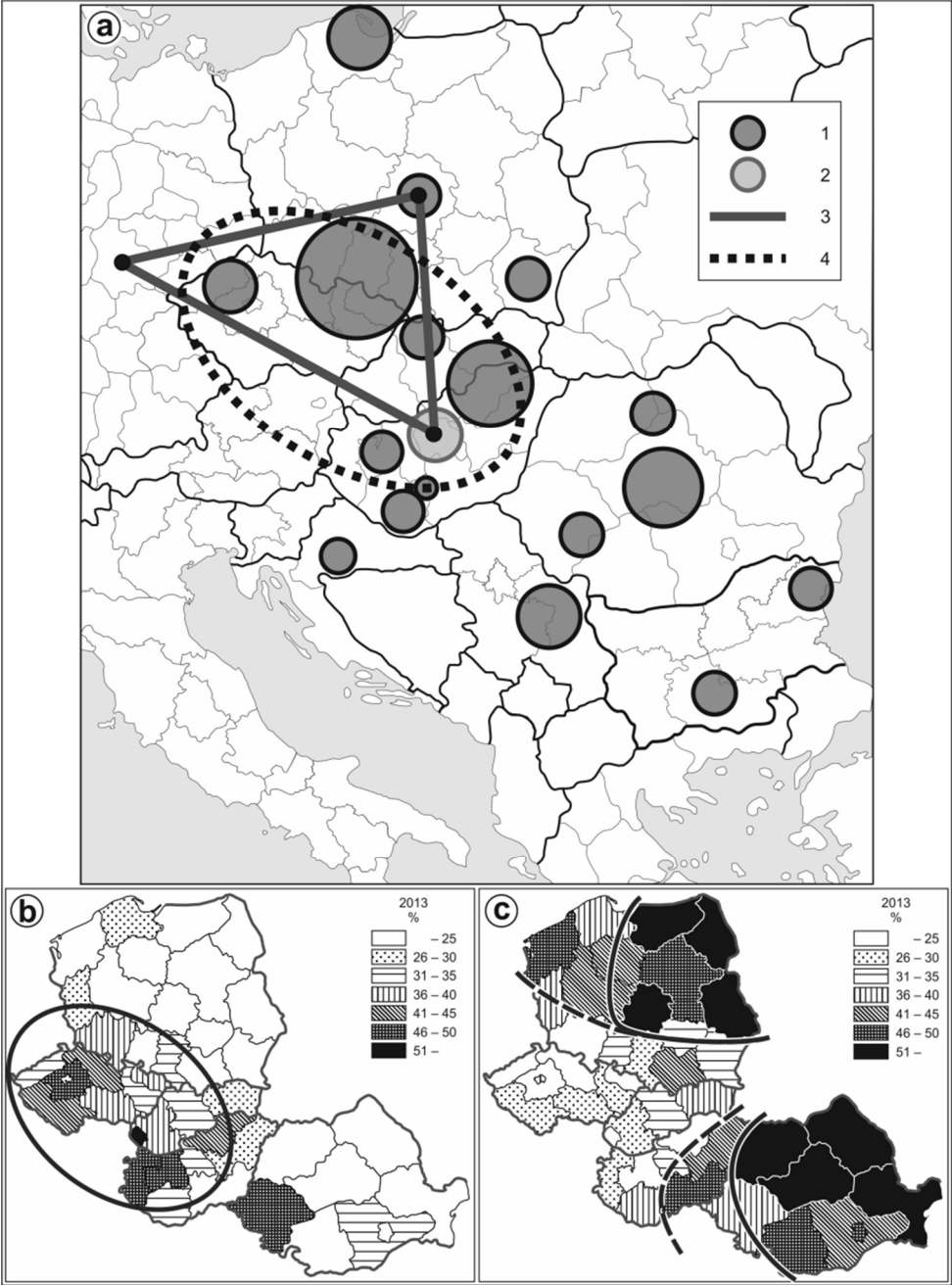


Figure 2.1 The spatial structures of Central European industry in 2013 (%)

Legend: a) Main spatial structures: 1 – Old Industrial Regions, 2 – central region with some OIR characteristics, 3 – traditional industrialisation core, 4 – new manufacturing core; b) The share of machine and electronics industries in industrial employment **with the current direction of expansion**; c) The share of light and food industries in industrial employment and Old Industrial Regions.

