Cohesion Policy and its contribution to addressing different development needs of regions

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Group of high-level specialists on the future of Cohesion Policy

The European Commission, the Directorate-General Regional and Urban Policy (lead) and the Directorate-General Employment, Social Affairs and Inclusion (associated) have set up a Reflection Group on the future of Cohesion Policy. The group includes high-level members from academia and practice and in 2023 will meet nine times to reflect on current and future needs and the functioning of Cohesion Policy.

The group will offer conclusions and recommendations that will feed the reflection process on Cohesion Policy post-2027 including through the 9th Cohesion Report in 2024 and the mid-term review of Cohesion Policy programmes in 2025.

About the author

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Acronyms

CEEC	Central and Eastern European Countries
DT	Development trap
EQI	European Quality of Government index
EU	European Union
FDI	Foreign direct investment
GDP	Gross domestic product
GERD	Gross domestic expenditure on R&D
GVA	Gross value added
GVC	Global value chains
HQ	Headquarters
ICT	Information and Communications Technology
IFDI	Inward foreign direct investment
KIBS	Knowledge-intensive business services
MNE	Multinational enterprise
NUTS	Nomenclature of territorial units for statistics
OFDI	Outward foreign direct investment
OLS	Ordinary least squares
R&D	Research and development
RDT	Regional development trap
S&T	Science and technology
S3	Smart Specialization strategy
SME	Small and medium-sized enterprises
STEM	Science, technology, engineering and mathematics

Acronyms

1   Introduction and aim

The "regional development trap" (RDT) concept in the European Union (EU) context refers to regions that face significant structural challenges in regaining previous economic dynamism or in improving wealth and prosperity for their residents (Diemer, Iammarino, Rodriguez- Pose, and Storper 2020, 2022). Indicators of development trap risks for the EU regions have been proposed on the basis of different variables representing the extent of economic dynamism of each region relative to itself in the past, and to both national and European averages (Diemer et al. 2020, 2022).

The RDT analytical framework allows to take a comparative perspective of "different speeds"across EU regions and places: this is crucially important as trapped regions in Europe may be so at different levels of income and economic development. Regions in development traps, or at significant risk of becoming trapped, may face economic, social and political hazards forthemselves, their nation State, and Europe as a whole. Thus, they represent a tricky challengefor policy makers at all levels of governance. The RDT dynamic framework provides an operative way to distinguish European territories' relative positions and paths with respect todevelopment trap risks, and to integrate in the EU Cohesion Policy reflections on the growing number of areas wedged between "rich" (core) and "poor" (peripheral) regions. Nonetheless,to guarantee its effectiveness as a dynamic indicator of regional trajectories, the RDT measureneeds to be sensibly applied and interpreted, taking into account its relationship with major socio-economic and institutional factors underlying regional development in the EU.

The aim of this paper is to provide preliminary answers to the following questions: Based on recent data, what can regions do to overcome or to avoid falling into a development trap? What can cohesion policy do further to support regions trapped or at risk of falling into a development trap? What additional policy mechanisms could be designed as to specifically target helping regions overcome the development trap? By considering some descriptive evidence within the RDT framework, other associated indicators, and regional examples, thepaper provides crucial insights on the use of such concept and measurement in EU policy debates, and sketches some of the revealed opportunities and challenges for the Cohesion Policy of the future.

2   Regional heterogeneity in Europe and the concept of regional development trap (RDT)

Academic and policy literatures have long documented the heterogeneity of European subnational regions with respect to many socio-economic indicators, in terms of both static levels and changes over time (e.g., European Commission 2022; Iammarino, Rodríguez-Pose, and Storper 2019). One reason behind such differences is that, since the early 1990s, many regions – at varying levels of development – have faced long-term economic stagnation, giving rise to a "Europe at different speeds" (Fagerberg and Verspagen 1996; Dunford and Smith 2009; Sassi 2011). Along similar lines, research has highlighted the slow and discontinuous nature of European inter-regional convergence processes (e.g. Martin and Sunley 1998), aligning to findings in studies on convergence clusters (Quah's 1996, 1997). More recently, Storper (2018) discusses growing interregional divergence of economic opportunities and political polarization across Europe, arguing that both agglomeration forces and institutional settings could have cumulative feedbacks. Groups, or 'clubs', of regions have been distinguished on the grounds of their overall wealth: very high-, high-, middle- and low- income (Iammarino et al. 2019). Regions at the top and bottom of the income scale have been, in general, far more dynamic than most regions positioned between these two

extremes; many of those European middle-income regions have experienced lengthy periods of low growth, weak or absent productivity increases, low employment creation or even loss.

In the academic literature development traps are part of the family of concepts that consider the possibilities for lower income economies to "catch-up" to the leaders by virtue of the gradual narrowing of their income and productivity gaps, according to a variety of country-specific trajectories (e.g., Abramovitz 1986; Fagerberg 1994; Fagerberg and Godinho 2006). "Catch-up cycles" and shifts in industrial leadership occur over time and are determined by the inability of the incumbent economies to adjust to shocks and mega-trends, i.e. globalisation processes, technological transitions, social, environmental and institutional transformations worldwide (e.g. Vivarelli 2016; Aghion and Bircan 2017; Lee and Malerba 2017). The concept of "middle-income trap" had, until Diemer et al. (2020, 2022), been applied exclusively at the national level and mostly with reference to emerging countries.

