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Cohesion Policy in the European Union: Growth, Geography, Institutions*

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Abstract

Since the reform of the Structural Funds in 1989, the EU has made the principle of cohesion one of its key policies. Much of the language of European cohesion policy eschews the idea of trade-offs between efficiency and equity, suggesting it is possible to maximize overall growth while also achieving continuous convergence in outcomes and productivity across Europe's regions. Yet, given the rise in inter-regional disparities, it is unclear that cohesion policy has altered the pathway of development from what would have occurred in the absence of intervention. This article draws on geographical economics, institutionalist social science and endogenous growth theory, with the aim of providing a fresh look at cohesion policy. By highlighting a complex set of potential trade-offs and interrelations – overall growth and efficiency; inter-territorial equity; territorial democracy and governance capacities; and social equity within places – it revisits the rationale of cohesion policy, with particular attention to the geographical dynamics of economic development.

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Introduction

Economic activity is unevenly distributed across space. At different territorial scales – from the world, to among Member States of the EU, and within them – there are conspicuous gaps in wealth, in the density of population and economic activity, and in the compositions of regional and national economies. Since the early 1980s, the EU has witnessed parallel processes of cross-national convergence, with countries in the original periphery of Europe catching up, and within country divergence, characterized by rising relative incomes in well-off regions. A number of studies have demonstrated that inter-regional disparities have grown since the 1980s, measured in terms of GDP per capita and employment (cf. Puga, 1999; Martin, 2000; Midelfart-Knarvik and Overman, 2002; Overman and Puga, 2002; Puga, 2002). The standard deviation of per capita GDP (EU-15 = 100) for Member States as a whole has declined from 12.5 in 1990 to 11.4 in 2000, but that same index increased from 26.5 to 28.5 for sub-national regions within Member States.

Since the reform of the Structural Funds in 1989, the EU has made the principle of cohesion – of reducing disparities in economic outcome and opportunity among European regions – one of its key policies. In the context of rapidly changing economic, demographic and political realities in the EU, cohesion policy has become an ever larger component of the EU budget. The funds made available to support cohesion objectives have more than doubled in real terms since the late 1980s, making it now the greatest area of commitment within the EU budget. For the period 2007–13, €347 billion (at current prices) has been allocated for cohesion funds, more than 80 per cent of which is targeted at promoting ‘convergence’.¹

Much of the language of European cohesion policy eschews the idea of trade-offs between efficiency and equity, suggesting it is possible to maximize overall growth while also achieving convergence in outcomes and productivity across Europe’s regions. Yet, given the rise in inter-regional disparities, it is unclear that cohesion policy has altered the pathway of development from what would have occurred in the absence of intervention.² The reasons for this are complex and while some of them may have to do with the procedures for implementation of convergence policies or perhaps the scale of intervention

¹ Source: Commission, DG Region; see [«http://ec.europa.eu/regional_policy/policy/fonds/index_en.htm»](http://ec.europa.eu/regional_policy/policy/fonds/index_en.htm).

² Much research effort has gone into answering the question of whether European regional development intervention has met its objectives, with little clarity resulting. Recent analyses reach widely differing conclusions. While some studies find that the EU development effort since the 1989 reform of the Structural Funds has had almost no impact (e.g. Boldrin and Canova, 2001; Dall’Erba and Le Gallo, 2007), others indicate that it has been a success (e.g. Cappelen *et al.*, 2003). In between there are those who point out that the impact of the Structural Funds has been limited (e.g. Bussolotti and Esposti, 2004), mixed (e.g. Puigcerver-Peñalver, 2007) or tends to vary according to differences in emphasis across development axes (Rodríguez-Pose and Fratesi, 2004) or from one geographical location to another (Percoco, 2005).

(e.g. in comparison to equivalent US federal policies), others may well have to do with the absence of a realistic view of the economic geography of development and hence of the possibilities, constraints and potential trade-offs faced by efforts to promote convergence.

Thus, any fresh look at cohesion policy would be well advised to reconsider a complex set of potential trade-offs and interrelations: overall growth and efficiency; inter-territorial equity; territorial democracy and governance capacities; and social equity within places.