Source: Author’s construction; b–c) based on data from EUROSTAT.

There is also a less apparent but nevertheless notable reintegration process specific to Eastern and South-Eastern peripheries which is usually tied to the food and light industries (particularly textiles). Light industry has been a traditional field of global economic integration. While it has undergone a major decline in the Visegrad countries (not the least thanks to its displacement by more competitive branches), it has continued to be prominent in regions still showing significant cost advantages, particularly in South-Eastern Europe. Here, surviving textile companies have become suppliers to the western apparel industry or acted as intermediaries towards the post-Soviet macro-region (Kalantaridis, Slava and Sochka, 2003, Smith et al., 2005). However, the majority of these companies tend to occupy the lower segments of global value chains. While Yoruk (2004) predicted the gradual upgrading of textile industry companies from assembly towards own brand production and design, Evgeniev (2008) and Anić, Rajh and Teodorović (2008) have revealed that unlike the Turkish clothing industry, Bulgarian and Croatian textile producers have shown little evidence of successfully changing over to more valuable activities.

Industrial development in South-Eastern Europe shows patterns different from those in the Visegrad countries (and, increasingly, Romania). Reaching a volume of 10 billion € in a decade, the role of investments coming from Greece and Turkey differed from those in their Western European, North American and Far Eastern counterparts. These investments have targeted low and medium-tech branches and labour-intensive activities which have shown close technological and cultural proximity to the ones in the host countries. Many Greek capital exporters (Kaditi mentions 3600 active firms) are SMEs, who find it easier to integrate into their environment and build stronger networks than several western firms. However, they find it hard to protect their intellectual property, which leads to valuable knowledge spillovers (Totev 2005; Monastiriotes and Alegria, 2011; Kaditi, 2013). Greek capital exports gathered momentum from the turn of the millennium and peaked during the financial abundance period of 2005–2008. Regrettably, the Greek crisis had not only led to a decline in capital exports, but turned into capital repatriation by 2013. If we also consider the role of Greek banks in the South-East European banking system, we can anticipate even more severe consequences.

The Localisation of Manufacturing and the Missing Pillar of Endogenous Development

Taken in a modern sense, industrial development is a form of local development. According to the ‘global–local paradox’, global industrial competitiveness is deeply rooted in the competitive advantages of localities (Lengyel, 2010), and this localisation is intrinsically tied to evolutionary development paths. The mainstream development model of localised resource concentration – reflected in the concepts of clusters, regional innovation systems and industrial districts – is typically based on the idea of endogenous development. However, exogenous (FDI- or global-value-chain-based) actors also tend to favour regions where they enjoy good location advantages, including skilled labour, the benefits of business networks and good institutions. Furthermore, instead of individual factors like cost-advantages or geographic proximity, industrial competitiveness is increasingly built on bundled ‘packages’ of multiple location advantages found in the local/regional context of companies, educational institutions, local governments and society. Identifying and exploiting local capabilities have become an important focus of regional development in order to gain territorially embedded competitive advantages which transcend low wages. This can mean building on pre-existing economic potential (such as the modernisation or conversion of existing industries) or mobilising previously unexploited resources (e.g. strengthening the knowledge transfer role of universities).