As known from economic geography and innovation literatures, industrial and innovative activities tend to cluster spatially at the sub-national level (e.g., Audretsch and Feldman 1996; Ellison and Glaeser 1997): thus, catch-up cycles can indeed help explain also economic dynamics across regions within advanced economies. The definition of "regional development trap" (RDT) borrows from the theory of middle-income trapped countries, but revise in depth the concept to adapt it to the European circumstances with respect to the following aspects:

- European economies are *largely industrialised* and advanced relative to the world average in terms of most socio-economic indicators.
  - o European regions tend to become trapped at considerably higher GDP per capita levels than those of countries experiencing middle-income traps.
  - o The lack of economic dynamism and stagnation paths in many advanced European regions – i.e. the presence or risk of a development trap – manifest themselves in dimensions other than income: for example, lack of productivity and/or employment growth, and/or decline in innovation capacity, and/or insufficient institutional responsiveness to change.

- European economies show considerable *heterogeneity and idiosyncrasy of development trajectories* at the subnational level. Regional stagnation in Europe does not occur exclusively after a successful transition from low- to middle-income status, but follows various paths:
  - o *From above:* formerly wealthy industrial regions whose economic fragility stems from decline or obsolescence of previously successful manufacturing activities.
  - o *From below:* formerly lagging regions that, after having experienced rapid growth in the past, get stuck at levels of development below the European average.
  - o *In stagnation:* middle-income level regions that have remained so over time and do not grow enough to improve their performance compared to the European average.

- European national and regional economies are *uniquely integrated in a specific multilevel and multidimensional institutional setting*.
  - o In the EU, trapped regions have been caught between national-level policies – often concentrating support towards the wealthiest and most dynamic industries and cities within their countries – and the EU-level Cohesion Policy, aimed at strengthening economic, social, and territorial cohesion in the Union as a whole by investing in the poorest and least developed regions.
  - o Trapped regions have generally not received consistent policy attention because they have not been identified and analysed as such. Many of those areas, with visible long-term economic decay and lack of opportunities, are increasingly regarded as sources of the "geography of discontent" (e.g. Rodríguez-Pose, 2018; Dijkstra, Poelman, and Rodríguez-Pose 2020; McCann 2020).

A "regional development trap" for Europe is thus defined as the *state of a region unable to retain its economic dynamism in terms of income, productivity, and employment, while also underperforming its national and European peers on these same dimensions* (Diemer et al. 2020, 2022). In other words, a region can be identified as being trapped if the prosperity of its residents does not improve relative to its past performance and the prevailing economic conditions in national and European economies. As explained, this concept is applied to regions that fall into this state from different levels of economic wealth relative to the European distribution. The dynamic conceptualisation also extends to the difference between regions that appear to *be in a development trap*, and those at significant near-term *risk of falling into such a trap.*

3 Measuring and identifying regional development traps in the EU27

3.1 The Development Trap (DT1) indicator

The RDT conceptualisation has been derived from different scholarly literatures and developed into measurement with the aim of providing a diagnostic tool to appraise the extent to which a region may be considered trapped or at risk of becoming so. RDT indicators are constructed along a multi-dimensional continuum, consisting of three variables representing main economic dimensions:

- Income: GDP per capita at constant prices.
- Productivity: total gross value added (GVA) per worker at constant prices.
- Employment: employment to population ratio.

Income per capita is included in the indicator as a succinct measure of regional wealth, as is standard in the literature. However, the latter also suggests that a development trap may manifest through channels other than income: thus, employment and productivity variables help to capture the phenomenon in a more nuanced way. Measurement reflects how an EU region performs across the above economic dimensions, relative to the following three benchmarks:

- The region with respect to itself in the past.
- The country the region belongs to.
- The EU average.

The final measure combines the finding into one summary indicator[1] of average risk of being in development traps, which could stem from regional, national, or Europe-wide effects that may interact and mutually reinforce each other.

As an example, Map 3.1 shows the geographical distribution (at the NUTS2 level) of the average risk/likelihood of being in a development trap over the period 2001-2018. The DT1 index measures whether a region's growth – as captured by GDP per capita, productivity and employment – is lower than that of itself, its country, and Europe, during the previous 5 years. DT1 is bounded between 0 and 1, with greater values denoting a greater risk of being trapped in a given year *t* (a region scores 1 for each time the growth is lower; this score

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[1] For the sake of robustness, two similar alternative measures of RDT were constructed (see for details Diemer et al. 2020, 2022): DT1 and DT2. As the former is simpler to construct and interpret, and given the strong correlation between the two indicators, in this paper only DT1 is reported. All data mentioned is from Eurostat and Cambridge Econometrics Regional Database.

between 0 and 9 is then rescaled to 0-1 (Diemer et al., 2020; Dijkstra and Rodriguez-Pose 2023).
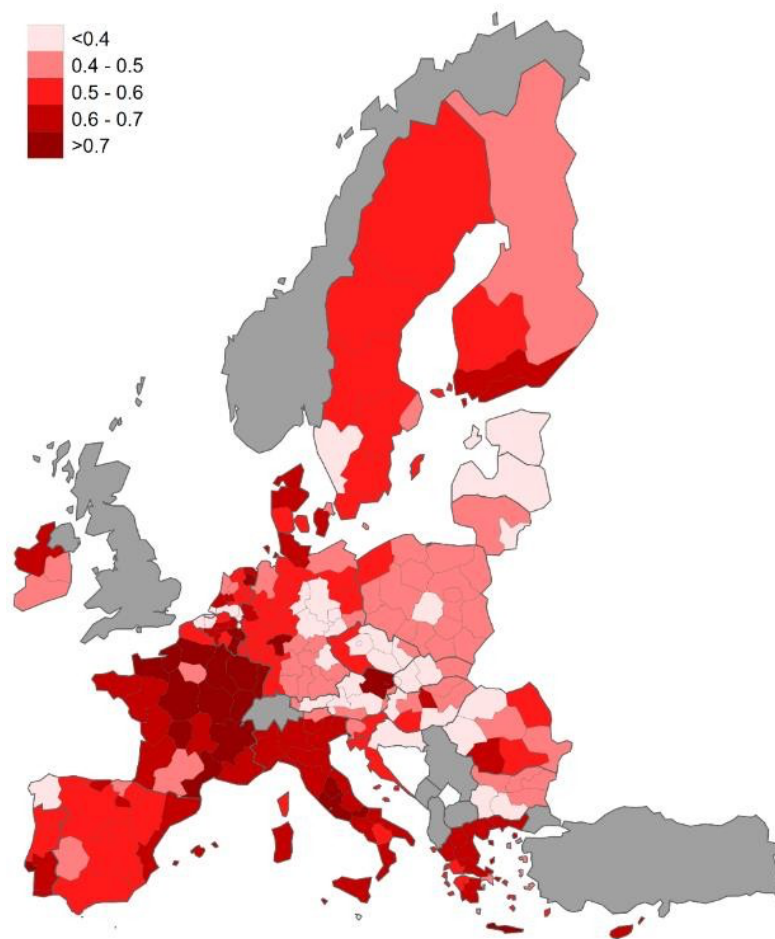
Map 3.1   Likelihood of being in a development trap: DT1 at NUTS2 level, 2001-2018

