



## Working Papers

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# Why Regional Development matters for Europe's Economic Future

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*Regional and  
Urban Policy*

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## > ABSTRACT

Regional economic divergence has become a threat to economic progress, social cohesion and political stability in Europe. Market processes and policies that are supposed to spread prosperity and opportunity are no longer sufficiently effective. The evidence points to the existence of several different economic clubs of regions in Europe, each with different development challenges and opportunities. Both mainstream and heterodox theories have gaps in their ability to explain the existence of these different clubs and the weakness of the convergence processes among them. Therefore, a different approach is required, one that would strengthen Europe's strongest regions but would develop new approaches to the weaker clubs. There is ample new theory and evidence to support such an approach, which we have labelled "place-sensitive distributed development policy" (PSDDP).

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## > EXECUTIVE SUMMARY

### The challenge

In the new millennium, inequality among the European Union's regions has turned sharply up again having fallen in the 1990s from high levels in 1980. Small and medium-sized manufacturing cities and regions have persistently suffered relative declines in employment and income. Their surrounding suburban or rural areas have also tended to stagnate. In contrast, many large metropolitan areas, including their suburbs, which had generally suffered a decline in the 1960s-1980s, are now among the most dynamic areas in terms of the creation of income and employment.

Increasing interregional inequality is the outcome of two forces. The first is related to the long development cycle in the economic structure. The major wave of technological innovation that began in the 1970s has stimulated the concentration of high-technology and knowledge-intensive sectors in large metropolitan areas, favouring the mobility of highly skilled, non-routine and creative jobs towards economic cores. The increasing automation of previously dominant manufacturing industries has revolutionised trade costs and resulted in the substitution of routinised medium- and low-skilled jobs in most of Europe's former industrial hubs. Manufacturing activity has become more geographically dispersed – and increasingly outsourced to third countries – leading to the demise of the more routine industry jobs across most of Europe. The second type of force is the long cycle of regional evolutionary features, comprising place-specific endowments of people and skills, firms and industries, formal and informal institutions, capabilities for innovation, and their reaction to change.

The rise in inequality has put Europe in a territorial conundrum. On the one hand, it must continue to sustain the prosperity of its most dynamic regions in order to assert its economic position in the world. While on the other, persistent territorial inequality is economically inefficient and, in the words of *The Economist*, has become too politically [and socially] dangerous to ignore.

### Evidence: economic “clubs” of Europe's regions

The club theory addresses the uneven pattern of development and the core question of sustaining prosperity in leading regions while enhancing it in other regions. It is a way of generating powerful insights into development and a distinctive perspective on policy.

Club membership is determined by economy-wide forces that define the overall ladder of possibilities, interacting with a variety of regional characteristics that determine the role of regions. European regions can be allocated to different economic clubs, depending on their level of development: regions with very high per-capita personal income (PCPI) (VH); regions with high PCPI (H); regions with medium PCPI (M); and those with low PCPI (L).

The VH club is dominated by a few very large metropolitan regions or capital city-regions, but also encompasses a few additional regions – generally highly urbanised via a network of cities – specialising in very-high-quality goods and services. They constitute the group of leading regions which are generating more than their fair share of European prosperity.

The H club shares many characteristics with the VH club. These regions tend to be somewhat less metropolitan or city-centred than the VH club and less dynamic in demographic terms. Their employment rates are high and many have satisfactory productivity growth per head, although not all areas in this club (e.g. south-east England, Benelux, northern Italy, Catalonia as well as many German regions) share this dynamism.

The M club in Europe mainly consists of parts of north-western Europe that are outside the VH and H clubs. Two main sub-groups can be identified within this category. The largest comprises regions that have lost manufacturing jobs, which is often reflected in stagnant or declining employment rates, low population growth or even decline. Education levels are below those of the H and VH clubs. These regions are economically fragile because of various combinations of declining manufacturing, unsatisfactory educational and skills attainment, and inadequate labour force participation. A second group stands out because it is either experiencing population growth – often amenity-driven growth – or new phases of industrialisation following recent EU integration.

The L club consists of large swathes of eastern and southern Europe. The southern EU regions in the club are those with long-standing issues related to productivity, specialisation, skills and labour force participation. The eastern European regions exhibit noticeable differences: they have higher education levels than the southern and western L-club members, but tend to experience higher population loss.

## Theory: efficiency versus equity

Despite their different fundamentals, endogenous growth, new economic geography (NEG) and evolutionary economic geography theories all indicate that greater agglomeration generates positive externalities. Such externalities are behind the dynamism of large cities and regions. A common feature of all these theoretical streams has been an acknowledgement of the role of geographical space in lowering barriers and costs of knowledge sharing and transmission across a range of networks as a decisive factor behind the strength of cities, industrial clusters and regional innovation systems.

Researchers in NEG and urban economics have mainly sided with the view that, in terms of development, efficiency is paramount and that equity may derive from greater efficiency. The compensation mechanisms for less-favoured regions act through knowledge spillovers and labour mobility.

However, knowledge spillovers are far from a panacea for the development of declining and lagging areas. First, the mechanisms through which knowledge flows occur have yet to be properly identified. Second, the backwash effects driving knowledge towards agglomerations are generally greater than those stimulating knowledge diffusion – through linkages and networks. Third, knowledge diffusion suffers from strong distance-decay effects: its effect in Europe is barely felt beyond 200 kilometres from the place where the knowledge is generated. As a consequence, knowledge creation – often proxied by R&D – tends to spur further inequality, rather than reduce it.

Labour mobility is also failing to reduce territorial inequality. Migration – especially within-country – is increasingly adopting a ‘not-so-much, not-for-all, not-for-free’ pattern. Within-country migration trends have remained relatively low in Europe over the last three decades. Moreover, worker migration is highly dependent on skills and occupation profiles. As productive capital and economic functions reorganise constantly across and within national borders, highly skilled workers in non-routine occupations have more national and international opportunities. Low-skilled individuals in routine jobs, often in less-developed areas, are not afforded this luxury and generally just stay put.

Theories of convergence imply that with increasing connectivity – through Europeanisation and globalisation – flows of knowledge, people and skills via more integrated value chains will naturally improve the capabilities of less-favoured regions and promote convergence. However, connectivity is also double-edged: in the current wave of development, the hierarchy-reinforcing (backwash) effects are stronger than the spread (convergence) effects.

The notion that attempts to spread out innovation capabilities and improve connectivity are going to destroy the benefits of agglomeration cannot be sustained by theory or any robust empirical evidence. Nor is there any strong evidence that high growth in large agglomerations acts as a catalyst for greater economic activity in less-developed regions.

## Policy: beyond the place-people divide

Hence, pursuing efficiency does not guarantee equity, while focusing exclusively on equity could undermine efficiency. Thus, there is a need to pursue efficiency and equity at the same time, although neither spatially-blind nor place-based policies alone are in a position to do so.

Policy alternatives that simultaneously take efficiency and equity into consideration are best positioned to challenge the causes of territorial distress while, at the same time, maximising the potential of every territory. Place-sensitive policies – that are guided by development theory and the structural opportunities and constraints of each club – are needed to maximise the development potential of each territory, creating greater opportunities for the resident population.

In Europe, tackling territorial distress while simultaneously promoting greater overall efficiency can be achieved by distributed development policies. Place-sensitive distributed development policies (PSDDP) refer to an innovative development policy approach that is well grounded in the key concepts emanating from development theory, while remaining sensitive to the characteristics, features and conditions of every territory. Different development clubs require different policy approaches. PSDDP offers a viable option to promote the economic development of the most dynamic places in Europe while, at the same time, countering the potentially negative spiral of geographically restricted development on three fronts by: a) pushing more and more regions towards more non-routine (innovative) functions in their economic mix; b) expanding the sources of creativity and satisfaction that are good in and of themselves on human grounds; and c) stimulating greater investment in basic capabilities that are essential to a dignified and creative life.

PSDDPs for the VH and H regional clubs must sustain Europe's world-class regions in the face of global competition by innovating to renew their specialisation in high-wage activities and supporting them in moving up the technology-quality ladder.

PSDDPs for the L club must mobilise land and labour at low cost and overcome manifold existing barriers to productivity. They must overcome competition with developing-world regions through a total factor productivity improvement strategy while, at the same time, tackling poor institutional quality.

PSDDPs for the vast array of Europe's M club regions must overcome their "middle income trap", which involves being too expensive for some activities but not innovative or productive enough for others.

# 1. THE CHALLENGE<sup>1</sup>

“Regional inequality is proving too politically dangerous to ignore”  
The Economist, 17 December 2016

In the new millennium, in the European Union, inequality among NUTS-2 regions has turned sharply up again having fallen in the 1990s from a high level in 1980 (prior to intensified European integration). This is not uniquely a European problem, but one common to many countries, both developed and developing. The inequality in income per person among US metropolitan areas was 30 % higher in 2016 than in 1980 (Ganong and Shoag, 2015).

In many countries, since the late 1970s, a combination of globalisation and technological change (and some policy choices) have generated what are known as the “great inversion” and the “new geography of jobs” (Moretti, 2012; Storper, 2013). The inversion concerns the fact that many rural regions and middle-to-small metropolitan areas that were once quite prosperous have been characterised by a combination of job loss, declining labour-force participation or declining per-capita income relative to the national average. In some others, employment may be increasing but on average is not of high quality, comprising more routine and relatively less-skilled jobs in the new economy. More specifically, centres of small and medium-sized manufacturing cities continue to suffer from a decline in employment or relative income, while their surrounding suburban or rural areas are characterised by income stagnation.

In contrast, many large metropolitan areas, including their suburbs, which had generally suffered a decline in the 1960s-1980s, are now among the most dynamic in terms of income and employment creation. In Europe, the panorama is even more complex. On the one hand, the increasingly familiar dichotomy persists between dynamic large agglomerations and stagnating industrialised and remote regions. Many industrial declining and/or peripheral regions continue to suffer a steady long-term decline in employment and competitiveness, whereas the inner areas of some large metropolitan regions continue to gain high shares of high-wage jobs. (Inner London now generates more employment than the rest of the south-east UK region, for example). On the other hand, many capital metro regions have been hard hit by the crisis, while some rural and intermediate regions have displayed more resilience (Dijkstra et al., 2015). The result is a finely-grained, multi-scale, territorial patchwork of diverging real incomes and rates of labour force participation: between states and regions; within regions, between core areas and peripheral areas; and between prosperous metropolitan regions and less-prosperous ones.

The current regional disparities can be seen as the outcome of two groups of forces. The first is the long cycle of development in

the economic structure, consisting of a major wave of technological innovation that began in the 1970s. This stimulated output in advanced technologies, finance and advanced services sectors that depend on agglomeration economies and therefore whose core, non-routine jobs favour large metropolitan areas and draw from pools of skilled workers in high-turnover labour markets. This wave of technological change also reduced employment in many previously dominant manufacturing sectors through automation, and has reduced the cost of B2B trade within their value chains, enabling them to become more geographically dispersed, away from their traditional regional heartlands to areas with lower-cost labour (Levy and Murnane, 2005). These long-wave or long-cycle technological changes have been coupled with an expansion in world trade, itself an outcome of the ways such technologies have reduced trade costs, and in conjunction with policies for lowering trade barriers. Together, these changes discourage employment creation and quality at the intermediate and some lower-skill echelons, whilst enhancing job opportunities for those with the highest skills. As different skill groups have increasingly become concentrated in different places, recent trends have by and large favoured metropolitan regions, which benefit from agglomeration economies, positive externalities, and knowledge spillovers, often at the expense of some intermediate and peripheral regions.

The second type of force is the long cycle of regional evolutionary features, consisting of place-specific endowments of people and skills, firms and industries, formal and informal institutions, capacities for innovation, and their reaction to change. The changing structure of the economy interacts with the characteristics of regions to generate a pattern of development. At certain points in the past, this interaction has provided strong opportunities for lifting less-developed regions upwards, in a process of interregional convergence. But since the 1970s, and especially in the new millennium, it has generated divergence. This is because the current long wave of development fundamentally favours geographical concentration of the best jobs and most innovative activities. But it is also because migration between regions has slowed down, and certain kinds of “traps” have emerged in the less-favoured regions, comprising a mixture of low incomes and skills, low labour-force participation, institutions that stifle development, and social dysfunction in the form of despair, withdrawal from economic life, and health problems.

In this study, we will argue that Europe faces a double challenge. It must continue to sustain the prosperity of its most prosperous regions, which are its city-regions because, as we will show, they are the fundamental motors of Europe’s overall prosperity. However, the divergence between these places and much of the rest of the EU has now reached a point where declining prosperity and lack of real opportunity are not only becoming economically inefficient, but also socially and politically dangerous. Therefore, as a whole, Europe’s economic future now is, more than ever, the future of its regions.

<sup>1</sup> We are extremely grateful to Peter Berkowitz, Lewis Dijkstra and Eric von Breska at the European Commission for pushing through this project and constantly challenging our ideas during the months leading to the drafting of the manuscript. Lewis Dijkstra and his team at DG REGIO also provided invaluable support by putting together the datasets and drawing the maps included in the manuscript. Participants at the European Commission/LSE Conference on Reassessing economic development policies for regions and cities, held at the London School of Economics on 21-22 April 2016, provided their views and discussions to inform many of the ideas presented in this paper, as did participants at a joint EPSC/DG REGIO high-level seminar, held on 3 May 2017 in Brussels. The European Commission’s financial support through contract no. 2017CE16BAT038 is gratefully acknowledged.

## 2. THE CURRENT PATTERN AND ITS CHALLENGES: THE ECONOMIC CLUBS OF EUROPE'S REGIONS

The interaction of economy-wide forces and regional characteristics generates a geography made up of countries, regions and city-regions that are at different structural positions in the wider economy's ladder of roles and functions. The issue is not whether, at any particular moment, there is perfect convergence or equality in development levels; there never is. Instead, we must identify possible short- and medium-term regional development pathways relative to this broader structure. This consists in specifically determining whether prosperous regions are sustainably prosperous, and whether less-prosperous regions have opportunities to converge upwards.

A summary indicator of development is per capita personal income (PCPI), or GDP per head. GDP per head for the economy of any given country, region or city-region is a good indicator of many of its key characteristics<sup>2</sup>. Economies at similar per capita income levels share many structural attributes, including their levels of education, science and technology endowments, infrastructure quality, and institutional quality. Conversely, between economies with dissimilar income levels, these structural attributes are significantly different. Because these different aspects of the economy tend to vary together, we can say that there are "development clubs" of nations, cities and regions. Clubs differ systematically across these dimensions<sup>3</sup>.

A very-high-income economy, for example, has high wages and levels of labour force participation, whereas a low-income economy has a combination of low wages and low participation levels. The high-income economy must resist cost competition from below by continuing to innovate or capture innovative, high-wage sectors. A high-income economy must also find ways to regenerate its advantages over economic cycles ('resilience') and avoid falling down the ladder of regions. The low-income economy can mobilise low-cost capital and labour to capture activities susceptible to being relocated in search of cost compression. Middle-income regions, as we shall see, face a particular challenge because they are neither very cheap nor extravagantly innovative or productive.

Therefore, each club has specific needs and challenges related to its starting point and its near- to medium-term prospects in relation to those of the other clubs. Another way of capturing the two sides of the development process is to say that economy-wide change is continuously sorting and resorting activities to different regions, as well as altering the overall mix of what the economy does and how it does it; and regions have different local strengths and weaknesses that position and re-position them in this landscape. Thus, local economic performance is related to specific local conditions, although these only become development outcomes in light of the overall conditions set by the ladder of functions in the economy.

