

THE CHANGING SPATIAL STRUCTURE OF INDUSTRY IN CENTRAL EUROPE

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In Central European states, the questions of industrialisation have been asked numerous times in relation to the European core. Before WW II, industrial underdevelopment could be linked to the peripheral situation of Central European economies, and meaningful parallels could be drawn with the states of Southern Europe, who had faced the same problems. With state socialism and its focus on catch-up through industrial location, the issue became muddled. To what extent was the path taken by Central European states to industrialise comparable to other economies on the European periphery, and to what extent was it a specific outcome of socialist development? Furthermore, is it possible to speak about national models, or are these variations less significant?

The role of industry had to be re-evaluated during transformation. Decline in employment, economic share and exports was universal, but it is also visible that some industrial activities have been able to survive and become a new source of growth. In Central Europe's integration into European and global networks, Foreign Direct Investment (FDI) have reshaped space; however, it is apparent that the dichotomy between old and new industries is a questionable one: even new greenfield investments are closely linked to previous production millieus, while old industries have often shown ability to be revitalised. Therefore, the spatial structure of industry of Central Europe today is a patchwork of continuity and change, where convergence towards the core is just as possible as the recreation of traditional peripheral relationships.

In this paper, the focus is on the spatial structure of Central European industry during three time periods: the early 1970s, when the changes brought by the socialist model had given way to consolidation; 1990–1991, a period of instability and change; and finally, 2003–2004,

a time where the new patterns of transition had already become visible. Against this background, the paper's emphasis is in part on the process of change itself; and in part on public policy's ability to drive and influence this process.

Industry during state socialism

Despite the common ideology, socialist economies showed significant differences in time and space. The first dimension shows a division into three eras: the Stalinist period of forced growth, a reform period where corrections were made to economic policy and states experimented with divergent economic models, and retrenchment from the end of the 1960s which coincided with the beginnings of economic decline. Here, I have chosen to examine the system as it was at the turn of the 1970s. At this point of time, the socialist block had entered a period of relative stability; most of the large-scale industrial investments had already taken place, and so have the reforms which made corrections to previous structures. There is also the matter of space: Central European states had shown different levels of development before WW II, and this, along with growth policies afterwards, was responsible for most of the visible differences.

Rapid and extensive industrialisation was a cornerstone of Stalinist growth policies. This involved the creation of new industrial centres as a tool of regional policy, and additional investments in already existing ones. Planners initially designed concepts for a more even distribution of production that would have modernised previously agrarian or light industrial areas – something that had also taken place in market economies in the same period (*Markos* 1951). However, eventual decisions were made on the basis of *political* and *military* instead of *economic* rationality; preparations for war required quick solutions and a strong concentration of resources. The process took place in a state of *dual isolation*: the isolation of the entire socialist block from the world economy, and the isolation of socialist economies from each other. Across Central Europe, the homogenisation of development policy took place. The results were impressive, but resulted in wide territorial imbalances between favoured areas and regions which were entirely neglected. Large-scale projects and fast growth rates masked the fact that it was usually previously strong industrial regions which gained the most investments.¹ Instead of more equitable distribution, economic policy had reinforced pre-war differences, although with a few new growth poles.

¹ As an example, between 1949 and 1953, 44,7% of new jobs in Hungarian industry were located in Budapest, which was already Hungary's most advanced industrial region, with 39,8% of all workers (*Kóródi – Márton* 1968). In Czechoslovakia, the largest investment, Kunčice, was in the already strong Ostrava-Karvina industrial region.

From the second half of the 1950s, it became apparent that the previous policies were unsustainable, leading to a wave of reforms across the socialist sphere. The most important elements were the following:

- transferring some economic control from direct command to intermediate organs,
- technological change (switch from “19th century” coal-and-steel industry towards hydrocarbons, chemical industry, electronics, etc.),
- cooperation and specialisation among socialist states and some decrease in their economic isolation, and
- the emergence of regional policy as a corrective instrument.

All of these had a hand in territorial decentralisation. Lessening the control of central planning somewhat strengthened the regional level, although at the time, this were often seen as restrictive to local interests. The switch to oil and gas as the main energy sources, but also less resource-intensive production, decreased the needs for resource proximity and transportation; consequently, allowed more evenly distributed industrial location. This also meant that industry could be more readily used as a tool of regional policy, located on sources of labour instead of raw resources.

Economic cooperation and specialisation, two sides of the same coin, was a troublesome issue. On one hand, specialised national production profiles were recognised to be potential sources of increased efficiency, as argued by the GDR and Czechoslovakia. On the other hand, national interests, especially in Hungary, Romania and Bulgaria, advocated complex autonomous industrial capacities. This conflict remained unresolved, and data collected from different sources suggests that even with all efforts, the share of intra-COMECON trade in the total only increased by 2.6% from 1960 to 1970 (*Meisel* 1974, *Böröczfy* 1975, *Peche* 1982).

Regional policy from the 1960s was specifically an instrument aiming to address problems of unequal development. With a few exceptions (such as Hungary, where agricultural cooperatives also had a significant role), its main tool was industrial location. Labour-intensive industries were located in small towns and sometimes rural areas, both as a social measure and a response to decreasing labour mobility. In the process, going back to previously neglected local knowledge and light industrial traditions was not uncommon. Among Central European socialist states, Poland and Hungary used the broadest range of policy instruments. Even so, the role of regional policy was merely to generate some growth

And in Poland, data from *Zawadzki* (1965) demonstrates that between 1951 and 1960, three voivodeships, Katowice, Kraków and Łódź, received 54% of industrial investments.

outside existing structures. It also has to be noted that in existing industrial regions, the effects of these policies were rather meagre. Although “one-sided development” was discussed in contemporary works (e.g. *Bartke* 1971 and *Kóródi – Kőszegfalvi* 1971), policy only succeeded in alleviating the problems of the 1950s – gaps between urban needs and infrastructure, hidden unemployment among women and (very rarely) the restructuring of areas affected by mine closures.

What were the results for the spatial structure of industry? Looking at **Annexes I./a and I./b**, we can see that the most industrialised regions were still pre-war ones. As discussed by *Enyedi* (1978), the majority of industrial employment before WW II was concentrated into an upwards triangle bordered by lines drawn between Łódź, Erfurt and Budapest. In 1970–1971, this formation was still strongly visible, although some counties in Romania (coal and oil mining areas, the metallurgic complexes of Reșița and Hunedoara) had joined them – although at the cost of continuing Stalinist principles and replicating outdated structures. It is notable that Yugoslavia and Hungary show a low level of industrial employment. The reasons are partly methodological: in both countries, a share of industry (some 10–15% in Hungary), was under the control of municipalities or cooperatives. Additionally, in Hungary’s case, the concentration of Budapest, accounting for 34% of employment and 23% of total investments, is contrasted by a more “empty” countryside.²

Overall, the share of employment in industry and construction reached an average of 51% by 1970–1971. Among the examined states, the differences are not excessive: the higher figures of Czechoslovakia (55%), Romania (53%) and Poland (52%) and the lowest of Yugoslavia (47%), Albania (46%) and Hungary (46%) are relatively close; this points to convergence compared to the more polarised pre-war conditions. Outside central regions and Katowice voivodeship, Czechoslovakia, Poland and Hungary show a relatively even spatial distribution of employment, while southern and southeaster states have higher differences.