Considering the 2001-18 average, the likelihood of being in a development trap is greatest (DT1>0.7) in many French regions – Bourgogne, Franche-Comté, Normandie, Picardie, Alsace, Champagne-Ardenne, Lorraine, Limousin, Languedoc-Roussillon and Rhône-Alpes –, in central Italy – Lazio, Umbria and Molise –, in the Área Metropolitana de Lisboa, in the Greek island of Crete and in the Spanish Canarias; in the northern EU, the Belgian Provinces of Liège and Luxembourg, the Drenthe region in the Netherland and the area of Darmstadt in southwest Germany are the only regions identified as trapped in the observed period. To be noted that France and Italy also display the largest number of regions in the group at high risk of becoming trapped (0.6<DT1<0.7), followed by Greece and Spain. By contrast, the risk of being in a development trap has been lowest (DT1<0.4) particularly for regions in Central and Eastern Europe as well as in Germany.

3.2   Main characteristics of trapped regions (or at risk of become so)

For the purpose of policy-oriented analysis, it is paramount to discuss, albeit briefly, the factors that economic theory suggests as associated to the likelihood of a region being/becoming trapped. Diemer et al. (2020; 2022) use pooled OLS and fixed effects regressions to show the correlation of the DT indicators with broad sets of socio-economic-institutional variables, comparing them between regions at risk and those that are not, also

across income categories: consistently with the dynamic conceptualisation, regional characteristics are always considered both in levels and changes.

A few qualitative associations need be emphasised. First, as conceptualised, a development trap trajectory in the EU is not a condition that affects only middle-income places, as regions with higher income per capita tend to exhibit higher levels of risk. Second, in terms of economic structure, the DT1 indicator is consistently and negatively connected with manufacturing, and positively with non-market services. More generally, trapped, or at risk of being trapped, regions display lower shares and low/null growth rates of manufacturing operations (measured in terms of both value added and employment): manufacturing bases are indeed especially high in non-trapped low-income and high-income EU regions, whilst middle-income areas show the lowest. By contrast, trapped or nearly trapped places show higher shares and growth rates of non-market services (mostly public services in the areas of social welfare, health, education and defence), which particularly middle-income regions rely upon. Third, demographical structure is also relevant, as the trap risk is associated with high dependency ratios. Forth, regarding innovation and skills, a strong negative correlation emerges between the share of government sector R&D (GERD) on GDP and the DT indicator, although GERD appears to complement more broadly regional wealth in high-income regions; in contrast, the share of employment in science and technology correlates negatively with development traps only in low-income regions. Lastly, the DT index shows a strong negative relationship with institutional quality, as captured by the European Regional Quality of Government (EQI) index, in high-income and, especially, middle-income regions.

In depth case-studies carried out in Diemer et al. (2020) have added further nuances to the nature of RDT in the EU.[2] Focussing here only on the two middle-income regions' cases– Abruzzo (Italy) and Champagne-Ardenne (France) – and considering that the period of reference for the case-studies was longer (1990 to 2015), both these two regions in the more recent years 2001-2018 in **Error! Reference source not found.** confirm the signs of being trapped (Champagne-Ardenne in the top group of the DT1 indicator above 0.7) or at high risk of becoming trapped (Abruzzo, in the second quintile, DT1>0.6). This is consistent across the four provinces which constitute both regions, although the regional capital of Abruzzo, L'Aquila (NUTS3), displays more dynamism, probably due to the funds for the reconstruction following the devastating earthquake in 2009.

The example of these two regions illustrates the heterogeneity of RDT trajectories in the EU: whilst Abruzzo can be identified as a formerly lagging behind region, achieving middle-income levels 'from below', then slipping back to lower levels, Champagne-Ardenne fits the description of a formerly well-off region that has approached the development trap 'from above' due to persistent stagnation. The two regions show remarkable similarities in their dynamics, in line with the general features highlighted by the quantitative analysis summarised above:

- Slow transition from agriculture and manufacturing – the latter strong in both regions – to high-skilled and high value-added activities, poor development of advanced tertiary activities, especially knowledge-intensive business services (KIBS).
- Demographic trends characterised by ageing population and increasing depopulation.
- Weak, and not improving, innovative capacity and, more generally, lack of a functioning innovation system, with inadequate linkages and networks among the main categories of actors.

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[2] For details and methodology of the four case-studies see Diemer et al. (2020).

