

PLACE-BASED POLICY RESPONSES TO SPATIAL INEQUALITIES

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Abstract

This paper aims to contribute a review of the recent literature on spatial inequalities at subnational level, building on the main foundations of regional studies and specific preoccupations with this subject. The overview of the literature has sought to derive key trends and to identify current knowledge frontiers and debates. It has been deployed on a comprehensive and systematic research of the relevant sources of the past decades and has been structured into three main parts, namely: (1) basic contributions and recent and state-of-the-art literature, (2) current debates, open issues or questions and (3) policy implications. The undertaken inquiries point to a variety of approaches, from those which bring into the spotlight the ‘left-behind places’, the ‘places that don’t matter’ (and their revenge), the ‘geography of discontent’, etc. to those proposing an entire typology for the lagging regions, revealing the interest of both academic community and policy-makers in this subject. The policies gravitate around place-based solutions, which, without neglecting the strongest European regions, aim to support the weaker regions as well. They go beyond simple compensatory measures, concentrating on the turning to good account of the untapped potential of the left-behind places. Moreover, building on the up-to-date findings and useful lessons, the current orientations regarding the future of the Cohesion Policy and the European growth model point to the need of a deeper integration of place-based and people-based approaches, in accordance with the spatial justice desideratum, as well as to the ambition “to bring EU closer to citizens and to leave no one behind” (European Commission, 2023, p.5), in the complex context generated by the ongoing transitions – energy, digital, industrial ones – and COVID-19 recovery.

Keywords: spatial inequalities, European Union, spatial justice, place-based solutions, people-based approaches

JEL classification: R10, R11, R28, R58,

1. Introduction

This paper aims at a critical review of the recent literature on spatial inequalities in Europe in the era of global mega-trends. The overview of the literature is seeking to derive key trends and to identify current knowledge frontiers and debates. The critical analysis is deployed on a comprehensive and systematic review of the relevant literature of the past decades. This review of relevant sources also captures pending or open research questions and, more importantly, policy dilemmas. For the latter dimension, the review of academic literature is triangulated with key publications from international organisations that have covered the key topics under investigation in the field of spatial inequalities (e.g. European Parliament, European Commission, World Bank, OECD, etc.). Finally, it is important to note that this paper focuses on the subnational inequalities dimension. In the following paragraphs the area of study and the main concepts attached to the topic of spatial inequalities are defined and described.

According to Kanbur and Venables (2005), spatial inequality is defined as “inequality in economic and social indicators of wellbeing across geographical units within a country”. It is of a major concern for the policy-makers considering that it is a “component of overall national inequality across individuals” and, besides, it requires attention “in and of itself,

especially when the geographical regions align with political, ethnic, language or religious divisions” (p.1).

In the last decades, spatial inequalities have been characterised in reference to disparities and uneven distribution of resources, opportunities, and outcomes across geographical spaces or regions, with a special focus on the links between spatial inequalities and developmental outcomes. Thus, these inequalities can manifest in various aspects, including economic (e.g. income, wealth, employment opportunities, and economic growth across different geographic areas, infrastructure) and social or institutional ones (e.g. access to social services, such as healthcare, education, housing, and public amenities) (Storper, 2018; Rodriguez-Pose, 2018; Neumark and Simpson, 2018; Iammarino et al., 2019; Dijkstra et al., 2020). Increasingly, more attention is also devoted to spatial inequalities that manifest as environmental inequalities (e.g. pollution, lack of green spaces, vulnerability to natural disasters) (e.g. Adebowale, 2008; Pellow and Brulle, 2015; European Environment Agency, 2019). In general terms, the studies devoted to the “geography of inequalities” can be grouped into two categories, namely those dealing with the understanding of the spatial patterns of inequalities and those which concentrate on the effects of spatial inequalities (van Ham et al., 2022).

Spatial inequalities have an intrinsic local territorial dimension, addressed in the last decades in relation to territorial identity (Capello, 2018), territorial capital (Camagni, 2007; Camagni, 2008), etc. As such, when we look at spatial inequalities, we very often end up looking at subnational inequalities. While inequalities between countries can have a spatial dimension, the diversity and heterogeneity within countries makes spatial inequalities often confined to smaller territorial units than national ones. As a consequence, spatial inequalities are usually reflected in regional or urban studies. Both fields contribute to our understanding of spatial phenomena, but they differ in terms of scale and scope of analysis. This paper selects some of the key recent debates in the corresponding literature, in order to focus narrowly on the studies specialised in the issue of inequalities. However, most of the studies that cover regional and urban dimensions inevitably reflect upon certain forms of inequality, even if they do not focus their research questions and research methodology on them.

Going further, in a distinct register we can find the concept of spatial justice. While spatial inequalities focus on the existing disparities across different spatial units, spatial justice is concerned with addressing these disparities and promoting fairness and equity in spatial distribution. The concept of spatial justice challenges the notion that access to resources and opportunities is evenly distributed, and instead focuses on how factors such as location, place, and space influence social and economic outcomes. It will be given a broader space in the next section.

Merging the preoccupation with concepts of spatial inequalities and social justice, recent years have also increasingly reflected on a new concept that showcases subnational inequalities (either regional or urban): just transition. The concept of just transition emerged from the recognition that the shift towards sustainability should not leave certain groups or regions behind or exacerbate existing inequalities (e.g. Sovacool et al., 2018; Jänicke, 2018; Green and Gambhir, 2020). It emphasizes the need to consider the impacts of environmental policies and transitions on workers, communities, and vulnerable groups, and to develop strategies that address their concerns and ensure they are not disproportionately burdened.

Similarly, economic transformations have generated preoccupation with another subfield of regional inequalities: left-behind places or geographies of discontent. The concept of left-behind places is often used in discussions around regional disparities, spatial inequalities, and social exclusion (e.g. Rodríguez-Pose, 2018; Pike et al., 2007). These areas may have experienced the negative impacts of globalization, deindustrialization, or shifts in economic structure that have disproportionately affected certain regions. Essentially, this concept refers to regions or communities that have been neglected or marginalized in terms of economic development, social opportunities, or public investments.

As a result of these key issues reflected in the recent literature on spatial inequalities, a response has emerged in the form of place-based economic policy. While primarily driven by international organisations and national governments, place-based policies are equally reflected in the academic literature (e.g. Neumark and Simpson, 2018; Barca et al., 2012; Austin et al., 2018; Busso et al., 2013; Kline and Moretti, 2014). Essentially, place-based policies aim to approach spatial disparities by addressing specific local characteristics of

places—be they regions or cities, and foster positive change and improve the quality of life for the people living in those areas (i.e. “place-aware” interventions). Moreover, many studies go further and suggest an integration of the place-based and people-based approaches (e.g. Barca et al., 2012) as well as policies connecting people with places (van Ham et al., 2022). They can be also interpreted as a reaction to the criticism of the previous assessment of EU Cohesion policy on the basis of convergence criteria alone, unable to capture the socio-economic objectives and to strengthen the institutional and learning behaviour (Rodríguez-Pose and Fratesi, 2004; Barca, 2009; Barca et al., 2012).