Where the share of industrial employment reflects the contemporary situation of industrial development in socialist states, per capita investments expressed in US dollar values offer a valuable insight into development priorities. Naturally, the map of **Annex I./b** can only give a snapshot, and may be distorted by certain high-priority projects; nevertheless, these anomalies do not affect the big picture. Poland and Romania stand out with their high investment volumes, while Bulgaria shows a lower level. In Hungary, the “energy axis” of

² Outside Budapest, Sofia city (16%), Southern and Northern Moravia (14 and 15%), Katowice (20%) and Bucharest (16%) count as super-concentrations.

industrialised counties is apparent, while in Romania, there is a strong divide between Transylvania and Old Romania. In Czechoslovakia, investments were divided between the Czech and Slovakian sides along population lines; by this time, programmes aimed at Slovakia's catch-up had already concluded.

Two decades under state socialism, even if development priorities and planning had changed over time, were not without consequences. Although industrialisation was unable to reshape the map of Central European industry like it intended to, states had become closer, even when the divergence of policies in the reform period is taken into account. The question arises whether the results are specific to the socialist model, or comparable to peripheral and agrarian regions of Europe. Evidence suggests that while the Stalinist developments of the 1950s were a detour from the path taken by market economies, reforms in the 1960s lessened these differences.³ The political retrenchment of the late 1960s halted the convergence process: over the next two decades, policy became "fossilised" and again increasingly homogenous due to political pressures, while damaged adaptation mechanisms lead to increasing differences between Western and Central European economies.

Industry during the early stages of transition

With the collapse of the socialist system, the role of industry in Central Europe had to be re-evaluated in the context of global challenges and the widespread crisis which had emerged during the previous decade. Although depression was sometimes seen as a system-specific problem, its underlying causes were similar to the experiences of Old Industrial Regions in the west: market loss, outdated products and the failure of regions to adapt to new circumstances. Differences are not found in the general features of depression, but rather three factors which had made it more severe.

The first of these is the *dysfunctional spatial consequences of socialist economic policy*. Extensive industrialisation was able to create new industrial centres, but didn't have the means to undertake complex regional intervention. The result was strong monofunctionality, where symptoms of earlier underdevelopment became conserved under the layer of new industries. The lack of small and medium enterprises resulted in dependence on a few employers – even higher than in western OIRs. In many cases, this extended to municipal services (heating, infrastructure, etc.) and public institutions. Furthermore, regions which

³ My interviews with Hungarian experts active in planning during the socialist period revealed that they were familiar with Western theories of economic development, and were consciously trying to adapt them to the local economic circumstances and political realities – not always an easy thing.

were industrialised the earliest (before or during the 1950s) often retained these original structures, which had become severely outdated by the 1990s.

The second factor is *damaged adaptation mechanism*. In the international context, this meant the isolation of socialist states from the world economy. Outside market impulses were too weak to affect decisions; by the time problems became apparent, policy's freedom of movement was already too narrow to offer treatment. On the national level, the survival of non-market rationality was another force working against adaptation. Even in states where adaptive measures were taken against the crisis, they were belated and marginal. This attitude can be clearly identified as institutional sclerosis as described by *Boschma – Lambooy* (1999) and *Steiner* (2003), to an even greater degree than in market economies. Lastly, on the sub-national level, we can again draw attention to dependence: much more importantly than simple lobbying power, large-scale industrial units were so strongly linked to local and regional economies that their collapse would have meant social catastrophe – while inaction lead to the gradual worsening of problems.

The third factor is *the new conditions of systematic change*. These conditions once again acted against effective intervention. The institutional instability of transition made traditional planning methods untenable, while a radical approach, fusing planning, decisionmaking and execution (*Faragó* 2004), was unavailable due to a lack of political and monetary capital. Therefore, the typical reaction of democratic governments was to use resources to prevent the immediate collapse of companies, and social measures to lessen the impact of unemployment in crisis regions. This step is consistent with early policy responses made in the EEC (*Ex post evaluation of 1994-99 Objective 2 programmes* 2003), although less effective because of low funds.

Consequently, the crisis of industrial regions in Central Europe was wider and more severe than in the west. Instead of *active*, policy-driven structural change, the process was overwhelmingly *passive* and market-driven, resulting in rapid de-industrialisation. This is both a positive and a negative phenomenon: it can be seen as a natural move to a more service-driven economy, but it also involves deskilling, the loss of export potential, etc. Thus, the higher share of tertiary activities can be interpreted as an outcome of successful structural change, but also a “sustenance economy” where services are dominant for a lack of alternatives. As discussed in the third part of this paper, industry and de-industrialisation has a different significance for central, intermediate and peripheral regions.

Annex II./a shows that by 1990–1991, the degree of de-industrialisation had already been significant. In all states except Romania, strong tertiarisation took place. Two decades before, this was only visible in central regions and large cities, now, it spread everywhere. The core industrial area of Central Europe dissolved, although national spatial structures changed relatively less. South-eastern states now had a higher share of industrial employment than north-western ones. Also, the concentration of industrial employment decreased: regions where employment was previously highly concentrated lost share, while under-industrialised ones gained some. Therefore, while overall, the most significant trend *in employment* was de-industrialisation, it was the strongest in former industrial regions.

Unlike employment, regional investment statistics (**Annex II./b**) show an opposite process: instead of *deconcentration*, the prevailing trend was strong *concentration* into highly industrialised regions, and decline in peripheral ones. Unfortunately, there wasn't enough data to construct a good comparative map about the per capita investment levels in Central Europe, as figures were sometimes given in percentiles instead of national currency, and moreover, strong inflation during the early transition period would have made the results suspect in any case. Therefore, the annex only shows the *share of industrial investments* in the total – which can shed some light on national trends, but doesn't enable a global comparison.⁴ Although investment volumes were falling everywhere, their contraction in Poland is immediately visible, showing a sharp contrast between the south-western industrial core, and rural peripheries – foreshadowing the threat of returning to the wide differences of “Poland A” and “Poland B”. Hungary's situation was similar, although decline was smaller early on due to successful policies to encourage foreign investment. North-western counties were the major winners of the process, along with the capital; former OIRs its losers. In Romania, industrial investments were still the most significant – and again, they were overwhelmingly in the industrial heartlands, while peripheral counties suffered.

Based on these two dimensions, we can conclude that in the early transition period, the spatial structure of industry reached a tipping point. *Before* 1990, Central European countries made relatively successful efforts to industrialise backwards areas, either as a form of regional policy (especially in Hungary and Poland) or a general drive (as in Romania). *After* 1990, peripheries had to face changed circumstances. Their products were often outdated, and there was little hope for investments to remedy this situation as social concerns had to take a backseat. To borrow *Gorzelak's* (1998) regional typology, while negative discontinuity was the threat for Old Industrial Regions, peripheral regions faced the threat of negative

⁴ Data for Yugoslavia was available, but I decided to exclude it on grounds of appearing inaccurate.

continuity, or conserving former disadvantageous positions. But the same could be asked globally: would Central Europe's new opportunity for European reintegration mean that its states would converge towards the core, or would they once again be incorporated into the fringes?