- Low tertiary educational attainment (though in the case of Abruzzo more representative of national problems in the education and vocational training system), scarce demand for highly qualified workers from local SMEs, and evidence of persistent local skill mismatch.
- Inadequacy of the regional governance system.

On the other hand, the two regions also show stark differences in their respective trajectories, particularly with respect to the following two broad aspects:

- Economic structure: *Abruzzo* witnessed a strengthening of its manufacturing activities since the 1970s up to 2018, both in terms of value added and employment. The manufacturing base is rather diversified, with strengths in medium- and high- tech sectors such as automotive, ICT, pharmaceuticals, and in traditional sectors such as textiles and apparel and agri-food. Abruzzo also featured a long-term interdependence between international integration through foreign direct investment (FDI) and multinational enterprises (MNEs) since its first phase of industrialisation: even if the region showed a remarkable retention of foreign firms located there in the phase of expansion pre-2000s, its attractive capacity has weakened over time even with respect to the rest of the Italian Mezzogiorno. *Champagne-Ardenne* is considered an old industrial region, with a specialised productive fabric much more oriented towards industry and agriculture than elsewhere in France. The strong specialisation occurs in a few, historically strong, manufacturing sectors, such as metallurgy and textiles and leather, which have experienced sustained decline in the shares of employment over time – some linked to the relocation out of the region by large foreign MNEs, such as the notorious case of Electrolux since the 2000s – mainly compensated by the expansion of non-market services. The agri-food sector – largely dominated by nationally-owned MNEs and by far the most attractive to foreign investors – plays a crucial role in the local economy: winemaking is a fundamental source of regional wealth, owing to a large international demand.
- Institutional quality: *Abruzzo* shares with the rest of Italy a range of complex institutional problems, which limit its economic development potential as well as the quality of societal life: the poor institutional quality as proxied by the EQI remains well below national and EU averages and has been declining since records started. In *Champagne-Ardenne*, instead, the EQI lagged behind both France and Europe until the mid-2000s, but since 2010 the region has been aligning with the national figures and consistently above the EU. Interestingly, the Champagne-Ardenne's case-study stresses the engrained and widespread perception in the region that its prosperous past will return, leading to a certain degree of political and institutional inertia (Diemer et al. 2020, p. 88): the 2016 merger of Champagne-Ardenne with Lorraine and Alsace into a Grand Est region may lead considerable change in the coordination and governance of local strategic resources.

4 Regional development traps: Opportunities and challenges for development policy

4.1 RDT as a diagnostic kit

The RDT analytical framework – reformulated on the European experience as a variety of development blockages – and the DT composite indicator provide an effective operational way to distinguish European territories' relative positions and trajectories with respect to being in/at risk of development traps.

The RDT toolkit conveys a summary performance information and allows the general assessment and ranking of a region relative to itself, others in the country and in the Union, thus also partialling out shocks that affect a particular member state or the whole EU (e.g. changes in national policies, EU enlargements, global shocks such as the 2008 Great Recession, or the more recent Ukraine war). The DT index offers an intuitive dynamic operationalization of the RDT concept, providing a year-by-year tool to assess the degree

and evolution of the risk for a region of being/becoming trapped, undoubtedly more useful than static measures based on snapshots of regional performance over ex-ante defined periods.

For European regions and policy makers adopting the RDT as a diagnostic toolkit, the following advantages can be highlighted:

- *At the EU level:* RDT offers a clear and reliable framework for analysing comparative dynamic trends across EU regions, providing grounds for experimenting new policy schemes on selected trapped, or at high risk to be trapped, regions, thus concentrating efforts and increasing opportunities for sound policy evaluation.
- *At the Member State level*: RDT analysis is useful for national development policies to understand their regions within the national and European dynamic context across flexible time windows, and to identify new forms of support for less dynamic or stagnant regions, beyond their level of income. It should be reminded that a region that performs poorly within a country where the trap occurs on a national-scale is far less likely to be identified as trapped by construction of the DT measure, thus generally suggesting the appropriate geographical scope of the development problem.
- *At the regional level:* the RDT framework is valuable for local and regional governments to identify stagnant areas and industries, to align bottom-up and top- down initiatives, to think about new strategies to re-generate and re-vitalise economic opportunities for the residents of their territories.
- *At all governance levels:* RDT is very helpful to signal priorities in policy debates. It is a powerful practical tool for summarising and communicating to the public complex issues such as a regional likelihood of becoming economically trapped. The DT measure can facilitate public awareness and institutional change by questioning the prevailing dichotomy in regional development policy targets, at last including in the EU policy debate the large number of regions wedged between cores and peripheries.

Nonetheless, to guarantee its effectiveness as a dynamic indicator of regional trajectories, the DT measure needs to be sensibly utilized and interpreted. Caution is always needed to avoid composite indicators being mis-applied and mis-interpreted, thus conducing to misleading policy indications. The following warnings may be highlighted:

- The dynamic nature of the DT index makes it exposed to annual fluctuations. The averages of the measure for the cross-section of European regions over a selected period may hide more recent risks not necessarily reflected in those averages. As said, RDTs may manifest in ways other than through GDP per capita, depending for instance on local industrial structures and institutional features; intensity and dynamics of these effects may differ across period of times in a specific region.
- The sensitivity of the DT index to geographical scales needs consideration as it influences level and direction of regional policy choice: many trapped regions (DT>0.7 in Map 3.1) show remarkable intra-regional differences, with stark territorial polarisation of economic decline, while others in the same group are homogenous in their disappointing dynamics (see also Map 7.1 in the Appendix).
- The DT measure is responsive to the definition of regional income categories: the risk of being trapped is generally greatest for regions with GDP per capita falling between 75 and 100 percent of the EU average although, as indicated earlier, regions display significant variation in their development trajectories, becoming middle-income from above or below. It should be noted that it is extremely difficult to empirically disentangle the status of a region being trapped from simply being closer to a steady state condition. Documenting lower dynamism at high income levels is not necessarily evidence of being trapped, and the DT index tends to overestimate risk for more advanced regions.