2. Basic contributions and recent and state-of-the-art literature

Aiming to produce a well-founded report, we have used an automatic bibliographic search engine (i.e. Publish or Perish) and have extracted from the Google Scholar database the 1,000 bibliographic references that were the most relevant to the search terms ‘spatial inequality’, ‘regional inequalities’, etc. between 2015 and 2023. Out of the total list, we have selected a subsample of 118 articles and books based on a qualitative triage on topical relevance, methodology, and quotations. After a careful consideration, we have retained a list of papers showcasing three categories of studies for our ongoing ESSPIN project bibliographic record, namely: spatial inequalities theory and datasets; inequality and market interventions; current challenges and inequalities (i.e. technology, green transition, COVID). In addition, several other papers have been explored for a deeper approach of these issues. We have reviewed the academic literature with an interest to discern the main theories, trends, measures, drivers and limitations pertaining to subnational inequalities in the past two decades. Further on, relevant comments have been added in relation to the research findings of previous Horizon 2020 projects (e.g. RELOCAL, IMAJINE), which addressed regional inequalities from perspectives complementary to ESSPIN. We develop in the following paragraphs an account on these recent contributions and their key ideas.

Contrary to mainstream economists who prioritize growth over distribution, disregarding the consequences of concentrated wealth in the hands of a few, Savage (2021) highlights the detrimental effects of severe economic inequalities. These inequalities amplify social, cultural, and political conflicts and undermine the foundations of liberal democracy, reintroducing burdens from the past. Savage's argument is closely related to Piketty and Saez's (2003) U-shaped curve, which demonstrates that income inequalities have returned to levels seen a century ago after a period of improvement. While the U-curve refers specifically to the US, Savage discusses the general case and argues that it may also be applied to other contexts.

In another register, McCann (2020) examines the concept of the ‘geography of discontent’ by investigating perceptions of regional inequalities and exploring whether the UK and other countries exhibit high or average levels of interregional inequality. The study considers 28 different indicators across 30 OECD countries and examines various measures of prosperity and inequality to understand interregional inequality. GDP per capita and Gross Value Added (GVA) per worker are used to measure regional inequalities at different territorial levels. The analysis also incorporates Regional Disposable Income (RDI), which captures wage/salary income at the residence location. The study compares the UK's performance in these measures with other countries and demonstrates the UK's interregional inequality in terms of GDP per capita, GVA per worker, and RDI. The research reveals that major differences in local productivity contribute to the ‘geography of discontent’, posing challenges to a country's institutional and governance structures. Intra-regional and intra-urban inequalities are also highlighted, emphasizing the interconnection between different dimensions of inequality.

The first exercise employed GDP per capita and measured regional inequalities at TL2 and TL3 (TL = Territorial Level according to OECD classification (see OECD, 2022)) in five different ways, namely (McCann, 2020):

1. GDP per capita of the highest region divided by the GDP per capita in the lowest region.
2. The absolute difference of the GDP per capita of the highest and lowest regions divided by the average GDP per capita for the whole country.

3. The GDP per capita of the 10% highest regions divided by the GDP per capita of the 10% lowest regions.

4. The GDP per capita of the 20% highest regions divided by the GDP per capita of the 20% lowest regions.

5. The Gini coefficient of inequality across all regions.

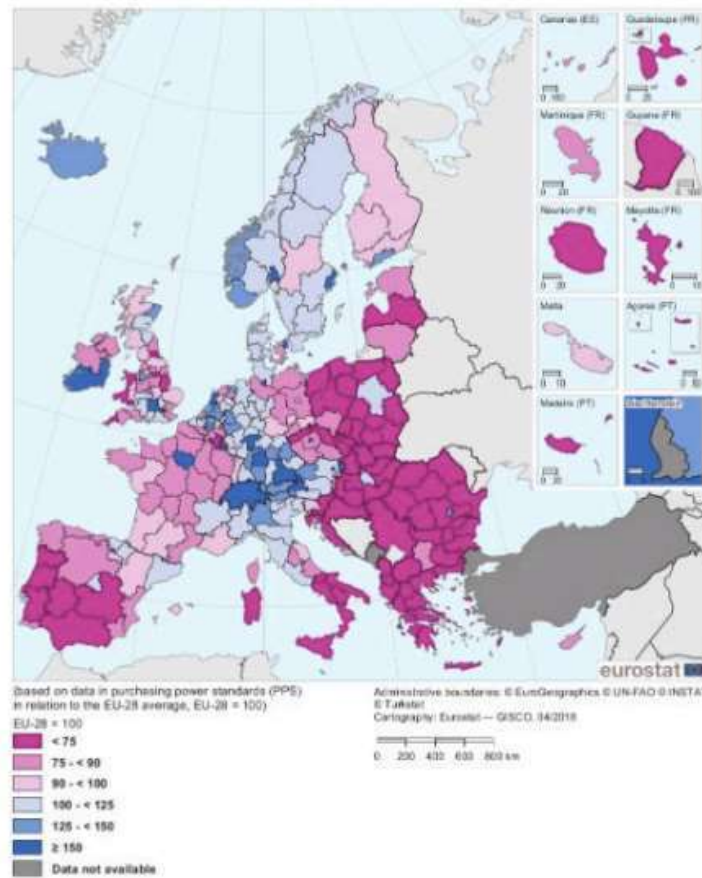
The same exercise was applied for GVA (Gross Value Added) per worker, as McCann, like Krugman (1994), embraces the idea that “The patterns of regional productivity underpin national productivity and the links between people’s lived experiences and political responses depend crucially on local productivity as the key driver of local prosperity” (McCann, 2020, p.257). These calculations have been also made by means of Regional Disposable Income (RDI), considering the supplementary information it can bring about, since it measures the people’s wage/salary income at the residence location, unlike the workplace location as in the case of GDP and GVA. Finally, this analysis was replicated for the Eurostat’s NUTS-2 and NUTS-3 regions. The results have indicated that, in terms of the highest and lowest GDP per capita NUTS-2 regions, ranks behind Ireland, Germany, Italy, Slovakia and Hungary, on the 6th place, out of 22 countries. The same situation is recorded for the NUTS-3 level. When the GDP per capita ratio between the highest 10% and the lowest 10% NUTS-2 regions is considered, UK displays higher values than all Western European countries except Ireland, whereas Hungary and Slovakia have higher ratios than the UK. Broadly, this pattern is similar to the GVA per worker at TL2 level, while at TL3 the UK appears as the second most inter-regionally unequal economy, only the small former communist countries being more unequal than the UK. For the same ratio, in terms of RDI at TL2 level the UK ranks 4th – the same like in the case of the ratio between the highest and lowest 20% regions, with only Slovakia, Italy and Spain being more unequal.

