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# State rescaling and economic convergence

Vlad Mykhnenko<sup>a</sup>  and Manuel Wolff<sup>b</sup>

## ABSTRACT

This paper critically engages with State/Space theory by interrogating the soundness of its fundamental assumptions regarding the rescaling of capitalism and by questioning the validity of its proposition about ever-rising spatial imbalances and economic divergence in post-1970s' Europe. The paper employs descriptive, cartographic and econometric analysis of the regional and urban growth data covering 28 European Union countries and 11 major OECD and BRICS economies. The vast volume of multi-scalar evidence presented here cannot substantiate the central rescaling hypothesis about Europe's increasing spatial disparities. A set of alternative explanations is proposed to account for the reported European economic convergence trends.

## KEYWORDS

rescaling; urban; regional; convergence; cohesion; Europe

JEL O18, O47, P16, R12

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## INTRODUCTION

Over the last 25 years, social scientists – inspired by Smith (1992) and Swyngedouw (1997), and building on earlier contributions of Harvey (1973/2009) and Lefebvre (1974/1991) – have dispensed a great deal of effort into the study of geographical scales as socially constructed, structured and reproduced phenomena of the so-called neoliberal age. The expanding literature on the production and re-production of geographical scale under capitalism – dubbed here 'State/Space theory' after Brenner, Jessop, Jones, and MacLeod (2003) – underlines the complexity of causal forces lying behind the social construction of economic space. The central hypothesis that has emerged from this new political economy of scale is that the rescaling of contemporary capitalism should have 'the most obvious and far-reaching causal impacts' leading to politically significant outcomes (Brenner, 2001, p. 601). In particular, it has been argued that the creation and reorganization of scalar hierarchies 'by the agents of transnational capital and US-dominated global neoliberalism' (p. 608) should lead to ever rising socio-spatial polarization and marginalization, with especially devastating consequences for European territorial cohesion.

Since the early 2000s, State/Space theory has matured into a scalar turn in social sciences (Deas & Giordano,


2003; Jessop, 2009; Jones, 2001; MacLeavy & Harrison, 2010). Yet even within geography and urban and regional studies, the scalar turn has generally received a mixed bag of responses, ranging from adulation to denunciation. Post-structuralist geographers have called for the abolition and elimination of scale as such, seeing it as a mind trap that imposes a repressive hierarchy of power upon the people seeking emancipation from it (Jones, Woodward, & Marston, 2007; Marston, Jones, & Woodward, 2005; cf. Jonas, 2006). Revolutionary Marxists have denounced the new political economy of scale for apparently misreading the dialectics of Henri Lefebvre, for having too deep a root in the 'structuralist–functionalist' regulation theory, and for the alleged empiricist and positivist reification of the categories scale, capital and state (Charnock, 2010a, 2010b).

Even amongst the (initially) sympathetic geographers, there appears to be a growing discontent with undelivered promises of State/Space theory, and geographical political economy in general, concerning the fundamental theme of uneven spatial development (Scott & Storper, 2015). Lefebvre's proposition of a full-blown urban society as the ultimate stage of (post-)capitalist evolution has been quietly rejected (Storper, 2016, pp. 1117–1118). Furthermore, as argued by Peck (2016, p. 318), 'after years of debate around the social construction and relativization of scale' the entire notion of combined and uneven


## CONTACT

<sup>a</sup> (Corresponding author)  vlad.mykhnenko@conted.ox.ac.uk

St Peter's College and Department for Continuing Education, University of Oxford, Oxford, UK.

<sup>b</sup>  manuel.wolff@ufz.de

Department of Urban and Environmental Sociology, Helmholtz Centre for Environmental Research – UFZ, Leipzig, Germany.

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development must be reconstructed anew. Nevertheless, despite vocal demands for rescaling theory to be abandoned as 'inherently flawed' (Charnock, 2010b, p. 87), academic output on the rescaling of statehood and capitalism continues unabated (Bialasiewicz, Giaccaria, Jones, & Minca, 2013; Haarstad, 2007, 2014; Li, Xu, & Yeh, 2014; Oliveira & Breda-Vázquez, 2010; Perkmann, 2007; Pugalís & Townsend, 2013).

This paper's primary research aim is to reflect upon the growing criticism of the key theoretical aspects of State/Space theory by interrogating the soundness of its fundamental assumptions and questioning the validity of the propositions made. To do so, we trace back the notion of rescaling to Marxist geographical conceptualizations of space, capital and the state in the production of uneven development. Consequently, the paper moves towards the core assumptions of the neo-Marxist literature on the rescaling of statehood, distilling the central hypothesis of State/Space theory to the claim that radical economic, social and spatial reforms, initiated by conservative right-wing governments across post-1970s' Europe, were inevitably to result in regional economic divergence and ever-growing spatial polarization across the continent. Consequently, this paper examines the cause and effect relationships posited by State/Space theorists against two bodies of comparative statistical analysis, based on economic and population trajectories of individual member states (MS) of the European Union (EU), and their regions and cities, set in comparison with territorial economic development in other major Western and emerging market economies. This paper's major finding is that the core rescaling hypothesis of rising spatial polarization and regional economic divergence in post-1970s' Europe cannot be adequately substantiated. The paper concludes with a discussion of alternative theoretical explanations of the reported territorial cohesion trends.

## UNEVEN DEVELOPMENT AND THE PRODUCTION OF SPACE UNDER CAPITALISM: A MARXIST PERSPECTIVE

The early 1970s saw the emergence of a spatially sensitive or *geographical* political economy – a new cross-disciplinary branch of knowledge, originating primarily out of the classical Marxist tradition in geography, political sciences and sociology. The main subject matter of geographical political economists concerns modern capitalism recognized as a spatially uneven, highly variegated and crisis-driven social formation. It was the dramatic end of the so-called 30 glorious years of Europe's extraordinary economic expansion following the end of the Second World War that had provoked the publication of the first two hugely influential volumes on spatiality and the urban form in contemporary capitalism: *Social Justice and the City* by Harvey (1973/2009) and *The Production of Space* by Lefebvre (1974/1991).

Lefebvre's core thesis was that '(social) space is a (social) product' (Lefebvre, 1991, p. 26) and that the underpinning of social relations was spatial: as such, they had 'no real existence save in and through space' (p. 404; see also

Lefebvre, 2003). He conceptualized a threefold development process, encompassing quantitative *growth* ('the expansion of the productive force'), *urbanization* ('the formation of massive units of production and consumption') and *spatialization* – 'a calibrated spatial support' provided by the state to underpin capitalism (Lefebvre, 2003, p. 85). The capitalist class (as private owners of the means of production) was the key driver of the process, for the bourgeoisie through its political creation – the state – attempted to prevent the inevitable (to Lefebvre) collapse of capitalism by organizing and maintaining a *hierarchical stratified morphology* of space. Through policies and practices of spatialization, the modern state could temporarily stabilize capitalism across the entire grid of social space by ensuring that definite spatial forms (e.g., neighbourhoods and villages) composed of discrete units (rooms, huts, buildings) were nested within each other in a Russian Doll-like hierarchically stratified order of cities, regions, nation-states, continents and the planet (p. 94).