CEE has had to face major impediments in the localisation of competitiveness: whereas state socialism greatly devalued locality and disrupted socio-economic networks, post-socialism would often bring de-specialisation and hollowing-out, both acting against strong localisation. The ‘homogenised peripheries’ of post-socialism (Chapter 2) are caught in a development trap of low development level and weak growth potential. Although positive examples are starting to emerge, many FDI plants have shown weak territorial integration and local linkages, due either to the large technological gap or the limited integration potential of their manufacturing activity (i.e. low-level assembly). Meanwhile, domestic manufacturing companies lack the critical mass in size, resources and network density to make a difference. Although the author’s empirical research has identified an emerging group of mid-sized companies that play an increasingly important role in local economic development and whose senior managers are rising actors in regional development coalitions (Lux, 2015), these developments cannot be compared meaningfully to the uninterrupted evolutionary paths of Western Europe’s industrial milieus.

Rebuilding a full landscape of regionally differentiated competitive localities is a hard task, and while it has been much discussed in literature and enshrined in development strategies, the results have been very modest. The most successful examples of assembling competitive packages of location advantages have usually been based on path-dependent economic traditions, some from the pre-war period and some from the socialist legacy. Contrary to the mainstream ideas of the 1990s which were very pessimistic about their development prospects (see e.g. Gorzelak, 1998), the positive examples include multiple OIRs which had been able to mobilise their latent technological know-how, human potential, firm networks and institutions to form new technological complexes. The most important ones among them are Upper Silesia and Moravian Silesia on the Polish–Czech border (Sucháček et al., 2012; Drobniak, Kolka and Skowronski, 2012; Gwosdz, 2014), but to some extent also Łódź in Poland (Páger, 2013), Central Transdanubia and Miskolc in Hungary, and Košice in Slovakia (Pástor, Šipikal and Reháč, 2013; Sokol, 2013). Unfortunately, the slow renewal of the latter two cities has had little effect on the depressed peripheral regions surrounding them. The development of these OIRs has been based on a mixture of old industries (machinery, coal mining and metallurgy in Silesia) and new activities (most markedly infocommunication technologies), as well as on the strong technological foundation provided by local technical universities and the fostering of local or regional business networks. There are other examples of renewal as well: traditions of the food industry have been rejuvenated in the rural regions of Eastern Hungary and Poland where domestic entrepreneurship has been more prominent, while in Italy industrial estates have followed the example of the industrial districts.

Smart specialisation (S3) policies, a concept rooted in the literature surrounding the transformation, have been embraced by the EU as a new policy paradigm in regional development shortly after their initial introduction (Foray, David and Hall, 2011; Foray, 2015; McCann and Ortega-Argilés, 2013). Although possessing limited theoretical novelty, the smart specialisation concept has positive implications for the development of CEE industry. Some of its progressive features which make it well-suited for the development of non-core regions include:

- the willingness to break with the universal ‘cure-all’ interpretation of a few branches (e.g. ICT, bio- and nanotech, tourism), and focus on local strength and resources;
- abandoning the sectoral neutrality of traditional competitiveness policies in favour of sector preference;

- an emphasis on the ‘seeking’ nature of regional development and the entrepreneurial discovery process, resulting in new combinations;
- the ability to absorb innovation into traditional, mature industries;

Smart specialisation, however, also comes with three risks, which must be resolved when deploying them as policies.

- Unless handled carefully, there is a *structural risk* of S3 reproducing previous over-specialisation or lock-in patterns, and increasing vulnerability to exogenous shocks.
- Hollowed-out regions may not in fact be able to come up with new, valuable specialisation patterns, and the benefits of S3 strategies risk *being captured* by external actors from core regions (c.f. Camagni and Capello, 2013).
- There is a particular *implementation risk* in CEE, associated with the prevailing centralised logic of development policy. S3 strategies can be – and as early experiences suggest, *have been* – subverted by top-down development agendas, effectively disrupting their exploratory nature, and subordinating the will of local actors to national policy goals formulated in central regions.

Weighing the risks and benefits, S3 seems to be the appropriate tool for a new generation of development strategies across the macro-region. However, their effectiveness depends as much on the reform of regional development institutions as on the capabilities of local actors.