Industry in the accession period

The third period examined in this paper is the phase when eight post-socialist states joined the European Union, with others set to follow. Fifteen years after systematic change, it is possible to see the trends which have reshaped the industrial structure of Central European states, even if they have not yet run their course. The integration process takes place over decades, and its outcome is not determined – although with the passage of time, the special characteristics of post-socialism lessen and common European problems gain their place. This section tries to enumerate the salient features of the transformation process, and the impact they had on spatial differentiation.

It is arguable that the strongest force which continues to mould industry is the *investment preferences of transnational corporations*. Capital investment at the beginning of the 1990s was mostly in the form of acquiring privatised assets, while later, greenfield projects took their place. The former recreates previous regional differences; the latter produces new ones. Companies owned by foreign interests surpass local ones in capitalisation, export potential and productivity, giving them a significant power to influence economic growth. The result is a *dual economy* (Barta 2005, Domański 2003), where duality is both a sectoral and spatial outcome, and links between domestic and foreign-owned enterprises are often weak.

Spatial differentiation occurs on national and subnational levels. Regulations, political/legal stability and investment incentives were decisive in national differences during the 1990s and continue to be relevant, if less influential today. On the subnational level, the most relevant factor was at first the accessibility of western markets. Western border areas with good infrastructure benefited, and previously existing west-east development gradients became steeper. Today, industry plays a role in all regions, but not the same role: we can see that its presence or absence can mean different things for different regions. In my opinion, a *threefold pattern* is visible on the map of Central European industry, representing distinct regional types developing along different trajectories.

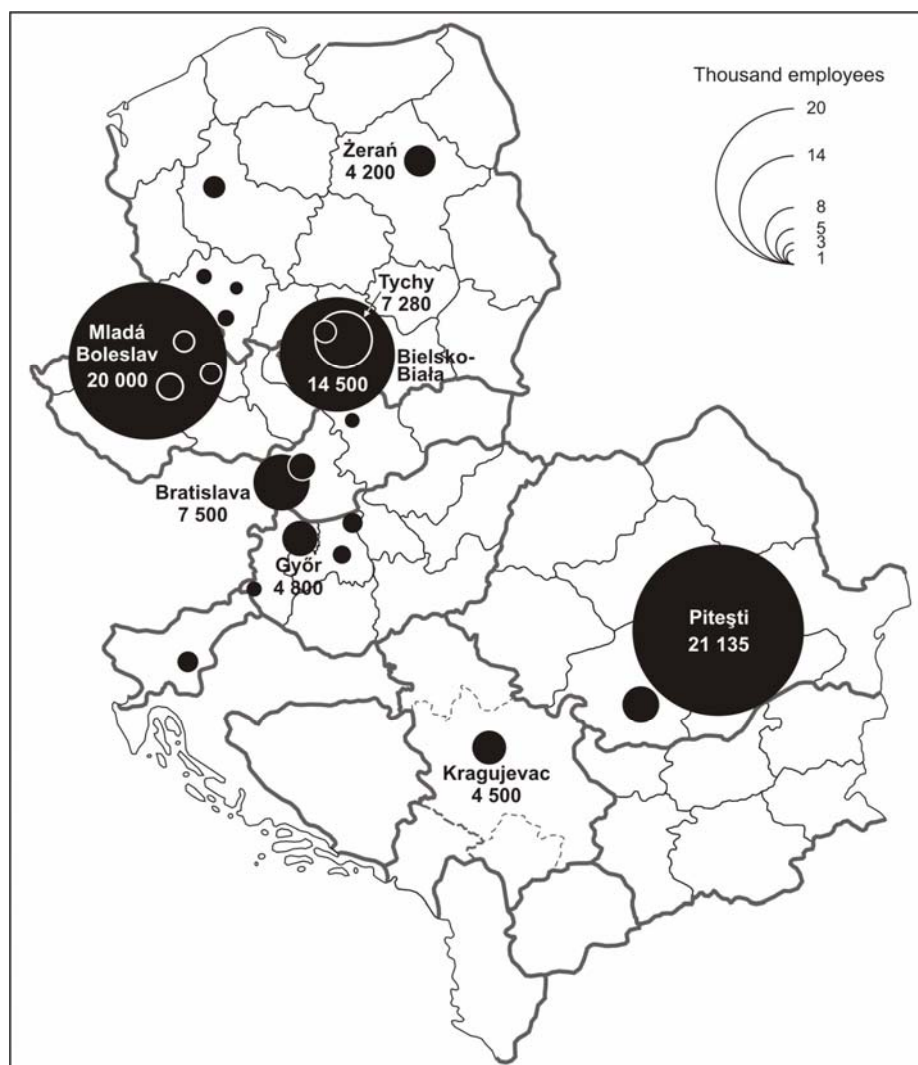
Central regions were major manufacturing centres in the socialist period. During transformation, their capacities rapidly shrank, and their place was taken by services. The most innovative service activities, especially business services, are strongly concentrated in central regions (for the example of banking, see Gál 2005), as are administrative/political functions. The development of central regions has been mostly tertiary, and in their chase, tertiarisation and de-industrialisation are associated with successful transition. As a note of caution, it has to be remembered that this doesn't mean development lacks an industrial component, and central regions managed to retain their presence in the highest value added branches. Higher education and R&D are also located in large urban centres, including capitals. 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.

Industry continues to be a strong dynamising force in *intermediate regions*. They can benefit from service-based growth, but all 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 area is just one example. On the other hand, they are not the only ones to belong to the category. Old Industrial Areas which have been successful in their adaptation by diversification or the innovative restructuring of their traditional branches start to become very strong contenders even if they do not benefit from an ideal geographic position. Their advantage is an established industrial milieu with support institutions and skilled workforce. The role of these factors is only going to increase in the medium term as pools of skilled labour are depleted across Central Europe. Organised and more costly labour is much less of a disincentive than economists suspected – and it could be argued that it is actually a contributing factor to long-term success.

Traditional and new peripheral regions are still coping with inherited and new backwardness. They were either under-industrialised, or their previous capacities were eroded so strongly that they can be considered lost. Most of the former are rural and/or eastern border areas, whose light and food industries suffered during transition, and are losing further ground to global competitors. Some OIRs have also fallen into this trap with the downgrading of their human capital. It is a common observation that industrial depression leads to a decrease in skills thanks to emigration and the social consequences of long-term unemployment. The result may be low level stabilisation as a peripheral region, instead of catch-up to intermediate ones. Peripheral regions need the intervention of regional policy to re-industrialise, but these measures must be accompanied by social regeneration – first and

foremost to reduce inactivity. On the other hand, contrary to usual expectations, not all peripheral industries are suffering. In certain branches and regions where cost advantages are still significant, we can see the re-emergence of traditional light industries, increasingly serving the needs of international supplier networks.⁵ Their challenge is whether their advantages remain sustainable in the face of global competition, and whether they will be able to diversify into higher value added activities or even new industries.