An alternative spatial approach aiming to measure subnational inequalities has been proposed by Smith and Rey (2018), who applied a spatial decomposition of the Gini coefficient for 93 countries so as to obtain cross-sectional variation. The results showed “improvement, decline and persistent clustering of subnational level inequality” (p. O657) and are considered useful in terms of measuring the Sustainable Development Goals of the United Nations as well.

In the EU-centred evaluations, the S80/20 ratio and Gini coefficient are employed. The S80/20 ratio is used for the measurement of inequalities reflected by the social scoreboard which accompanies the European Pillar of Social Rights, while the Gini coefficient is a measure of income inequality applied at larger international scale. Going deeper, even if the EU Cohesion Policy envisages a comprehensive approach, which incorporates economic, social and territorial cohesion, the reduction of territorial inequalities has mainly focused on the convergence of regional levels of GDP per capita in relation to the EU average. Figure 1 reflects the situation in 2016, a highly relevant year considering that it is both the final year for the implementation of the 2007-2013 Cohesion Policy and the final year of the 2007-2016 period, which witnessed the financial and economic crisis in Europe (EPRS, 2019).

Usually, in terms of convergence among the EU regions, two processes are explored, namely beta- and sigma convergence. Beta-convergence reflects the catching-up process, i.e. lagging behind regions grow faster than the developed ones, whereas sigma-convergence mirrors the decrease in the disparities between regions over time. It is considered that the latter is “more revealing in terms of describing the distribution of income across economies” (EPRS, 2019, p. 4). As summarised by Goschin (2017) “...sigma and beta convergence are interrelated. Sigma convergence implies beta convergence, but the reverse does not necessarily hold, as beta convergence, although required, it is insufficient to produce sigma convergence (Bongardt et al., 2013). This is because beta convergence may occur without reducing the GDP dispersion (Wodon and Yitzhaki, 2005). It happens when economic shocks, affecting stronger certain regions, maintain or increase the initial dispersion (Barro and Sala-i-Martin, 1995)” (p.131).

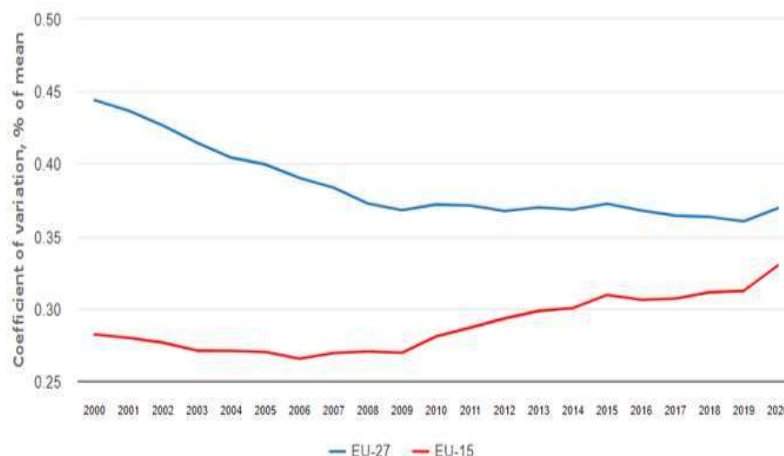
Figure 1: GDP per capita (PPS) relative to the EU average, 2016



Source: Eurostat (2019)

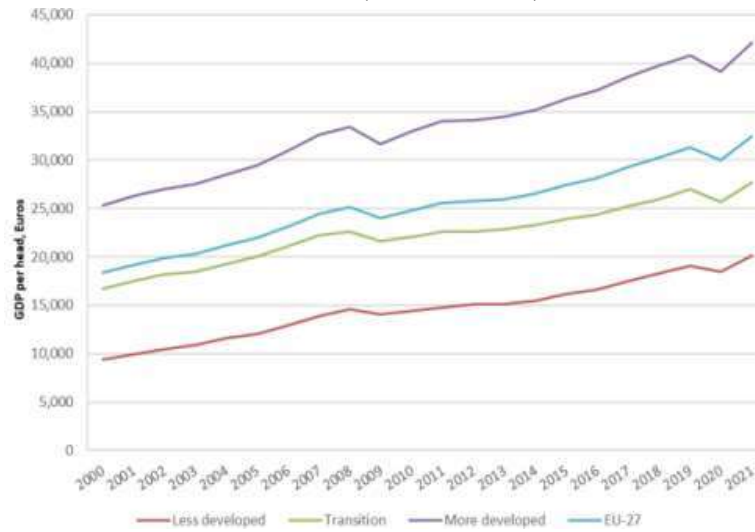
In empirical analysis terms, a noteworthy remark has been made by Monfort (2020), who pointed out that, even if before the economic and financial crisis the EU used to be named “the convergence machine” (p.1), the impact of the crisis was so strong that, despite a sustained recovery, the convergence within the EU stopped and since 2008 the disparities are more or less stable. Moreover, within many Member States, disparities are increasing. This conclusion is supported by the Figures 2, 3 and 4 for the EU as a whole, while Figure 5 presents the situation of regional disparities for several countries in 2021 compared to 2019 (the year before the covid-19 crisis started). It can be noticed that, whereas in several countries the regional disparities slightly decreased at the EU level the coefficient of variation by NUTS 2 region increased.

Figure 2: Regional disparities (NUTS2) in terms of GDP per capita (PPS), 2000-2020



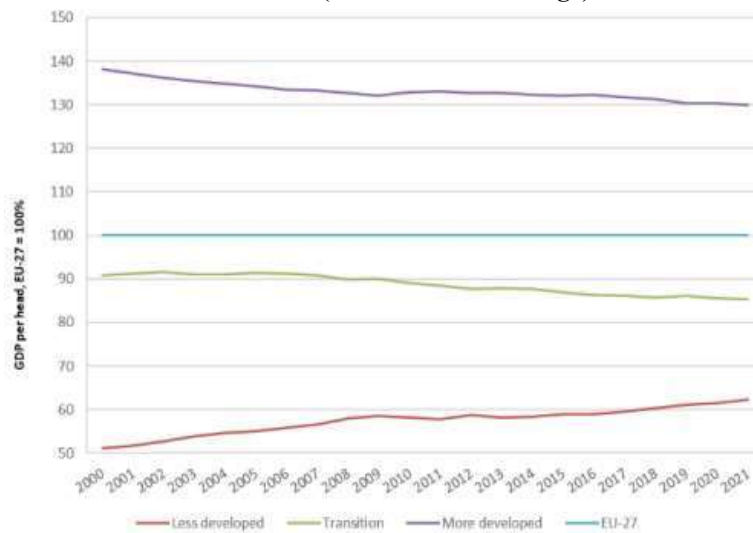
Source: Monfort (2020), based on Eurostat and REGIO calculations