David Harvey's initial contribution echoed many of the themes touched upon by Lefebvre, but it was in his *The Limits to Capital*, where Harvey (1982/2006) provided a comprehensive Marxist geographical treatment of uneven capitalist spatial development. Harvey's reading of capitalism was rather orthodox, depicting a crisis-prone social formation geared towards continuous accumulation of capital through profit and investment, with a tendency towards over-accumulation. The absorption of surplus capital value was restated as the system's central problem, with crisis describing phases of devaluation and destruction of the ever-increasing quantities of surplus value that could not be profitable reinvested. Harvey's key contribution to geographical political economy was his conceptualization of *spatial circuits of value* (an idea first mentioned by Lefebvre) that flew from the primary circuit of production and consumption of goods, services and labour power towards the secondary circuit of investment of surplus value into fixed capital, physical infrastructures and the built environment, and, finally, into the tertiary circuit of investment into welfare, science and technology, public administration, and the military. By switching and 'freezing' surplus capital in time (via long-term public infrastructure projects) and in space (via the local built environment construction or through overseas investment), its owners were said to be able to achieve the so-called *spatial fix* – a temporary alleviation of the profitable surplus absorption problem (Harvey, 2006, p. 417).

In the same vein, Neil Smith's *Uneven Development* (1984/2010) focused on the *multi-scalar* and dialectical nature of capitalist development, oscillating between powerful forces causing geographical differentiation (economic divergence) and an equalization of economic differences (convergence). For Smith, the separation of absolute space into particular (urban, national, global) scales of human activity was the central *requirement* for capitalist accumulation:

Behind the extant pattern of uneven development lies the logic and the drive of capital toward what we shall call the

'seesaw' movement of capital. If the accumulation of capital entails geographical development and if the direction of this development is guided by the rate of profit, then we can think of the world as a 'profit surface' produced by capital itself, at three different scales. Capital moves to where the rate of profit is highest (or at least high), and these moves are synchronized with the rhythm of accumulation and crisis. ... Capital attempts to seesaw from a developed to an underdeveloped area, then at a later point back to the first area which is by now underdeveloped, and so forth. ... And whatever the limits placed upon it, the uneven development of capitalism will continue to be driven on by the opposing tendencies of equalization and differentiation, and the seesaw movement of capital that results.

(Smith, 2010, pp. 197–199, 202)

## STATE/SPACE THEORY

Following the collapse of state socialism in Europe in 1989–91, Marxist geographical political economy arguably lost its allure. The analytical prowess of this perspective was eventually restored under the guise of a neo-Marxist State/Space theory by Bob Jessop in *The Future of the Capitalist State* (2002). This new strand of geographical political economy has gone much further in its analysis of the contemporary condition than the usual critical and radical geography arguments about neo-liberalism – supposedly a single hegemonic project aimed at restoring the power of the transnational capitalist class through deregulation, privatization, marketization and fiscal austerity (Brenner & Theodore, 2002; Harvey, 2005; Swyngedouw, 1997).

Jessop defined the fundamental post-1970s' changes in Western economies as a process of *state rescaling*, gradually transforming the post-war 'Keynesian Welfare National State' (KWNS) into a 'Schumpeterian Workfare Post-National Regime' (SWPR). Jessop (2002, 2008) suggested that the SWPR would consequently rise as a mode of regulation fit for the neoliberal capitalist globalization, encompassing: (1) a distinctive set of economic policies focused on Schumpeterian creative destruction, innovation and supply-side measures to promote a knowledge-based economy; (2) social policies aimed at enhancing territorial competitiveness through a downward pressure on wages, a curtailment of welfare rights, and a rise in low-wage, low-skill employment opportunities (hence, *workfare*); (3) a light-touch public governance regime to correct (but not to compensate) for market and state failures; and (4) a fundamental *relativization* or fragmentation of scales in economic and social policy – upwards (towards Europeanization), downwards (decentralization) and sideways (via public-private partnerships).

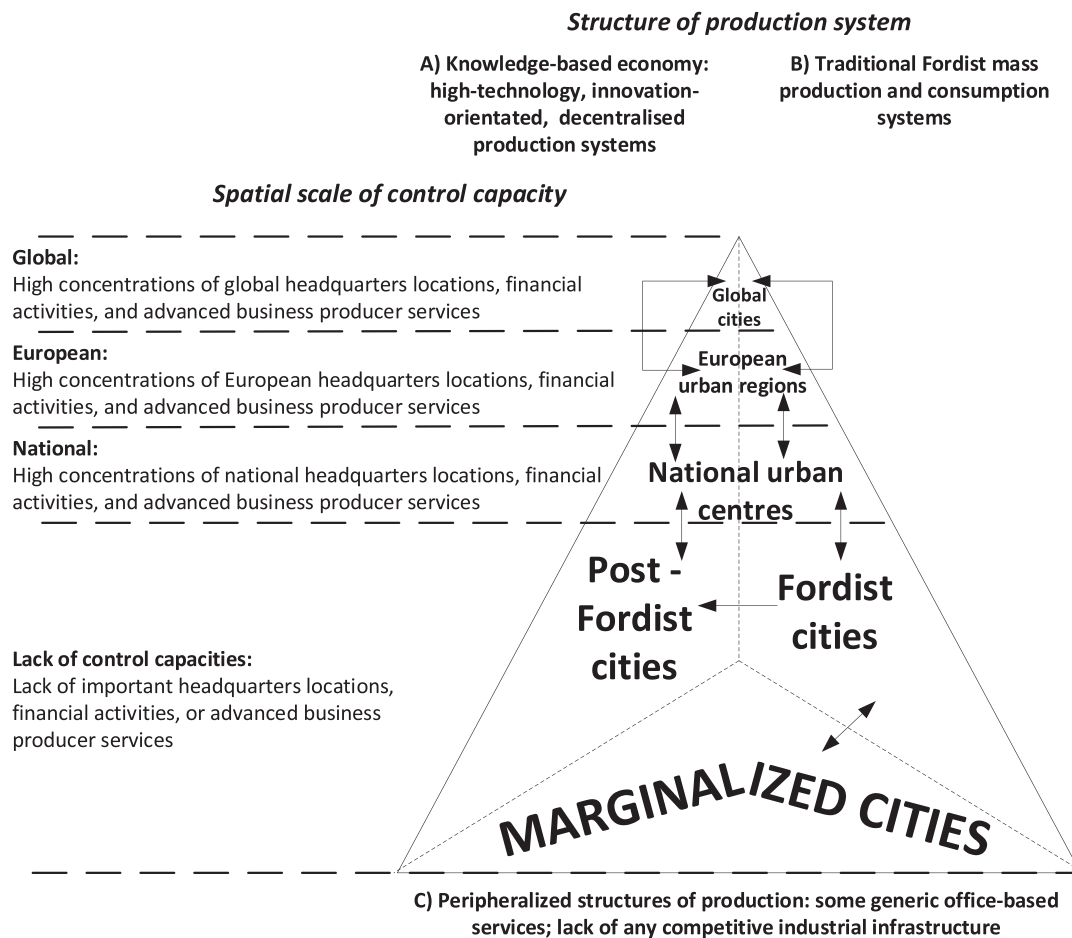
## THE RESCALING OF EUROPE: TOWARDS DIVERGENCE AND POLARIZATION?

For Brenner (1999), the new capitalist matrix was to comprise new *subnational* state spaces in the form of global cities, city-regions and local geographical scales of state

power. Like many Marxist economic geographers (Harvey, 1996; Smith, 2003), Brenner argued that the rescaling of modern statehood was becoming a key *capital-accumulation strategy*: instead of eroding state territoriality, the purported reconfiguration of the national scale was creating a *city-centric* capitalism. In *New State Spaces*, Brenner (2004a) further developed Lefebvre's spatialization hypothesis to argue that the rescaling of national statehood proceeded primarily through urban policy and the governance of capitalist urbanization: 'a wide-ranging recalibration of scalar hierarchies ... throughout the state apparatus as a whole, at once on supranational, national, regional *and* urban scales' (p. 3; original emphasis). Overall, State/Space theorists have maintained that all types of spatial restructuring, including (1) the rescaling of *statehood*; (2) the rescaling of *capital* accumulation; (3) the rescaling of *urbanization*; and (4) the rescaling of contentious *politics*, should be considered exercises of political power on behalf and in the interest of global capitalism run by the transnational capitalist class. However, whilst Marxist theorists in the 1970s–80s would emphasize the calibrated spatial support provided by the state to shore up capitalism, their theoretical disciples three decades later offered a dramatic change of perspective. As emphasized by Brenner: '*It is no longer capital that is to be molded into the (territorially integrated) geography of state space, but state space that is to be molded into the (territorially differentiated) geography of capital*' (p. 16, original emphasis).