4.2 The missing dimensions relevant for policy analysis: a focus on regional global connectivity

The association of the RDT concept and measure with main sets of socio-economic and institutional factors (i.e., economic structure; physical capital and infrastructure; demographics, human capital and labour force; innovation capacity; institutional quality) rests on sound theoretical considerations. On the same basis, Diemer et al. (2020, p. 38) identify an additional group of variables – economic geography, trade and internationalisation: however, persistent lack of data and comparable information at the subnational level makes it very difficult to capture the features and evolution of international integration for EU regions, and to explore the links with development trap risks, although important insights into such a relationship are gathered from both regional case-studies (Diemer et al. 2020, p. 61) and further recent research (e.g. Crescenzi, Pietrobelli and Rabellotti 2014; Crescenzi and Iammarino 2017; Comotti, Crescenzi and Iammarino, 2022; Casadei, Comotti, Crescenzi and Iammarino, 2023; Crescenzi and Harman, 2023).

EU regions have faced unceasing pressures to adjust in response to processes of globalisation of production and innovation and changing patterns of migration and trade. Their competitiveness and dynamism are fundamentally affected by factors such as international outsourcing and offshoring, attractiveness to FDI or foreign talent, degree of internationalisation of domestic firms and actors. Inflows, outflows and networks have been the foundations of the Single European Market in the early 1990s, and have gone through dramatic transformations continentally and globally since then: intra-EU interdependence in continental Global Value Chains (GVCs) has increased over time, with a subnational geography shaped by sectors and business functions/value chain stages (i.e. production, R&D and innovation, HQs, sales, logistic and distribution). The association between the DT indicator and international integration and global connectivity variables is of utmost importance in the analysis of the factors behind regional trajectories of stagnation and decline and the ways to address them.

Looking at one indicator of such connectivity – as proxied by the cumulative value (in million Euros) of inward (IFDI – left) and outward (OFDI – right) greenfield FDI to and from EU27 regions over the period 2003-2017[3] – the simple visualisation of the FDI subnational geography in Map 4.1 suggests an association with the DT1 index reported in Map 3.1.

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[3] Data comes from FT fDiMarkets; details are available from the author and in Comotti et al. (2020). NUTS2 are used for all countries for which data are available. NUTS1 are used for Belgium and Germany.
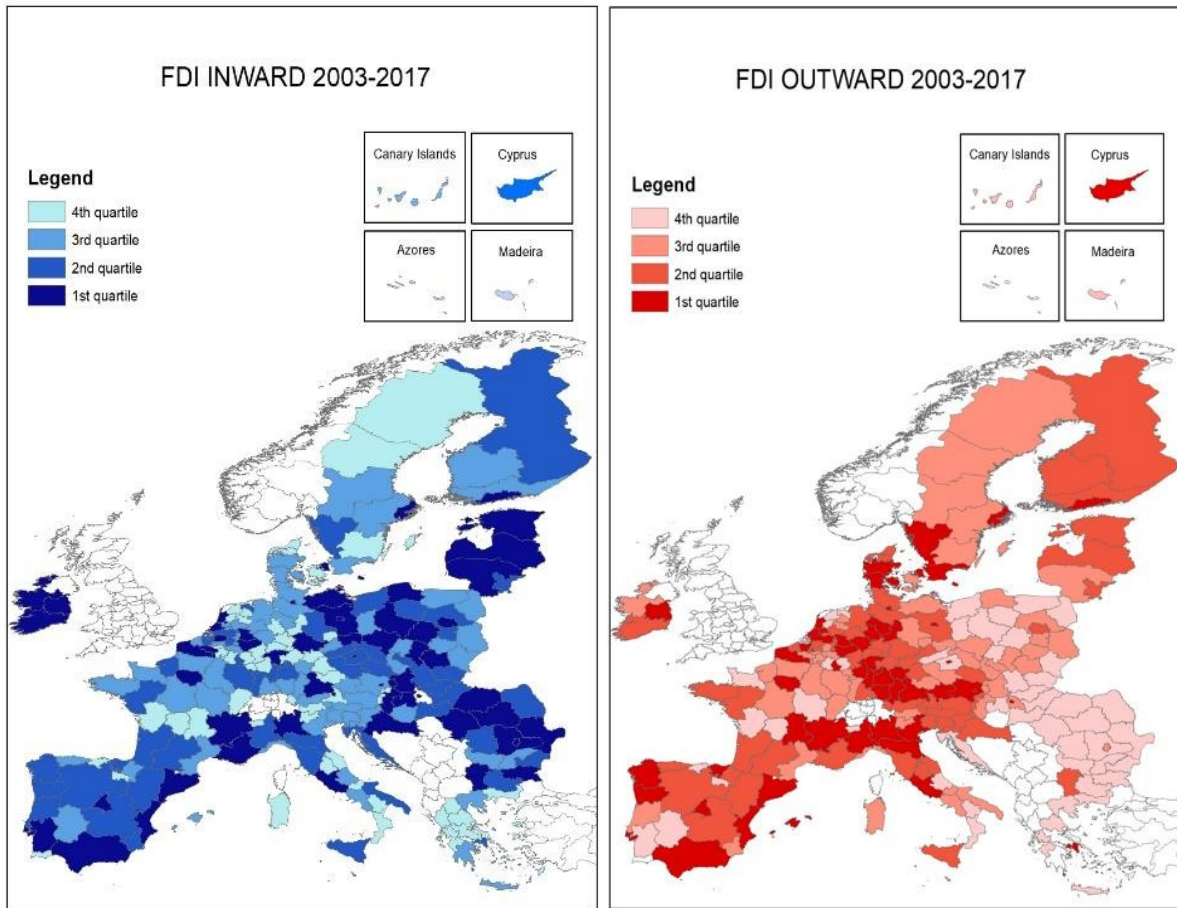
Map 4.1   Inward and Outward FDI: cumulative value (mil. Euros) of FDI to and from EU27 regions, 2003-2017