Figure 3: GDP per capita (PPS) in less developed, transition and more developed NUTS regions, 2000-2021 (absolute terms)



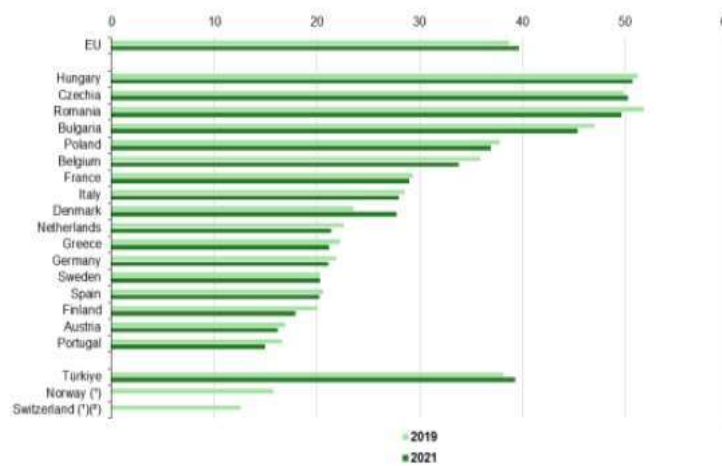
Source: European Commission (2023), based on Eurostat and REGIO calculations

Figure 4: GDP per capita (PPS) in less developed, transition and more developed NUTS regions, 2000-2021 (relative to EU average)



Source: European Commission (2023), based on Eurostat and REGIO calculations

Figure 5: Regional inequalities in GDP per capita, 2019 and 2021 (coefficient of variation (%) by NUTS region)

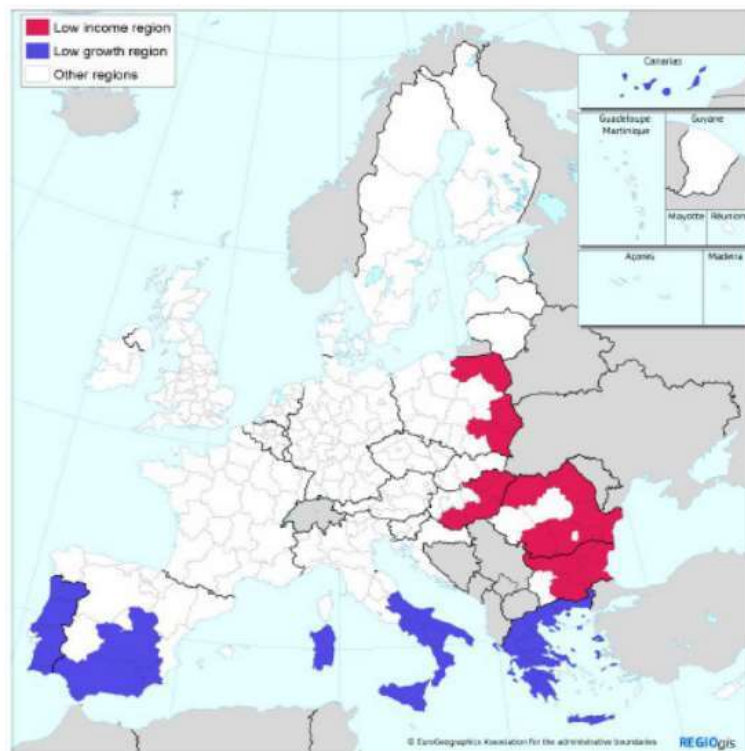


Note: as measured by the coefficient of variation for EU Member States with more than four NUTS 2 regions (Estonia, Ireland, Croatia, Cyprus, Latvia, Lithuania, Luxembourg, Malta, Slovenia and Slovakia: not available).
 (*) 2021: not available
 (**) 2018 instead of 2019
 Source: Eurostat (online data code: nama_10r_2gdp)

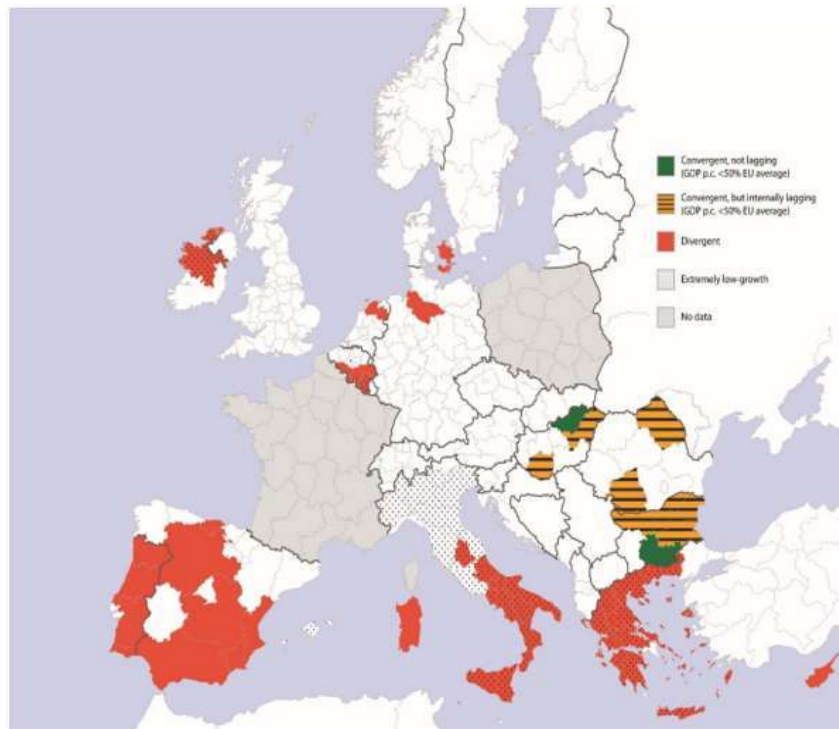
When it comes to the EU new member states, Artelaris et al. (2010) applied non-linear econometric models transcending “the ‘all or nothing’ logic behind conventional convergence analysis”, which indicated the existence of regional convergence clubs in many of these countries. The identification of such clubs pointed out “the heterogenous impact of the EU economic integration process” (p. 113).

In the given context, a particular emphasis has been placed on the EU’s lagging regions, especially the most left behind regions – targeted by the Lagging Regions Initiative (2015), followed by the Catching-Up Regions Initiative (2018) (European Parliament, 2020). Thus, initially the left behind regions were divided into two types, namely low-income regions, with a GDP per head less than 50% of the EU average (most of them being found in Poland, Hungary, Romania and Bulgaria) and low-growth regions, with a GDP per head less than 90% of the EU average (most of them located in Portugal, Spain, Italy and Greece) (Figure 6). Further on, a new typology for lagging regions has been proposed, comprising internally lagging regions (they converge to the EU GDP per head average but diverge from the national average), divergent regions (poorer regions that do not converge to the EU average) and extremely low-growth regions (which experience growth rates lower than half of the EU average growth since 2000) (Figure 7).