Grouping economies into clubs in this way provides a way of generating powerful insights into development and a distinctive perspective on policy. There are some generic lessons about development that apply to all economies. These concern the microeconomic rules of good practice and sources of productivity, market formation and so on. These insights are fundamental, but they do not get us very far in understanding the specific tasks for the different clubs, except to suggest that the less-wealthy clubs should somehow become like the more-wealthy ones, or frequently that rich places should become cheaper while poor places should become more productive. A financial centre such as Frankfurt (DE) and an old manufacturing city such as Lille (FR) must both follow these general rules of good practice, but their near- and medium-term perspectives and tasks are profoundly different from one another. In contrast, club theory directly addresses the uneven pattern of development and the core questions of sustaining prosperity in leading regions while enhancing it in other regions, and in particular overcoming the barriers that exist in the less-favoured regions.

For this analysis of EU NUTS-2 regions, we have distinguished four clubs: very high GDP per head (VH); high GDP/head (H); medium GDP/head (M) and low GDP/head (L)<sup>4</sup>. In the following analysis, "very high PCPI" means 150 % of EU average or greater (and in the national analysis, 150 % of national average or greater); "high" means 120-149 % of EU or national, "medium" signifies 75-120 %, and "low" identifies regions with less than 75 % of EU or national GDP per head.

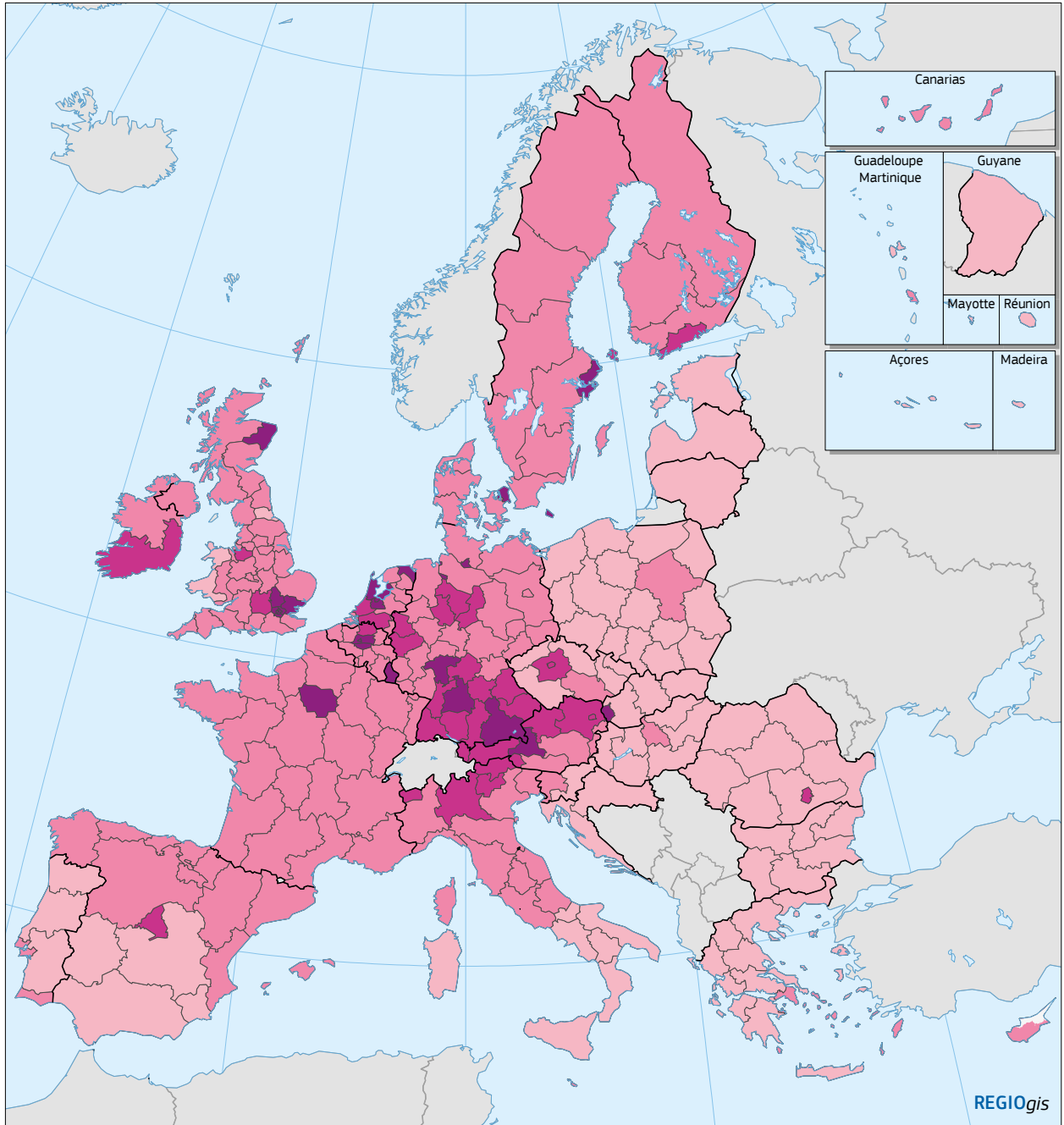
Club membership, as we noted, is determined by economy-wide forces that define the overall ladder of possibilities, interacting with a variety of regional characteristics that determine a role for regions (in the overall economy-wide division of territorial functions). Over time, as economic waves unfold, regions follow pathways either going up or down compared to other regions. In addition, the economy of each region in Europe is shaped in part by being in the EU, but also strongly by how well its national economy is navigating economic change in each wave of development. The reason that national effects are important for regions is that interactions – the mobility of people and firms – among regions within a national economy should in principle be stronger than interactions across borders with other EU countries or the world at large. Moreover, countries are by definition at a scale whereby there are strong common institutions and rules that affect all their regions, as well as considerable redistribution of income among them. Any attempt to identify clubs of regions in Europe must therefore distinguish between that part of a region's performance that is transmitted from the national development level (club) to the region, and that part relating to the region's performance relative to the national level.

Map 1 shows the four economic development clubs of EU regions. The VH club mainly encompasses a number of large cities – many of them national capitals – at the core of Europe, while the H club has its centre in the Alpine area but involves a large number of cities and national capitals elsewhere in the EU. Then there are two other broad areas, a large middle-income part embracing the majority of the western side of the EU, and a low-income part to the south and east.

<sup>2</sup> There has been considerable controversy about the extent to which GDP per capita represents a good indicator of economic development. This is not the right place to discuss in-depth the advantages and disadvantages of using GDP as a proxy for economic development. The predominant view these days seems to be to supplement "GDP with a dashboard that incorporates measures of environmental impacts, health and social indicators" (Coyle, 2016: 474). However, this option is not without controversy as, on the one hand, GDP provides a useful and widely accepted indicator and, on the other, many of the alternatives proposed are: a) controversial (Dasgupta, 2014); b) seem to be ad hoc and not necessarily "rooted in any well-defined notion of social well-being" (Dasgupta, 2013: 20); and c) they are often overly complicated and include problematic trade-offs across their basic components (Ravallion, 2012a and 2012b; Fleurbaey and Blanchet, 2013).

<sup>3</sup> The notable exception to this observation is economies that depend on highly-priced natural resource exports. We sometimes observe high PCPI levels in those economies without the attendant structural features. In the long-run, however, such weaknesses tend to catch up with them, in a phenomenon known as the "resource curse".

<sup>4</sup> In international development economics, the rule-of-thumb is often for low-, medium- and high-income countries, although sometimes a very low category is added for those economies that are only weakly related to the world economy. In a developed region such as Europe, it seems reasonable to add a VH category, as will be seen in the data.



### The Economic Development Clubs of European Regions

- Low
- Medium
- High
- Very High
- no data

0 500 km

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**Map 1: The economic development clubs of European regions**



The demographic and labour-market characteristics of these four clubs are markedly different and shed light on the very different challenges each faces. Figure 1 reveals that total population change follows the club gradient: people are going to higher-income areas and, in the case of the low-income club, more are leaving than staying. Map 2 adds nuance to this relationship by mapping the growth rate of population according to club. Many high-income regions are also experiencing high rates of population increase. A significant exception to this rule is much of Germany which has high

income but low population growth. Two other cases stand out: many low-income regions are experiencing low population growth – in eastern Europe, western Iberia, southern Europe, and the declining manufacturing regions in north-eastern France and northern England. Some low-income regions are enjoying higher population growth, as in southern and western France, or southern Spain, and some areas of Britain. These are mainly areas with a combination of high amenities and a lower cost of living, and with many pensioners.

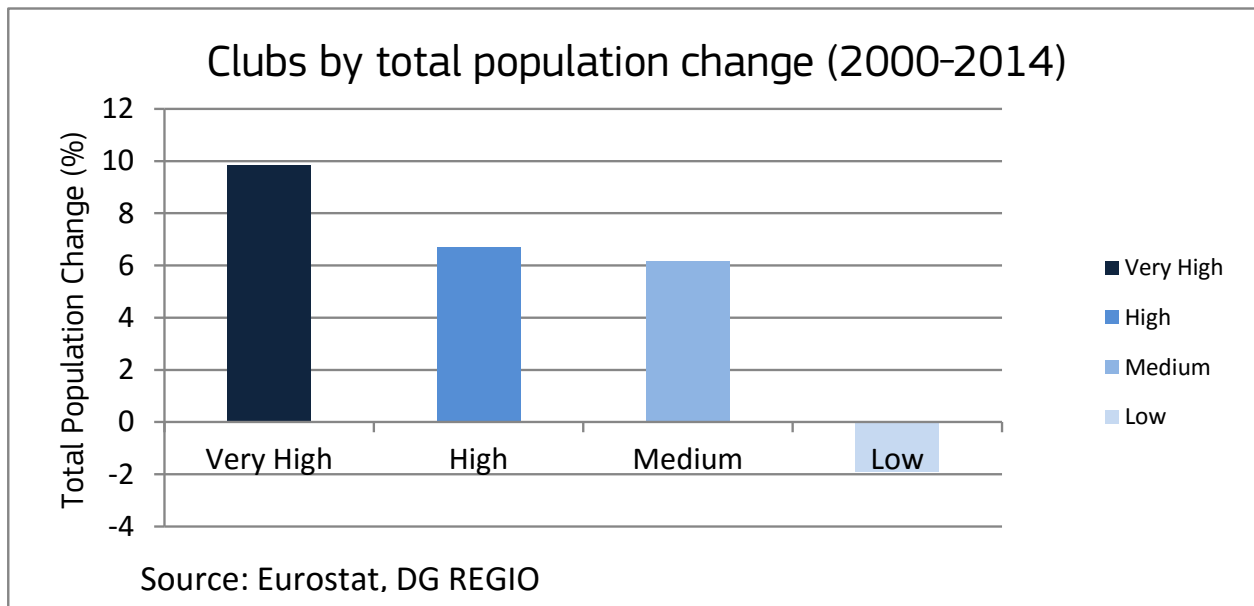
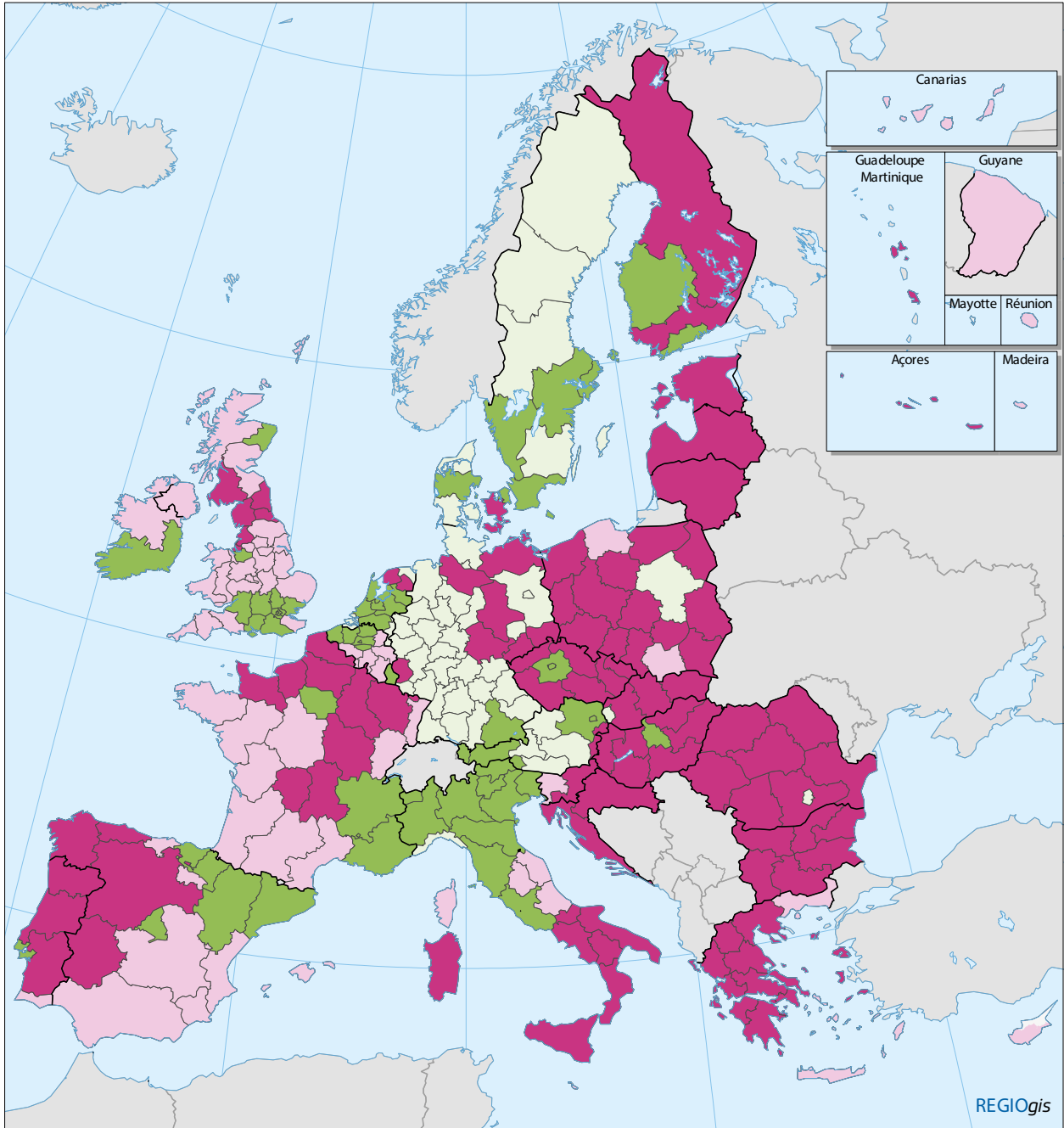


Figure 1: Clubs by total population change (2000-2014)