According to State/Space theory, urban Europe was the real battleground, where the combined effects of the four rescaling processes would most prominently manifest themselves (Jessop, 2009). Europe's new urban hierarchy was depicted as a geographical *force field* (Brenner, 2004a, p. 190) – an evolving system of multi-scalar relations and interdependencies between cities and city-regions of different types (Figure 1). State rescaling has repositioned European cities across two overlapping dimensions. Cities were sorted according to their place within global, European and national scalar divisions of labour, defined by the dominant structures of economic specialization and the production system. These ranged from a few high-end knowledge economy-based global cities positioned at the top of the hierarchy to the myriad of uncompetitive and peripheralized production systems at the bottom end. Concomitantly, the relative standing of cities also had to depend on their position within corporate control and management networks.

The emergent European hierarchy of urban positions was presented as a *dynamic* phenomenon based on different national, regional and local state strategies aimed at inserting major urban economies most profitably into the global and supranational circuits of capital (Brenner, 2004a; Brenner & Theodore, 2002; Paul, 2005; Smith, 2002). To this end, many (previously abolished) metropolitan or city-regional levels of government have had to be re-created or made anew (Boudreau, Hamel, Jouve, & Keil, 2007; Brenner, 2004b). As the arrows in Figure 1 indicate, cities may descend the hierarchy as their local economies suffer de-industrialization, deskilling and peripheralization.



**Figure 1.** New urban hierarchy: spatial scales and structures of production in post-1970s' Europe.  
Sources: Derived from diagrams in Brenner (1998, p. 19; 2004a, p. 191).

Conversely, a city may move upwards by creating a brand new path through a simultaneous process of services upgrading and manufacturing deskilling. This structural adjustment strategy was usually associated with a rise in high-tech employment, as new corporate headquarters, high-end knowledge-intensive industries and chief management functions were being attracted to the city. Finally, cities may also improve their *absolute* fortunes through upgrading the existing industries, including high-tech manufacturing, alongside the development of other high-value-added activities (Birch & Mykhnenko, 2008; Turok & Mykhnenko, 2008). Nevertheless, this last scenario would often not lead to any *relative* improvement in a city's position: Fordist cities have to run to stay still.

Despite the arrows in Figure 1 pointing both ways (except for post-Fordist cities), the overwhelming majority of European urban areas were said to be locked into a failing development trajectory, unable to 'engender either a sustainable regime of economic growth or a territorially cohesive framework of political regulation at any spatial scale' (Brenner, 2004a, p. 300; 2004b). Therefore, the core hypothesis of State/Space theory was that state rescaling and turbo-charged territorial competition unleashed upon Europe by the so-called forces of neoliberalism would ultimately lead to territorial economic *divergence* –

a new socio-spatial 'mosaic' being characterized by 'intense economic dynamism within a select group of powerful, globally interlinked cities, regions, and industrial districts and by enhanced stagnation, marginalization, and exclusion within many of Europe's older industrial cores and underdeveloped, peripheral zones' (Brenner, 2004a, p. 258; Swyngedouw, 2000; Weber, 2002). Inevitably, marginalized cities were gradually to become the most numerous category within the European urban hierarchy, as more urban areas were expected to lose their competitive edge and fall to the bottom of the pecking order. Noticeably, after the global financial crisis of 2007–08, the originally bleak scenario of unfettered interspatial competition and ever-growing levels of territorial polarization (Petrella, 2000) were reconfirmed by State/Space theorists as still commanding 'considerable plausibility' (Brenner, 2009, p. 130).

## EXAMINING THE RESCALING HYPOTHESIS: DATA AND METHODS

The basic geographical political economy conceptualization of uneven development is that of an observed phenomenon as a powerful process that acts on and between different spatial scales. Thereby, the development



of a basic unit (say, municipality) shapes the evolution at the next spatial scale (regional), which, in turn, feeds back on the development at the basic unit (top down) as well as nationally (bottom up) (Pumain, 2006; Resende, 2013). To encompass the complexity of State/Space theory, this paper covers *six* scales of the available territorial statistical data, ranging from the national, EU MS level, to the local authority level of municipalities. In between, the standard EU regional classifications of national units of territorial statistics (NUTS-1–3) are applied (for details, see European Commission (EC), 2011; NUTS = Nomenclature of Territorial Units for Statistics).

To interrogate the rescaling hypothesis, we start at the national level by measuring the speed of economic catching-up processes, contrasting the new MS (EU-13) with the old MS (EU-15) during the pre- and post-2004 enlargement decades. The EU's gross domestic product (GDP) and population data are derived from EUROSTAT's (the Statistical Office of the European Communities) *General and Regional Statistics* (2017); foreign direct investment (FDI) data come from the United Nations Conference on Trade and Development (UNCTAD) (2016). Subnationally, in order to measure the level of regional disparities across Europe since the 1970s, we have procured the last ever edition of Cambridge Econometrics' (CE) *European Regional Database* (2015). For decades, CE has been Europe's principal supplier of basic regional statistics (including GDP, gross value added by sector, population, employment structure, working hours, remuneration) covering the period 1980–2012 across 97 NUTS-1 regions, 271 NUTS-2 regions and 1303 NUTS-3 regions across the EU-27 (the CE's data set had been discontinued before Croatia became the 28th MS). The private management consultancy's data collection has formed the basis for the EC's *The Single Market Review* (1997) of regional growth and convergence impact. To fill in the missing historical data and extend the late 1970s' to early 1990s' statistical records of EUROSTAT's old database to the NUTS-3 level, CE has used econometric extrapolations and verification procedures involving a pan-European regional consultant network (Terrasi, 2002). CE's *European Regional Database* (2015) has consequently been widely used in the literature assessing Europe's long-term regional growth patterns (Armstrong & Taylor, 2000; Crescenzi, Luca, & Milio, 2016; Ezcurra & Rodríguez-Pose, 2009; Martin, Sunley, Gardiner, & Tyler, 2016).

To deliver robust, reliable and up-to-date findings, however, the present research's validation strategy has aimed specifically at corroborating the initial results. This was achieved by deploying several editions of EUROSTAT's open-access official regional statistics to produce a set of convergence measurements for the periods 1995–2011 (EUROSTAT, 2013a) and 2000–15 (EUROSTAT, 2017) across the entire EU-28, including 97 NUTS-1 regions, 276 NUTS-2 regions and 1343 NUTS-3 regions. The EUROSTAT data appear to be far superior in their quality and reliability; however, its statistics do not stretch further back than 1995, unlike those of CE.

The evolution of Europe's regional disparities is consequently compared and contrasted with the corresponding measurements of convergence across Europe's 11 major global counterparts, including Australia, the European Free Trade Association (EFTA, consisting of Iceland, Lichtenstein, Norway and Switzerland), Japan, South Korea, the North American Free Trade Agreement area (NAFTA, consisting of Canada, Mexico and the United States), as well as the emerging market economies of Brazil, Russia, India, mainland China and South Africa (BRICS). The Organisation for Economic Co-operation and Development's (OECD) *Regions and Cities* database (2017) is used for constructing these international comparisons. The OECD's (2013) classification of geographical units within each member country is applied here using the higher level – territorial level (TL) 2 – regions, which are broadly equivalent of EUROSTAT's NUTS-1.