I. The Sources of Growth and the Tendency towards Agglomeration

For much of the period between the 1960s and the 1980s, the theories of trade and integration deployed to explain the geographical pattern of economic development tended to ignore the possibility that such development would cluster strongly in certain places (cities and regions, and within certain countries), and generate long-run income divergence. The neoclassical and Heckscher-Ohlin models emphasized the dispersion of economic activity, according to the principle of comparative advantage, and economic convergence, through subsequent adjustment of factor proportions in different places. The predictions of these theories found some empirical support within Europe and the US: the post-war decades witnessed widespread economic convergence both at the national and at the regional level (Barro, 1991). However, the evidence for the usefulness of such theories was weaker at wider territorial scales, such as in relations between highly developed and much less developed countries and regions. And indeed, some development economists in the 1950s and 1960s (e.g. Myrdal, 1957; Hirschman, 1958) emphasized that economic activity had ‘circular and cumulative’ patterns. Some economists attempted to reconcile these two perspectives by arguing that areas such as western Europe or North America represented selective convergence processes, or ‘convergence clubs’, where convergence would be possible among economies with similar ‘structural’ characteristics (Quah, 1996; López-Bazo *et al.*, 1999). A more complex picture emerges at wider territorial scales (such as, for example, the world, or eastern–western Europe), where underlying structural capacities of economies are quite different. To complicate matters further, since the late 1980s – and especially since the beginning of the 1990s – there appears to be a trend towards widening *within* country (i.e. cross-regional) disparities (Rodríguez-Pose, 1999; Puga, 2002). Economic integration is unleashing forces benefiting core regions within countries, often to the detriment of the periphery. This is happening virtually all over the world, with large cities in China, India,

Australia, Japan, Brazil, Mexico and elsewhere experiencing more rapid, sustained growth than medium-sized cities and rural hinterlands (Kanbur and Venables, 2005). Europe is typical, and large cities have generally outperformed other regions both within and outside their national boundaries. This is the case for London, Paris, the Randstad, Madrid, Rome, the Scandinavian capitals, Dublin and most other capitals in Europe. In sum, while integration in the EU to date has promoted inter-national convergence, sub-national inter-regional inequalities have tended to increase.

Research suggests these trends are driven by:

1. the technological paradigm driving growth, and especially innovation and its geography;
2. geographical integration of markets, combined with greater organizational and geographical fragmentation of production;
3. the persistence of institutional differences between places despite integration.

In this light, tendencies towards the geographical agglomeration of certain types of activities are likely to continue for the foreseeable future. This generates powerful tendencies toward income divergence, between 'core regions' (i.e. those regions within which are located the largest economic agglomerations) and 'peripheries' (i.e. regions generally lacking similar agglomerations and often the potential to generate scale economies). Though there are also powerful forces for convergence operating at the same time – notably the organizational fragmentation and geographical de-localization of production, as well as improvement in institutions in peripheral areas – they may not be powerful enough to counteract divergence. The 'spread' of development may be thus overwhelmed by the 'backwash' of income effects (big home markets) and technology effects (core regions move up the technological ladder faster than backward regions can catch up) (Myrdal, 1957). To our knowledge, a half-century of more sophisticated trade and location models has not overturned this fundamental geographical logic of development.

As noted, however, great progress has been made in understanding the mechanisms of geographical development processes since the 1950s. Three such academic efforts to understand the persistence of development to generate core and periphery regions are most relevant in this regard.

The first are 'new economic geography' models, which emphasize how market integration, scale economies, transport costs and home market effects combine to favour the concentration of economic activity in 'core' regions, and how the advantages of large, flexible, highly specialized labour markets and localized technological spillovers reinforce these tendencies (Krugman, 1991; Fujita *et al.*, 1999).