**GDP per head (2013) vs. growth rate of population (2001-2013)**

High and Low as compared to EU average



Source: Eurostat, Cambridge Econometrics, DG REGIO

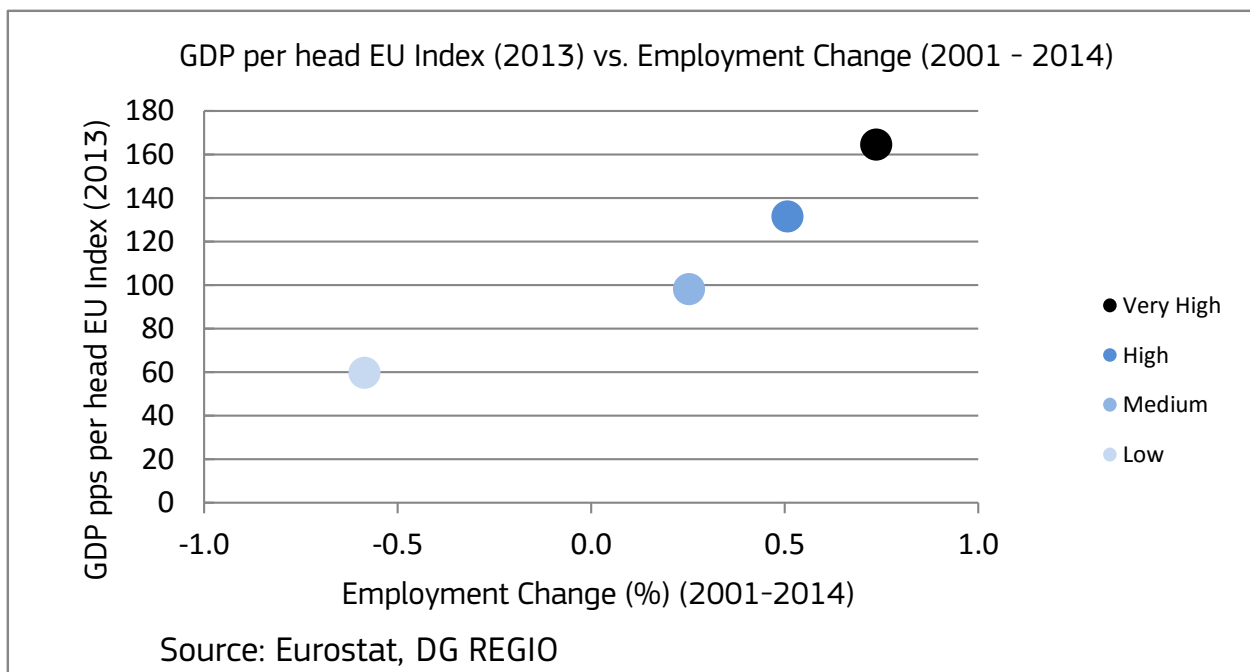


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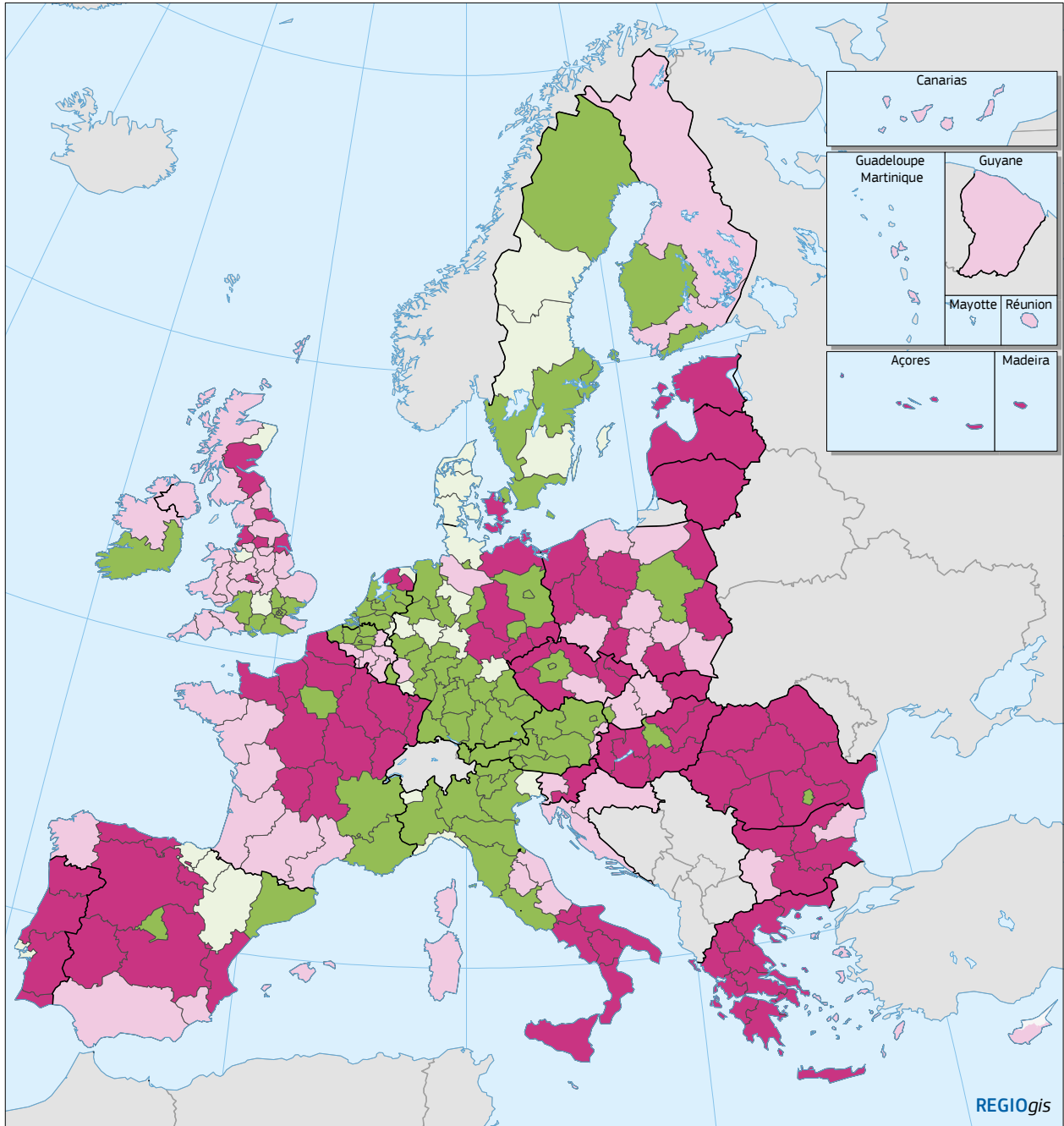
**Map 2: GDP per head (2013) vs. population growth rate (2001-13)**

Additional insights are provided by examining the labour markets of the different clubs. Figure 2 shows that employment is essentially stagnant (in the aggregate) in all the clubs except the high and very-high income groups. This reflects the fact that, during the new millennium, employment creation has been low in Europe as a whole, although it also shows that very prosperous regions have continued to create jobs. Map 3 (which uses a less detailed breakdown by club than Figure 2) shows several different dynamics. Most of the high-income regions continue to create new employment, which is the familiar core European geography of economic performance. There are only a few high-income regions with low employment changes, and these might be special cases

for attention. The low-income club displays a familiar division between de-industrialising regions, with low change or loss of employment, and amenities-rich or new manufacturing areas (the latter especially in eastern Europe), with an increase in employment. But notice that in this latter group, incomes are not x keeping up with employment changes everywhere, probably because in some of these regions (e.g. western France) the number of service jobs is growing to serve the amenity-seeking core population, but does not comprise jobs in tradeable goods and services with high innovation and high skills. This is a familiar pattern in other places too, such as Arizona and Florida in the United States.



**Figure 2: GDP per head EU Index (2013) vs. employment change (2001-14)**



**GDP per head EU Index (2013) vs. Employment Change (2001-2013)**

High and low as compared to EU average



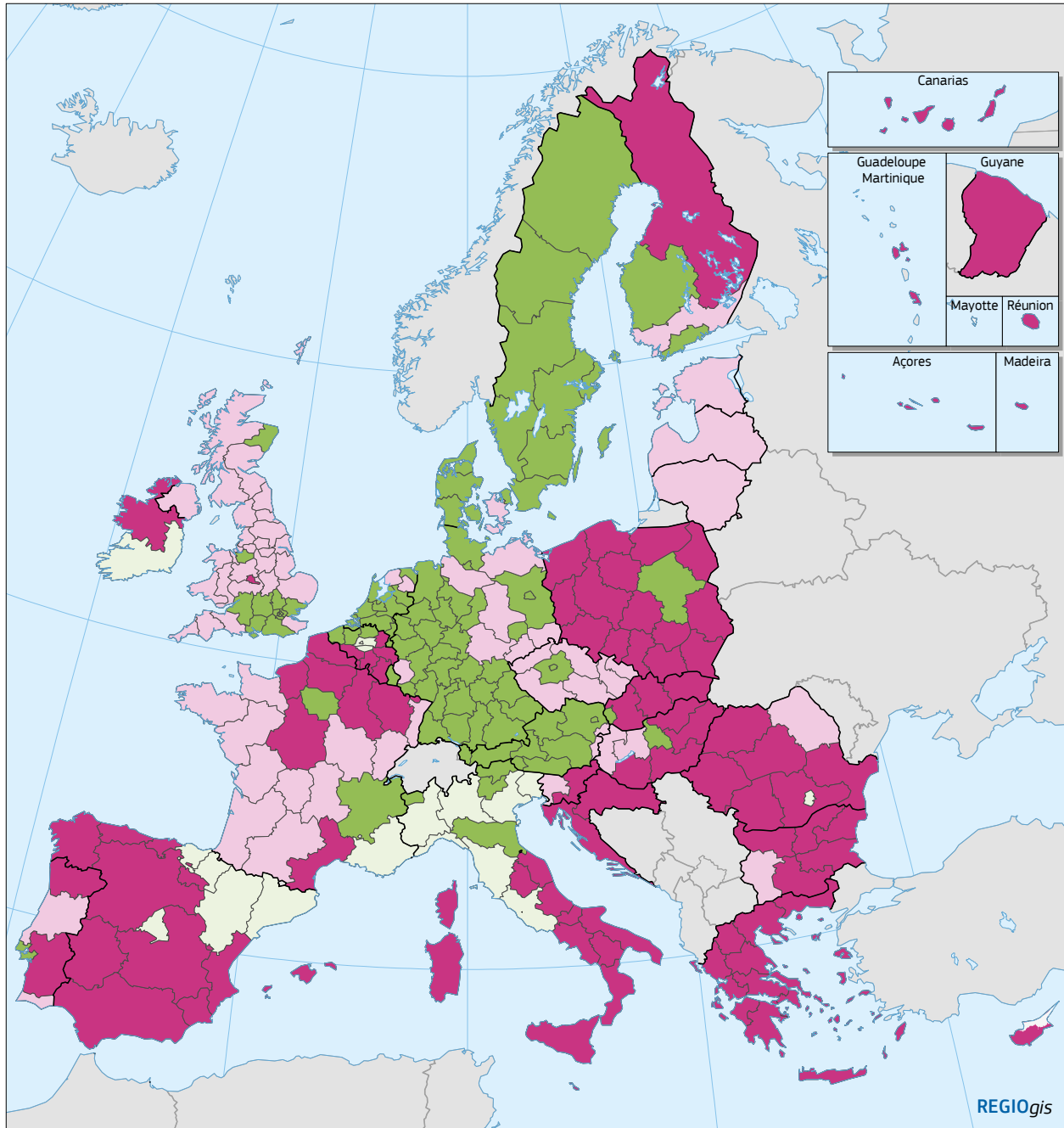
Source: Eurostat, Cambridge Econometrics, DG REGIO



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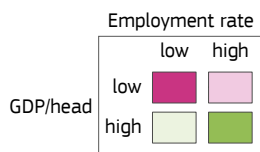
**Map 3: GDP per head EU Index (2013) vs. employment change (2001-13)**

Digging deeper, in Map 4 we observe that most of the regions in the high-income clubs have high rates of employment (labour force participation), although there are some (mostly Italian and Spanish) exceptions to this pattern.



**GDP per Head EU Index (2013) vs. Employment Rate (2015)**

High and Low relative to EU average



Source: Eurostat, Cambridge Econometrics, DG REGIO

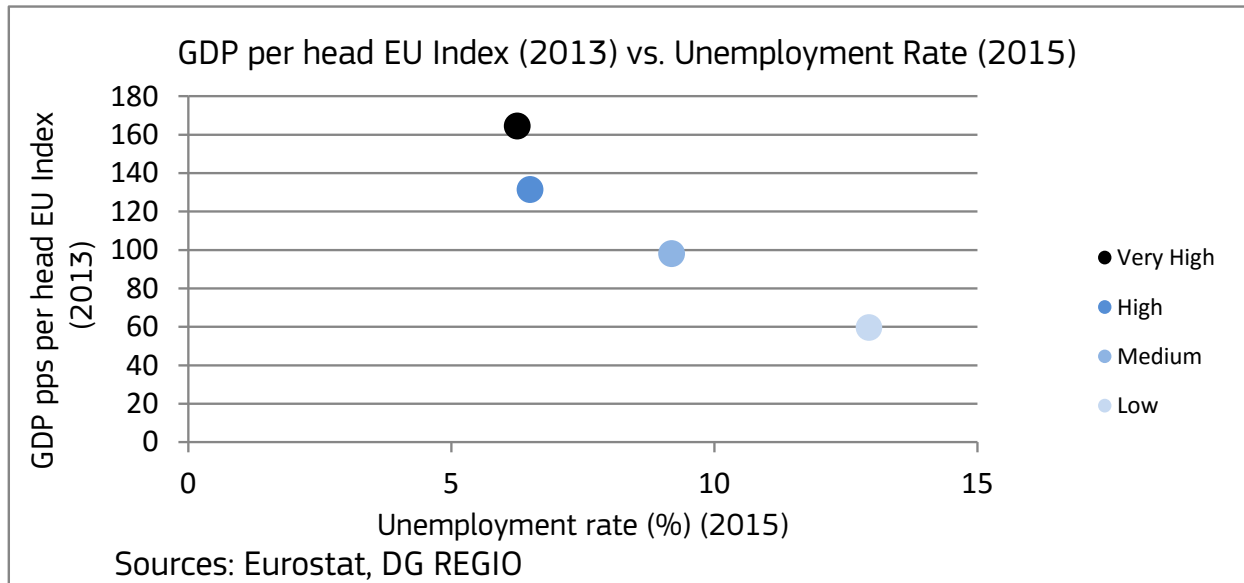


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**Map 4: GDP per head EU Index (2013) vs. employment rate (2015)**

Figure 3 shows that unemployment rates reflect the development patterns generally highlighted for the four clubs, but it should be viewed with caution in within-group comparisons. In fact, as labour markets in Europe are still predominantly national, some of the very-high-income regions have a higher unemployment rate than the medium- and low-income clubs. Unemployment rates are the result of the complex interaction of demographics and labour market

trends. Some high-performing regions, especially metropolitan ones, have high 'flow' or turnover so that even though they are creating employment, there may be a high level of short-term unemployment at any given moment (Jayet, 1983). The M and L clubs have higher unemployment which is likely to comprise more long-term unemployment than that in the VH and H clubs because of differences in the structure of labour turnover.