The key proposition of State/Space theory about Europe's post-1970s' spatial economic development trajectory is that local economic imbalances in per capita income should have increased over the medium to long run, with rising levels of divergence, described *interchangeably* as polarization, peripheralization or marginalization, impacting the majority of cities and regions across the continent. The opposite – convergence – should occur when spatial economic disparities decrease. The literature on regional convergence in Europe (Armstrong, 1995; Martin & Sunley, 1998) usually focuses on the two related concepts of  $\beta$ - and  $\sigma$ -convergence respectively:

- $\beta$ -convergence, or absolute convergence, detects possible *catching-up* processes, measuring the speed of convergence, when poor regions grow faster than rich regions, equalizing GDP per capita levels across the regional economies over time; whereas
- $\sigma$ -convergence or dispersion measures income (or wealth) inequality as the variance of per capita income or GDP between regions at a given point in time. A decrease in the dispersion (spread) of average per capita incomes between regions over time indicates the occurrence of  $\sigma$ -convergence (Molle, 2007).

The regional divide can be assessed in many different ways, ranging from the simplest approach to measure the gap between the highest and lowest values (the top/bottom ratio) to more sophisticated indicators (e.g., the coefficient of variation of regional GDP per head and the Gini index), and very technical ones, including the generalized entropy class of measures (e.g., the Theil index), the Atkinson's family of indices, non-parametric estimation of density functions based on Gaussian kernels, and Markov chain analysis (Ezcurra & Rodríguez-Pose, 2009; Monfort, 2009). In 2007, EUROSTAT proposed a new comprehensive evaluation of regional convergence that measures the dispersion between the regional per capita GDPs and the national (or supra-national) average. In its logic, the EUROSTAT dispersion index is somewhat similar to such long-established measures of individual income inequality as

Schutz's coefficient and the Hoover index (Allison, 1978; Vining & Strauss, 1977). In particular, for a given country (or an economic area), the dispersion  $D$  of the regional GDP of, say, NUTS-3 regions is defined as the sum of the absolute differences between regional and national (economic area) GDP per capita, weighted on the basis of the regional share of population and expressed as a percentage of the national (economic area) GDP per capita, as follows:

$$D = 100 \frac{1}{Y} \sum_{i=1}^n |(y_i - Y)|(p_i/P)$$

where  $y_i$  is the regional GDP per capita of region  $i$ ;  $Y$  is the national (economic area) average GDP per capita;  $p_i$  is the population of region  $i$ ;  $P$  is the population of the country (economic area); and  $n$  is the number of NUTS-3 regions in the country (economic area).

The value of the NUTS-3 regional dispersion of GDP per capita is zero if the values of regional GDP per capita are identical in all regions of the country (or economic area such as the EU-28, EFTA or NAFTA). *Ceteris paribus*, the dispersion index will show an increase if the differences in per capita GDP between the regions grow. A value of 25%, therefore, means that the GDP of all NUTS-3 regions of a given country (economic area), weighted on the basis of the regional population, differs from the national (economic area) value by an average of 25% (EUROSTAT, 2013b, p. 91). Whilst EUROSTAT's own use of the dispersion index has been patchy (published occasionally, but discontinued in 2015–16), we have consistently applied this regional GDP dispersion formula to the present data, whilst searching for the evidence of convergence/divergence across the EU at the three regional scales. Additionally, we have calculated regional GDP per capita dispersion indices for the key OECD and BRICS economies mentioned above as compared with the EU at the TL-2 level.

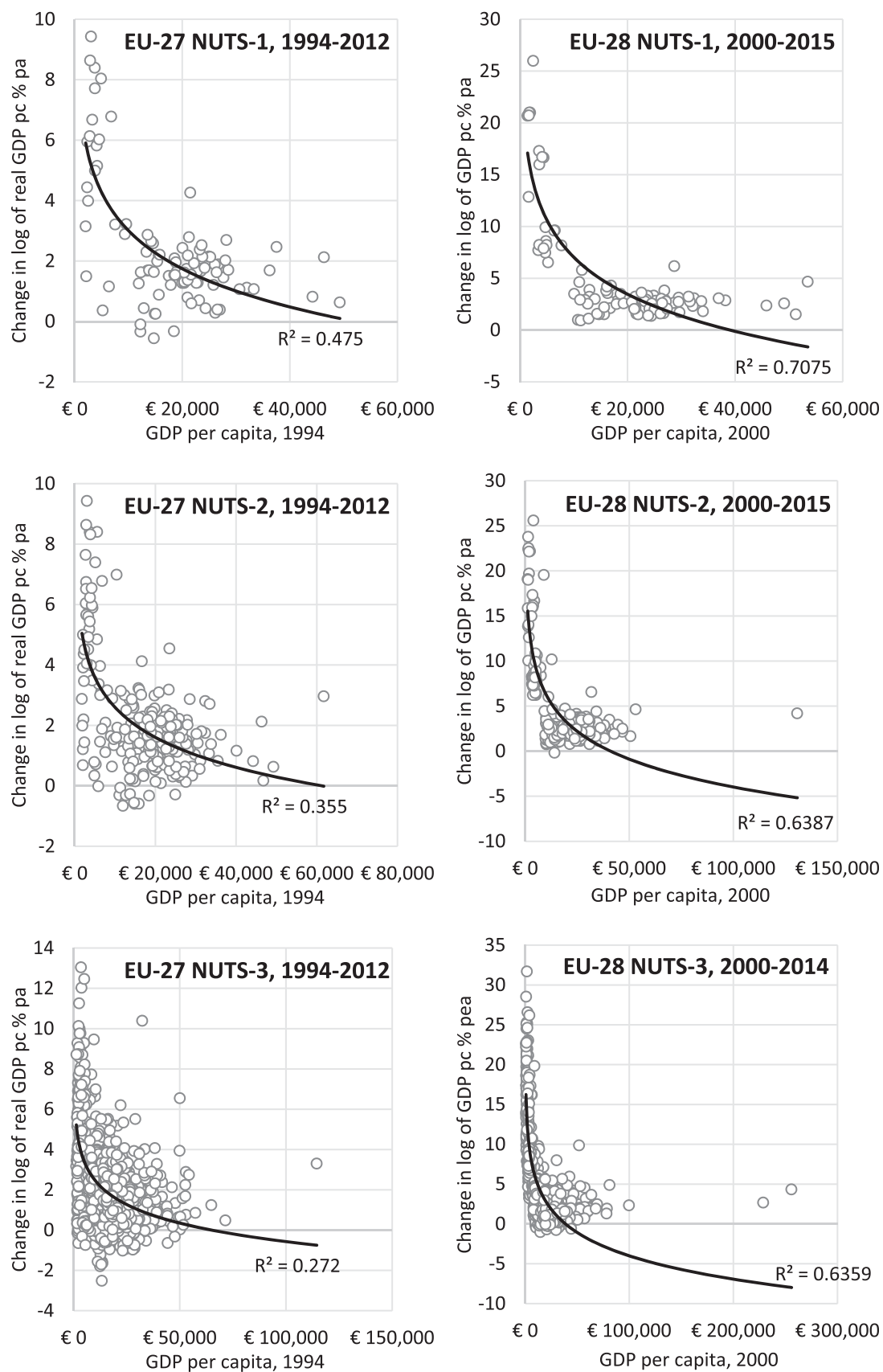
Consequently, this study moves down to the local scale of European municipalities in order to investigate the actual workings of the continent's emergent urban hierarchy, following the fall of state socialism in 1989–91. For cities, unlike regions, we have to rely on population change as the only available, accessible and comparable indicator of growth (and decline) at the municipal level across the continent over time. Here the paper uses the COST Action TU0803 database (Avila de Sousa et al., 2011; Wolff & Wiechmann, 2018), which contains absolute population figures for the period 1990–2010 covering 92,773 local authority units (LAUs or municipalities) in 36 European countries. The lower LAU level (LAU-2, formerly NUTS-5) generally consists of over 120,000 municipalities across the EU (EC, 2011), whereas the upper LAU level (LAU-1, formerly NUTS-4) is defined only for some MS. In order sufficiently to capture the role of urbanization processes in state rescaling, we have additionally analyzed the population change data for 7585 European cities with 5000 residents and above (cf., Wolff & Wiechmann, 2018).