Figure 6: The EU’s lagging regions – Lagging Regions Initiative



Source: European Parliament (2020), based on Eurostat (2017)

Figure 7: Revised lagging regions typology

Source: European Parliament (2020), based on Eurostat (2017)

Moreover, apart from the convergence-based perspective, multi-dimensional approaches to inequalities are more and more envisaged so as to capture the variety of their underlying factors and to propose adequate solutions. Thus, reacting to the “Beyond GDP debate”, multiple aspects of inequalities within the EU are revealed by Social Progress Index (which focuses on basic human needs, foundations of wellbeing, opportunity), Regional Competitiveness Index (which concentrates on ('Institutions', 'Macroeconomic stability', 'Infrastructures', 'Health', 'Basic education', 'Higher education, training and lifelong learning', 'Labour-market efficiency', 'Market size', 'Technological readiness', 'Business sophistication' and 'innovation') and EU Quality of Government Index (which captures average citizens' perceptions and experiences with corruption, quality and impartiality of three essential public services – health, education and policing - in their region of residence) (EPRS, 2019).

As a result, in terms of policy responses, more emphasis is required on turning to good account the diversity of places, solidarity, inclusion and public service provision, subsidiarity, interplay between territorial and sectoral policies, etc. (TA2030, 2020), aiming at “a renewed cohesion understanding and an active implementation of it” (Böhme and Redlich, 2023, p. 729).

The facts revealed by the empirical analyses are relevant for explaining and understanding the ‘geography of discontent’. One of its primary sources consists in the major differences in local productivity, which also represent “a challenge to country’s institutional and governance structures” (McCann, 2020, p.264). It has been demonstrated that countries with decentralised governance systems display “more interregionally equal growth patterns (...), less dominance by an individual city-region (...) and no effect on national growth (...)”, the huge imbalances recorded by the UK being associated with its “over-centralized national governance system” (McCann, 2020, p. 264). It is also underlined that intra-regional and intra-urban inequalities are noticed even in the countries with low inter-regional inequalities, but higher inter-regional inequalities are associated with higher interpersonal inequalities at the national scale, so that “these two dimensions of inequality cannot be separated” (McCann, 2020, p. 257). Moreover, “most people’s perceptions of their prosperity and quality of life depends crucially not only on the productivity of the region in which they live and work but also on their awareness of the experiences of other regions” (McCann, 2020, p.257), which is influenced by both social media and – very important – by personal experience, which is strengthened by geographical proximity. In addition, the research undertaken by Lenzi and Perruca (2021) reveal that

“intraregional inequalities do matter for individual discontent, and individual socioeconomic disadvantage conditions amplify further this negative effect” (p. 415).

Dijkstra et al. (2020) focus on the ‘geography of discontent’ in relation to growing support for parties opposing EU integration. They highlight the role of geographical factors, particularly in stagnating and low-productivity regions such as rural areas and small to medium-sized cities. These regions face challenges like job losses, declining labour force participation, and lower per capita income compared to the national average. The authors use an econometric model to map the geography of discontent across electoral districts in the EU-28 and identify factors contributing to the rejection of European integration. Low education levels, limited employment opportunities, and historical reliance on manufacturing play significant roles. However, the study also finds that wealthier places tend to be more opposed to European integration once education, employment opportunities, and economic and industrial changes are taken into account. The authors propose addressing these challenges by implementing place-sensitive policies that tap into the economic potential of less-developed regions and provide real opportunities to tackle neglect and decline.

The discontent determined by the feeling of being ‘left behind’ is expressed in the ballot-box, as “the revenge of places that don’t matter”: “The areas left behind, those having witnessed long periods of decline, migration and brain drain, those that have seen better times and remember them with nostalgia, those that have been repeatedly told that the future lays elsewhere, have used the ballot box as their weapon to vent their anger against the establishment” (Rodríguez-Pose, 2018, p.200). Moreover, the long-term nature of the ‘left behind’ places is accompanied by “the interaction of spatial inequality with intergenerational inequality”, many areas remaining deprived across multiple generations (CEPR, 2022, p.1).

In addition, given that economic concentration effects started to be linked to growing urban agglomerations, Rodríguez-Pose (2018) underlies the “persistent poverty, economic decay and lack of opportunities” (p. 189) that encircle rural or less connected areas. As these regions become hotbeds of disenchantment and revolt, studies are further linking the diagnostic of drivers of regional or subnational disparities to place-based economic policies in United States (e.g. MacKinnon et al., 2022; Glaeser and Gottlieb, 2019; Austin et al., 2018), United Kingdom (Martin et al., 2019), or France (Fourquet, 2019).

As suggestions for addressing this so sensitive issue, Dijkstra et al. (2020) consider that “fixing the so-called places that don't matter is possibly one of the best ways to start” (p.751). This points to “policies that go beyond fundamentally targeting, as has often been the case until now, either the more developed and often dynamic large cities or simply the least developed regions” and, at the same time, to policies that go “beyond simple compensatory and/or appeasement measures” (p.751). This implies “tapping into the often overlooked economic potential” of the left behind places and “providing real opportunities to tackle neglect and decline” (p.751). According to Iammarino et al. (2019) ‘place-sensitive policies’ may be the best response to address the problems at the core of the geography of discontent and, at the same time, to cease and revert the ascent of the anti-establishment voting.

Also named ‘place-sensitive distributed development policy’ (Iammarino et al., 2017) this approach does not neglect the strongest European regions but also aims at supporting the weaker ones. It has come as an alternative to the mainstream and heterodox theories, which have not succeeded to explain the existence of the different economic clubs of regions – with their challenges and opportunities - and the weaknesses of processes of convergence among them.

Building on the literature on ‘left-behind places’, Martin (2015) looks at the high reliance of national economies on a few leading cities, implicitly accepting poor territorial distribution of opportunities across the country. Martin (2015) uses the case study of the UK, as he discusses the need for spatial re-balancing of the UK's economy to reduce its dependence on London and the South-East cities. The paper highlights the spatial economic imbalance that persisted for many years and argues that existing theories of regional development and policy, such as spatial economics and regional studies, are insufficient for devising effective policies to address this imbalance. Martin suggests the need for new approaches that go beyond targeting only the most developed or least developed regions and focus on powering up northern cities to achieve spatial re-balancing.