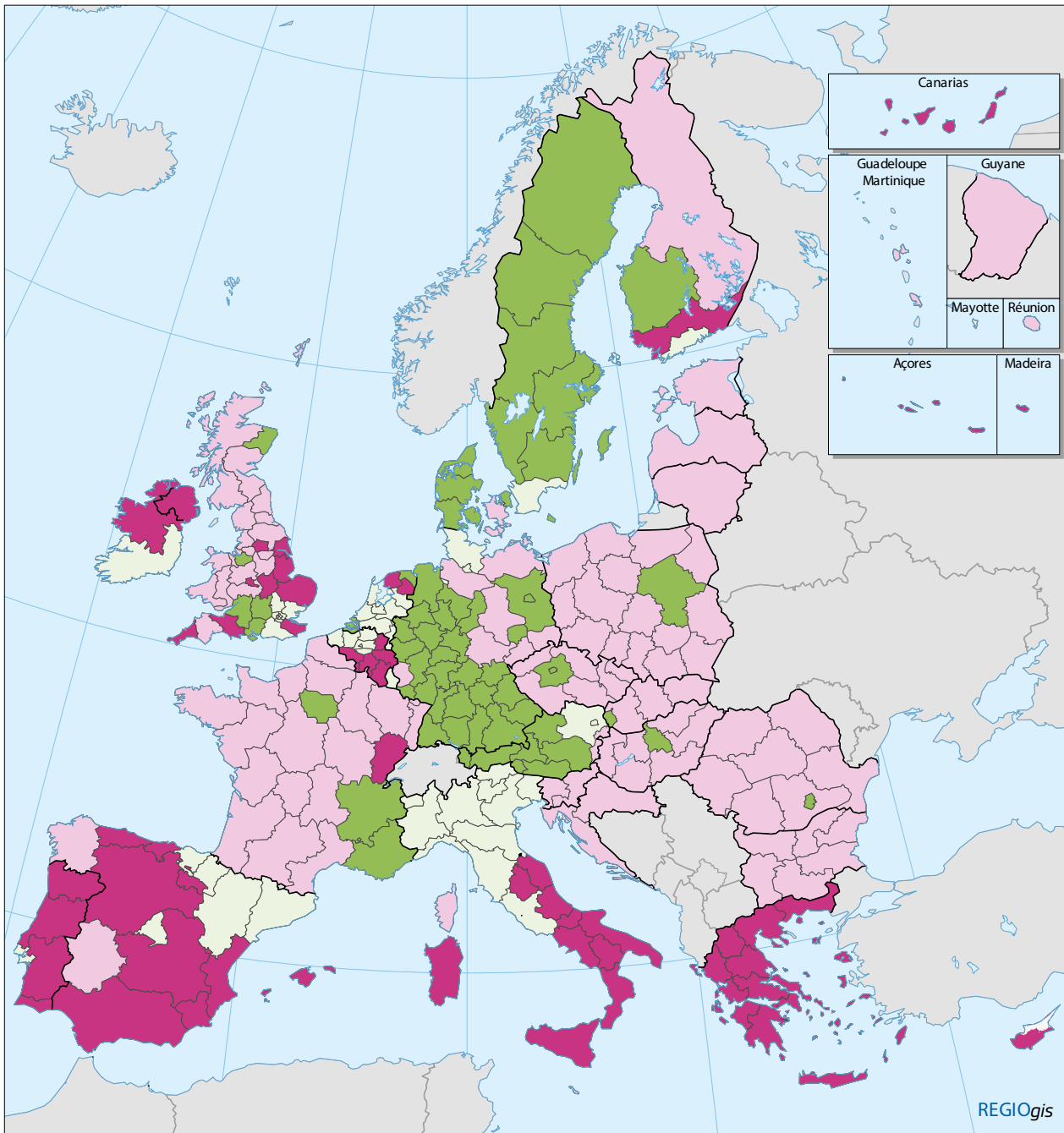


**Figure 3: GDP per head EU Index (2013) vs. unemployment rate (2015)**

As expected, these patterns of interaction between employment and demography are reflected in labour productivity dynamics – the key way in which demography, employment and income come together. Map 5 shows that much – but not all – of Europe's most prosperous regions continues to experience strong increases in income per head, whether against a background of rapid population growth (see above), or against a less dynamic demography. These are two different ways to maintain prosperity. On the other hand, a good deal of metropolitan London, Benelux, northern Italy and Catalonia – all high- or very-high-income regions – are in a slow productivity-growth period, which could compromise their future. In this respect, Greater London and the Île-de-France – two of the EU's most dynamic metropolitan regions – show a contrast in this respect, with the French capital exhibiting a combination of high population inflow and high productivity growth, and London

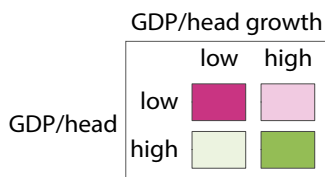
less- well-performing on productivity in relation to its demographic dynamism. Many German and Scandinavian regions are productivity-growth leaders.

A number of regions in pink on Map 5 – from some south-western regions in France to many relatively fast-growing regions in central and eastern Europe – show satisfactory productivity growth per capita. However, this should be taken with caution, because if productivity growth is rising against a backdrop of shrinking population – as has been the case in a number of central and eastern European regions – this may become problematic in future. In the amenity-driven parts of France, by contrast, there seems to be a positive dynamic of population and productivity, even though the absolute level of GDP/capita is medium. Finally, those areas – in dark red on Map 5 – with low output per head and low growth are clearly economically fragile.

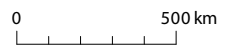


GDP per head (2013) vs. growth rate of GDP per head (2001-2013)

High and Low as compared to EU average



Source: Eurostat, Cambridge Econometrics, DG REGIO



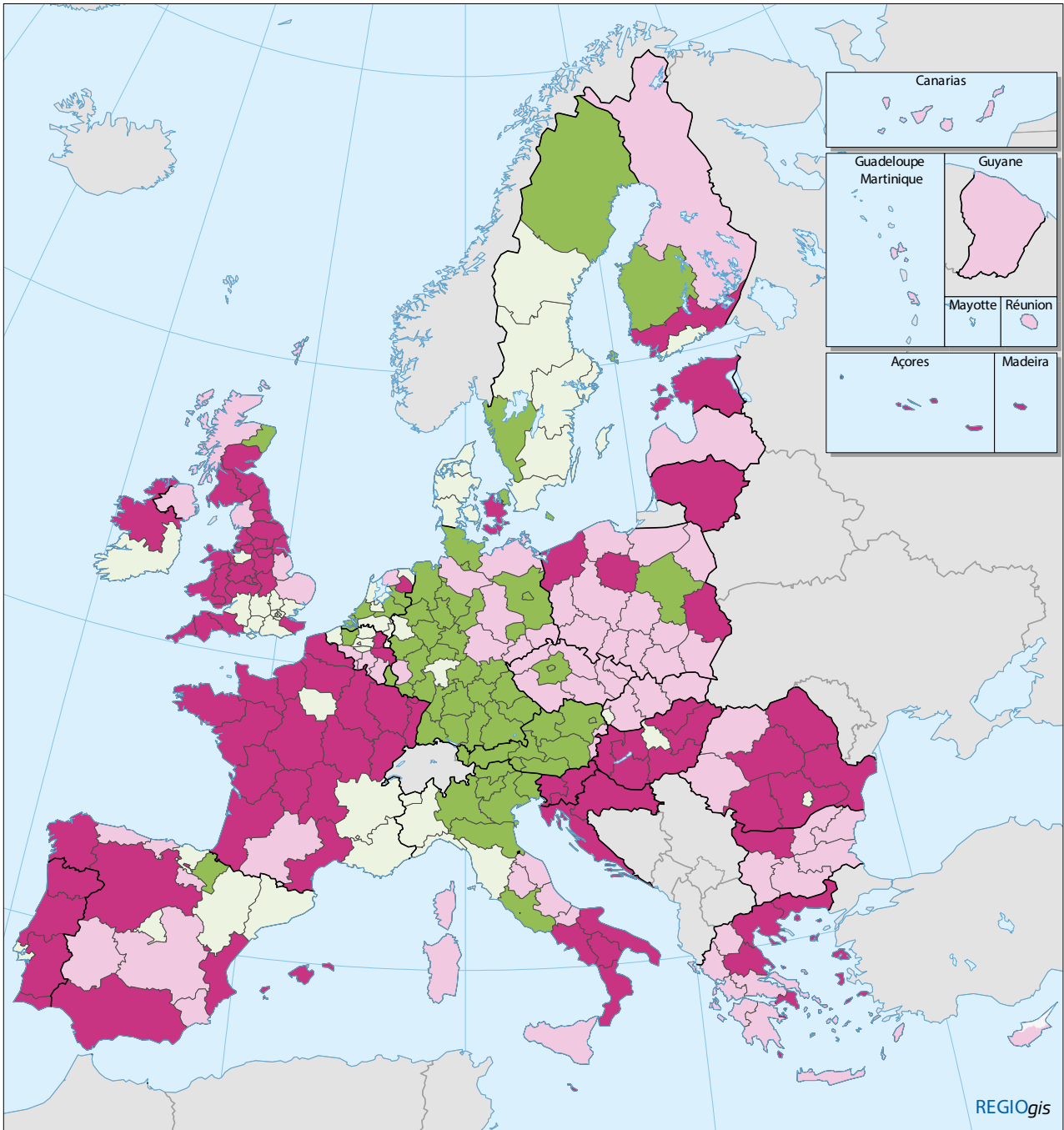
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**Map 5: GDP per head (2013) vs. growth rate of GDP per head (2001-2013)**

The next observation is cautionary. As we noted, GDP/head is the outcome of how demography, labour-force participation and labour productivity interact – it is an excellent summary indicator, although there can be several different stories behind it. The same is true for the sectoral composition of employment and its relationship to income. Map 6 shows changes in industrial (manufacturing) employment relative to GDP, and Map 7 shows the same for services. There are different routes to productivity and income growth or decline, and these cannot be mapped into a specific sectoral pattern. Thus, in the continent's core high-income club regions (especially Germany), incomes are supported by a high-performing manufacturing economy. However, this is not true for metropolitan capitals such as London and Paris. The issue is not whether or not one has manufacturing, but whether the manufacturing is innovative, based on high skills and high quality, and generates strong demand for support services, as well as whether – in other regions – there are alternative high-productivity, high-skill employment bases (such as advanced services). Clearly, any collapse of manufacturing employment is a source of income weakness in many regions. These latter regions had different production activities from the ongoing successful manufacturing regions: routine

manufacturing that has reduced employment due to technology and globalisation, compared to high-income manufacturing regions which host innovative activities that have revived their advantages over time. This crucial difference shows up clearly in Map 8, separating the former industrial regions that are innovative from those that are not: the Map overlaps almost completely with Map 6, due to the skewed nature of the patent indicator able to capture innovation only in manufacturing industries. However, Map 7 hints at another dynamic relationship: areas with high income, many of them with much manufacturing, are also often dynamic in service growth, because manufacturing and highly skilled, knowledge-intensive services are highly complementary in today's economy. Low growth in services in many of the poorly performing income regions of Europe is a sign of this complementarity. Europe has an advantage in both manufacturing and services in its high-productivity, high-income regions. The only real exception to this is growth in some dynamic, but low-skilled services, such as tourism. These tend to grow in regions with good natural amenities – e.g. sun and sea – as well as in areas with comparative advantages in cultural amenities. However, these types of services do not exhibit particularly high wages or skills base.





**GDP per head EU Index (2013) vs. employment change in industry, (2001-2014)**

High and Low are relative to EU average

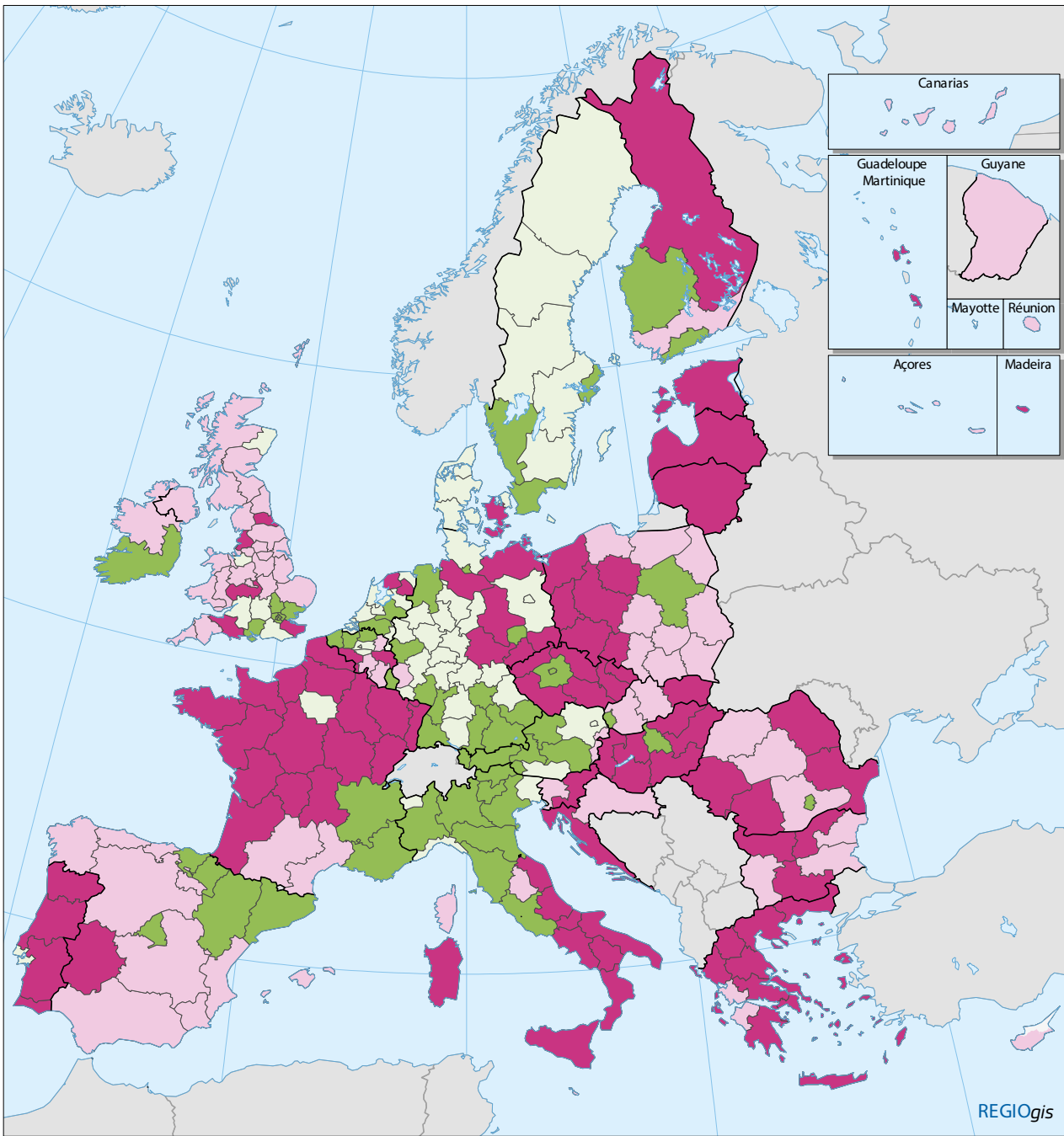


Source: Eurostat, Cambridge Econometrics DG REGIO



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**Map 6: GDP per head EU Index (2013) vs. employment change in industry (2001-14)**