Thus, in order to analyse comprehensively the outcomes of spatial restructuring in Europe and beyond within the framework of State/Space theory, the indicators used here mirror to a large extent the rescaling of capital accumulation (production, income and investment) and its interaction with the workforce (the working-age population and residential population). One must acknowledge that the explanatory power of GDP is limited, as it focuses on production for the market, but hardly reflects the cost of social and environmental reproduction, the impact of technological benefits, innovation, and other private and personal sector services (Bergh, 2009; Constanza, Hart, Posner, & Talberth, 2009). However, as GDP accounts for all the goods and services that pass through official, organized markets, and because of the lack of adequate historical alternatives with a sufficiently high spatial resolution, it is contended that GDP per capita data should allow one to draw conclusions on state rescaling occurring on behalf and in the interest of global capitalism. Finally, we use population change as the only comparable indicator of growth at the municipal level across the continent. Population change has a long pedigree of usage for spatial analysis as an indicator of individual behaviour at the scale of households and other economic agents (Beauregard, 2009; Turok & Mykhnenko, 2007).

## ECONOMIC CONVERGENCE AND TERRITORIAL COHESION TRENDS IN EUROPEAN REGIONS, 1980–2015

First, we search for the evidence of absolute ( $\beta$ ) convergence across the EU NUTS-1–3 regions using the 1994–2012 CE data (Figure 2, left column) and the 2000–15 EUROSTAT data (Figure 2, right column). The post-communist economic transformation and the EU eastward enlargement both contributed to significant regional convergence on per capita incomes across Europe, as indicated by the logarithmic curves of Figure 2, which plots economic growth between 1994 and 2012 (and 2000–15) on the  $y$ -axis on comparable levels of GDP per head in 1994 (and 2000 respectively) in euros. Europe's regional convergence trends have become much stronger since 2000, especially evident at the NUTS-1 level.

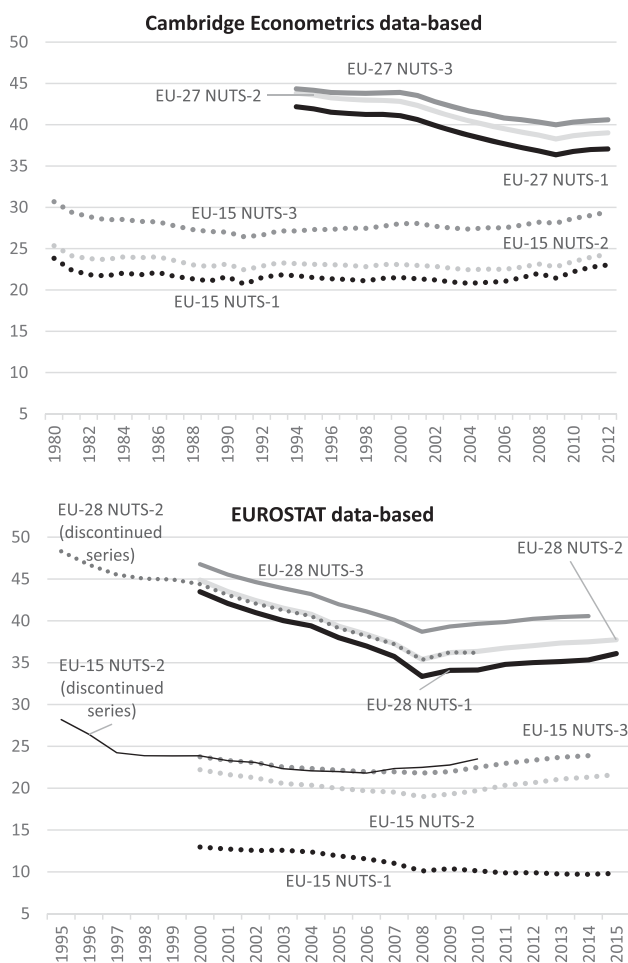
The  $\sigma$ -convergence evidence generated for this paper (Figure 3) (see also Table A1 in Appendix A in the supplemental data online) covers the three NUTS levels, with the dispersion of regional per capita GDP indices based on the CE data encompassing the period 1980–2012 for the EU-15 and 1994–2012 for the EU-27. Another set of EUROSTAT data-based dispersion indices cover the period 2000–15, with the NUTS-2 time-series stretching as far back as 1995. Thus combined, this paper takes the entire period of state rescaling into consideration (with 2015 being the latest year for which consistent regional GDP data are available). Figure 3 reports an overall *decline* in regional disparities across all three scales in both the old and new MS. The CE-based regional convergence indicators produced here show the EU-15 NUTS-1 regions registering a very modest decrease in dispersion of



**Figure 2.** Regional  $\beta$ -convergence in the European Union, NUTS-1–3: 1994–2012 (Cambridge Econometrics, EU-27) and 2000–15 (EUROSTAT, EU-28).

Sources: Authors' elaborations of Cambridge Econometrics (2015) and EUROSTAT (2017) data.





**Figure 3.** Regional  $\sigma$ -convergence in the European Union, NUTS-1–3: 1980–2012 (Cambridge Econometrics-based time-series) and 1995–2015 (EUROSTAT-based time-series).

Note: Scales are between 0 and 100, where 0% = identical gross domestic product (GDP) per capita values in all regions of the country or economic area.

Sources: Authors' elaborations of Cambridge Econometrics (2015) and EUROSTAT (2013a, 2017) data. For details, see Table A1 in Appendix A in the supplemental data online.

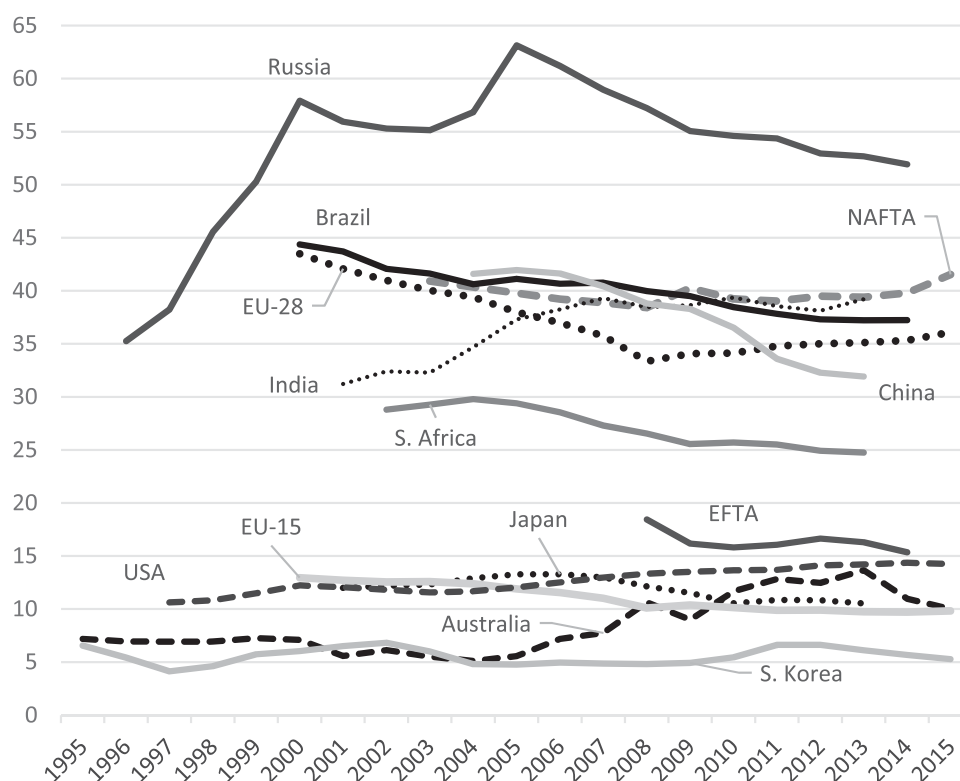
0.8%; NUTS-2 regions, 1.0%; and NUTS-3 regions, 1.3% accordingly. Across the EU-27 area, between 1994 and 2012, a decrease in regional disparities appears to be much more impressive, registering a 5.1% drop across NUTS-1 regions, a 4.8% drop in NUTS-2 regions and a 3.8% drop in NUTS-3 regions.