Figure 1: The distribution of automotive industry in Central Europe (2003, number of employees)



Source: Author's construction based on data from *Worrall – Donnelly – Morris* 2003

⁵ For example, textile companies in Eastern Slovakia, Hungary and Bulgaria have experienced new growth, and even become intermediaries between western and post-soviet states (*Kalantaridis – Slava – Sochka* 2003).

The spatial structure created by the ongoing differentiation process is characterised by a mixture of continuities and new phenomena. The location preferences of transnational corporations have played a role in modifying the picture of previous decades: some traditional industrial regions have lost in significance, while others emerged as new competitors. At the beginning of transformation, it was often prognosed that radical changes would take place, and the map of industry would be completely redrawn. But evidence suggests that these predictions did not come true.

Continuities play a larger role than anticipated, as **Figure 1** demonstrates through the example of automotive industry. Even allowing for differences in labour and capital intensive forms of production, it is apparent that manufacturing centres are almost always located in locales with strong industrial traditions, and the largest production facilities are all old ones – by far outstripping greenfield projects. This continuity is either manifested in the survival and transformation of traditional corporations, or the adaptation and evolution of industrial milieus. New plants are located in old regions, even OIRs, as the successful transformation of Central Transdanubia or Upper Silesia demonstrates. Based on my interviews with decisionmakers and entrepreneurs in one Polish and two Hungarian OIRs, the single most important source of growth potential is *the availability of skilled labour*. The relative abundance at the beginning of the 1990s no longer exists as tertiarisation proceeded and deskilling took place. Secondary education, and strong technical universities were instrumental in replacing losses, and where they didn't succeed – which was unfortunately the case in both Hungarian examples – the scarcity of skilled professionals became the main impediment before FDI inflows.

Annexes III./a-1–2 and III./b show the transformed industrial landscape of Central Europe. What stands out is the continuing de-industrialisation of post-socialist countries. The degree of this process was such that two separate maps had to be constructed – one using the scales for 1970–1971 and 1990–1991, and a separate one where interior differences would be visible. In employment, only one Polish region, Upper Silesia, exceeded 35% in industrial employment; from all regions mapped, one half did not reach this level. Only three regions exceeded 50%: fifteen years before, one quarter of the total did, and on the turn of the 1970s, almost one half.

The diverse role of industry is evident from **Annex III./a-2**. The most developed central regions show the lowest levels of industrial employment – but so do eastern peripheries. Troubled regions can be found among those where the ratio is highest – but also others which grow dynamically. Development level cannot be linked to sectoral composition; we

must look into distinct region types to correctly appraise the value of industry in our transforming societies. Comparisons of industrialisation and GDP rankings verify this conclusion: the first spots are taken by service-driven regions; Prague, Bratislava, Central Hungary, Zagreb and Mazowieckie. But they are immediately followed by intermediate industrial regions: Western Transdanubia, Central Bohemia, and so on. Even with de-industrialisation, traditional divides and development gradients survive: the southwest–northeast division of Poland, the “energy axis” of Hungary, the continued importance of former industrial centres of Romania, etc.

Investments statistics, seen in **Annex III./b**, show wide differences. In Bulgaria, masked by low overall levels, there is a more than twofold difference between the south-western capital region and the northern central one. Although regional statistics couldn't be found, reports regarding industry in Romania suggest that similar polarisation takes place. In Poland, western border areas and the capital are the primary targets, as are in Hungary: however, while the latter saw an overall higher investment level, its distribution within the country was less equal. Northern Hungary had the single highest investment ratio per employee, while Southern Transdanubia fell in the lowest bracket.

Do the development processes in Central European industry point towards convergence towards the European core, or the re-constitution of pre-war peripheral positions? It was often feared that the dual industrial structure of transition societies would result in deskilling and disembeddedness, or “desert cathedrals”. *Pavlínek – Smith* (1998), recounting arguments from Dunning, Grabher, Lipietz and Smith, pointed out that “defensive structural change” – focusing on low or medium technology activities, the lack of innovative products and relying on labour cost as the most important competitive advantage – would lead to the preservation of core-periphery arrangements. It follows, then, that even in re-industrialised regions where FDI inflows are strong, catch-up is an illusion, and modernisation relative, as the resulting structures will be crisis-prone just like socialist ones.

This concern is not altogether unrealistic, and has to remain a cautionary note to decisionmakers and regional scientists. Central European industry could at the moment be described as *semi-peripheral* – not purely relying on unskilled but cheap labour, but still very distant from the optimal level of high value added activities. However, in agreement with *Domański's* (2003) views, who describes a labour-intensive and capital-intensive rural/urban split, I consider semi-peripheral industry better than the alternative. Semi-peripheral industry can play a positive role in regional development, if it keeps the economy active, provides employment and maintains industrial millieus – or, it *stabilises*. In the case of peripheries, old

and new, the effect is even more beneficial as a *generator of growth*. Economic policy must be able to distinguish between these two roles, since they do not fulfil the same function. For peripheral regions, the positive outcome is regeneration, reintegration and social improvement. For intermediate regions, it is a stepping stone towards higher embeddedness and endogenous growth. Local production systems and chambers of industry/commerce can play a vital role in the process (Grosz 2004, Póla 2007). The main tool of public policy today is no longer industrial location, but assistance in institution-building. To be efficient, this requires a degree of administrative decentralisation, especially in the realm of economic policy. So far, only Poland has done so among post-socialist states, and it appears that the results were positive. It remains to be seen if others will follow the example.

Conclusions

The question of industrial development in Central Europe was always strongly associated with the question of modernisation. Socialist development policy's industrialisation drives created new growth centres and reinforced old ones, but failed to achieve complex modernisation, and neglected the question of regional inequalities. Reforms attempting to fix these problems were to an extent successful, resulting in some convergence towards western economies; however, the changes could only modify existing structures, and were unable to break with the consequences of dysfunctional spatial phenomena and dual economic isolation. Socialist states unquestionably became industrial societies – but even as they were doing so, changes in the world economy started to undermine their model of development.

The failure of socialism to adapt to the changes had been directly responsible for a postponed and therefore more damaging crisis that faced Central Europe's states during early transition. Effective restructuring was outside the means of national governments, and therefore, structural change was mostly market-driven instead of managed. The result, widespread de-industrialisation, was as much a sign of converging towards modern economies as a sign of economic weakness and peripherality.

The transition period between systematic change and EU-accession was as much a period of change as a time of surviving continuities. The location decisions of transnational corporations were instrumental in reshaping the industrial landscape of Central Europe's states; their preference gave advantages to some regions and left others with less growth opportunities. Industrial development was strongly differentiated, and three distinct regional

types arose: central regions driven by service-based growth but still having a good position in innovative industries; intermediate regions where industry, especially manufacturing plays the dynamising role, and traditional and new peripheries who continue to struggle with economic and social problems.