The current debates on the balanced territorial development bring into spotlight the territories and their people – in other words place-based and people-based approaches, offering a solid background for the idea of ‘spatial justice’. Spatial justice, defined as “the fair and equitable distribution in space of socially valued resources and opportunities to use them” (Soja, 2009, p.2) is mostly associated with the research done by Soja (Soja, 2009; Soja, 2010) who has built on the works of predecessors like Davies, 1968; Lefebvre, 1968; Lefebvre, 1972; Harvey, 1973, and others. In other words, spatial justice links social justice to space and the three key dimensions which distinguish it from social justice are “spatiality, which draws attention to spatial aspects of justice; integration of distributive and procedural justice, which goes beyond this controversial dichotomy in social justice; and inclusion, which crosses the boundaries and addresses both inter-regional and intra-regional inequality” (Madanipour et al., 2022, p.307). It opens the door to broader development policies models, with open-ended spatial boundaries (Constantin, 2021), which “respond to the functional needs of places at different territorial scales, not pre-defined on the basis of political or administrative borders” (Mendez, 2011, p. 12). Such models can be considered a response to the criticism of the ‘one-size-fits-all’ policy, which “does serious injustice” to the uneven development of various territories (Birch, 2017, p.129) as well as to the ‘statistical condition’ for territorial justice, which shows that it depends on “the dimensions of needs and provisions that are compared” (Boyne and Powell, 1991, p. 263).

According to IMAJINE (2022), “...there is not one single ideal of ‘spatial justice’ that can provide a normative model for future cohesion policy in Europe. Rather, individual perceptions of spatial justice place differing weight on economic equality, broader social and environmental wellbeing, inter-regional solidarity and redistribution, and territorial autonomy, producing visions of the future that are not always compatible. EU institutions, national governments and civil society need to engage with these contrasting priorities and promote public debate on the form of spatial justice that citizens want to shape Europe’s future” (p.3).

In the last decade the need to move ‘beyond GDP’ has been stressed, requiring to extend the focus in order to include the ‘social dimension of regional disparities’ at the same time with the increase of the geographical granularity, by extending the scope of the databases to NUTS3 level and even lower level, for ‘zooming in’ on territorial specificities (RELOCAL, 2018). In this way, favourable conditions for addressing territorial inequalities through the lens of spatial justice are created.

The studies concentrating on local administrative units (LAU) - LAU1, LAU2 (until 2016, then LAU), and microdata offer a more detailed view on the ‘inside’ of overall regional disparities as well as on certain, well-targeted aspects of these disparities (such as Structural Funds allocation, territorial profile of public expenditures, impact of road investment on accessibility, mobility patterns, etc.), creating the necessary basis for more accurate policy measures, based on integrated approaches (Constantin, 2021). In other words, the diversity of disparity patterns revealed at lower levels of disaggregation lay a more robust foundation for “differentiated decisions regarding the use of the EU structural funding, with direct implications on the results of the financial assistance process” (Constantin, 2021, p.326). Moreover, they can help preventing governments from directing “more resources to relatively better-off and politically dominant regions” and, thus, “reinforcing spatial inequalities” (Abdulai, 2017, p.386). In addition, the heterogeneity of impacts of the EU structural assistance must be also considered. Pappa and Canova (2021) demonstrate that even if all funds contribute to job creation and economic recovery, the European Regional Development Fund has more short-term direct effects, whereas the European Social Fund has more medium- to long-term indirect effects. Moreover, there is significant regional heterogeneity in impacts, driven by location, level of development, EU tenure, and euro area membership.

In line with the orientations of increasing the geographical granularity, the European Commission and the World Bank, in cooperation with the EU member states launched a poverty mapping project which provided a set of high-resolution poverty maps for small geographical areas in the EU countries (at NUTS3 level or lower level) by means of the information provided by national population censuses and household income surveys (World Bank, 2012). It was based on the previous World Bank-funded research undertaken by Elbers et al. (2003), who proposed a set of area homogeneity assumptions necessary for poverty mapping in order to offer adequate estimates for small areas. The better measuring of

territorial inequalities at local level proved to be useful for the targeting of development assistance as well as for decentralisation of spending decisions. At the same time, the local level analyses prove to be very useful when it comes to territories with specific characteristics. In a broader framework, the estimated disaggregated data and those provided by Eurostat have served for multi-scale evaluations of the territorial inequalities, from locality to region and state level, considering their political implications in the discussions on territorial cohesion (IMAJINE, 2017).

As an overarching conclusion with regard to the use of microdata, the lessons learned from poverty mapping in the European Union performed by the World Bank can be mentioned: the regional development agenda is a useful source of primary information for estimating small area poverty; the institutional barriers can be reduced if pre-existing arrangements are involved; project outcomes and sustainability are positively impacted by strategic engagement across institutions and across countries; one size does not fit all cases (Simler, 2016).

Wei (2015) has reviewed the literature on regional inequalities concentrating on the spatiality of economic/income inequalities so as to contribute to a better understanding of their complexity and dynamics. He points to the fact that “existing theories disagree over temporal trends and underlying forces of regional inequality, and spatio-temporal models have been favored by economic geographers” (p.1). Thus, the neoclassical convergence model demonstrates that efficient markets and factor mobility tend to equalize regional differentials. Then, the inverted-U model shows that regional inequalities increase in the early stages of development, decreasing when the economy becomes a mature one. Finally, the divergence and structural models underline as source of divergence the asymmetries in productive performance.

Fanti et al. (2023) have taken an alternative route bringing into discussion the complex system approach and agent-based modelling. Thus, they have evaluated a particular source of divergence, namely “the different (de)regulation level of the labour markets acting as a first order channel fuelling, in turn, the productive performance divergence” (p.409). In the empirical register, focused in regional inequalities in Italy, they highlighted that the concentration of temporary and part-time contracts, the reduction in working hours, and the wage stagnation have been more noticeable in Southern Italian regions, although transformations in labour-market institutions can be observed in the entire Italy.

Starting from the largely acknowledged finding that the debates about urban growth and change are usually centred on specialization, Kemeny and Storper (2015) notice that “arguments linking specialization to metropolitan economic development contain diverse, and sometimes conflicting, claims” (p.1003). They raise and seek answers to the following questions: “Is it better to be highly specialized or diversified? Does specialization refer to the absolute or relative scale of an activity in a region? Does specialization have static or evolutionary effects?” (p. 1003), which are investigated in theoretical and empirical terms. The analysis of local agglomerations over time highlights that “growing absolute specialization is positively linked to wages, while changes in relative concentration are not significantly associated with wage dynamics” (p. 1003).

While, at global scale, it is largely acknowledged that “the concentration of economic activity is inevitable and usually desirable for economic growth”, the usually resulted “large spatial disparities in welfare levels that accompany this concentration” (World Bank, 2009, pp. i-ii) are viewed differently, pointing to the need to keep these disparities in reasonable intervals of variation.

Based on the empirical evidence from Greece, Giannakis and Bruggeman (2017) apply shift-share and input-output models to analyse regions' resilience to economic crisis. The results indicate that rural regions are more resistant to recession-induced shocks than urban regions. When economic sectors are considered, agriculture appears as highly resilient, whereas food industry recorded increase in employment in seven out of thirteen regions, proving a decline of crisis impact over time. Overall, tourism contracted, but at regional scale the situation varies from continental regions, more affected, to island regions, more resilient. The main conclusion is that “The spatial heterogeneity in the effects of the recessionary shocks re-emphasizes the need for targeted and differentiated regional development policies” (p. 451).