The reunification of Germany and the incorporation of its poor eastern regions in 1990 had significantly decelerated the process of convergence within the EU-15, whereas the advent of the global financial crisis in 2007–08 seemingly suspended the reduction in regional disparities throughout the single market. However, when comparing the left- and right-side charts in Figure 3, it becomes obvious that the older historical regional data produced by CE have significantly underestimated (by at least 5%) the level of spatial socioeconomic imbalances in Europe in the 1980s and early 1990s. At the same time, their data extrapolations, which were presumably based on NUTS-1 figures, have generated peculiarly synchronous

looking trends, with all NUTS-1–3 GDP dispersion indicators reflecting each other. By contrast, the  $\sigma$ -convergence measurements generated on the basis of the official national and regional accounts data from EUROSTAT (regional GDP and population) show a much more striking decline in regional per capita GDP dispersion between 1995 and 2015, recording a decrease of 6.6% in the EU-15 and 10.6% in the EU-28 (both across NUTS-2 regions) accordingly. If one combines the reductions in the EU-15 regional per capita GDP dispersion figures for the NUTS-2 level from the three time-series reported in Figure 3, then the aggregate decline in regional disparities during 1980–2015 would amount to at least 7.2% overall. The 2005–15 growth figures at the MS level (see Table A3 in Appendix A in the supplemental data online), the EU-15 convergence trends at the NUTS-1 level (Figure 3) and the most recent findings of the EC's Seventh Cohesion Report *My Region, My Europe, Our Future* (2017) all suggest that the interruption in regional convergence observed across the EU between 2008 and 2015 had been a temporary phenomenon, with further reduction in regional disparities being back on track from the mid-2010s onwards. Furthermore, as Figures 2 and 3 confirm, in the long run, regional convergence in Europe has mostly been the result of its least developed areas catching up, rather than growth decelerating in the more developed regions (EC, 2014, 2017; Monfort, 2009).

The magnitude of regional economic convergence across the EU reported here seriously questions the rescaling hypothesis of worsening spatial disparities in Europe: if anything, regional income and, thus, economic activity is much more *evenly* spread across the continent now than it was in 1980, at whatever regional scale or part of the EU one chooses to adopt. What is even more striking is the direction of Europe's convergence trajectories in contrast to its major global economic compeers. Figure 4 points to a significant *decline* in regional per capita GDP dispersion in the EU-28 TL-2 regions between 2000 and 2015 by as much as 7.4%, second only to a 9.7% drop in regional disparities across mainland China, and followed by Brazil (7.1%), South Africa (4.1%), the EFTA area (3.1%), Japan (1.5%) and South Korea (1.3%) respectively. At the same time, regional economic disparities increased significantly across Russia by 16.7%, India by 8.0%, the United States by 3.6%, Australia by 2.8% and the NAFTA area by 0.6%. The growing gap between the levels of regional disparities registered in North America and those of the EU looks particularly salient: whereas in 2000, the EU-15 regional GDP dispersion was almost the same as in the United States, by 2016, the level of regional disparities in the United States had exceeded its European counterpart by 4.4%. Similarly, the gap in the level of regional disparities between the NAFTA area and the EU-28 has grown by 4.6% during this period.

Turning back to State/Space theory, if the rescaling of statehood and of capital accumulation has indeed occurred in Europe, then on the evidence presented so far it has led to a decrease rather than an increase in regional disparities, at least over the past 35 years. Whereas if, as the theory



**Figure 4.** Regional  $\sigma$ -convergence in Europe and beyond, 1995–2015 (OECD TL-2 regions).

Note: Scales are between 0 and 100, where 0% = identical gross domestic product (GDP) per capita values in all regions of the country or economic area.

Sources: Authors' elaborations of EUROSTAT (2017) and OECD (2017) data. For details, see Table A2 in Appendix A in the supplemental data online.

suggests, the rescaling of capitalism has been a near-universal phenomenon, then it may be concluded that it has had no tangible impact on regional inequalities overall, diminishing in some countries and rising in others. It must be stressed here that one must not confound or confuse *spatial* economic convergence patterns with a decline or rise in *individual* income inequality: the two are not necessarily correlated. Yet, as the rescaling hypothesis focuses on rising spatial economic imbalances across Europe, it cannot be supported on the basis of this paper's empirical findings presented so far.

## EXPLAINING EUROPEAN REGIONAL CONVERGENCE OUTCOMES

A rather mainstream or orthodox explanation could shed more light on the observed regional equalization trends, though. Dating back at least to Hoover (1948), Myrdal (1957) and Hirschman (1958), spatial economists and regional scientists have generated a host of regional growth theories, progressing far beyond Smith's (2010) rather simplistic – albeit elegant – see-saw analogy of capital flows quoted at length above. In this context, neo-classical theories of interregional *self-balance* could provide a credible explanation for Europe's long-term regional economic convergence through 'spread', 'spillover' and 'trickle-down' effects (Aoyama, Murphy, & Hanson, 2011; Dean, Leahy, & McKee, 1970; Harris, 2011). Briefly, driven by the unhindered flows of capital and labour in the opposite

directions, labour-rich (and capital-poor), low-wage regions tend to entice capital with a promise of higher profits, whilst capital-rich, high-wage regions tend to attract extra labour resources (whilst losing capital). Working on the (very likely) assumption that capital is more mobile than labour, over the long run a poor and capital-importing region should experience faster output growth and catch-up with its high-wage, capital-exporting neighbour, generating convergence (Borts & Stein, 1964; McCann, 2013, ch. 7; Meade, 1962).

Comparing directly the GDP growth rates and accumulation of FDI stock in the older, pre-2004 eastward enlargement MS (the EU-15) with the newer post-2004 MS (the EU-13), we report that the EU-13 was growing *1.6 times faster* than its western counterpart during the period 1995–2005. In 2005–15, the rate of the EU-13 catching-up process increased to *3.3 times*, despite a general slowdown in absolute growth rates across the EU. At the same time, the newer and poorer EU countries were able to attract FDI at a rate *7.6 times faster* than the older and wealthier MS. As a result, during the last 20 years, the relative share of the EU-13 in the total bloc's output had *doubled* from 4% to 8%. The evidence also indicates a gradual shift of surplus labour force from the poorer East to the richer West, with the EU-13's share of the total workforce *declining* by 1.5% between 1995 and 2015. Furthermore, the inflow of FDI capital from the EU-15 to the EU-13 and the outflow of labour in the opposite direction

across the continent have led to an even faster rate of wage convergence (the equalization of employee pay) than the GDP figures portrait (for full details, see Table A3 in Appendix A in the supplemental data online).