De-industrialisation, which has progressed even further since systematic change, has now resulted in a situation where competitiveness is increasingly linked to the availability of skilled labour, and the institutional environments that cultivate it. Old Industrial Regions, thought to be doomed to economic decay and obscurity, can see this as a new opportunity for regeneration; and for peripheral regions, industrial development continues to be the most useful means of escaping from their disadvantageous situation. Public policy, whose means have been strongly curtailed, cannot hope to enact change by itself, but it can contribute to building decentralised institutional structures which can be effective in influencing regional development and economic growth.

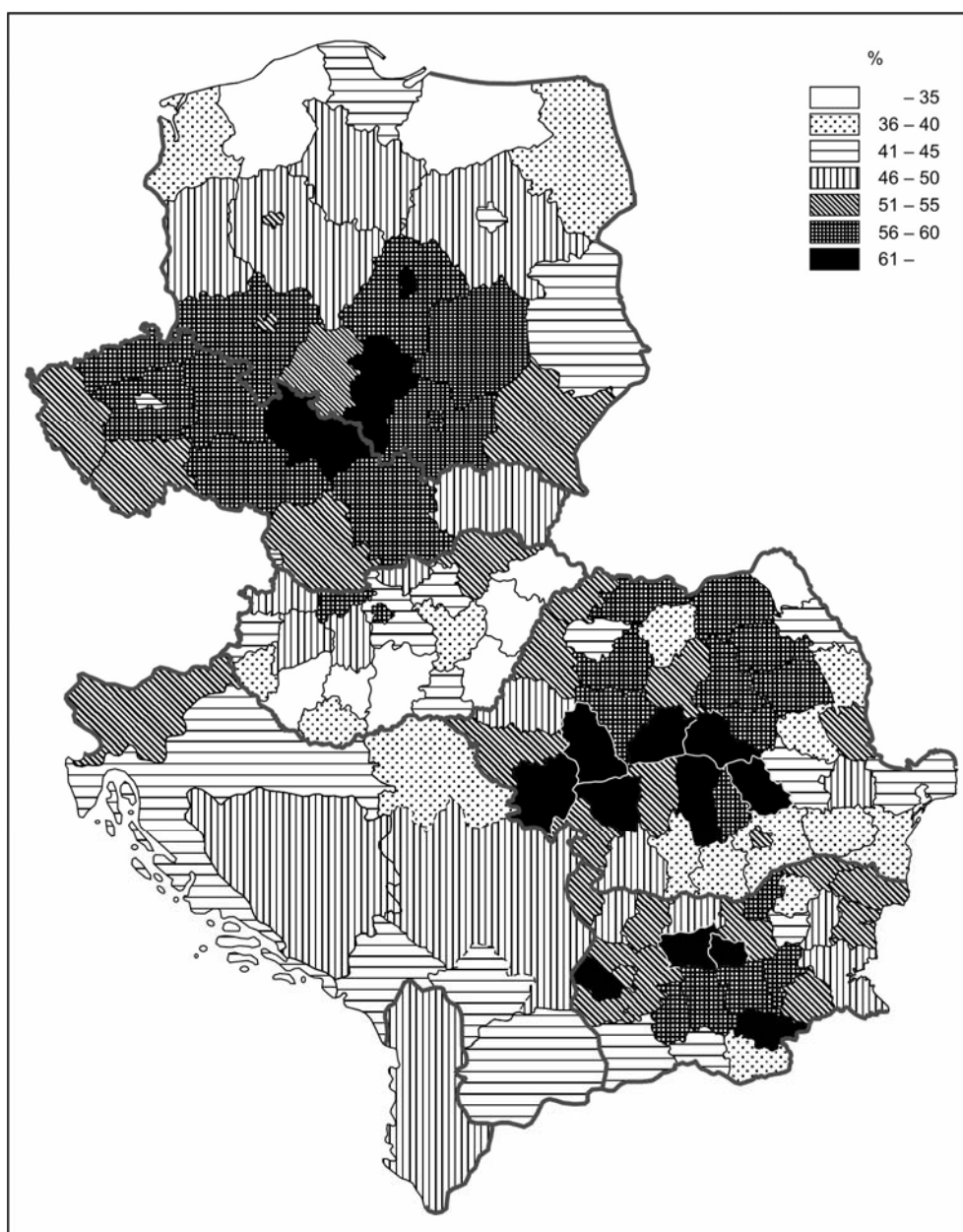
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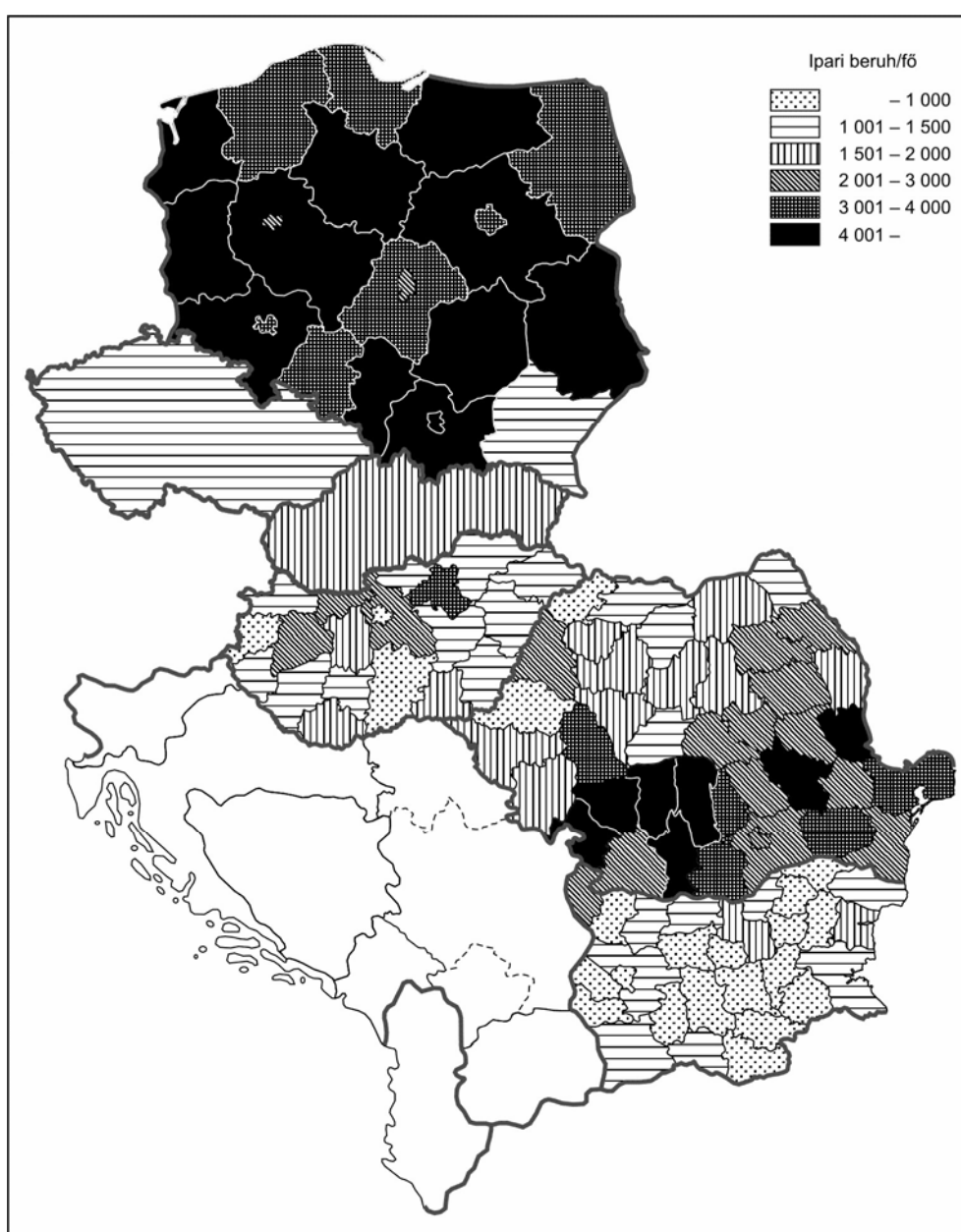
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Annex I./a: Industrial employment as a share of the total (1970–1971, %)