Secondly, models grounded in endogenous growth theory, including innovation economics (Schumpeterian growth theories), focus on innovation – the outward movement of the technological frontier and the ongoing extension of quality ladders and ‘product spaces’, and the positions of territories relative to this frontier (Romer, 1986; Lucas, 1988; Grossman and Helpman, 1991; Aghion and Howitt, 2005). These models stress change and adaptive efficiency rather than the adjustment towards an optimal, equilibrium allocation of factors between places. The economy is seen as a restless search for new products and processes with high rates of return, but where the potential to do this is unevenly distributed across territories. There is considerable empirical evidence in favour of this position, indicating that high factor cost areas, such as the core regions of the EU, are increasingly specialized at the top of ‘quality ladders’ (products with high knowledge and technology content as well as advanced producer services) and that their exports correlate well to the areas in which they innovate (Patel and Pavitt, 1991). Thus, economic geography and growth economics both emphasize innovation and processes of learning – knowledge creation and assimilation. They come together in that the human capital necessary to innovate operates through networks of knowledge transmission and training. This has important spatial implications since the transaction costs of transmitting knowledge remain high, often involving face-to-face contact, defined institutional channels and long periods to build up these channels.

A third school of research argues that institutions are the key force in determining where a region is situated with respect to the technology frontier, because institutions shape the ability of an economy to use and develop its resources. These institutional factors can also contribute to the agglomeration of economic activity, insofar as institutional capacities are unevenly distributed, reinforcing the concentration of the most advanced activities in metropolitan settings in particular, and in highly developed countries in general. One important set of institutions are those facilitating innovation R&D, venture capital financing and business support/facilitation; these are known collectively as ‘systems of innovation’ (Lundvall, 1992; Nelson, 1993). A certain economic scale is required to sustain such a range of institutions; moreover, only certain regions have the capacity to develop or attract the human capital and other resources needed to maintain such institutions at sufficient levels of quality. Second, as good institutional conditions are often hard to replicate, even mobile investments in innovation-oriented activities tend to concentrate where these favourable institutional conditions are found. On the other side, institutional weaknesses, stemming from lack of knowledge, capacity or the protection of existing rents, may result in political coalitions holding back appropriate institutional development, and policies

inappropriate for sustaining innovation and growth given their position relative to different types of frontiers (i.e. institutional, educational and, above all, the world technological frontier) (Persson *et al.*, 1997; Grossman and Helpman, 2001; Acemoglu, 2006; Acemoglu and Johnson, 2006).

The geography of cores and peripheries is the combined result of agglomeration tendencies, the uneven geography of innovation, the process of geographical fragmentation of production and the recursive feedbacks of these forces to the geography of institutional capacities. At any given moment, we may think of a stylized picture of three different ‘places’ depending on their position relative to the world technology frontier (Aghion and Howitt, 2005, p. 7):

- *places at or near the frontier*: characterized by high levels of skilled labour and access to capital, with few institutional and cultural barriers to developing and adopting new technologies; these tend to be core regions;
- *places further from the frontier*: characterized by a lower mix of skilled (vs unskilled) labour and/or limited access to capital; may face barriers to adopting and assimilating technology due to human capital, institutional and/or cultural constraints; these are possible near-term transition zones in the geographical division of labour;
- *places far from the frontier*: characterized by high concentrations of unskilled labour, limited access to capacity, low productivity and substantial cultural and institutional barriers to adopting technology; these are more often located in the periphery.

The locations of countries and regions relative to the different technology, educational, institutional and other types of frontiers vary substantially on a global scale; this is also the case within the EU, which has a mosaic of positions relative to the technological/quality ladder hierarchy. In the EU, this tends to play out within an urban–regional hierarchy, exhibiting strong metropolitanization effects. Close to the frontier we find mainly metro regions or regions adjacent to major metro areas. Other metro areas, often secondary cities within national urban systems, tend to be further from the frontier. Finally, lower-income regions, mainly located in the periphery, remain generally far from the technology frontier. There also appears to be a macro-geography to this, with core–periphery patterns nested at both the national and European levels. Metropolitan areas within northern and western Europe, which benefit from being geographically closer to the economic centre of Europe, tend to be closer to the frontier than those in southern and eastern Europe which are located further from the largest European agglomerations. This indicates that agglomeration and comparative advantages forces are at work over various, overlapping scales. Within the EU, there is a tendency for

innovation and economic output to concentrate in the economic core; within countries concentration is in the existing core regions; and within regions, there is a tendency to concentrate in urban areas.