Based on free market-driven flows of surplus capital *and* surplus labour, the EU single market per se must be a powerful driver of regional convergence (EC, 2014, pp. 200–206). Further confidence in this regard is drawn from the fact that unlike the EU (and EFTA), NAFTA has facilitated closer economic ties between Canada, Mexico and the United States only through increases in trade and FDI: the free-trade zone does not allow for the free movement of labour. Moreover, as Figure 4 indicates, it was only the EU and EFTA – with their four single-market freedoms of movement over borders of goods, capital, services and people – that have seen their regional disparities decline.

An alternative – state-interventionist – explanation preferred by the EC (2014) highlights that NAFTA does not have a regional development policy, making it much harder for Mexican regions to benefit from trade and capital integration. By contrast, at least since 1988, the EU with its Cohesion Policy and affiliated structural investment funds has been actively intervening into the lagging and least developed regions (Faludi, 2010; Molle, 2007). The public funding allocation to the European Structural and Investment Funds and Cohesion Policy instruments has grown from €75 billion to €454 billion between 1989 and 2020, with 73% of the total amount going to the poorest EU-13 regions (EC, 2016). McCann (2015, pp. 62–70), having reviewed over 50 major studies of EU Cohesion Policy, concluded favourably on its role for catching-up growth. For example, the estimated impact of the Cohesion Policy investment to be made through the period 2014–20 would make the EU-13 total GDP to be 2.6% higher by 2023 compared with the baseline non-intervention scenario without EU public investment (EC, 2014, pp. 266–269).

Thus, the established view amongst State/Space theorists – and radical geographers generally – that none of the EU policies has been construed as a genuinely compensatory, territorially redistributive counterbalance mechanism, posing ‘much of a threat to the prevalent competition-based, competitiveness-oriented model of European interscalar relations’ (Brenner, 2004a, p. 302) is highly questionable. EU Cohesion Policy in its current form may not adhere fully to the vision of a strategic interventionist spatial framework that was called for more than two decades ago (Amin & Tomane, 1995). Nevertheless, the tension within the EU polity, between the pursuit of market-led solutions and active state intervention in favour of economic expansion and socio-spatial justice, remains as real now as it was back then (Farole, Rodríguez-Pose, & Storper, 2011). Persistently to ignore this opportunity, not to mention the very tangible territorial cohesion results achieved in the course of European integration, means effectively aiding the menacing portrayal of Europe as a ‘failed neoliberal project’ that ought to be dismantled (Apeldoorn, Drahokoupil, & Horn, 2009; Elliott, 2016). The UK Brexit experience will undoubtedly provide a good litmus test of how socially progressive such political posturing has been.

## TERRITORIAL COHESION AND EUROPE’S CHANGING URBAN HIERARCHY

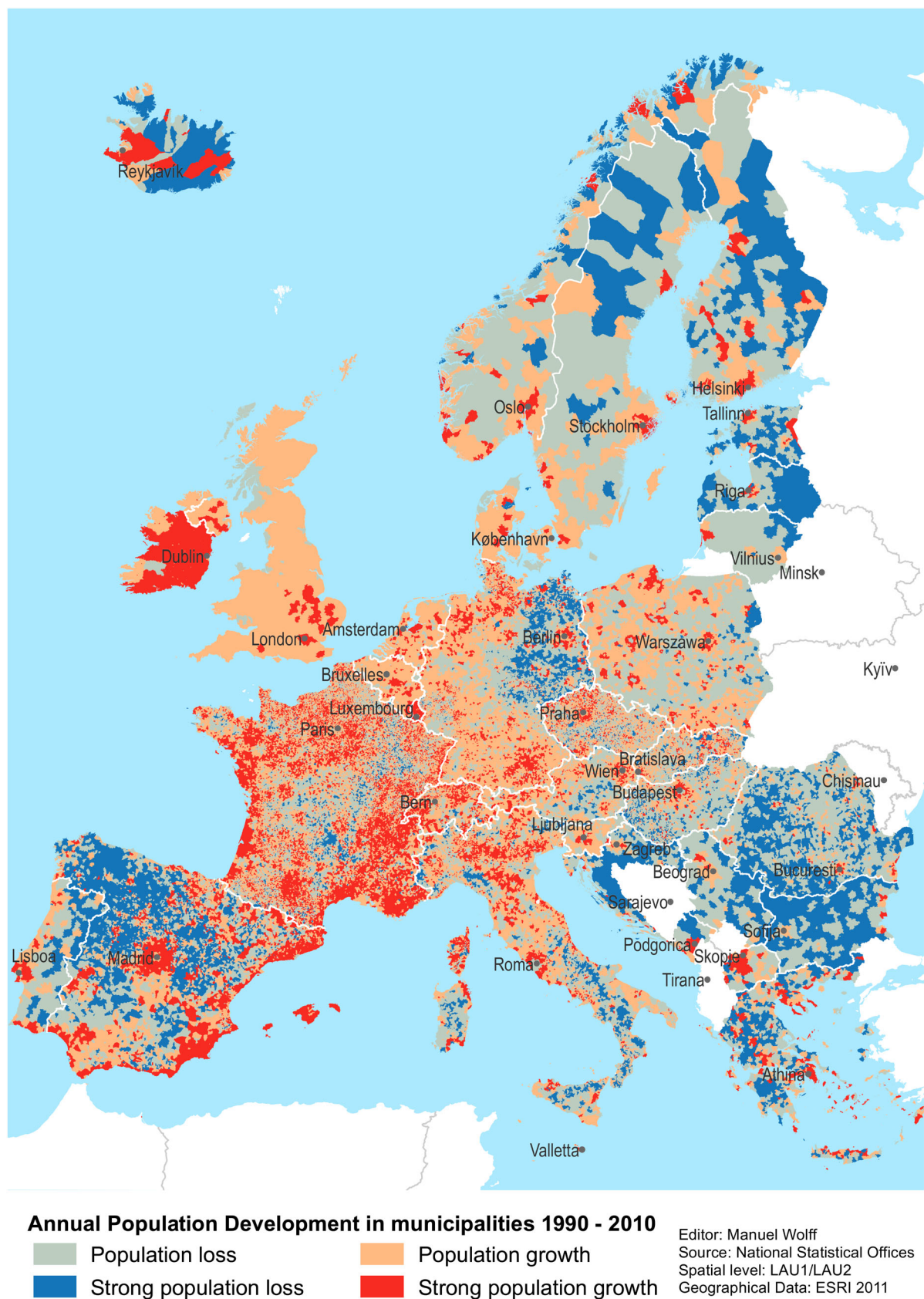
Having examined the post-1970s’ European territorial cohesion trends at four different scales (from the MS down to the NUTS-3 level), this section ultimately zooms into the local scale of local authority units (LAU-1–2). Here the paper deals with absolute population figures for 92,773 municipalities inhabited by 511,924,257 people across the EU and associated countries, with 7585 of these local authorities being cities with 5000 residents and above. The local-scale evidence on population trajectories presented here corresponds to the national and regional economic convergence analysis above. It is also rather conclusive with regard to the rescaling hypothesis about the ever-polarizing European urban hierarchy; the vast majority of European cities have been *growing* rather than shrinking throughout the 1990s and 2000s. The population change data were further broken down (see Table A4 in Appendix A in the supplemental data online) by city size, growth trajectories (shrinking, stable or growing), old, new and associated MS, in absolute numbers and percentage terms. The evidence shows that of all cities across Europe, 65% registered strong population growth over the period 1990–2010, a further 15% maintained their population levels and only 20% experienced shrinkage. Whilst only 30% of cities in the formerly communist Eastern Europe reported population growth during the period 1990–2010, 73% of their counterparts in Western Europe appeared in that category.