This is provisionally supported by the Pearson correlation coefficient – calculated separately for the 'old' and 'new' (CEECs) EU members' regions – highlighting a consistently negative and significant relationship between the DT1 indicator 2001-2018 and both IFDI and OFDI (2003- 17, average per capita values in US$): remarkably, correlation coefficients almost double for central and eastern European regions. It is also interesting to note that, amongst the most trapped regions (DT1>0.7), only four regions, all highly urbanised, position themselves in the first quartiles of the inward and outward FDI distributions: Lisboa in Portugal, the Italian Lazio, which hosts the capital Rome, the region of Lyon in the French Rhône-Alpes, and the German city of Darmstadt. These cases indicate the need of a more systematic analysis of idiosyncratic regional evolution: indeed, previous research suggests that EU regions showing a balanced connectivity in terms of inward and outward FDI – and managing in a more effective way the integration between intra- and extra-region networks – are also more resilient to shocks both in terms of GDP and employment (Crescenzi and Iammarino, 2017).

Beyond these basic statistical associations, all in depth regional case-studies reported in Diemer et al. (2020) emphasized the strong influence of interregional and international participation in GVCs and the crucial role played by MNEs for local economic and technological dynamism. The two middle-income regional examples mentioned in section 3 above reveal that foreign MNEs were behind the strong growth phase of Abruzzo in the 1980s and early 1990s; both foreign- and nationally-owned MNEs dominate some of the domains of specialisation in current Abruzzo's smart specialization strategies (S3), such as Automotive/Mechatronics, Life Sciences and ICT/Space. Overall, however, both regional FDI

attractiveness and integration in GVCs remain relatively weak, becoming weaker in more recent years. On the other hand, Electrolux's subsequent relocations from Champagne-Ardenne to Poland (four production sites, in Żarów, Oława, Świdnica and Siewierzin) in the early 2000s and 2010s, have been behind the sharp decline of the medium-technology metal working sector in the region. At the same time, FDI inflows have been among the lowest across all French regions in the 2003-2018 period. Both regions display situations in which the possibility of benign externalities and spillover effects from both nationally- and foreign-owned MNEs has been severely curtailed.

Finally, the RDT conceptual and empirical dynamic nature may offer additional applications to take into account, more broadly, other types of interregional/international inflows and outflows, such as those of human capital and skills. For instance, as reported in Map 7.2 in the Appendix, a regional "talent development trap" has been used to define those regions experiencing rapid working age population decline in combination with low and stagnating tertiary education attainments, as well as regions at risk of falling into such a trap identified as undergoing significant outflows of young people (EC, 2023).

5   Conclusions and main policy implications

Many rural and old industrial regions, at different income levels and predominantly in Western Europe, have since the early 1990s endured long periods of entrapment or are at significant risk of entering development traps. Many trapped areas had not fully recovered from the Great Recession shock in the early 2010s, when additional shocks from global political-economy instability, COVID pandemic, Russia-Ukraine conflict, etc., hit them again. Many were already undergoing slow loss of population and human capital, and others suffered from absence of long-term vision on the basis of diffused perceptions inherited from a now-irrelevant past.

As said, this is not just an economic matter: remaining for long in a development trap is brewing the geography of discontent (Dijkstra et al. 2020; McCann 2020). Subpar economic performances, lack of employment opportunities, and loss of population and competitiveness are causing social and political resentment (Rodríguez-Pose 2018; McCann and Ortega-Argilés 2021). Thus, what can regions do to overcome or to avoid falling into a development trap? What can Cohesion Policy do further to support regions trapped or at risk of falling into a development trap? What additional policy mechanisms could be designed as to specifically target helping regions overcome the development trap?

The relevance of the RDT framework for decision-makers and planners at all levels of governance is summarised below, with the main goal of raising awareness of the regional development trap issue, and designing policies specifically targeted at helping regions overcome entrapment:

- *Increasing the awareness of regional development traps.* What regions can do to move in the direction of overcoming, or avoiding falling into a development trap is, first of all, to be conscious of such a condition/risk. To support regions trapped or at risk of becoming trapped, the first step for Cohesion Policy is to identify their relative trajectories over shorter and longer terms within the EU. The problems linked to economically trapped regions have mostly been neglected by decision-makers: considerable attention has been devoted to the least advanced regions, whilst national policies have mostly focused on reinforcing the winners, the largest and most economically dynamic urban agglomerations. Caught between these two policy strategies, trapped regions have so far struggled to attract interest, becoming the so- called 'places that don't matter' (Rodríguez-Pose, 2018).

The challenge for policymakers – and particularly for Cohesion Policy – is to add them to their portfolio of concerns, striking a balance between sustaining the economic engine of booming urban agglomerations, while at the same time attending to regions in development traps or at risk of falling into them, in the many and varied circumstances in which these exist in Europe.