**GDP per head EU Index (2013) vs. employment change in services, (2001-2014)**

High and Low are relative to EU average

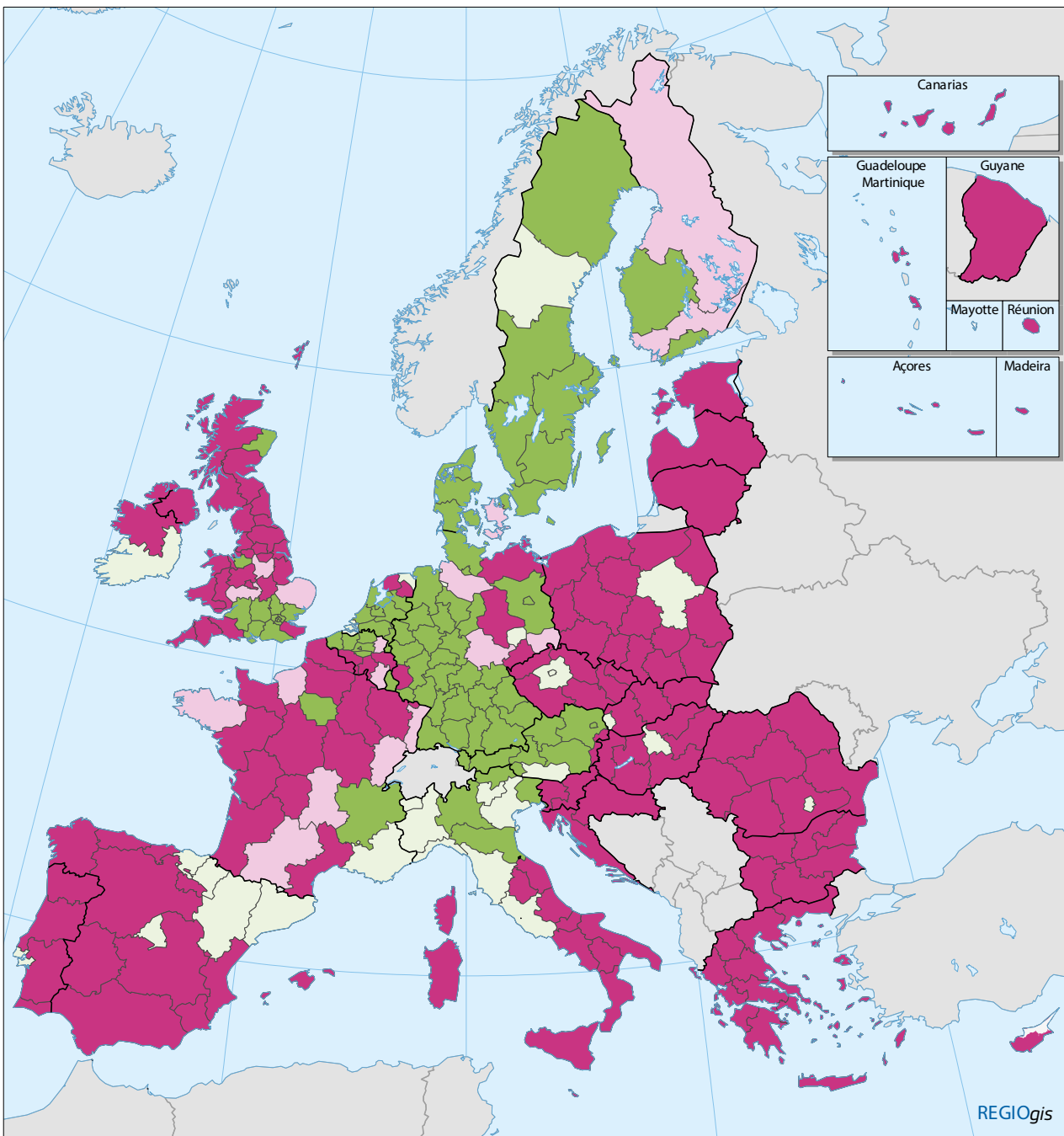


Source: Eurostat, Cambridge Econometrics DG REGIO



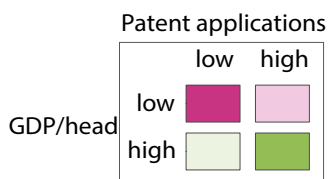
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**Map 7: GDP per head EU Index (2013) vs. employment change in services (2001-14)**



GDP per head EU Index (2013) vs. Patent applications per million inhabitants (2010-2011)

High and low in relation to EU average



Source: Eurostat, Cambridge Econometrics, DG REGIO



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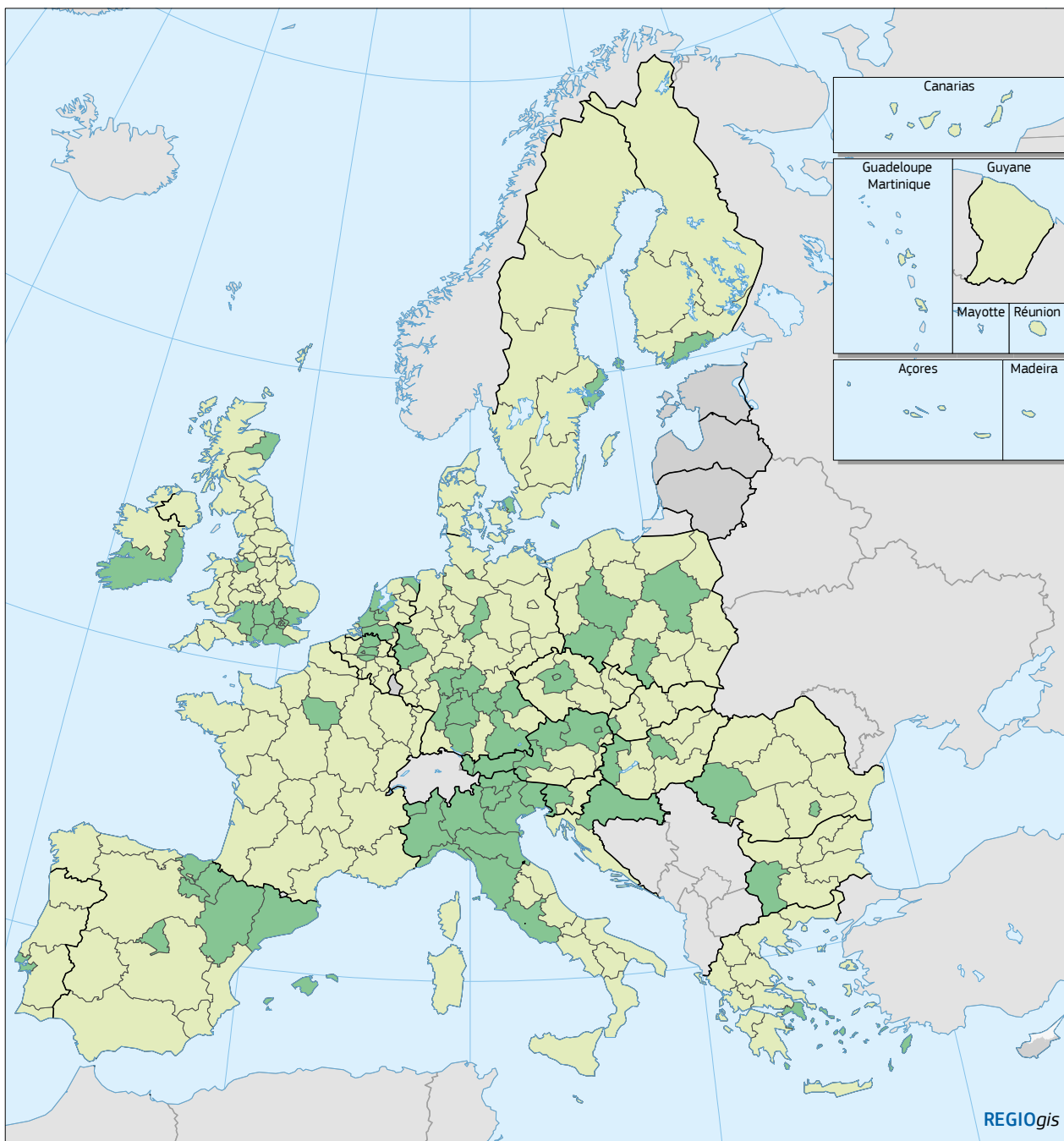
**Map 8: GDP per head EU Index (2013) vs. patent applications per million inhabitants (2010-11)**

Map 9 and Appendix 1 provide an additional layer of understanding of our four clubs, by examining whether regions perform well or poorly in relationship to their national economy's GDP per head, rather than EU GDP per head. The Map only shows the basic picture, but Appendix 1 breaks down regional data out by showing national GDP per head – ranging from very high to low. The analysis identifies the regions in each group according to whether they are above or below the national average for their respective EU Member State. The data deliver three major insights.

The first is that there are very strong regional effects throughout the data, with many EU regions performing better or worse than their national averages (the table shows more of these than the Map because of the greater level of detail). This means that overall EU and national dynamics are not exclusively driving regional performance, and confirms our opening statement, that the regional level is a distinct and highly variegated scale of economic development with strong overall divergence processes at work. The regional question really is at the heart of Europe's economic future.

The second point is that – as in the rest of the world – there is a core of leading regions in Europe, comprising a set of major metropolitan (often capital) regions in many countries and a few dynamic regional core areas in Benelux, Germany-Austria-northern Italy (see also Rodríguez-Pose, 1999; Kallioras and Petrakos, 2010; Crespo Cuaresma et al., 2014). This is the strong agglomeration effect of innovative high-wage activities that is discussed in detail in the theory section (Section 3 below) of this paper.

The third point is a cautionary note on how to read Map 9. There are some countries in the EU that are generally more evenly developed than others. In a high-income but evenly-developed country (relatively low interregional GDP variance) such as Germany, a Map of underperformance or over-performance means less than a similar Map for France, Spain, Italy or the UK. The wide incidence of underperforming regions reflects a high baseline level of variance and therefore translates, on the ground, to a worse relative performance in the underperforming regions than in a country such as Germany. Germany also displays the ongoing effects of the lagging former German Democratic Republic regions.



**Over-performers and under-performers**

- underperformer
- overperformer
- not applicable

Source: Eurostat, DG REGIO

0 500 km

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**Map 9: Overperformers and underperformers**

## THE FOUR CLUBS: A SUMMARY

The very-high income club of regions is dominated by a few very large metropolitan regions or capital city-regions, and several additional regions, generally highly urbanized in the form of a network of cities (e.g. Rhine-Ruhr or Randstad Holland), that are specialized in very-high-quality goods and services. Many of these regions are attracting population (with the noted exception of Germany), although some have high unemployment rates and have underperformed since the beginning of the financial crisis (Dijkstra et al., 2015). Most of them have high productivity growth, although others, such as London, are an exception – London is split between its inner core and its increasingly productive (and very spread out) outer rings. The basic storyline is that a group of leading regions are generating more than their share of European prosperity. We demonstrate below that sustaining these regions is an important part of the European policy agenda because they are competing with other leading regions worldwide in an open global economy.

The EU's high-income regions share many characteristics with the VH income club. They tend to be somewhat less metropolitan or city-centred than the VH club and somewhat less dynamic demographically. Their employment rates are high and many have satisfactory productivity growth per head. However, south-east England, Benelux, northern Italy and Catalonia are doing less well than many German members of the H-club which, to a certain extent, corresponds to two sub-clubs – one that is more innovative and the other less so. Later, we conclude that a key challenge for the H club is to remain innovative.

The medium-income club in Europe is vast, and comprises a great number of those parts of north-western Europe that remain outside the VH and H clubs. There are two sub-groups within this club. The largest covers regions that have lost manufacturing jobs, which is often reflected in stagnant or declining employment rates. Population growth is low or even in decline in some of these regions, so unemployment rates vary. Education levels – attainment of secondary and post-secondary education – are below those of the H and VH clubs. All in all, these regions are economically fragile because of the combination of declining manufacturing, unsatisfactory attainment of education and skills, and inadequate labour-force participation. The second sub-group stands out because it is experiencing population growth. Such in-migration brings income (via people-based fiscal transfers in the form of pensions and health benefits), and spending has a local multiplier effect, mainly in the demand for services.

Labour-force participation can remain low because of the age structure of the in-migrants. More importantly, the types of employment stimulated, in mostly non-tradeable local services, involve limited skill development, limited innovation potential, and limited export-ability. These features depress the per-capita income benefit of such employment gains. However, there is a wide dispersion of productivity in such services among regions and countries, with France appearing to do well in them (with perhaps an employment-reducing effect).

The low-income club consists of large swathes of eastern and southern Europe. Eastern and southern European regions share some common characteristics in terms of low employment rates and poor quality of government, low investment in R&D, and a relative lack of accessibility, and have also experienced divergent economic trajectories in recent years. This has led the European Commission (2017) in its *Lagging regions report* to distinguish between 'low-income' and 'low-growth' regions. Low-income regions are mainly located in central and eastern Europe and have a GDP per head below 50 % of the European average, measured in purchasing power standards (PPS). Most of these regions have higher education levels than the southern and western L-club members, but tend to have experienced population loss. Thus, these regions are experiencing the consequences of their entry into both the EU and the world economy. Their human capital is out-migrating to seek opportunities, and this vicious circle of population and talent loss is creating spatial traps for those who remain. There may also be other conditions that limit their more successful participation in cross-EU value chains, as well as barriers to entrepreneurship. Low-growth regions stretch along the southern fringe of the EU and "cover less-developed and transition regions (regions with GDP per capita up to 90 % of the EU average) that did not converge to the EU average between the years 2000 and 2013 in Member States with a GDP per head in PPS below the EU average in 2013" (EU, 2017: 1). They generally have better endowments in infrastructure, but suffer from significant skill shortages and a lack of capacity within the economic fabric to generate and assimilate innovation. These different trajectories and challenges mean that the pursuit of efficient policies would, in all likelihood, require different development strategies for low-income and low-growth regions.

The few western EU regions in the club – including West Wales and the Valleys or Tees Valley and Durham in the UK – are those with long-standing issues related to productivity, specialisation, skills and labour force participation. Today, they are characterised by their educational deficiencies, when compared to more prosperous parts of their own countries and the EU as a whole.

### 3. THEORY OFFERS NO CLEAR GUIDE ON HOW TO OVERCOME REGIONAL DIVERGENCE

In an article dated 27 December 2016, *The Economist* magazine observed that “orthodox economics has few answers to the problem of regional inequality”. This is indeed the case, and it requires that we understand the gaps in orthodox theory and the additional theories required to understand regional inequality.

As shown by the empirical evidence presented above, Europe remains torn by considerable differences in the levels of development, manifest across the whole continent as well as within its constituent countries. Moreover, territorial inequalities have proven considerably persistent. Despite the non-negligible effort to foster greater cohesion and numerous cases of success (involving mainly capital cities and other large agglomerations and supported areas), many cities and regions across Europe's economic peripheries have been stuck in a low-development trap, unable to break into sustained levels of economic development over time. They have become increasingly dependent on fiscal transfers, leading to the emergence of sheltered economies (Rodríguez-Pose and Fratesi, 2007). Other traditionally highly industrialised regions have undergone lengthy economic decline, transforming former European powerhouses into areas that are struggling to reinvent themselves and find their comparative advantage (Hassink, 2010). The dynamism of other European cities and regions – mainly associated with issues such as agglomeration economies, innovation and competitive advantage in core areas – has neither compensated for nor stemmed the level of distress in Europe's less-developed and declining areas. On the one hand, diffusion effects from dynamic areas have been shown to be bounded geographically. As underlined by Moreno et al. (2005) and Crescenzi et al. (2007), there is no evidence of spillovers beyond 200 kilometres from the source agglomeration. On the other hand, the very growth of some dynamic regions and cities – while helping to maintain the standard of living in many declining areas through fiscal transfers – fully demonstrates the contrast between successful and less successful cities and regions, fuelling social and political tensions.

How can the urban and regional backwardness behind current territorial levels of distress be tackled without compromising the drive of not just Europe's most dynamic areas, but of Europe as a whole? How can opportunities for the populations living in less-dynamic cities and regions be enhanced and the potential of these areas tapped while, at the same time, fostering economic progress across Europe? Economists, economic geographers and other social scientists have been grappling with these trade-offs for quite some time. In the next section, we look at how economic growth and economic geography theories have inspired economic development policies in recent years, and how the postulates of such theories square with the empirical evidence presented in the previous section.

#### 3.1 SHOULD WE FOCUS ON EFFICIENCY FIRST?: AGGLOMERATION ECONOMIES, INNOVATION AND COMPETITIVE ADVANTAGE

*The importance of agglomeration economies.* Traditional economic approaches, based on neoclassical growth theory (Solow, 1956; Swan, 1956) have generally posited that development intervention is not necessary. This is based on the assumptions of perfect competition and perfect factor mobility, and that greater investment in less-developed cities and regions will yield higher returns due to constant or diminishing returns to scale in large, prosperous regions, because of congestion and high land and labour costs. The expected outcome is territorial convergence, even without intervention. However, a combination of empirical evidence and the emergence of competing theories has removed some of the gloss of the neoclassical approach to economic development. On the one hand, the persistently skewed distribution of wealth in the real world – in particular since the beginning of the economic and financial crisis in 2008 – has indicated that neither a more efficient functioning of market forces nor greater economic integration are sufficient to unleash the potential of declining and less-developed areas. As discussed above, while integration in Europe may have contributed to promoting a certain level of cross-country convergence (especially by fuelling economic growth in former Candidate Countries and new Member States), it has done little to alleviate within-country territorial differences (Puga, 2002; Cuadrado-Roura et al., 2016). However, in line with the Williamson (1965) hypothesis, there is some evidence that the benefits of agglomeration may be diluted as national GDP increases across Europe (Brühlhart and Sbergami, 2009). On the other hand, more recent developments in economic theory have resulted in looking at territorial disparities and the trade-off between efficiency and equity from a different perspective. Endogenous growth, new economic geography (NEG), and evolutionary economic geography theories and models, which have dominated economic development thought since the late 1980s, have all emphasised the limited heuristic power of a standalone notion of ‘dispersion’, pointing to ‘agglomeration’ forces as the most significant complement to the changing geography of economic activities. Although these theories have different fundamentals, they all share the ideal that concentration and dispersion can occur simultaneously, giving rise to convergence and divergence patterns, depending on the type of economic activity and function and the spatial scale of reference – e.g. inter-continental and international convergence versus interregional subnational divergence.