Amongst all municipalities, both urban *and* rural, 62% (or 57,365 LAUs with 343,709,083 inhabitants in total) enjoyed a rise in population between 1990 and 2010; only 38% (35,408 LAUs with 168,215,174 population) registered population loss. Figure 5 indicates that shrinking municipalities have primarily covered vast rural areas in northern, eastern and southern peripheries of Europe. As east European workers move westwards, their home cities (and villages) have to adjust to a smaller labour pool, whilst attracting capital from the West. The data presented above further corroborate the earlier evidence about the process of spatial economic convergence, proceeding through the outflow of Europe’s surplus labour resources from the poor to the rich localities, regions and countries, whilst surplus capital travels in the opposite direction. By 2015, five East European cities had managed to move up above the EU-28 average level of per capita income (measured in purchasing power standards), with Bratislava becoming Europe’s sixth *most affluent* city (at 186%), Prague appearing in ninth place (173%) and Bucharest in the 47th (129%), jumping well above Madrid, Hannover and Berlin.

## DISCUSSION: STATE RESCALING AND UNEVEN ECONOMIC DEVELOPMENT IN EUROPE AND BEYOND

This paper’s findings pose a fundamental challenge to State/Space theory as far its prescriptive and normative powers are concerned. First, they provide additional





**Figure 5.** Population change across Europe: municipalities, 1990–2010.

ammunition to those who find the theoretical claim of a fundamental state rescaling in Europe to be grossly exaggerated, if not entirely trivial (Cox, 2009).

Second, the paper further questions one-dimensionalism of capitalist accumulation (Jessop, Brenner, & Jones, 2008). The spatial logic of capitalism, frequently evoked



in the literature, is found to lack an adequate explanation of territorial cohesion trends in Europe vis-à-vis North America and BRICS. Indeed, several recent empirical studies have refuted rather crude instrumentalist explanations of state rescaling as a (transnational) capitalist class project. Keating and Wilson (2014) discovered how Europe's big business on many occasions turned out to be hostile to many rescaling initiatives, fearing a potential fragmentation of markets, multiplication of regulation and the loss of administrative simplicity. Territorial interests and the interests of European capital often collide, with the latter losing the contest (Keating, 2014). Thus, we can confirm an earlier assertion made by Gibbs and Jonas (2001, p. 274) that 'state territorial structures are neither fully determined by, nor indeed are necessarily functional to, the needs of (regional, national, global) capital' (cf., Lobao & Adua, 2011).

Third, the findings also lend further support to econometric modelling-based studies of the impact of state rescaling on territorial cohesion (Rodríguez-Pose & Gill, 2005). As argued by Ezcurra and Pascual (2008), Lessmann (2009, 2012) and Rodríguez-Pose and Ezcurra (2010), the devolution of fiscal power to subnational governments (i.e., the downscaling of statehood) tends to be negatively correlated with the level of regional inequality across industrially advanced Western societies: in rich countries, at least, a higher degree of decentralization is associated with lower regional imbalances. Nationally, Torrisi, Pike, Tomaney, and Tselios (2015) reported no evidence of the post-1996 devolution in Italy leading to an increase in regional disparities; quite the contrary, they found a reduction of dispersion of disposable household income per head over the period 1995–2007 (cf. Pike, Rodríguez-Pose, Tomaney, Torrisi, & Tselios, 2012). Charron (2016), using aggregated regional-level data from the EU MS between 1995 and 2008, further confirmed the positive relationship between the downscaling of state capacity and territorial cohesion, with decentralization resulting in lower regional inequalities. Going further down the scale towards the individual level of interpersonal income distribution, Tselios, Rodríguez-Pose, Pike, Tomaney, and Torrisi (2012) pointed out that greater fiscal decentralization in Western Europe has been *unambiguously* associated with lower income inequality within regions: 'against the views that worse-off regions would be disadvantaged because of capacity and funding constraints ... it is precisely these less well-off regions which seem to be benefiting the most from the inequality-reducing effects of fiscal decentralization processes' (p. 1296).

Finally, the findings suggest that amongst many mechanisms driving Europe's regional convergence, one ought to mention the ever-present role of the state. As maintained by Storper (2016, p. 243), the comparative data simply do not support the claims made in the radical geography literature that state rescaling is associated with blanket neo-liberalization and the collapse of spatial Keynesianism (see also Martínez-Vázquez & Timofeev,

2009). The beneficial impact of the EU Cohesion Policy can no longer be ignored in this regard.

To conclude, despite its huge acclaim amongst critical social scientists (e.g., Soja, 2010), State/Space theory features significant flaws. As argued by Beauregard (2012, p. 479), critical theory par excellence must be explicitly aimed at exposing the mere appearances and hidden mechanisms of injustice and mystification, highlighting the gap between 'society as it is from society as it could be'. Yet, even the most sympathetic readers of the rescaling of capitalism ought to concede that the empirical observations of Europe's post-1970s' spatial economic development can hardly be explained, if at all, by the general rules of State/Space theory. And despite the often acknowledged – and cherished – epistemological, ontological and methodological differences between positivist and post-positivist science, to many concerned observers the radical geography literature reviewed above has become nothing more than an indiscriminate critique of private enterprise under an 'ominous, anti-liberal, anti-capitalist drumbeat' (Storper, 2016, p. 258; see also Overman, 2004).

The central proposition of State/Space theory is that the rescaling of statehood as the key accumulation strategy of the ruling capitalist class is supposed to result in ever-rising levels of spatial economic divergence, polarization and marginalization. Without conflating regional and individual income inequalities, this paper has shown that Europe's territorial economic development for the period 1980–2015 was characterized by economic convergence, with the poorest regions catching up fast in per capita GDP terms. The comparative analysis presented here has also shown that the territorial structures of political power in Europe are highly *undetermined* and potentially dysfunctional as far as the perceived needs of (global) capital are concerned. The concreteness of Europe's territorial cohesion presents an unsolvable anomaly for rescaling theory. As recently argued by Peck (2016):

beyond the simple tropes of seesawing or slash-and-burn dynamics, which in their own away appeal to pendular metaphors that are actually rather inapt for what are always historically cumulative, non-repeating patterns, dealing with (combined and) uneven development calls for the kind of epistemological gymnastics that many prefer not to attempt. (p. 316)

With the validity of State/Space theory being fundamentally challenged, and its potential for collective progressive action severely compromised, is this not the right time to bring down the curtain on the scalar turn?

It is contended that a definitive answer to this question depends on the ability and willingness of State/Space theorists seriously to pursue what is arguably the most promising and underdeveloped theme in literature to date, namely, the rescaling of contentious politics. As argued by Uitermark (2002), the fragmentation of the national scale has undermined the privileged position of the

nation-state as the natural platform, where capital and labour used to negotiate, bargain and compromise. Accordingly, by downscaling the political decision-making towards local and regional entities, capital makes the less mobile, locally dependent social entities relate their material well-being directly to the relative fortunes of the place where they live. Consequently, interests of members of the same class faction residing in other cities and regions may appear antagonistic, whilst improving the competitive standing of one's own city within the transnational value chains and global production networks could become an increasingly attractive and efficient strategy for diverting scarce resources to your advantage. In turn, by upscaling and reconfiguring political processes onto higher (supra-national and global) scales, capital can limit further organizational opportunities for class politics, mounting legal, practical and administrative hurdles for any working-class faction trying to operate across national boundaries and cultures. Whether and how state rescaling has prevented the latent class struggle from becoming manifest is the State/Space research agenda well worth pursuing.

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## ORCID

Vlad Mykhnenko  <http://orcid.org/0000-0001-8944-0608>

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