

FDI-Led Reindustrialisation and Regional Development Trajectories: Evidence from Hungary

Extended abstract

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Following the 2008 global financial crisis, reindustrialisation became a central element of European Union economic strategy. Initially framed as a response to deindustrialisation and crisis-induced restructuring, reindustrialisation has since been embedded in broader strategic objectives, including strengthening economic autonomy, supporting the green and digital transitions, and enhancing defence-related capacities. Beyond these macro-level ambitions, reindustrialisation also plays a crucial territorial role: it is expected to contribute to economic, social and territorial cohesion by fostering structural change and productivity growth in less developed regions.

In Central and Eastern Europe, and particularly in Hungary, reindustrialisation has been predominantly driven by foreign direct investment (FDI) and EU cohesion funding. Since EU accession in 2004, Hungary has become deeply integrated into European and global value chains, especially in automotive, electronics and electrical equipment industries. By the late 2000s, foreign-controlled affiliates accounted for roughly two-thirds of manufacturing gross value added (GVA), half of manufacturing employment, and around three-quarters of manufacturing investment. As a result, Hungary exhibits one of the highest shares of foreign-controlled manufacturing in the EU.

While FDI has contributed to technological upgrading and productivity gains, especially in export-oriented manufacturing, the literature increasingly warns about the structural risks of FDI-dependent development models. Regions may become locked into assembly-based production, characterised by limited local value added, weak supplier integration and insufficient innovation capacity. In such cases, catching-up processes may stall, leading to what recent literature defines as a regional development trap: a situation in which regions fail to sustain productivity and income convergence relative to national or European benchmarks.

Against this background, our study addresses the following research question: does FDI-led reindustrialisation in Hungary contribute to regional catching-up with the EU12 average, or does it increasingly generate development traps at the subnational level?

The novelty of our approach lies in its NUTS 3-level analysis. While national-level studies of Hungarian catching-up are abundant, the heterogeneous trajectories of counties remain underexplored. We therefore analyse 20 Hungarian NUTS 3 regions (including Budapest) over the period 2000–2023, using Eurostat and Hungarian Central Statistical Office data. Reindustrialisation is measured primarily by the share of manufacturing GVA in current prices, following Capello and Cerisola's methodological proposal, complemented by employment and productivity indicators.

First, we compare Hungary's manufacturing trajectory to the average of the former EU12 member states (excluding Luxembourg and Ireland for methodological reasons). While the EU12 experienced continuous deindustrialisation until 2008 and only a temporary stabilisation thereafter, Hungary underwent strong reindustrialisation after the crisis. The share of manufacturing GVA increased dynamically until 2015, reaching 24%, significantly above the EU12 average. However, after 2016, deindustrialisation resumed, and the manufacturing share declined gradually, stagnating around 20% in recent years.

Productivity dynamics reveal a similar pattern. Hungarian manufacturing productivity improved from a very low base and reached approximately 35% of the EU12 average by 2008. A short period of accelerated catching-up occurred between 2012 and 2015, but after 2016 productivity stagnated, remaining around 35% of the EU12 level until 2022. Thus, despite a high and growing weight of manufacturing, sustained productivity convergence has not materialised.

To capture territorial heterogeneity, we distinguish five region types based on manufacturing structure, FDI intensity and development characteristics: Central region (Budapest and Pest county), FDI-led reindustrialised counties, FDI-led reindustrialising counties, Knowledge hub counties, Less industrialised counties.

The FDI-led reindustrialised counties (e.g. Győr-Moson-Sopron, Komárom-Esztergom, Vas, Fejér) display extremely high shares of manufacturing GVA (above 34%), high export orientation and strong foreign ownership dominance. The FDI-led reindustrialising counties also show significant industrial weight, though at slightly lower levels. In contrast, the central region and knowledge hubs rely more on services and exhibit lower manufacturing intensity.

Between 2010 and 2016, FDI-led region types were the main drivers of Hungary's national catching-up process. GDP per capita (in PPS) in these counties converged rapidly towards the EU12 average. However, after 2016, a structural break becomes visible. The FDI-led reindustrialised regions stagnated at around 70–71% of the EU12 average, with some counties (e.g. Győr-Moson-Sopron and Vas) even experiencing relative decline. Meanwhile, the central region entered a new phase of dynamic convergence, rising above the EU12 average by 2023.

The productivity data reinforce this interpretation. In FDI-led reindustrialised regions, manufacturing productivity relative to the EU12 peaked around 2016 (44%) and subsequently declined to approximately 35%, effectively returning to its 2008 level. Similar stagnation is observed in FDI-led reindustrialising counties. This suggests that the investment-driven growth phase has exhausted its potential.

To explain this stagnation, we examine endogenous development factors: educational attainment, R&D expenditure, research intensity and labour market characteristics. The central region stands out with high graduate shares (43%), strong R&D intensity (1.6% of GDP) and dense research capacity. In contrast, FDI-led reindustrialised counties exhibit low graduate shares (around 26%), minimal R&D expenditure (0.8% of GDP) and weak research presence. Three of the four counties lack substantial higher education institutions. Although unemployment is low and employment rates are high, innovation capacity remains limited.

These patterns are consistent with Capello's "imitative" regional development model and Porter's investment-driven stage of development. FDI-led regions rely on external knowledge, imported technologies and assembly-based production. Weak local supplier networks further

reduce regional multiplier effects. As a result, growth becomes externally driven and structurally constrained. We therefore argue that Hungary's FDI-led reindustrialisation generated a temporary convergence effect until approximately 2015, but subsequently led to the emergence of regional development traps in several manufacturing-intensive counties. These traps are characterised by: stagnating productivity relative to the EU12, declining manufacturing shares after 2016, weak local innovation ecosystems, limited integration of foreign affiliates into local networks.

Importantly, since national GDP is the aggregate of regional performances, stagnation in manufacturing-intensive counties also slows Hungary's overall convergence. While Budapest and its metropolitan area increasingly drive national growth, territorial dualism deepens.

Our findings have broader implications for EU industrial and cohesion policy. Reindustrialisation alone does not guarantee sustainable catching-up. Without strengthening endogenous innovation capacity and multi-level territorial governance, FDI-led growth may reinforce structural dependence. Hungary's highly centralised development policy and the limited role of place-based coordination further constrain regional upgrading.

The main contribution of this study lies in demonstrating, at the NUTS 3 level, that FDI-led reindustrialisation can generate heterogeneous and ultimately self-limiting development paths. The Hungarian case illustrates the risks of an FDI-dependent industrial model in less developed European regions. Future research should complement macro- and meso-level indicators with firm-level and network analyses, and extend comparison to other Visegrad countries to better understand the mechanisms through which FDI influences long-term regional trajectories. Overall, the Hungarian experience suggests that reindustrialisation without deepening innovation capacity may produce convergence in the short run, but development traps in the long run.