Last but not the least, the statistical analysis of spatial data requires a specially designed collection of tools and approaches. They have evolved from Exploratory Data Analysis (EDA) to Exploratory Spatial Data Analysis (ESDA) and Exploratory Spatial Temporal Data Analysis (ESTDA) (See, 2021). As geographical phenomena may be correlated over space, traditional statistical models (e.g. regression) cannot be employed because they accept the assumption of independence between variables. Therefore various tests have been proposed to check whether spatial autocorrelation exists, such as Moran's I, Geary's c, variograms, Ripley's K function, etc. (Getis, 2010). Local versions of these statistics have been proposed as well, such as local Moran's I and Local Indicators of Spatial Association (LISA), which are useful tools for identifying hotspots in area-based data. Further on, the data mining process is applied when the discovery of patterns in large datasets is required, involving methods, techniques and algorithms at the intersection of statistics, artificial intelligence, machine learning and database systems (Cheng et al., 2021).

3. Current debates, open issues

Some of the largest debates in the academic literature on subnational inequalities cover the deepening cleavage lines in our societies—derived from the economic modes of production and environmental changes (i.e., just transition and spatial justice), derived from the internal migration of the population (i.e., urban-rural divides), derived from the administrative and political choices (i.e., local governance capacity).

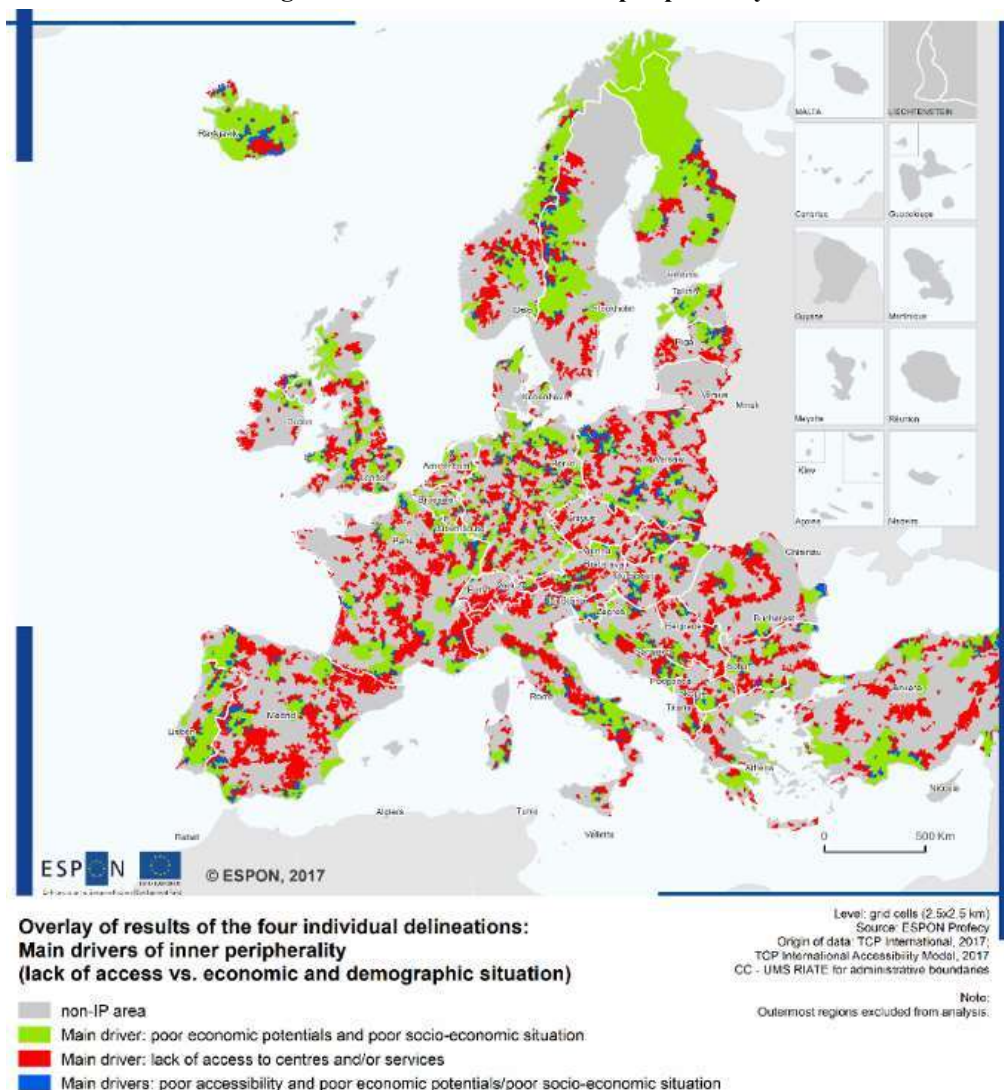
Thus, in reaction to the large territorial impact of the changes in the industrial geography and modes of production, there is an increasingly large conversation in the academic and policy literature around the just transition or spatial justice. Spatial justice literature highlights the unequal distribution of resources and opportunities within cities, regions, and territories, and seeks to address the resulting social, economic, and environmental disparities. While economic development models have long been building on the idea of local endowments and factors of production, the just transition and spatial justice literature bring in discussion the need for compensatory measures and redistributive policies. This literature advocates for policies and practices that aim to reduce spatial inequalities and create more just and equitable spatial arrangements. Building on the 60s-70s literature on social justice, spatial justice literature has been reflected in the past decades in a new stream of the urban studies literature (e.g. Marcuse, 2009; Soja, 2010; Stilianos and Ladas, 2011; Brenner et al., 2012, Slater, 2006). On just transition some of the main debates in the literature cover the extent to which current measures are achieving redistributive justice at local level (Sovacool, 2017; Jänicke, 2018).

Also, the subnational disparities between urban and rural areas have increased over the past decades in the context of increased internal migration and the rise of the cities. Spatial dynamics and agglomeration have informed a large set of studies on the new forms of urbanization and the urban-rural divide (e.g. Champion and Hugo, 2016; Vernon Henderson, 2010; Partridge and Rickman, 2006; Berdegué et al., 2015). This thematic discussion has achieved a large convergence of interests and preoccupation between policy researchers and academics, mirroring and informing each other's methods and data. The process of urbanization has continued at a rapid pace globally, with a significant influx of population into urban areas. This trend has led to the expansion of cities and metropolitan regions, resulting in increased pressure on urban infrastructure, housing, and services. Meanwhile, rural areas may experience population decline and depopulation, leading to a widening gap between urban and rural areas. Beyond the traditional divide in terms of economic opportunities and quality of public services and infrastructure, the urban-rural divide has also grown to include over the past decades the dimension of a digital divide (e.g. Van Dijk, 2005; Morris et al., 2022). This is reflected both in terms of digital infrastructure (e.g. broadband connectivity, internet speed, devices) and in terms of individual knowledge and skills, and can further exacerbate disparities in education, employment, and access to information and services. Subsequently, urban-rural digital divides have been further exacerbated by the COVID-19 crisis and the changes it launched in the way we learn and work (e.g. Chetty et al., 2020; Lai and Widman, 2021).