- *Designing place-based policies for regional re-generation and re-vitalisation.* Because regional development traps can arise in Europe at different levels of income, they demand attention not just ex post, but also in a forward-looking mode, aiming to prevent risks of entrapment. Additional and experimental policy mechanisms could be thought to specifically target such regions: the heterogeneity of stagnation trajectories calls for tailored place-based strategies aimed at revitalising and regenerating simultaneously economic and social fabrics. Extracting value from territorial capital, adopting conservation strategies of natural, cultural and artistic heritages, leveraging of technological shifts (i.e., green energy and digital transitions) to link new forms of tourism and certified and branded agricultural activities – as seen in both Abruzzo and Champagne-Ardenne case-studies – may be essential complements to strengthening regional S&T systems and FDI attraction for integrating resilient sectors in continental GVCs (see also Serger, Soete, and Stierna 2023). The intersection between regional economic and innovation structures, education and institutions is likely to be a critical policy triad. Safeguarding manufacturing jobs per se is likely neither an effective nor a sustainable approach, especially if it is in sectors that struggle to remain competitive internationally or are not inserted in interdependent GVCs. On the other hand, reconciling firms' cross-regional and trans-national organisational networks with space-specific assets and institutional structures – i.e., the 'strategic coupling' process driving regional economic development in the global economy (Yeung, 2021) – is a task that requires effective multi-level governance and strong coordination of top-down and bottom-up approaches. Thus, educational systems able to produce new skills and competences are needed not only as STEM fields and R&D-intensive activities are concerned, but also – and possibly predominantly in trapped regions – in upgrading both KIBS and public services quality, advancing coordination, planning and organisational capacity, and ultimately accelerating institutional change.

- *Harnessing 'global connectivity' for regional development.* The growing division of labour within GVC different segments of production processes tend to be associated with increasingly diverse shares of value added, skills and employment. The long-term processes of specialisation and diversification able to reconfigure regional competitive advantages over time adapting them to technological shifts, are shaped by the region participation in the global, and continental, division of labour (Crescenzi and Harman 2023). Re-vitalisation critically entails the establishment of intra- and extra-regional connections – through capital and labour flows – to provide new opportunities to the local residents. The relevance of the nexus sector-function-region in GVCs shows that understanding the detailed structure and evolution of GVC and FDI networks, and identifying the potential for integration of cities and regions, must become a central reflection of future public policies. A holistic policy approach to regional economic development with respect to global connectivity is still missing. Governance and policy design for European value chains need necessarily coordination at the EU level: GVCs and networks are international, within and outside the EU, and interregional within Europe and its members, and only a systematic and comprehensive observation of such interdepended networks can grasp their territorial implications. Other mega- trends crucially intersect with European GVCs: both green energy and digital transitions – as general-purpose technologies of the future – will open windows of opportunities for territorial re-generation.

Regional economic development strategies need to address the 'global connectivity issue' as it can act as a new form of peripherality, persistently curbing the development prospects of a growing number of EU regions.

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7   Appendix
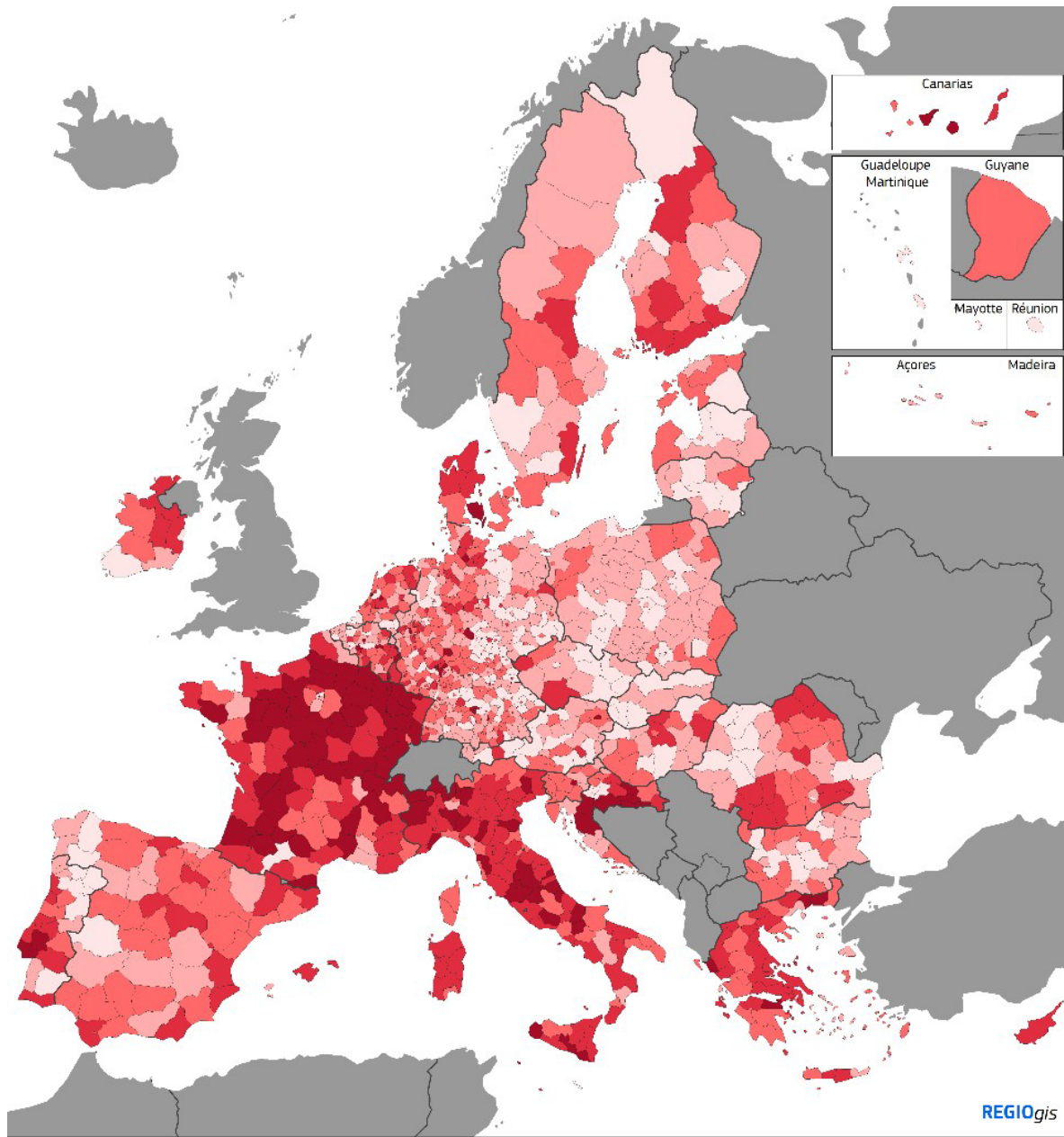
Development trap index 1 at NUTS-3 level, 2001-2018