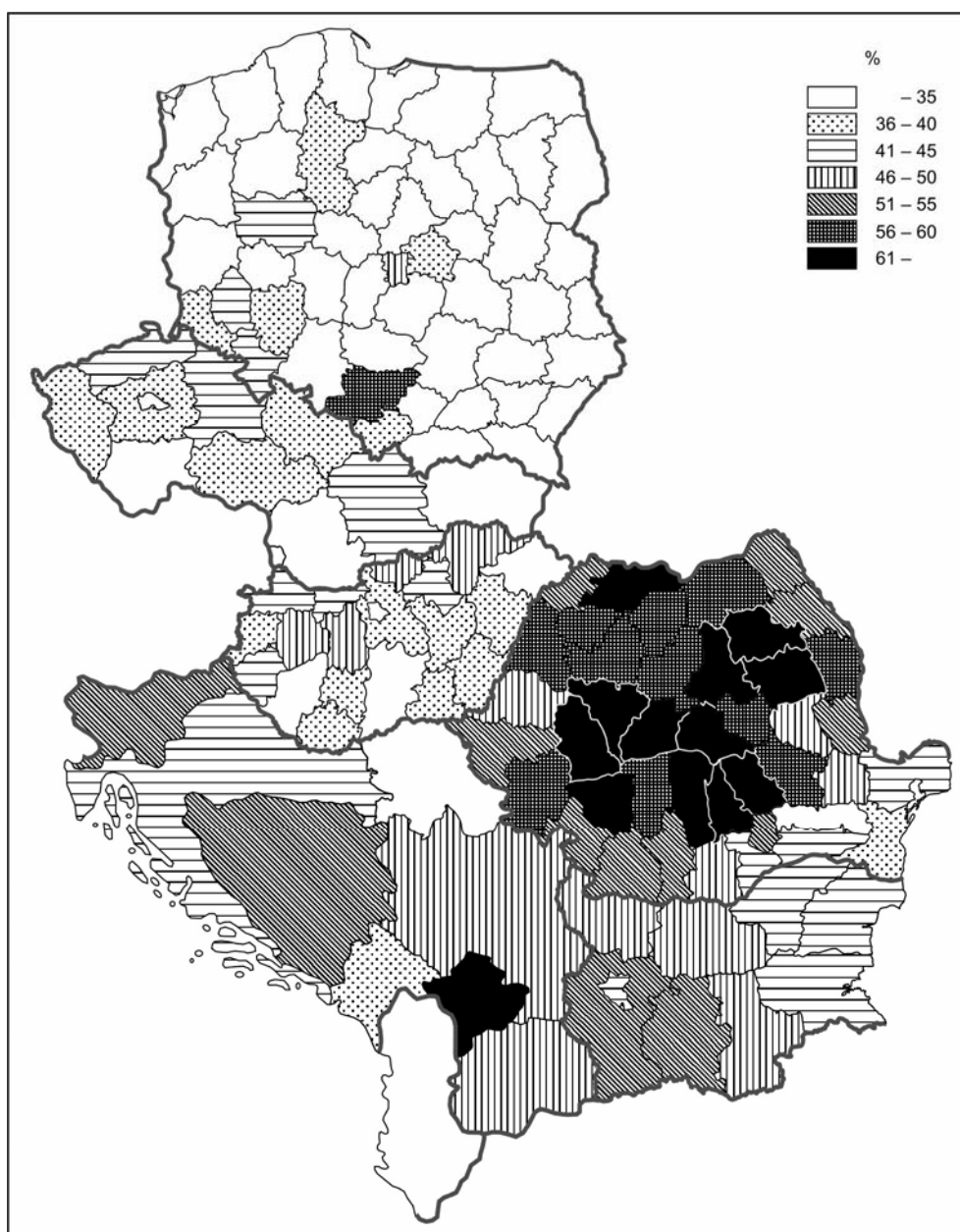
Source: Author's construction based on national statistical yearbooks

Annex I./b: The level of industrial investments per employee (1970–1971, USD)