In Europe, this translates into a degree of convergence due to the limited dispersion of activities in the course of ongoing European integration, EU value chains and improvements in infrastructure and basic conditions in many regions. However, agglomeration forces are also unleashed by globalisation, EU integration and technological change. Since the 1980s, the rise of new economy industries, such as IT, advanced services, finance, and global markets for quality-oriented goods, inter alia, have strengthened agglomeration economies and the advantages of city-regions. With these agglomeration forces, migration shifted to cities, especially larger ones, reinforcing a talent divide between high-income places and other regions, in spite of national policies to diffuse educational opportunities. In most cases, the concentration effect of the new economy has been more powerful within the developed world than the dispersion effects (Pike et al., 2017). Many

dispersion effects in manufacturing have now leapt over the medium- and low-income clubs in developed countries to the developing world.

This wave of economy-wide forces is still gathering strength. Upcoming waves of new technologies are likely to develop through strong agglomeration economies, drawing in skilled labour, strengthening networked ecologies of innovation and production, and thereby remaining concentrated in a limited group of regions. The interplay between accelerating globalisation – broadly defined as the network-based interdependence of the global division of labour and creation of economic value – and technological change – with the abrupt decline in transport, information and communication costs – has been commonly considered by current economic geography theories – and, in particular, by NEG – as the fuel behind the relevance of agglomeration forces driving economic growth (or the lack of it).

There is a consensus that greater agglomeration generates positive externalities, that lie behind the dynamism of fundamentally large cities and regions, which become the motors of economic growth. Theoretical models stemming from both NEG and urban economics emphasise the benefits of spatial agglomeration for competitive advantages in terms of positive externalities, from input-output links to physical infrastructure and accessibility, and from skills and human capital pools to innovation incubators (e.g. Fujita et al., 1999; Fujita and Thisse, 2003; Duranton and Puga, 2001, 2004; Martin and Ottaviano, 2001; Ellison et al., 2010).

The literature on technological change, innovation, and evolutionary economic geography emphasise that the efficiency properties of agglomeration from a different angle: the relationship between dynamic competitive advantages through innovation and spatial concentration (e.g. Cooke et al., 1997, 1998; Cooke and Morgan, 1994; Audretsch and Feldman, 1996; Rodríguez-Pose, 1998; Iammarino, 2005). A common feature of all these theoretical and conceptual streams has been acknowledgement of the role of geographical space in lowering barriers, and the cost of knowledge sharing and transmission across a range of individuals' networks as a decisive factor behind the strength of cities, industrial clusters and regional systems (e.g. Storper and Venables, 2004; Iammarino and McCann, 2006, 2010). As noted above, this pattern characterises the European level, as well as other major areas of the world economy: large cities, often combining economic functions with political ones as capitals of their respective countries have, with very few exceptions, performed well.

Based on these views, it has become common among a large number of researchers in NEG and urban economics to take the view that, in development terms, efficiency is paramount and that equity may derive from greater efficiency. That is the view posited in Glaeser's *Triumph of the City* (Glaeser, 2011: 1): "Urban density provides the clearest path from poverty to prosperity". As productivity increases and returns to innovative investment are higher in big cities than anywhere else (Combes et al., 2012), investing in large cities is the best way to promote growth and create opportunities for individuals. Thus, migration towards big cities has a double purpose: a) increasing density in large agglomerations, resulting in more positive externalities and growth; and b) creating more opportunities for people to

leave smaller cities and less-developed regions. Abundant empirical evidence has been provided on the positive relationship between city size and productivity, innovativeness and entrepreneurship in advanced economies (e.g. Rosenthal and Strange, 2004; Glaeser and Kerr, 2009; Puga, 2010; De la Roca and Puga, 2017) and, increasingly, proponents of this view suggest that this pattern is extending to the developing world (see review, Duranton, 2015; and, for example, Brülhart and Sbergami, 2009; Castells-Quintana & Royuela, 2014).

In most standard theory, uneven spatial development is seen as a price to be paid for better overall economic performance. It is claimed that basically there is a set of trickle-down effects through greater economy-wide innovation and productivity, and through consumer surpluses. Thus, in this respect, regional development theory is tracking trade theory. The main compensation mechanisms for less-favoured regions – envisaged by NEG and urban economics theory as counterweights to agglomeration/urbanisation forces' unequal distribution of benefits and costs – are knowledge spillovers and labour mobility.

*The first compensation mechanism: knowledge spillovers.* "[...] when the economy moves from dispersion to agglomeration, innovation follows at a much faster pace. As a consequence, even those who stay put in the periphery are better off than under dispersion, provided that the growth effect triggered by the agglomeration is strong enough" (Fujita and Thisse, 2003: 121). In the new growth theory underlying NEG, technological progress is treated as an input factor, as an 'intangible capital' which results from the knowledge derived and generated by either spillovers, human capital or 'learning by doing' (e.g. Romer, 1986; Lucas, 1988), or alternatively by investing in R&D (e.g. Romer, 1990; Grossman and Helpman, 1991).

However, the empirical evidence does not always support the claims made above. A growing number of cross-country estimations reveal a far more complex reality linking city size to economic growth and development (e.g. Iammarino and McCann, 2015; Frick and Rodríguez-Pose, 2016). Across developed OECD (Organisation for Economic Co-operation and Development) countries, the relationship between city size and productivity adopts an –shaped form (OECD, 2006). This mixed evidence supports the idea that it is not just size, but other characteristics of cities – such as knowledge accumulation (e.g. Storper, 2013), creativity (e.g. Florida, 2005), innovation (e.g. Acs 2002) and cultural diversity (e.g. Lee and Nathan, 2010) – which are equally important for competitive advantages and economic growth. In the USA, for example, the productivity of city-regions seems to reach a maximum at the 7-8 million level (San Francisco, Washington, Boston), before declining in the biggest city-regions such as New York or Los Angeles. Empirical research appears to highlight that the benefits of agglomeration across European countries seem similar, albeit slightly smaller, to those found in the USA (Ciccone, 2002). Very large city-regions may have other advantages as the result of specific specialisation patterns unique to the very largest cities, but there is no decisive evidence one way or another on this question.

Indeed, while the NEG suggests agglomeration (with its various forms of returns to scale) is key to this, it does not say that such agglomeration must follow a particular national distribution, as in a highly hierarchical national urban system



(with a few Silicon Valley-type “supernova agglomerations” and the resulting steep territorial inequalities). Indeed, the jury is out on whether the benefits of agglomeration can be achieved through a more even distribution of middle-sized agglomerations, i.e. on the exact spatial layout and distribution of agglomeration benefits (Crescenzi et al., 2007, 2012). Some very wealthy countries perform very well without very large cities (Germany), while in others it seems that national performance depends on very big cities (e.g. France). Middle-sized cities play a more important role in the EU than in the other developed parts of the world (Dijkstra et al., 2015), and this pattern seems to be compatible with high levels of economic development in many EU countries.

Whatever urban-system form agglomeration economies may take, all economies face the issue of how their innovation- and skills-based advantages affect the wider economy and all of its territories. Most empirical findings on knowledge spillovers do not clarify how they arise, nor do they shed light on the mechanisms by which the main knowledge flows occur (Breschi and Lissoni, 2001). On the other hand, the strong emphasis economic theory attributes to R&D investment as an ‘input to growth’ has resulted in underestimating the ‘double face’ of innovation (e.g. Iammarino and McCann, 2013; Lee and Rodriguez-Pose, 2013). Knowledge creation – often proxied by one partial formal input indicator, i.e. R&D – tends to spur inequality, while knowledge diffusion – through linkages and networks – spreads opportunities. However, it has been demonstrated that the diffusion of knowledge suffers from strong distance-decay effects, and in the case of Europe, too (Moreno et al., 2005; Crescenzi et al., 2007). Moreover, geographical proximity per se does not automatically induce knowledge spillovers or innovation diffusion: other forms of proximity, interacting with space, enable the dissemination of new ideas across space (e.g. Breschi and Lissoni, 2001; Faggian and McCann, 2004; Boschma, 2005; Breschi et al., 2005; Ponds et al., 2007; D’Este et al., 2013). Features such as dense, diverse and open business and social networks appear to be critical channels for knowledge diffusion and learning processes, allowing for Schumpeterian recombinations of old and new pieces of knowledge (e.g. Powell et al., 1996; Cooke, 2006). Hence, it is unlikely that less dynamic cities and regions can regularly benefit from knowledge spillovers unless connectivity – in the form of stronger cognitive, institutional, organisation and social links (Boschma, 2005) – can be greatly enhanced.

*Labour migration: declining overall and increasingly separate worlds.* In addition to the weakness of the first compensation mechanism – knowledge spillovers, a second potential compensation mechanism – labour mobility in the form of within-country migration, has failed to address most sub-national interregional disparities, which are historically stubborn in some European countries. Most recently, there has been a steep decline in internal low-skilled migration in a number of countries. Moreover, there is growing evidence showing that even international mobility in economic integrated areas, such as the EU or NAFTA (North American Free Trade Agreement), seems to be jeopardised by rising restrictions on people flows (e.g. Barslund et al., 2015). The steady decline of low-skilled internal migration is not specific to Europe: the same trend has been observed in other advanced economies, including the USA, where internal migration in the new millennium is half of its long-term

average (e.g. Frey, 2009; Partridge et al., 2012; Cooke, T.J., 2013; Molloy et al., 2014; Kaplan and Schulhofer-Wohl, 2012).

A vigorous debate is emerging on the nature and causes of the migration slowdown although it is still in the early stages. Many possible causes for this phenomenon are now being examined through research. These include: growing gaps in inter-regional house prices; double-income couples, resulting from higher female employment rates; job search at distance using ICT; and the changing nature of skills.

While there are undoubtedly interactions between these potential causes, the changing nature of skills appears to be particularly important and under-studied. As Rutherford (2001) observes, learning-region approaches view geographical labour markets “[...] either as secondary or as analytically indistinct from learning based on direct inter-firm and institutional networks”. In the aftermath of the economic crisis, however, scholars have increasingly highlighted the need for a more spatially-specific perspective on the link between such labour market dynamics and the consequence of economic shocks (e.g. Quatraro, 2009; Martin, 2011; Filippetti et al., 2015; Gagliardi et al., 2015).

Not only has labour migration declined in the aggregate, but the migration under way reveals a sharp split between the highly- and lesser-skilled. The more skilled are mainly migrating among the prosperous clubs, and to an extent from less-prosperous places to the more-prosperous regions. Overall, the less skilled are migrating much less than the more skilled, and there is some evidence that they migrate among the less-prosperous regions (Diamond, 2016; Giannoni, 2017). Similarly, some labour economists and sociologists have argued for rethinking the nature of skills in the new economy (De Long, 2016; Deming, 2015). Indeed, more formal skills are required than ever before for many jobs in the new economy. However, as well as diplomas, more experience-based skills are needed which can only be acquired by ‘being there’ (De la Roca and Puga, 2017). In itself, experience seems to have several different components and distinctive geographies: one such is simply having learned the unwritten or informal aspects of job performance in many parts of the new economy. Another is that high-turnover and highly-individualised work in the new economy’s skilled sectors requires social networks – i.e. knowing people (Kemeny et al., 2015). New economy skills are more social and collaborative compared to manual jobs or routine industrial ones. This reasoning implies that even those individuals who succeed at formal schooling in certain regions are increasingly disadvantaged by their location. They are less apt to acquire the informal experience, knowledge and cues, and to build networks that create advantages for similarly educated individuals in the wealthier regions. This gap in effective capacities emerges on two scales: between the skilled and less skilled, and even within groups with similar levels of formal skills. If this is the case, then institutions in the wealthier regions can also give their students better overall capacities via better networking and social cueing than in less-advantaged regions. These differences then accumulate over the development cycle through the differential ability of families to have the income and connections to achieve such capabilities for their children. Such opportunities appear to be scarcer and less “in the air” in less-developed regions than in those that are already ahead.

*Beyond naïve notions about connectivity:* a force for both convergence and divergence. Another notion underlying convergence theories is that by increasing connectivity – through Europeanisation and globalisation – flows of knowledge, people and skills through more integrated value chains will naturally increase the capacities of less-favoured regions and open up the convergence ‘valves’ in incomes. Since at least the 1989 reform of the Structural Funds, European Cohesion Policy has invested considerable resources in preparing the EU’s less-developed areas for greater integration and more competition. Most of this intervention has been intended to make lagging or falling-behind territories more connected and attractive for business. This notion is naïve, as we now know from a generation of research that has identified two faces of connectivity – spread (convergence) effects and hierarchy-reinforcing (backwash) effects – and which demonstrates that in the current wave of development, the hierarchy-reinforcing effects are stronger than the equalising or convergence effects. The two principal causes of repercussions are: the hierarchical nature of innovation, and the ways that new connectivity reinforces pre-existing differences in territorial attractiveness. Below we examine each of these in turn.

Huge cross-border movements of productive capital, activities and functions are constantly redesigning the geography of economic activities worldwide, and within nation states. Firms’ investment returns come from capturing markets which extend well beyond national or regional borders. Traditionally, these returns were generated by exports, but the role of international investment has become far more important. International flows of productive capital, technology and knowledge are increasingly understood as being bidirectional or multidirectional, with concepts such as ‘openness’ and ‘connectivity’ replacing terms such as ‘inward’ and ‘outward’ flows, or ‘home’ and ‘host’ locations (Iammarino and McCann, 2017; Crescenzi and Iammarino, 2017). The ‘law of uneven development’, identified by the seminal work of the international business scholar Stephen Hymer, suggests a ‘correspondence principle’, i.e. the existence of a direct relationship between the degree of centralisation of power and control within modern multinational corporations and the geographical unevenness of economic development. In his words: “geographical specialisation will come to reflect the hierarchy of corporate decision-making, and the occupational distribution of labour in a city or region will depend upon its function in the international economic system” (Hymer, 1972: 124). Cross-border corporate network-based organisation of production has contributed to both economic integration and to isolation: rising spatial (and individual) inequality due to the concentration of power and value creation in certain cities and regions in advanced economies in the Global North has been coupled with the widespread diffusion of low-tier activities (as well as increasingly higher-value-added ones) towards certain regions and cities in emerging and developing areas of the Global South (Iammarino and McCann, 2013, 2017).

Thus, whilst trade does diffuse routinised and codified or (economically ubiquitous) knowledge, there is a hierarchy of creation and non-routine knowledge. Knowledge that is not economically or geographically ubiquitous generates innovative rents and requires high-skilled employment to be both deployed and further developed. This leads to the classic process of circular and cumulative causation identified by Myrdal (1957).

In contemporary language, agglomeration and hierarchy are present in regional innovation systems (Cantwell and Iammarino, 1998, 2003). Even though routinising knowledge is spreading, the highest-performing innovation systems are a moving target for other regions, recreating divergence and a hierarchy of clubs (Storper and Walker, 1989; Storper, 1997).