A final point can now be made, which brings this discussion back into a temporal context. From the 1960s to the 1980s, it appeared to some researchers that convergence processes then in evidence – known as ‘club convergence’ – would slowly but surely gain ground at wider and wider spatial scales. But the major structural change in the world economy in the 1980s seems to have increased the importance of innovation for economic growth, and with it powerful trends towards agglomeration at various spatial scales, and with that, the importance of spatially uneven distribution of institutional capacities to innovate. The result is the ‘backwash’ that has been in evidence recently, in the form of complex, and stubborn, spatial hierarchy of incomes, within Europe and at the world scale.

II. Is there a Conflict between Efficiency and Convergence?

We have noted that, even though there are indeed forces for convergence unleashed by integration, there are also many forces pushing in the other direction. It is precisely this notion that underlies the call for policies encouraging convergence or inter-territorial equity within the EU. But, as should also be clear, such policies are not only costly, but may also have unintended effects.

Agglomeration is generally good for economic growth and development because it is the privileged geographical form taken by economic systems which carry out extensive innovation (World Bank, 2009). The link between innovation and agglomeration tends to be self-reinforcing: innovative activities tend towards agglomeration; and the greater the economic agglomeration, the greater the potential for innovation, for knowledge spillovers and for higher levels of economic growth. Excessive equality may thus be detrimental for economic growth if it involves limiting the productivity- and innovation-enhancing effects of agglomeration; some degree of inter-regional inequality may therefore raise the overall rate of growth. Regional inequalities in the EU are higher than those found in the US, but also significantly lower than those found in most countries in the developing world (Rodríguez-Pose and Gill, 2004). Agglomerations do generate spillovers, both in terms of economic multipliers and, critically, the spread of knowledge; however, these exhibit spatial selectivity and suffer from strong distance-decay effects (Audretsch and Feldman, 2004). Thus, most spillovers tend to accrue to regions surrounding cutting-edge metropolitan areas. Knowledge spillovers to other

metropolitan areas arise, where they are well networked (including physical transport and communications links, as well as links within firm and industry production chains) as part of an integrated urban system. But the scope for this is limited. Even within highly developed countries, sparsely populated regions are unlikely to benefit from the knowledge spillovers generated at the core, as they lack the connections to access them, the capacity to assimilate them and the scale to enable them to function through the formation of local agglomerations. For similar reasons peripheral regions at the European-wide scale are unlikely to capture a significant share of the spillovers resulting from agglomerations in the European core, except for cities at the top of their urban hierarchies.

Inequalities in growth across regions may not be harmful in the short term, as long as growth across all regions is robust. In a 'race to the top' scenario even the losers may be better off than when the race began. Thus, in an analogy to 'gains to trade', agglomeration (as a geographical expression of specialization) may indeed be essential to maximizing overall output, but the distribution of those gains may be uneven. There are, of course, limits on the degree to which agglomeration contributes to greater growth. Particularly as agglomerations seem to occur in metropolitan environments where space may be limited (and in the European context at least, there has generally been a strong consensus in favour of containing the spread of metropolitan growth), they also create diseconomies (Duranton and Puga, 2000). These manifest themselves in congestion (time), housing costs (with knock-on implications for wages and other inputs) and environmental degradation. Yet on the whole, the evidence points to a positive association between agglomeration and economic growth (Bourguignon and Morrison, 2002). This suggests that if Europe is to remain competitive in a more integrated world, and if Europe is to become more of an innovative 'first mover' in the global economy, agglomeration may be the geographical underpinning of so doing. Indeed, comparisons of the economic geography of the EU to that of the US show that Europe has fewer and smaller specialized agglomerations than the US, and many scholars believe this difference enhances the US' ability to dominate new, innovative sectors of the world economy (Midelfart-Knarvik and Overman, 2002; Crescenzi *et al.*, 2007).