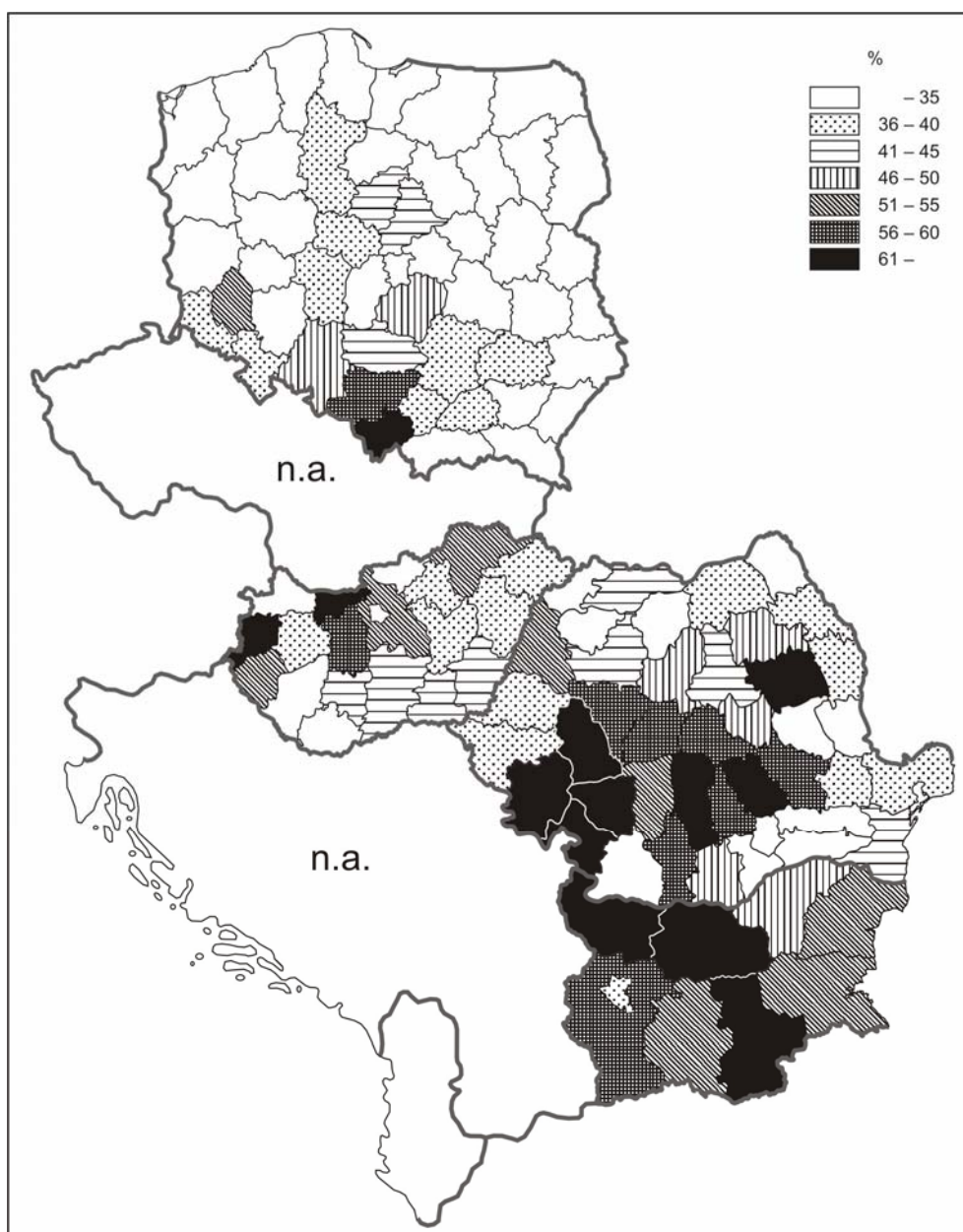
Source: Author's construction based on national statistical yearbooks

Annex II./a: Industrial employment as a share of the total (1990–1991, %)



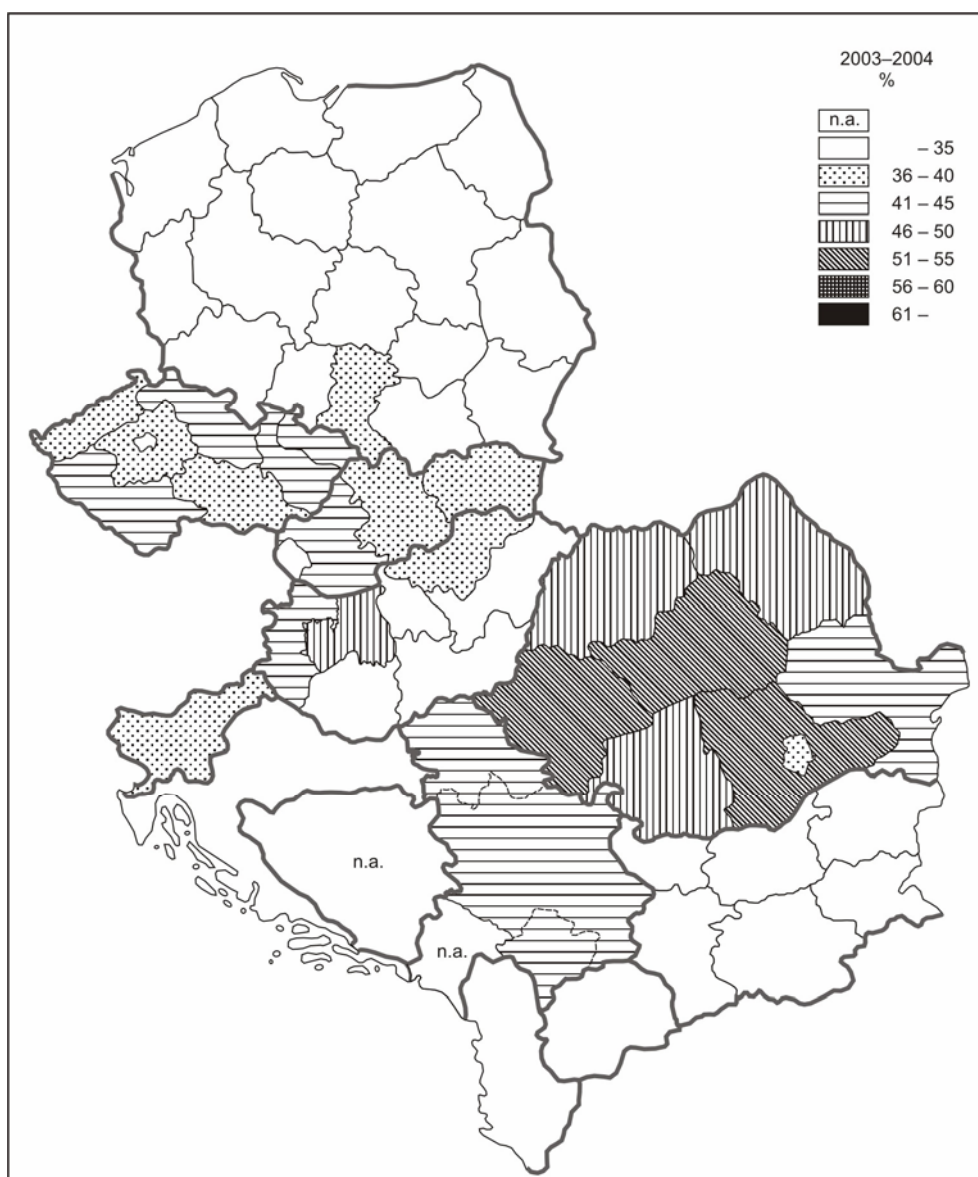
Source: Author's construction based on national statistical yearbooks

Annex II./b: Industrial investment as a share of the total (1990–1991, %)