New path creation, or emerging from destructive de-industrialisation, is a much rarer phenomenon than building on existing legacies. Several failed efforts to build clusters or attempts to establish innovative industries on the periphery with EU funds point to the problems of inadequate critical mass, low network density, and the pull effect of more successful regions. Even these peripheries have some highly competitive economic actors, but these examples often remain remote, individual success stories without strong spillover effects.

We undertook a complex survey on new regional development phenomena in our project, including questions about industrial location factors. Covering our study area evenly at national level, questionnaires were sent out to 540 actors involved in regional development.⁵ The questions discussed in this chapter were answered by 90 to 101 respondents (n). Although the number of valid responses precludes country-level breakdowns, we can still get a picture of the state of competitiveness and development needs in the CEE macro-region. The results are given in Table 2.1.

Respondents were first asked for an evaluation of their region’s location factors (*‘Please evaluate your region within the Central and Eastern European context according to the following industrial location factors’*) on a scale of 1 (very weak) to 5 (very strong). Then they were asked to select up to five of the location factors they thought most important to be improved and rank them according to their importance (*‘In your opinion, in which factors does your region need most improvement to increase its competitiveness?’*). The first question produced few surprises; the average rating was 3.4, respondents tended to have a favourable impression of their region’s geographic location and market access, while they were least satisfied with the availability of tax benefits and support schemes, high-quality business services, and the strength of partnerships and business support institutions. In the case of the second question, innovation-related needs were mentioned most often, followed by partnership and business support institutions, as well as tax benefits and support schemes. It is notable that the *‘general’* factors – mostly country-level location advantages (macroeconomic conditions, road accessibility, tax benefits and support schemes) – were ranked first, and

'locally embedded' location factors, which are localised and feature prominently in endogenous growth paths (innovation-related factors, skilled workforce, flexibility and adaptability, as well as partnership and business support), came in as second and third. While both groups of location advantages are important, the first one represents the current model of industrial competitiveness in CEE more closely, whereas the second is becoming increasingly relevant in this decade, forming the foundation for locally differentiated upgrading paths. Regions and localities able to successfully develop their endogenous development capabilities can expect to emerge as the new winners of the post-transition era.

Table 2.1 Evaluation of industrial location factors in Central and Eastern Europe

	Evaluation of current location factors		Improvement needs of location factors					Average %
	Scale 1–5	n	Rank1 n=99	Rank2 n=97	Rank3 n=90	Rank4 n=78	Rank5 n=70	
Macroeconomic conditions	3.2	100	14	4	7	5	6	8
Tax benefits and other support	3.0	99	16	10	3	11	3	10
Availability of high quality business services	3.2	100	8	8	6	7	6	8
Road accessibility, logistic potential	3.5	99	15	11	8	4	1	9
Air accessibility, airport logistics	3.3	100	5	10	5	2	5	6
Geographic location, market access	4.0	101	1	0	4	1	4	2
Reasonable labour costs	3.5	99	0	7	3	5	5	5
Skilled workforce, industrial know-how	3.6	98	9	10	12	4	4	9
Flexibility, adaptability, reliability	3.3	99	10	8	11	6	6	9
Innovation background, R&D, higher education	3.4	100	12	20	12	14	2	14
Organisational background, partnership and business support institutions	3.2	99	8	7	12	13	11	12
Proximity of industrial districts, clusters, industrial estates	3.4	98	1	2	4	4	10	5
Other urban advantages	3.6	90	0	0	3	2	7	3

Source: Author's calculations and construction based on an online survey.