In this light, it is urgent that Europe get a more precise handle on the potential trade-offs involved in pursuing goals of growth and innovation and those of convergence and equity. There is likely an analogy to the models used to assess the overall benefits of regional integration in a world economy: if convergence is pursued via policies attempting to spread existing economic activity, there will be a complex set of 'creation' benefits (linkages of poorer to richer regions, with positive effects on output and income), there will be

trade ‘diversion’ costs (costs of de-agglomeration and loss of comparative advantage optimization) and there will be *complex dynamic, endogenous feedbacks of the two* (terms of trade effects as poorer regions enter the economy, especially, which may actually favour the richer regions in the end). In any case, the overall costs and benefits of convergence-through-redistribution strategies require much more careful estimation and the results may turn out to be counter-intuitive (Dupont and Martin, 2003; Martin, 2005) and Europe needs to have a much more scientifically rigorous approach to theorizing and measuring such effects as it considers such policies. At present, we do not have sufficiently precise data to determine the ‘right’ target levels of these two complex phenomena in interaction, especially because doing anything to change either of them involves opportunity costs for the other if it requires significant redistribution of resources. This is therefore a major open area for policy research and formulation.

III. Reframing the Question

A more interesting question, however, is suggested when we move beyond this way of conceptualizing the relationship between equity and development. Indeed, while agglomeration forces may restrict the potential for convergence across regions, they do not explain fully the gap in productive output between leading and lagging³ regions in the EU. Many lagging regions are not simply failing to maintain the pace of growth and development being achieved in leading regions, they are failing to make productive use of the resources available. This is the problem of persistent (or durable) underdevelopment – i.e. of regions producing consistently below their production possibilities frontier. The more thorny question has to do with whether such certain uneven geographical patterns of development can have potentially perverse *dynamic structural* effects, by which we mean they lead to *divergent capacities to engage in development* between developed and less developed regions, thereby contributing to the problem of underdevelopment. In more conventional terms, ‘capacities’ refers to the probability that a place will be able to adjust its use of factors to move up the technology frontier or product space, and ‘divergent capacities’ exist when there are durable differences in the rate at which this can be done by different territories. Such structural inequalities, for example, would become circular and cumulative when skilled human capital emigrates to leading regions, weakening innovative capacities in

³ Defined here as regions with per capita GDP substantially below the EU average and/or regions with output and employment levels well below the EU average.

lagging regions, leading to adverse selection effects for the existing population and for political behaviours and institutions, in a ‘vicious circle’ scenario.

This idea is not new, but it carries with it a steep methodological challenge, which is twofold. On one hand, it would require a more precise definition of the probabilities that a place will, or will not, move up the technology frontier/product space, and over what type of time horizon. On the other hand, it would require identifying whether *active intervention* could improve these probabilities, and precisely how it would improve capacities to move up the technological frontier/product space, and which such capacities are amenable to improvement with intervention.

IV. Sources of Underdevelopment of Capacities

The underdevelopment of capacities stems from a range of factors, the relative importance of which will vary across regions. Endogenous and Schumpeterian growth models point to problems of low levels of human capital and low capacity to innovate and assimilate innovations as factors limiting growth potential. New economic geography models emphasize insufficient scale and poor accessibility to markets. Other lines of thinking underline the gap in technological and innovation capacities between regions, sometimes attributed to differences in human capital levels, others to differences in structural R&D/science capacity, and others to the quality of firms and entrepreneurialism. Still others consider that these differences might be generated, in the long run, by differences in the quality of their economic, social and political institutions. Much of the recent research on economic growth identifies institutions as a fundamental determinant of a region’s or a nation’s economic growth trajectory. Many lagging areas are beset by problems of institutional sclerosis, clientelism, corruption and pervasive rent-seeking by durable local elites who have an incentive to block innovation (Acemoglu and Robinson, 2000). Informal institutions in these places are often similarly dysfunctional, resulting in low levels of trust and declining associative capacity, and restricting the potential for effective collective action. In such an environment where institutions are ‘inappropriate’, a region is likely to fail to break out of low growth and low productivity traps. Weak institutions may have negative influence on the provision of public goods and on the development and delivery of policies aimed at improving skills or innovation capacity, or other potential sources of growth.

Such an environment of inappropriate institutions tends to have cumulative effects, leading to vicious circles of low growth. The poor conditions for investment in lagging regions may lead to a further concentration of economic

activity in already existing development poles, exacerbating trends toward divergence. And increasing levels of divergence often contribute to undermine an already weak institutional capacity and quality in lagging regions, entrenching underdevelopment.