Although global value chains are diffusion mechanisms, they also strengthen hot spots of job-market disadvantages for specific types of workers in unattractive locations that are more exposed to trends such as offshoring and outsourcing, thereby spurring polarisation and divergence (Gagliardi et al., 2015).

Turning to the second dimension, almost one in two euros invested in trying to prop up the EU’s less-developed regions has targeted infrastructure deficits, particularly those in transport infrastructure (Crescenzi and Rodríguez-Pose, 2012). This has greatly improved the physical connectivity of Europe’s lagging areas, although the effort has not always been translated into more jobs, greater productivity or economic growth. This is because increased connectivity may raise aggregate attractiveness, but it also reinforces differentials in attractiveness.

Connected places are not just better positioned to exploit their hitherto latent comparative advantages, but are also subject to the re-centralisation of resources and knowledge via inward flows that are becoming much cheaper. Companies’ interactive dynamic capabilities – highlighted in the business and management literature as a fundamental requirement for successful entrepreneurship (e.g. Zahra et al., 2006; Yiu et al., 2007) – represent the extent to which the firm is able to integrate, build and reconfigure internal and external competences and knowledge sources to address rapidly changing environments (e.g. Malerba, 1992; Teece et al., 1997; von Tunzelmann and Wang, 2007). By the same token, regional interactive dynamic capabilities refer to the local system’s overall ability to engage in innovative and organisational processes and to make institutional change (i.e. ‘social capabilities’ for growth – see Abramovitz, 1986; Feldman et al., 2005; von Tunzelmann, 2009; Rodríguez-Pose, 2013; Rodríguez-Pose and Di Cataldo, 2015) able to sustain regional openness and connectivity, inward and outward flows of knowledge and new ideas brought in and out by both people and capital. Skills, capabilities, entrepreneurial and innovative propensity are all attributes of people: they move across space with people and are enhanced by capital flows. This difference in capability and agglomeration effects is why, for example, a high-speed train line between two very unequal territories often reinforces centralisation and can lead to de-industrialisation, fewer locally provided services, and a decline in local commerce in areas that become annexed hinterlands of the more powerful regions.

*The power of centralisation effects over diffusion and compensation mechanisms.* Thus, to tie this discussion together, we can observe that the current wave of development of the wider economy – dating from the new economy of the 1980s and still gathering strength – seems to have weak diffusion mechanisms of the type that would be required to share prosperity with other regions and bring about a trend towards income convergence. In the past, some waves of development have matured, leading to the development of routinised activities that have then undergone

de-agglomeration from manufacturing centres toward regions with lower land and labour costs. This was facilitated by a fall in transportation and trade costs. Much of the developed world, including countries in north-western Europe, benefited from this from the 1950s through to the 1970s. In contrast, during the current wave we cannot observe such convergence mechanisms, which may be partly due to technological change. Today, as agglomerated urban activities mature, they become both very lean in terms of job creation and tend to leapfrog Europe's regions to developing countries. Part of this lack of convergence may also be due to a weak diffusion of technological innovation capacities from the agglomerated centres to other regions. Part of this may be because, as observed above, the wave of development continues to strengthen, which renews the advantages of prosperous, dense centres. Part may also be due to the changing nature of skills which, paradoxically, are more interpersonal and networked and based on experience than in the past, and as such are less available to people in outlying regions, even those with good formal educational systems.

Consequently, while there is considerable evidence that agglomeration and density can be essential drivers of growth in Europe, there is no strong evidence that potential high growth in large agglomerations will act as a catalyst for greater economic activity in less-developed areas. The development of Europe's low- and middle-income clubs is not assured by the development of its high-income areas.

### 3.2 SHOULD WE FOCUS ON EQUITY INSTEAD?

There has been no shortage of attention in NEG and urban economic research given to the potentially negative externalities related to growth in agglomerations: congestion, pollution and high land costs have featured prominently in this literature (Henderson et al., 2001; Fujita and Krugman, 2004). However, what is becoming one of the most – if not the most – prominent negative externality linked to agglomeration has been largely overlooked (or dismissed as a temporary stage in the quest for greater aggregate economic efficiency): rising territorial inequality. As seen in the evidence presented in Section 2 above, as in other advanced and emerging economies, within-country inequality in the EU has continued to grow (e.g. Rodríguez-Pose, 1999; Puga, 2002; Ezcurra et al., 2005; Heidenreich and Wunder, 2008; Farole et al., 2011; Charron, 2016). However, despite remaining considerably lower than in less-developed countries worldwide (Ezcurra and Rodríguez-Pose, 2014), the rise in territorial inequalities in Europe, especially within-country inequalities – has provoked a number of problems, including increasingly virulent social, economic and political tensions and reactions. Uneven development has been a key factor behind the rise in populism all over Europe (Ballas et al., 2017). It was also a fundamental driver in the British vote in favour of Brexit, which is jeopardising the factors behind development in the UK in recent decades (Jessop, 2017; McKinnon, 2017; Toly, 2017).

Does this mean that policy should focus on equity first, rather than focusing on agglomeration? The term 'equity' is polysemic, but we can use it to signify approaches that focus on redistributing economic activity with the aim of achieving income convergence among regions. In previous times, many states around the world used combinations of mandatory locational controls designed to provoke de-agglomeration, or

tried to create growth poles through massive state investment, with the goal of creating agglomerations in less-developed regions. But the result was often considered as a 'watering down' of the concentration of economic activity, meaning that "the early history of spatial planning became strewn with failed or abandoned growth-pole strategies" (Parr, 2015: 386). By and large, these approaches are no longer considered feasible. In their place, however, are notions that massive public investment should be directed towards less-favoured clubs, as well as huge people-based subsidies based on a formula that favours lower-income populations and, by extension, lower-income regions. This definition of 'equity-based' policies implies some kind of forced 'spatial rebalancing' whereby the development of low- and middle-income clubs is seen as a consequence of attracting development away from high-income clubs (Martin, 2015).

In the past, such policies have generally not been very effective in combating the strong market forces for spatial concentration. For example, the French Plan never succeeded in reducing the share of GDP and population of the Greater Paris region. The health of outlying regions in France during the *Trente Glorieuses* was not based on a reallocation of production away from the Île-de-France, but rather on the nature of the overall economy in the post-war period, where routine manufacturing production generated considerable high-wage employment and remained in the developed countries (Ancien, 2005). Spatial redistribution-cum-equity policies have also been weak in stimulating endogenous development in other parts of Europe, as in the Italian Mezzogiorno experience (Polverari, 2013) or, more recently, in the UK (Martin, 2015).

Moreover, a truly successful redistribution-equity or 'spatial rebalancing' policy would probably have negative aggregate economic effects. It would reduce the dynamism of innovative, high-performing areas by reducing their multiple agglomeration- and diversity-based advantages (Scott and Storper, 2003). But as we have shown, put too much emphasis on efficiency and, primarily, there is no absolute guarantee that growth will take place. Second, even if growth is more likely to happen in core and agglomerated areas, there is very limited evidence and theoretical arguments to support the idea that economic dynamism will spread out from the core to far-flung places which are lagging behind.

### 3.3 DISTRIBUTED DEVELOPMENT STRATEGIES: ENHANCING CAPABILITIES

On the basis of this discussion, it can be seen that a third type of development strategy is required. Rather than the two extremes of much inherited theory – a mechanical notion of 'equity' through territorial redistribution, or an 'all-agglomeration' strategy – the alternative is what we call 'distributed development'. This term refers to an innovative place-sensitive development policy approach that counters the potentially negative spiral of geographically restricted development in three ways. Its overall goal is for more and more regions to have non-routine (innovative) functions in their economic mix; it is based on expanding the sources of creativity and satisfaction that are good in and of themselves on human grounds; and it starts with investment in basic capabilities that are essential for a dignified and creative life, as argued by Amartya Sen (Feldman et al., 2014; Feldman and Storper, 2017).

At this point, the notion that any attempt to widely distribute innovation capacities is somehow going to destroy the benefits of agglomeration is sustained neither by theory nor by any robust evidence. Indeed, we can go further in advocating for economic development policy to be both sensitive to the need for agglomeration and to occur in as many places as possible (Duranton and Puga, 2001). It is linked to the inherent uncertainty of the future of creativity, the what and wherefore of future innovation. Although economic development officials and government planners have always dreamt of being able to define long-term strategies, they always seem to fail in this task. It is impossible to predict scientific discoveries, important new technologies and all the ongoing tweaks that transform our lives. Few people predicted the potential of the internet and how it would change the way we access information and communicate. IBM, an industry leader, underestimated the potential of the computer industry, creating an opportunity for new firms to create personal computers. Moreover, successful entrepreneurs make their own luck, adjusting and adapting to survive. Instead of wisely considered, far-sighted solutions, by necessity, entrepreneurial activity is messy, adaptive and unpredictable. The biggest problem is that it is impossible to predict which technologies are going to yield any pay-off. On the other hand, the crucial role of 'second-mover advantages' and 'technology latecomers' for the enhancement of localised entrepreneurial capabilities and structural change has long been emphasised in the literature on innovation, for example, with reference to the rapid economic and technological development of Southeast Asian economies as successful second movers in electronics and knowledge-intensive services (e.g. Amsden and Chu, 2003; von Tunzelmann and Wang, 2007). Hence, governments and decision-makers need to hedge their bets and promote broad-based social, institutional and business innovation, as well as the diffusion of technological innovation, as a way of maximising the economic potential of every territory.

Therefore, the best economic development strategy is to enable as many actors and regions as possible to participate productively in the economy to their greatest ability. This prioritises improving the quality of life and well-being by enhancing capabilities and ensuring that agents have the capacities and freedom to achieve this. Diversity is the most powerful tool for success in the open probability game of innovation and economic creativity (Kemeny, 2014). Thus, economic development strategies need to be adaptive and to maximise the diversity of people, firms and places involved (Feldman and Storper, 2017). In the light of this, policymakers cannot afford to wait for perfect predictability and an error-free world. As Kline and Moretti (2014: 634) conclude: "Second best may, in practice, be very attractive relative to the status quo." And second best may be first best in the long run, if it promotes those widespread capacities that are the basis for flourishing in ways that cannot be predicted in the short run.

### 3.4 A KEY OBSTACLE TO DISTRIBUTED DEVELOPMENT: INSTITUTIONS

The missing link in development intervention is institutional quality. Institutions, understood as the rules of the game in a society (North, 1990: 477), play a key role in determining the potential of a territory to be developed. Although measuring institutions is notoriously difficult, it has become increasingly clear that, in the case of Europe, many regions and cities which are either lagging behind or declining have much weaker institutional constructs than their more developed counterparts (Charron et al., 2011, 2014a and 2014b). Recent research has demonstrated that weak institutions, in general, and poor-quality government, in particular, constitute a crucial obstacle to development (Rodríguez-Pose, 2013). Poor institutions affect essential growth-promoting factors, such as the returns on European Cohesion policies (Rodríguez-Pose and Garcilazo, 2015), competitiveness (Annoni and Dijkstra, 2013), and undermine entrepreneurship (Nistotskaya et al., 2015), migration (Ketterer and Rodríguez-Pose, 2015), and the local capacity to innovate (Rodríguez-Pose and Di Cataldo, 2015). At times, poor institutions – ineffective local governments, limits in voice and accountability as well as corruption – have steered transport infrastructure investment towards large projects, often with dubious economic and/or social returns (Crescenzi et al., 2016) and have heavily shaped multinationals' location of productive capitals in the EU and its neighbours (Ascani et al., 2016). This has led, in the past, to a proliferation of white elephants which may have responded to short-term electoral or private gains, but which in the medium-term have contributed little to addressing the problems of opportunity in lagging and declining areas.

In addition to the limits that poor institutional quality imposes on development at any given moment, is the dynamic problem. If institutional quality cannot be improved, then regions will not capture waves of economic possibilities as they unfold. While a country like Estonia has witnessed rapid improvements in institutional and government quality associated with fast economic growth, a lack of institutional improvements in many parts of southern Italy or in Greece has truncated the prospects of economic development progress. Good institutions are also essential for the promotion of low-skilled jobs and for reducing social exclusion (Di Cataldo and Rodríguez-Pose, 2017). Thus, improving government capacity, enhancing transparency and accountability, designing better policies, and tackling corruption are fundamental tools for addressing territorial distress. Yet, for the most part, these aspects have been overlooked by the literature on regional development, consequently occupying a very limited space in development policies.

## 4. POLICY: BEYOND THE PLACE-PEOPLE DIVIDE

Policies tend to be divided into two types, following the conventions of theory by emphasising either efficiency or equity. So-called spatially-blind frameworks focus on successful models of agglomeration and efficiency, perhaps boosting overall growth but doing very little to address the problems of declining and lagging-behind areas. They only attempt to address peripherality, marginalisation and inequality indirectly and in a compensational manner (Pike et al., 2017). Spatially-blind (often inappropriately called people-based) policy approaches have been advocated and justified on the basis of the traditional assumption that by helping people to become skilled or entrepreneurial, natural forces of geographical labour mobility and spillovers of knowledge would act as counterbalancing mechanisms of agglomeration, leading to income equalisation, the diffusion of innovation and territorial convergence.

*Place-based policies* have been promoted under the assumption that less-developed areas can always catch up, if provided with the right endowments, and that declining areas can address the sources of their decline. However, on the one hand, developments in economic geography theory and empirical evidence have shown that, more often than not, labour mobility and innovation diffusion exacerbate economic polarisation and limit the equity-enhancing effects of spatially-blind policies: regional inequality and social marginalisation go hand in hand. On the other hand, low mobility, insufficient connectivity in areas other than physical infrastructure, and poor institutions means that place-based policies frequently function more as social rather than true development policies. To summarise, too much focus on efficiency may enhance territorial inequity (which, in turn, undermines efficiency), while too much focus on equity undermines efficiency. Hence, there is a need to pursue efficiency and equity at the same time and neither spatially-blind nor place-based policies on their own are in a position to do so. Policy alternatives that take both dimensions into consideration simultaneously are best positioned to challenge the causes of territorial distress while, at the same time, maximising the potential of every territory.

In other words, there are no fundamental trade-offs between people-based and place-based strategies, between those aiming at generating prosperity and at maximising the territorial potential to generate and share in it. These logics, inherited from much of the theory reviewed and critiqued above, are now invidious and must be replaced by a different way of thinking based on maximising distributed development capabilities. The fusion of these two principles leads us to call for 'place-sensitive distributed development policies' (PSDDP). Place-sensitive policies – which combine strong guidelines derived from development theory, while remaining sufficiently malleable to respond and adapt to the specific characteristics and challenges of every territory – are needed to maximise each territory's development potential, creating greater opportunities for its population. Place-sensitive policies tap into the potential of every territory, generating and spreading development throughout.

### 4.1 GENERAL ASPECTS OF PSDDPS

Given the plurality of theoretical approaches, what principles should inform PSDDPs? Some general policy principles emerging from current local economic development theories are: policy *differentiation*, *coordination* and *integration*. Place-sensitive distributed development policies imply *differentiation* both between and within the 'core' and the 'periphery'. By differentiating needs, challenges and drivers of change from one regional group to another, the notion of 'development clubs' helps to operationalise a place-sensitive approach by, at the same time, avoiding generalisation of the core-periphery dichotomy and the uniqueness of regional case studies, which are both ineffective ways of tackling territorial and individual inequality. Place-sensitive approaches also take into consideration group differences in institutional quality. High levels of corruption or poor government effectiveness do not have the same consequence, depending on the level of development among the different clubs. For example, in Europe, poor-quality local government has yet to undermine the economic and social returns on strategies based on infrastructure, human capital and innovation in the 'low income' regions of central and eastern Europe. By contrast, similar or even higher levels of government quality in the 'low-growth' regions in southern Europe have not only significantly limited the returns on regional development strategies, but have frequently led to inadequate decision-making in which individual and/or private interests have often prevailed over collective interests (Rodríguez-Pose and Ketterer, 2016; Crescenzi et al., 2016; European Commission, 2017). Hence, "club theory offers a pragmatic scale of generalisation that can be used not only to see what is common within clubs, but to see them in relation to each other" and in relation to economy-wide structural parameters (Storper, 2016a: 4). Such an approach has the potential to go well beyond the modest achievements of spatially-blind tools, such as those spurring increases in R&D/GDP shares (to 3%) no matter where, or attracting inward FDI no matter what.