The Limited Upgrading Potential of the Post-socialist Development Model

The global integration of manufacturing is a dynamic, qualitative process. The location of competitive activities is only second in importance to their upgrading potential and eventual sustainability. The *factor intensity* of production (Guerrieri, 1998; Soós, 2002) and the position of CEE firms and regions in the global division of labour are worth mentioning here. In the early years of transformation, the dominant form of integration was labour-intensive production, coupled with the weakening of specialisation profiles and decreased territorial embeddedness. However, by the 2000s, new investments and the upgrading of manufacturing activity had led to a more stable integration model based on scale-intensive, specialised suppliers and, to a limited extent, knowledge-intensive roles and R&D functions (Soós, 2002; Lefilleur, 2008; Jürgens and Krzywdzinski, 2009; Pavlínek, 2012). These manufacturing companies are specialised mainly in medium-tech and medium value-added segments, and

employ medium-skilled labour. Upgrading and the changing competitive environment exert pressure on the remainder of the macro-region’s industry, as low value-added forms of production are getting ‘priced out of the market’ (Pavlínek and Ženka, 2010). These development patterns are evident in CEE’s deepening integration into continental economic networks, partially surpassing a simple core–periphery model. There is evidence of upgrading processes in competitive industrial branches, resulting in increasing factor intensity. Simultaneously, growing supply networks have also increased the territorial embeddedness of FDI plants, although outside Poland’s robust domestic supply sector, most of these suppliers are themselves based on foreign capital.

The European economic crisis did not alter the FDI-based development trajectory fundamentally. Although export-driven industries were short-term losers of the initial shock, leading to swift corporate downscaling and massive redundancies, this was followed by a rebound of exports. Meanwhile, the contraction of domestic markets – except in Poland where they served as a potent shock absorber – had a lasting, but less significant negative impact (Barta and Lócsei, 2011; Lengyel, 2014). The post-crisis world saw a new wave of investments by manufacturing TNCs, leading to continuing internationalisation. As Lengyel demonstrates, foreign ownership in Hungarian manufacturing increased from 62% of Gross Value Added in 2008 to 73% in 2011. Partly in a bid to follow the successful German example, countries in CEE have undertaken industry-friendly structural reforms, from adopting Germany’s dual vocational training model (Hungary and Romania) to attempts at encouraging knowledge transfer through innovation vouchers and the development of technological knowledge centres (Moravian Silesia in Czechia, Upper Silesia in Poland). The main trend in the space economy is slow-paced but steady reindustrialisation, even more than in the accession period (Figure 2.2).