V. From Theory to Logics of Intervention

In light of the above, it can now be seen that there are two different challenges to be faced by cohesion policy. The first relates to ‘unevenness’ and the fact that the factors driving economic growth appear to have a tendency towards agglomeration, concentrating growth in core, metropolitan regions at the expense of less populated and peripherally located ones. The second relates to ‘persistent underdevelopment’, which has a number of endogenous causes, including the inability to generate agglomeration as well as a tendency towards poor institutional environments.

In looking at the reasons for intervention to address unevenness and durable underdevelopment, it is useful to remember that cohesion policy has historically been assigned three objectives: equity (essentially equality of economic outcome and opportunity through redistribution), growth (reducing the underutilization of resources) and legitimacy (promoting and preserving the legitimacy of the EU and its institutions). These create a complex EU policy field with a certain number of objectives that are not necessarily mutually consistent:

(1) *Promoting growth versus reducing underdevelopment as policy objectives*: perhaps it is most difficult to justify the need of a cohesion policy on the grounds of reducing inter-regional inequalities. Since promoting higher levels of growth may require accepting geographical concentration of economic activity, generally in the best-endowed regions, there are likely to be trade-offs between aggregate economic efficiency and promoting convergence.

(2) *Reducing underdevelopment in a growth-enhancing way – development of capacities*: the case for intervention to respond to persistent underdevelopment has to do principally with the imperfect state of European integration, involving barriers to labour and capital mobility. In the absence of significant internal labour mobility, it becomes more difficult for underdeveloped regions to lower their unemployment rates, especially as labour mobility is more limited for the less skilled, leading to a combination of brain drain and underemployment/unemployment for the worst-off regions. Though capital mobility has increased, it is highest for activities relatively far away from the technological frontier, amenable to fragmentation and long-distance trade,

and biased toward the use of less-skilled labour. Close to the frontier, embeddedness in innovation networks limits spatial mobility to circulation and integration principally among the already developed regions. Taken together, the potential for aggregate growth in the EU may be prejudiced by resulting underdevelopment. While the EU may want to take action to promote increased labour mobility, this is likely to take a long time to bear fruit and it may never reach North American levels. Increasing the innovative capacities of less innovative regions will require policies that go beyond mere opening of borders. The policy concerns of enhancing growth in underdeveloped regions (as opposed to the aggregate growth of the EU as a whole) and combating underdevelopment of these regions have some overlap, but once again, the opportunity costs to aggregate EU growth and welfare require careful assessment.

(3) *Social development*: within the EU there is widespread consensus to provide a certain standard of living and public service provision to all citizens; welfare is widely considered to consist not just of income levels, or aggregate income, but of satisfaction of basic needs.

(4) *Political stability*: the presence of persistent and perhaps growing territorial inequalities has been the source of political tensions within many Member States of the EU.

(5) *Legitimacy of the EU*: persistent underdevelopment is considered by some to weaken the legitimacy of the EU, as it would indicate a failure to deliver on some of its core objectives to enhance the welfare of all its citizens.

VI. The Risks of Intervention

A provisional case for intervention to address underdevelopment in a growth-enhancing way seems to emerge from existing theory and evidence, but this does not mean that it is costless or free of risk. Among the main risks a cohesion policy should consider are the potential for interventions to:

- distort the efficient functioning of markets in the regions by favouring investments in activities inappropriate given the region's location relative to the technology frontier. This is particularly likely where regions adopt policies not based on localized sources of comparative advantage and/or where they attempt to replicate wholesale that which has been successful in other regions (e.g. the plethora of would-be 'Silicon Valleys');
- crowd out private investment, leaving the region vulnerable to fall back into decline once public funding dries up;

- shelter regions from markets, rendering them ever less able to adapt to changing external conditions;
- create a dependency culture, where in the name of generating ‘structural change’, regions come to rely on transfers and experience convergence in consumption but persistent divergence in productive output and potential;
- entrench existing elites by propping up ineffective, clientelistic institutions and fuelling rent-extracting machines.