PSDDPs would entail the *coordination* of 'mission-oriented', top-down, science-led approaches, and 'diffusion-oriented', bottom-up, capability-building programmes. Top-down approaches account for the necessary conditions at club level. Bottom-up capability-building programmes tackle the dynamic specificity of the clubs' socio-economic structures, i.e. the *sufficient* conditions for development (e.g. Asheim and Gertler, 2003; Dopfer et al., 2004; Iammarino, 2005; Pike et al., 2007, 2010; von Tunzelmann, 2009; Crescenzi and Rodríguez-Pose, 2011).

PSDDPs require a different and *integrated* type of success metric, especially in the relationship between short-term and long-term performance. Regional economies are complex systems which are notoriously difficult to model and influence. There is no reason to believe that optimising the performance of any one component of a complex system will maximise or even necessarily improve the system's performance overall. Current thinking is that economic development is not brought about by discrete projects or programmes but emerges from the development of interactive, dynamically adaptive and integrated ecosystems (Hwang and Horowitz, 2012). Ecosystems have many different parts and many redundancies.

They also evolve in unpredictable ways, with multiple positive unexpected outcomes. The knowledge spillovers discussed above are the key internal flows and connective tissue of economic ecosystems, while institutions – mentioned below – are its organic structure.

The problem with most existing policies is that they use economic impact studies which do not fully capture the returns on a wide range of public economic development investments. Moreover, the amount of funding provided for economic development initiatives, while important to very many recipients – in many less-developed regions, European development funds account for the majority of public investment expenditure and, in some cases, represent more than 5 % of GDP, as in some of ultra-peripheral regions, such as the Portuguese archipelagos of Madeira and the Azores – remains small in relation to the size of the regional economy in most European regions. Claims that attribute positive outcomes to specific programmes, investments or projects are probably more about good luck, publicity and hype, and are rarely backed up by sound economic analysis. Moreover, external shocks to wider economic conditions (such as major technological changes and macroeconomic policies or cycles) may wipe out any hard-earned local gains. This means modifying the metrics for policy success, away from the standard “immediate and/or direct pay-off” indicators, to capture increases in development capabilities, where the actual development may not be immediate and/or apparent. This is because, as mentioned above, development over time and across many territories is a risky, uncertain and probabilistic process. Its core, innovation, is highly unpredictable. The goal of policy is to maximise the possibility of “mass flourishing” by spreading innovation capabilities that run the gamut from major breakthroughs to ordinary iterations, small improvements, and the ongoing ‘tweaking’ of products and processes (Phelps, 2013). To do so, policy must increase not only the hard, objective inputs to innovation capabilities – education and infrastructure – but must also improve the framework conditions for human creativity, including good government and governance, increasing tolerance for risk, greater openness and less clannishness, the capability to integrate long-distance and cross-border migrants, and many other soft and hard factors.

These *capability* goals are ends in themselves because they are wellsprings of the possibility of distributed development as mass flourishing. However, this in no way argues for abandoning traditional science, technology and innovation policy, education and social policy, agricultural and environmental policies, transport and competition policies (Schout and Jordan, 2007). Rather, it suggests that these policy domains should be subject to two types of metric: the first is the standard direct policy output measures, while the second is how well they contribute to the expansion of capabilities in a broader sense. Together, they should be measured on whether they contribute to expanding the possibility frontier for prosperity and opportunity. Thus, a critical task for implementing PSDDPs is the development of a better set of success metrics incorporating both outcomes and capabilities.

## 5. PSDDPS FOR EACH CLUB

The distributed development club-based policy approach may be exemplified as follows:

*PSDDP strategy for very-high-income regions:* Regions in the VH club must maintain their specialisation in high-wage activities in the face of a changing landscape of comparative advantages. Specifically, they must out-run two forces: one is that activities that are high-wage at one moment in time tend to become progressively more widespread, more routine, and hence to permit the arrival of imitators who lower their high wages. The second factor is, as innovative sectors mature they spread out geographically so that the leading region no longer has a lock on them. In other words, the richest countries and regions can only maintain their prosperity through sectoral succession (replacing old activities with new ones on the technological frontier) or by continuing to push the edge of innovation in their existing broad areas of activity.

*PSDDP strategy for high-income regions:* The issues for the H club are not so different to the VH club, although the former are more vulnerable from below to having their advantages overlap with the medium-income regions that are developing their skills and productivity levels to be more similar to those of the H-club cities. The H club is also vulnerable to standardisation of the products they make (product cycles, maturity), which often enables industries to move to regions with lower costs and less-skilled labour. But this need not be fatal: it depends on the capacity of the high-income group’s firms to generate innovations within their areas of economic specialisation or to move to areas linked within the economy.

Both the VH club and H club contain global metropolitan centres and dynamic industrial city-regions. For both, but with the specific place-based adaptation mentioned above, the PSDDPs rely on the following points: cutting-edge technology strategies, science-led and R&D-based innovation, business-university research collaboration, artistic creativity, forward-looking postgraduate education, environmental and anti-congestion measures, free international flows of human capital, strong synergies between public and private actors in supporting long-term investments in new and uncertain technological areas, and urban integration of cultural and ethnic diversity.

*PSDDP strategy for the low-income regions:* At the other end of the spectrum, low-income regions suffer from limited skills and assets in the areas of technology and organizations, although generally speaking they have the advantage of having relatively low-cost land and labour. As noted earlier, as economic activities become more routinised, they seek out lower cost locations, and the L club may offer just this. Some L regions can launch development by making land and labour available at low cost – such is the “advantage of backwardness”. However, in this wave of economic development, the routinized activities that may undergo de-agglomeration to these regions through

European or global value chains tend to economise on labour through capital intensification. The most labour-intensive activities will leapfrog them into developing countries. Being backward will not solve their employment problems. In addition, as mentioned above, the degree of backwardness in the L group is highly heterogeneous, for example, between EU southern and eastern peripheries.

L-income club regions face two additional challenges. The first is whether they actually mobilise their natural advantages by making their labour and land available at low cost and high efficiency. This depends on having connectivity and decent institutions, and a minimum of skills in the labour force. So L-income regions must transform their relative backwardness into an advantage, which is neither automatic nor universal. We observed that many L-club cities and regions in Europe are not attractive. One reason for this could be that their key supply factor – labour – is not fully mobilised, as reflected in low labour-force participation or reservation-wage levels that exceed their relative productivity levels. Moreover, as noted in our discussion on connectivity, firms in L-club regions generally internalise more functions, have limited external networks, and are less likely to be located in specialised clusters or industrial districts. Other reasons could be institutional – weaknesses or dysfunctions in government and governance. Furthermore, others could be infrastructural: although remoteness is rapidly disappearing in Europe, peripheral regions are far better connected to core cities than to other peripheral centres.

As we have seen, in the absence of effective PSDDPs, in an integrated economic area such as the EU, L-club members will lose talent and youth to higher-income places. At the same time, they will not be able to attract firms and talent from the outside world – thereby generating a negative demographic dynamic coupled with a lack of connectivity and therefore potential sources of economic and social creativity. If their populations age due to out-migration of the young then they will also face a long-term decline in labour-force participation. All these forces may combine to limit their size and hence their ability to offer scale in infrastructure, logistics and supply. They have a narrow window in which to exploit their initial advantages and move into the middle-income club: a race against the clock.

This requires a broad range of activities: investment in infrastructure, with an emphasis on intra-periphery connections; active labour market policies and reforms to increase labour-force participation, particularly among women and youth, creating start-ups and the return of well-educated human capital (in both hard and social science disciplines) to modernise local governance structures; education reforms ensuring quality from primary and secondary educational level, and cultural integration (e.g. emphasis on foreign languages); technical and vocational training and retraining; job-skills matching based on the use of both qualifications and skills; university-industry linkages to provide the skills required by the local productive structure, and for innovation transfer; identification of complementarities across existing productive capacity (i.e. in

agriculture, manufacturing and services) to create 'regional integrated policy platforms' (Cooke, 2007); and support to social networks and cultures of risk-taking and openness.

Improvements in government – from tackling red tape and promoting e-government to encouraging transparency and availability and eradicating corruption – along with strengthening civil society should be integral parts of any sort of development intervention. Improving connectivity, beyond physical connectivity, can also address the inherent problems of knowledge generation in areas that lack both the agglomeration and density normally seen as the seed for knowledge generation. This club – including most of the European periphery – should be broken down into more fine-grained development groups, on the basis of the high level of differentiation among the challenges and risks characterising the geographical observation units: e.g. 'emerging industrial regions' in eastern EU sharply differ from the 'disconnected periphery' of southern Europe.

*PSDDP strategies for middle-income regions:* In international development economics, there is a key development bottleneck known as the "middle income trap". Successful low-income countries can enjoy very high growth rates (often known as "miracles") for a certain number of years, before experiencing a long-term slowdown (Kharas and Kohli, 2011; Eichengreen, Park and Shin, 2013; Foxley, 2016; Im et al., 2015; Vivarelli, 2016). This is because their labour costs rise to the point where other regions become more attractive for labour-intensive or low-skill activities. However, these countries or regions typically do not have the advantages of richer countries, in terms of productivity, the quality of organisations and business ecosystems, infrastructure, home markets, and critically, inventiveness and skills. So they are wedged or trapped between two worlds. Moving up requires much higher investment per worker than in the early stages of development, because it requires more skills. Raising the quality of firms also requires more investment in hardware and orgware. In fact, society as a whole requires more investment in infrastructure, education, health and urbanisation to sustain a higher-quality, more cost-sensitive growth process. The per-capita investment costs of an additional unit of growth at the middle-income level tend to rise, compared to the low-income stage, which occurs just as there are demands to encourage consumption rather than investment. Thus, M-club regions have some of the hardest developmental challenges: they are neither as productive nor as innovative as the high- and very-high-income regions, but their labour and land prices are not as low as those of the lower-income regions.

Europe has an abundance of such regions. This club could also be further differentiated between, for instance, 'slow-growing' and 'ageing and declining' industrial areas, and amenity-based regions.

In the historically slow-growing regions of southern Europe, poor-quality government, historically pervasive corruption, collusion and lack of trust are more of a barrier for development than a shortage of assets. Employment

generation, firm creation and innovation in places like the Italian Mezzogiorno and less-developed regions in Greece, Portugal, and Spain depend to a large extent on capacity building and increasing the effectiveness and the quality of local governance in these regions. The key goal has to be increasing the productivity of individuals and systems by enhancing education and labour-force participation for individuals and capacities for firms. The historical aversion to risk, poor entrepreneurship, and rent-seeking behaviour through the public sector all require particular attention. These tasks are tied through the need for institutional improvement.

Some ageing and declining industrial areas in France, northern Italy and northern Spain have good-quality government but suffer from a skills mismatch to the current economy, as well as degraded amenity and residential conditions, combined with deepening social problems due to the despair of long-term decline. Their reservation wages make them poor candidates for competition with low-income regions, whether in Europe or abroad. These are some of the most arduous conditions to overcome today. But industrial reconversion in Scandinavia and in some parts of the ex-German Democratic Republic gives reason for hope. The PSDDP strategy for these regions is based on very significant investments in re-skilling (along the lines of the Danish flexicurity system). This should be combined with increasing the attractiveness of inward capital flows and establishing new knowledge links and reorientation of the local industry structure and economic functionality through active internationalisation and university-industry collaboration for

selected innovative projects. Restoration of social capital – encompassing networks of workers, government, universities, entrepreneurs and investors – to overcome historically stratified conflict-ridden class relations will be essential to moving forward.

These are just a few examples of how club theory and PSDDP theory help to advance the thinking about the current challenges facing Europe's development. Thus, PSDDP should aim to tap the untapped potential that has remained idle across many European regions by empowering local stakeholders to maximise their skills, talent and capabilities in a way that contributes to enhancing the economic performance and potential of Europe as a whole. Such a strategy would imply improving the opportunities available for citizens and workers wherever they live, allowing them, through a combination of well-targeted development strategies and institutional improvements, to make the most of their capabilities in their country of residence – regardless of whether this is their place of birth or where they live. This requires the design and implementation of development policies based on guidelines for each club or group of regions sharing similar characteristics, which can be adapted to specific regional features.

By placing a revised mission of how to deal with uneven development at the centre of the EU effort, Europe can start to redress some of the economic, social and political challenges which have gradually eroded its capacity to lead at the global scale and which have become all too evident as a source of division and conflict over the last two years.



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## Appendix 1: List of underperforming and over-performing regions

Regional GDP  
per head, 2014  
as EU Index

National GDP  
per head, 2014  
as EU Index

### Over-performing NUTS 2 regions (regional GDP per head > national GDP per head)

DE60	Hamburg	206	126
SK01	Bratislavský kraj	186	77
DE21	Oberbayern	179	126
FR10	Île-de-France	178	107
SE11	Stockholm	172	123
UKM5	North-eastern Scotland	164	109
BE00	Brussels and regions covered by its commuting zone	163	118
NL11	Groningen	163	131
DE71	Darmstadt	163	126
DE11	Stuttgart	162	126
DE50	Bremen	161	126
DK01	Hovedstaden	157	125
NL31	Utrecht	154	131
NL00	Amsterdam and regions covered by its commuting zone	153	131
AT32	Salzburg	152	129
IE02	Southern and Eastern	150	134
UKJ1	Berkshire, Buckinghamshire and Oxfordshire	149	109
ITH1	Provincia Autonoma di Bolzano/Bozen	144	96
FI1B	Helsinki-Uusimaa	144	110
UK00	London and regions covered by its commuting zone	141	109
DE12	Karlsruhe	140	126
AT34	Vorarlberg	139	129
AT33	Tirol	138	129
BE21	Prov. Antwerpen	138	118
FI20	Åland	137	110
DE91	Braunschweig	136	126
DE14	Tübingen	136	126
DE25	Mittelfranken	135	126
DEA1	Düsseldorf	134	126
NL41	Noord-Brabant	134	131
ITC2	Valle d'Aosta/Vallée d'Aoste	133	96
AT00	Vienna and regions covered by its commuting zone	133	129
DEA2	Köln	132	126
AT31	Oberösterreich	132	129

NL33	Zuid-Holland	131	131
RO32	Bucuresti-Ilo	129	55
DE23	Oberpfalz	128	126
DE26	Unterfranken	127	126
ITC4	Lombardia	126	96
ES30	Comunidad de Madrid	125	91
CZ00	Praha and regions covered by its commuting zone	124	84
UKD6	Cheshire	123	109
ITH2	Provincia Autonoma di Trento	123	96
ES21	País Vasco	119	91
ITH5	Emilia-Romagna	117	96
UKJ2	Surrey, East and West Sussex	115	109
ITI4	Lazio	114	96
ES22	Comunidad Foral de Navarra	113	91
UKK1	Gloucestershire, Wiltshire and Bristol/Bath area	112	109
UKJ3	Hampshire and Isle of Wight	112	109
PL12	Mazowieckie	108	68
ITH3	Veneto	108	96
ES51	Cataluña	108	91
HU10	Közép-Magyarország	107	68
PT17	Área Metropolitana de Lisboa	106	78
ITI1	Toscana	104	96
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