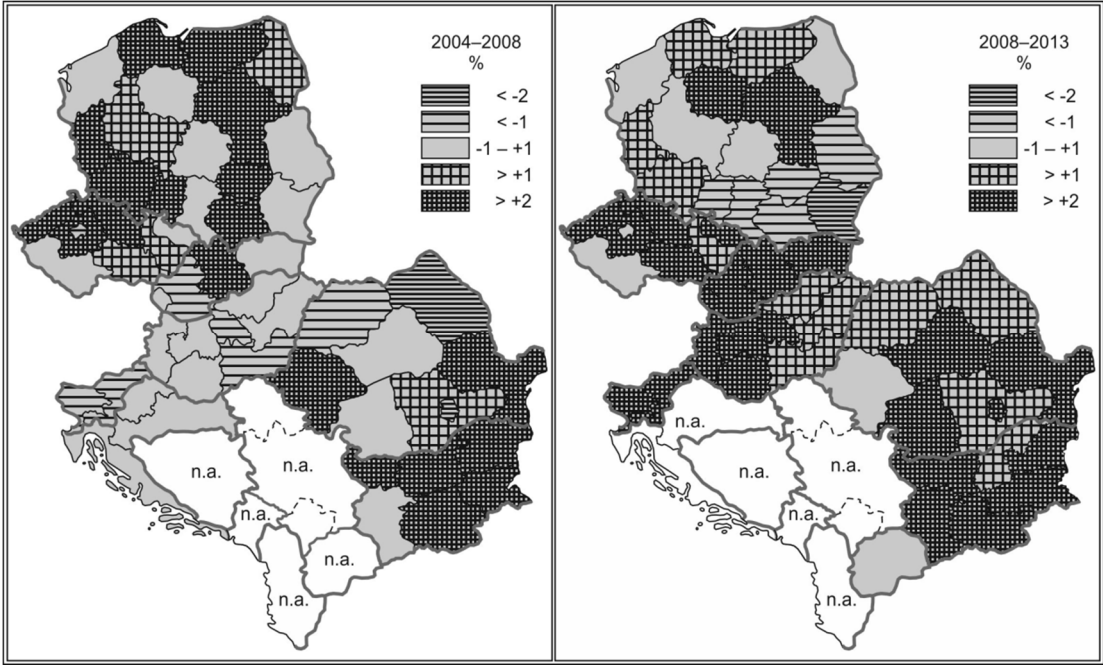


Figure 2.2 The dynamics of industrial employment in the accession and the crisis periods (%)

Source: Author’s calculations based on data from EUROSTAT.

While the FDI-based development model can be viewed as an overall success story, there are two important qualifiers that deserve to be mentioned. First, the territorial unevenness of integration has been a factor in increasing regional differences: only a limited number of regions have benefited from high capital inflows and modernisation, while those missing out have often experienced destructive de-industrialisation, a loss of productive capacities without new industries or competitive services to replace them. There have been few comparable success stories outside the scope of exogenous, path-dependent development. At subnational level this poses a major problem and a significant impediment where regional development gaps should be reduced, as the investment behaviour of TNCs follows the formula of ‘concentrated dispersal’: global networks establish their offshoots in a very concentrated manner, favouring a handful of privileged sites. Substantial spatial dispersion is only found in the lower segments of global value chains, characterised by low-waged activities with diminishing returns (Potter and Watts, 2010) and very modest knowledge content. Iammarino and McCann (2010) describe the relationship between multinational firms and localised innovative development as the complexity of technical know-how acting as a ‘filter’ in selecting potential production sites. At the same time, the processes of knowledge creation are especially strongly localised, ‘sticky’ activities. The prospects of the peripheries to attract large-scale capital investments and valuable manufacturing activities are very slim indeed. The location of such activities is limited even in supply networks. R&D and innovation on the peripheries are at a low level, and although they are present in the form of ‘on-site’ process innovation, they are less formally tied to the R&D centres that are mainly located in the TNCs’ home countries (Šipikal and Buček, 2013; Pavlínek, 2014; Pavlínek and Žižalová, 2014).

Second, the development process is strongly dependent on external capital, which is starting to pose problems in the development phase when cost-based competitive advantages are no longer sufficient and companies as well as regions need to explore ‘high-road’ strategies to maintain or improve their positions. Thus the success factors underpinning CEE’s current industrial competitiveness can hinder its further upgrading, and in some way they are antithetical to endogenous development paths.⁶ Wage pressure can lead to increasing risks of delocalisation and a new wave of company closures, which was already experienced during the post-2010 decline of the low value-added electronics industry.

Third, upgrading through endogenous development faces strong barriers. In addition to the weak local networks discussed in the previous section, even the basic conditions of this development path stand on weak foundations. Data from the World Bank’s *Knowledge Assessment Methodology* (2012) show that the Knowledge Economy Indices of the EU-15 countries had an average of 8.7 on a global scale of 0–10; while the V-4 and Slovenia had an average of 7.8, and South-Eastern Europe only 5.8. The components of the index – i.e. economic incentives and institutional regulation, the innovation system, education and human resources, infocommunication – showed the same deficiencies. Although no subnational breakdown is available, a plethora of evidence supports the assumption that the situation is significantly worse outside the metropolitan areas. There are weaknesses in the support institutions of endogenous development as well: the strong traditions of centralisation and weak local power limit both effective development planning and the emergence of strong development coalitions or urban regimes (Pálné Kovács, 2011 and Chapter 9). We can find only a few exceptional cases such as Upper Silesia in Poland, Győr in Hungary or the Banat in Romania.