Likelihood of being in a development trap

- <0.4
- 0.4-0.5
- 0.5-0.6
- 0.6 - 0.7
- >0.7

This index measures if a region's growth is lower than that of the EU, of its country or of the same region during the previous five years.
It considers GDP per head, productivity and employment per head growth over a five year period. A region scores 1 for each time its growth is lower. This score between 0 and 9 is then rescaled to 0-1.
Source: DG REGIO calculations based on JRC and Eurostat data

0   500 km

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Map 7.1   Likelihood of being in a development trap: DT1 at NUTS3 level, 2001-2018

Source: Dijkstra and Rodriguez-Pose (2023)
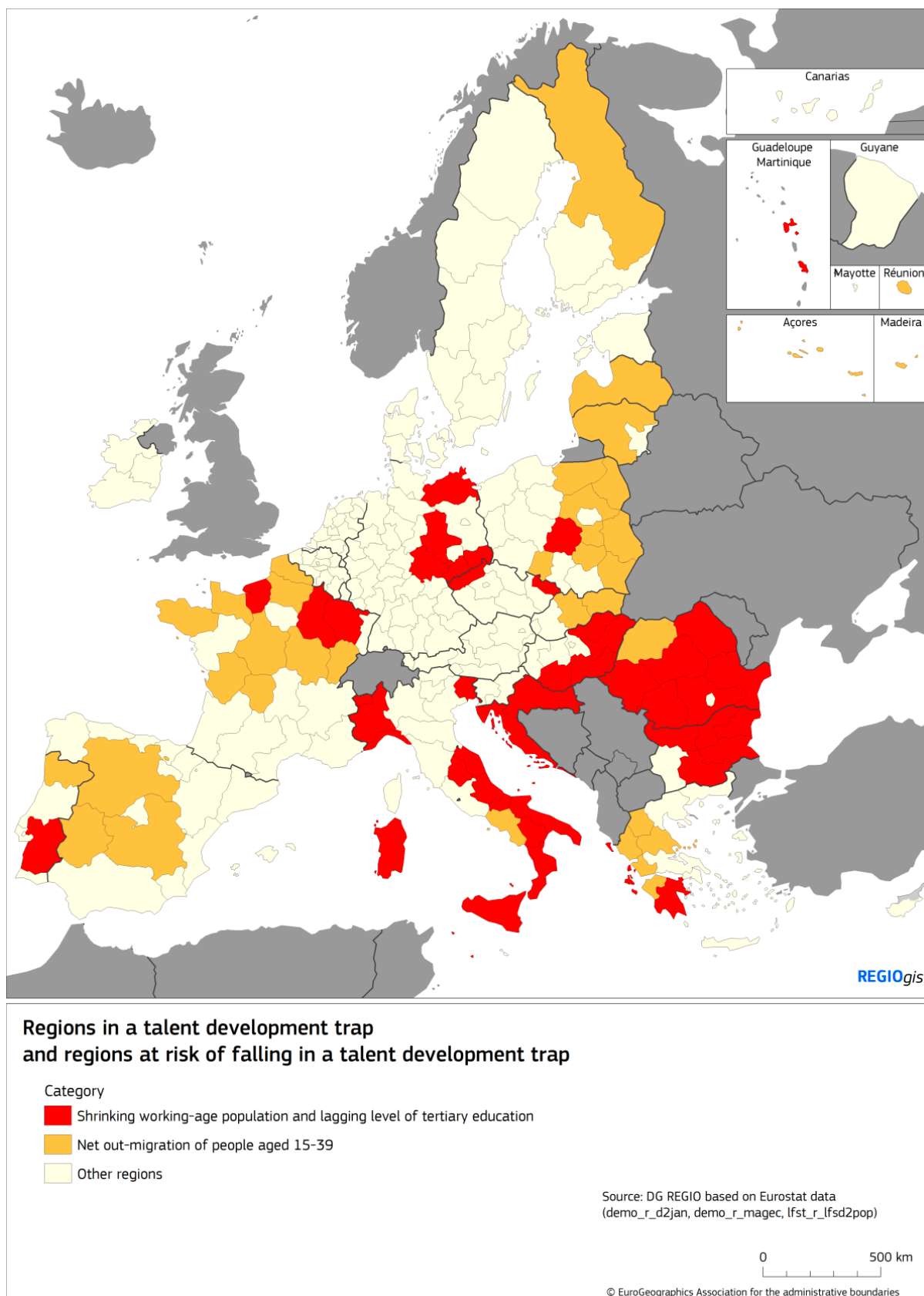
Map 7.2   Regions in (or at risk of) a talent development trap: NUTS2 level, 2015-2020