In addition, there are hot current debates on peripheries, which do not address any longer the peripheral areas as simply 'natural', according to simple geographical features; on the

contrary, distinction is made between economic, technological, social, institutional and geographical peripheries and their interrelations are discussed so as to identify the determinants for effective place-based policies and the ‘de-marginalization’ mechanisms (e.g., Storti et al., 2023; Barbero and Rodriguez-Crespo, 2022; Pugh and Dubois, 2021; Oppido et al., 2023; Jardon et al., 2024; etc.). A study undertaken by ESPON (2017) brings into the spotlight the concept of “inner periphery”, which is examined in terms of general performance, level of development, access to services of general interest, relational proximity, quality of life. Such areas exist in almost all European countries and “seem to share a perception of ‘being forgotten’ in the national political agenda” (EPRS, 2019, p. 6). Figure 8 depicts the main drivers of inner peripherality and reveal the features of the territorial patterns for the inner peripheries. Thus, inner peripheries can be found in many other areas than those considered peripheral from geographical viewpoint, whereas border regions display a higher incidence of peripherality. Moreover, in many cases border effects are not limited to the areas close to the border, on the contrary, they affect larger territories (Fantechi and Fratesi, 2023).

Figure 8: Main drivers of inner peripherality



Source: ESPON (2017)

The solutions for deconstructing the marginality of peripheral areas, within so-called “de-marginalization processes”, envisage the transformation of the local institutional framework, collective actions and ‘self-governance’ processes at local level, renovation of elite groups and economic renewal and innovation (Sorti et al., 2023). A special attention is paid to the institutional capacity, relational proximity and the role of local collaborative networks in peripheral regions (Torre, 2022) and, further on, to the transnational collaborative networks, when border regions are involved. According to ESPON (2017), a core aspect in the context

of inner peripherality is “the capacity of a territory to “connect” with its environment (regardless of its geographic location). Connectedness generate synergies, networks and other types of links that allow to be present in the places where relevant decisions are made, both in relation to public policy as well as in investment and private strategies” (p. 1). From this perspective, a well-connected territory is characterised by “more and better possibilities for development, better conditions of access to SGI, or a more dynamic labour market capable of retaining skilled population” (p.1).

Another important related debate in the spatial inequalities literature refers to the extent to which institutional capacity is mediating or amplifying subnational disparities, from the large dataset on the European Quality of Government Index that shows institutional capacity metrics at NUTS II level in the European Union, to a variety of studies looking at the role of institutions for regional development (e.g., Rodríguez-Pose, 2013). This essential link between regional disparities and governance or policy interventions is also reflected upon by Stoker (2005), Bahl and Wallace (2018) or Sepetis et al. (2024). Going deeper, the current place-based approaches are accompanied by new institutional models of regional economic regulations and governance, which expose the orientation of many nation-states to decentralising and devolving their institutional and political structures to regions and localities, with the aim of flexibilization of their space economies. This is a recognition of the locally variable nature of economic development and is also seen as a solution for curbing state expenditures (Pike et al., 2015; Danson and Wittam, 1999).

In addition to these thematic debates, another increasingly more important question is linked to the availability of relevant data. One of the first issues is that of defining the scale that data availability is required and its aggregation (Keuschnigg et al., 2019). Duranton and Overman (2005) and Elbers et al (2003) point to the relevance of micro-level data in pinpointing dynamics behind spatial inequalities accurately. Furthermore, Singleton and Arribas-Bel (2021) bring into question the definition of spatial units and their boundaries, and as such encourage a more granular assessment. However, the size of such databases also requires more sophisticated statistical methods such as Python programming (Rey and Anselin, 2010). Data availability and quality is also brought into question by several studies (e.g. Wagner and Henzen, 2022; Galimberti et al., 2021). The more complexity the world offers, the more innovative research methodologies have to become, and as such, there is also a plethora of new indicators, metrics and composite indexes covering spatial inequalities (e.g. Atkinson, Marlier and Nolan, 2004; Tarozzi and Deaton, 2009; Alkire and Foster, 2011; Lall and Deichmann, 2010). Finally, in terms of methods, the last decades brought about papers that cover issues related to the spatial autocorrelation and spatial dependence of local indicators (e.g. Anselin, 2010), as well as the temporal dynamics and varying relationships in spatial analysis (e.g. Fotheringham et al., 1998; Chen et al., 2022).

4. Looking ahead: policy implications

Even if the spatial inequalities are accepted as a reality of the contemporary economy and society, their scope, amplitude and persistence vary between countries and within countries, at subnational level, between various territorial units. They need to be observed and treated carefully, considering the fierce competition between countries, regions and even smaller geographical spaces. In other words, in an increasing regional competition there will be always winners and losers but “it is important to recognize the difference between absolute and relative winners (or losers)” (Nijkamp, 1997, p.17).

This entails a ‘rethinking’ of lagging regions, with the aim of better promoting their untapped potential. The EU structural assistance can unlock this potential by exploiting agglomeration for productivity growth, investment and job creation, provided the coordination failures are overcome through complementing approaches of sectoral interventions able to remove the distortions induced by government and market failures and to strengthen core endowments (skills, institutions) within regions (World Bank, 2018). In order to capitalize on the resulting place-based policies, areas where evidence base can be successfully extended have been suggested, such as: the investigation of long-run effects; the isolation of those policy features that make them effective or, on the contrary, create undesired distortions; the better identification of the effects and their beneficiaries; the interpretation of the interactions between areas where such policies are applied, etc.

(Newmark and Simpson, 2018). In addition, the Brookings Institute highlights in a recent report key findings and lessons of place-based policies: the importance of multi-level governance; tailored strategies to the specific needs, opportunities, and challenges of each locality; investment in infrastructure and innovation; focus on human capital; data-driven decision making; promoting inclusive growth; ensuring flexibility and adaptability; integrating lessons learned from successful case studies (Brookings Institute, 2021).

Moreover, building on the up-to-date findings and useful lessons, the current orientations regarding the future of the Cohesion Policy and the European growth model point to the need of a deeper integration of place-based and people-based approaches, in accordance with the spatial justice desideratum (IMAJINE, 2022), as well as to the ambition “to bring EU closer to citizens and to leave no one behind” (European Commission, 2023, p.5), in the complex context generated by the ongoing transitions – energy, digital, industrial ones – and COVID-19 recovery.

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