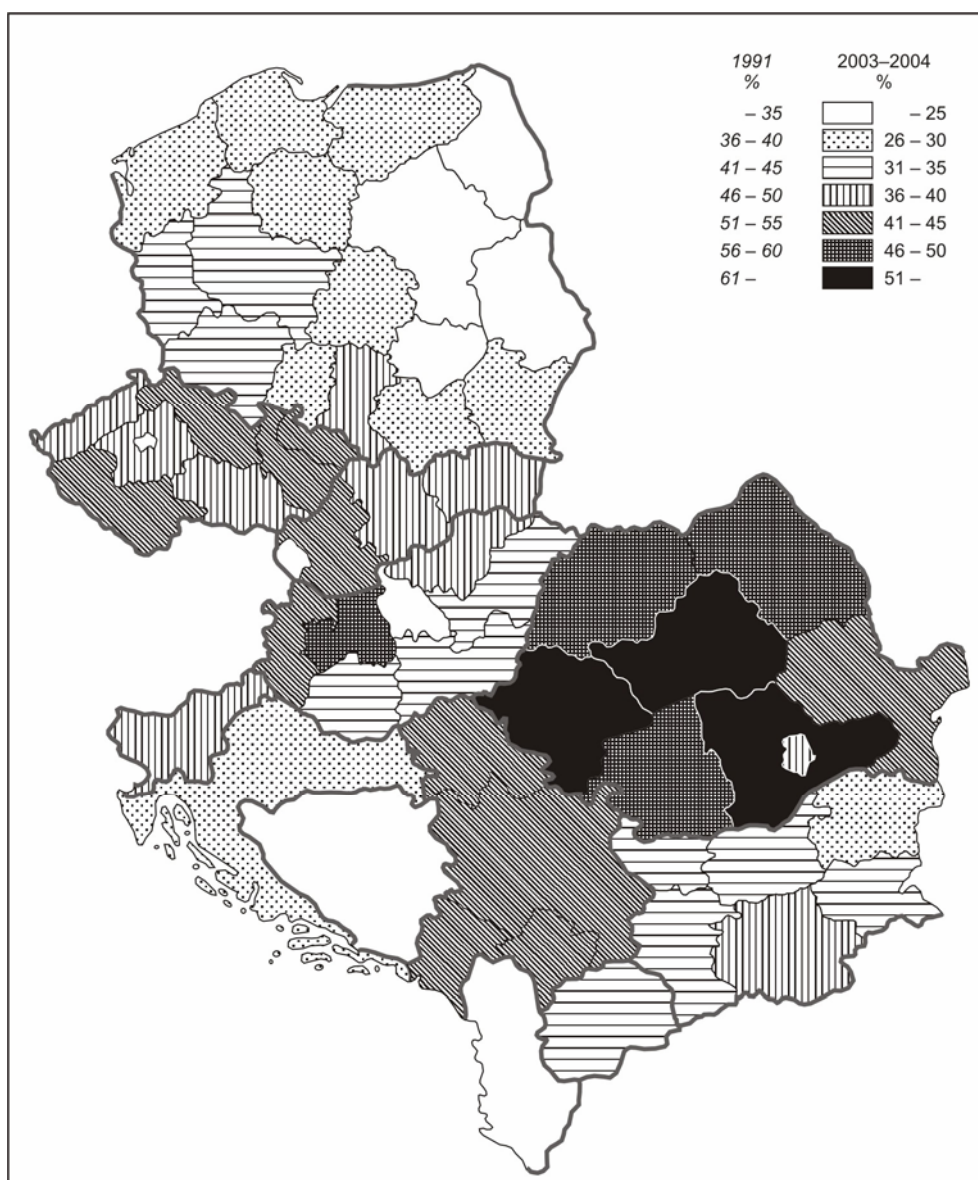
Source: Author's construction based on national statistical yearbooks

Annex III./a-1: Industrial employment as a share of the total (2003–2004, %)



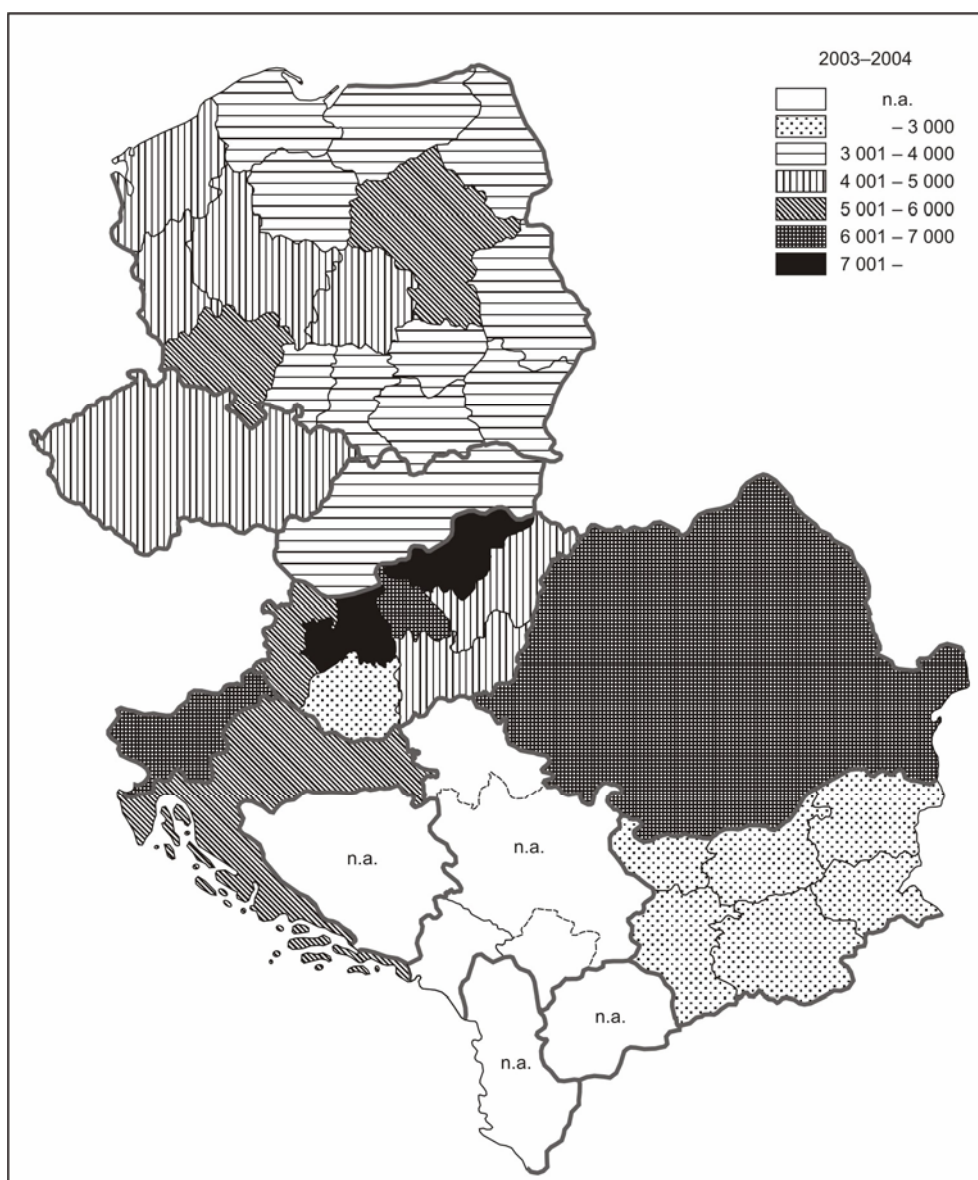
Source: Author's construction based on national statistical yearbooks

Annex III./a-2: Industrial employment as a share of the total, adjusted range (2003–2004, %)



Source: Author's construction based on national statistical yearbooks

Annex III./b: The level of industrial investments per employee (2003–2004, USD)



Source: Author's construction based on national statistical yearbooks