Towards Sustainable Development Paths in the Post-transition Period

Beyond the European crisis, and taking into account the lessons of global integration, industrial competitiveness should be rethought in the CEE context to be able to foster high-road industrial development, particularly for the benefit of non-metropolitan regions. FDI will continue to play a dominant role in shaping industrial production, but it cannot be relied on as the be-all-end-all source of competitiveness. The *virtuous path-dependence* of manufacturing has been a boon to a number of successful regions, but the benefits are very unevenly distributed. Even where it contributes to current regional development, regions cannot rely on exploiting the existing paths without risking a new structural crisis (which e.g. might affect the automotive industry in the 2020s). Specialisation – an agenda best served by smart specialisation strategies – must be counteracted by diversification, an increase in related and unrelated variety. There is a need to discover and exploit latent but unrecognised or untapped potentials, as well as to plant the seeds of new industries that may lead to new path creation. Domestic entrepreneurship, particularly medium-sized companies in supply networks or high-value added product niches, should also be supported. This might need to be supplemented by a limited number of large national champions that can integrate their own SME networks. Altogether, a wave of development policies based on innovative and sustainable activities is needed, with special focus on endogenous growth potential. This leads us to two potential approaches to reindustrialisation:

- *Direct reindustrialisation* aims to improve the local or regional business environment. Through the logic of resource concentration, it attempts to build industrial districts and regional clusters in order to channel and concentrate localisation advantages, and to encourage endogenous capital accumulation or external investments. The final aim is to *respecialise* the region, creating a production system able to generate sufficient spillovers for multiple enterprises and remain competitive in the global environment.
- *Indirect reindustrialisation* builds on the innovative development of the local factor supply, particularly skills, knowledge and learning ability, endeavouring to increase the general adaptation capability of society, institutions and economic actors. This philosophy is based on the concept of economic *diversification*, the continuous exploration of alternative growth paths, and on results in improved economic resilience.

These alternative philosophies are complementary and ideally should be pursued together, but they represent a hard choice for non-metropolitan cities and peripheral regions which are too small and have too few resources to maintain either diverse or specialised economic profiles like the ones found in metropolitan regions. It is possible but hard to achieve a balance, especially because of domestic capital shortage. Effective institutional solutions are needed to manage development co-operation, either in the form of a relatively informal *development coalition* focusing on specific, narrowly defined development tasks, or in a formalised *neo-corporatist* model of interest articulation, following the Austrian or German model, in order to foster long-term restructuring processes.

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Notes

- ¹ By 1960, compared to 1938, the share of industries producing investment goods had increased from 51 to 59% in Czechoslovakia, from 47 to 57% in Poland, from 38 to 66% in Hungary, from 30 to 63% in Romania, and from 24 to 47% in Bulgaria (Markos, 1951; Enyedi, 1978).
- ² These included electronics and chemicals in the German Democratic Republic; heavy machinery, household machinery and arms manufacturing in Czechoslovakia; coal mining and chemical industry in Poland; non-metallic machinery, public transport vehicles, pharmaceuticals and communications technologies in Hungary; petrol-based chemicals in Romania; and light industries, later electronics in Bulgaria.
- ³ In Czechia and Hungary, strict bankruptcy laws were responsible for a particularly harsh selection environment. Data by Barta (2002) show that the survival rate of privatised enterprises in Hungary was a mere 20–25%, much less than could be explained by ‘economic necessity’.
- ⁴ On the flipside, Romania’s rating is not a sign of high value-added domestic manufacturing, but relates to low product complexity and significant raw material exports.
- ⁵ Of the 540 questionnaires, 154 were returned, with a response rate of 18%; consisting of 98 full and 86 partial answers. 33% of the responses came from universities, 31% from development organisations, 16% from statistical agencies and the rest from city governments and other actors. 17% of the responses came from capital regions, 83% from outside them. 30% of the respondents were from Poland, 19% from Czechia, 15% from Hungary, 10% from Bulgaria, and below 10% from other countries.
- ⁶ As Humphrey and Schmitz (2002) have shown, this has happened to numerous Western European assembly sites, too.