In addition, interventions – particularly those designed to generate innovative and adaptive growth – tend to be often vague, providing a blanket authorization for spending on a wide range of – often ineffectual and poorly monitored – programmes and projects. *It is therefore critical that the objectives of addressing underdevelopment in a growth-enhancing way be sharply distinguished from: (a) convergence policies; (b) policies to address underdevelopment that have few community-wide growth-enhancing effects; (c) policies for social cohesion and meeting basic needs, that have few growth-enhancing properties. These are fundamentally different policy objectives.*

VII. What is Appropriate Intervention? Types of Territories, Types of Intervention

Addressing underdevelopment in a growth-enhancing way necessarily requires basing policies on the *many and varied types of underdevelopment dynamics* to be found in the EU’s regions. In other words, it cannot be done via a ‘one size fits all’ policy framework or mechanically applied criteria for intervention. There are major challenges to specify new criteria for intervention on underdevelopment and with the goal of building capacities that can enhance growth. To see this in more depth, we need to identify different types of territories, as well as different aims of intervention.

Different types of regions may be classified (broadly) as:

- metropolitan regions at the core of the EU;
- metropolitan regions in peripheral and less developed regions of the EU;
- regions adjacent to metropolitan regions;
- peripheral regions with relatively large populations and urban centres;
- rural and peripheral regions with sparse populations.

Different aims of intervention might include:

- enhancing growth for the EU as a whole, possibly by supporting efficiency and innovation in leading agglomerations;
- spreading innovation/growth by facilitating spatial spillovers and linkages to highly developed places;

- promoting innovation/growth in certain non-core regions deemed to have real medium-term potential to move up the technology hierarchy/product space;
- addressing underdevelopment through a combination of transfers, public goods provision and institutional reform, in order to enhance long-term growth capacity of these regions, whose potential for moving up the innovation/product quality hierarchy is limited, but potential for increasing productivity is nonetheless considerable;
- addressing equity for regions with limited potential to increase innovation or productivity, while admitting that it might have trade-offs (in the form of opportunity costs) to EU-wide growth and efficiency.

Thus, in the latter two categories, territorially targeting many policies that promote growth or combat certain dimensions of underdevelopment may lead to lower aggregate growth, but a different territorial and social distribution of growth. If the aim of policy is to maximize economic growth, there is a case for intervention designed to improve the potential of individuals and firms, including in the wealthiest regions. Beyond this, many growth-enhancing policies should not be territorially targeted. Many of the institutional factors that facilitate innovation and growth are best enabled at the national level, or in some cases the EU level. These include tax policies for R&D, laws and frameworks governing firm start-ups, venture capital markets, bankruptcy laws, cultures of success and failure, reforms of R&D and research systems, overall educational expenditures; in short, many of the factors that encompass national (and EU) systems of innovation (Lundvall, 1992; Nelson, 1993). In other words, the paradox is that policies for both enhancing overall growth and combating underdevelopment may better be achieved in a non-spatially targeted way. This, in combination with policies that reduce barriers to the mobility of capital and labour, should lead to firms and individuals being able to make better choices of productivity- or innovation-enhancing locations. The results of this type of intervention may vary across the EU. In old Member States the likely result would be to reinforce inter-national convergence within western Europe but to reproduce inter-regional differences. New Member States that have successful agglomerations would probably enjoy a certain convergence tendency with EU averages, but this may come at the price of exacerbating inter-regional inequalities. In contrast, new members without the medium-term probability of building core innovative regions are likely to have slower growth in their (sub-national) inter-regional inequalities, but lower overall convergence, if at all, towards the EU average.

However, in the cases of both growth promotion and reduction of underdevelopment, it might be that delivery of general-purpose policies will be

most effective when it involves territorial agencies. This is because many important institutions, including regional labour markets, education and training institutions, business associations and chambers of commerce, and individual research institutions, function primarily at the regional and local level. To take the previous example of policies to reform systems of innovation: many critical reforms must be enacted at large territorial scales; but parts of their implementation require the involvement of regional and local scales. Thus, there are two potential roles for regional and local institutions, that should not be confused: one is as an autonomous policy actor setting local, context-specific goals (true subsidiarity); the other is as an embedded delivery system for policies set at higher territorial scales, but cannot be implemented exclusively from those scales (multi-level governance and implementation). The task for policy-makers is to understand precisely which interventions are appropriate at each scale.

From a purely economic point of view, combating underdevelopment to enhance growth requires a mixture of multi-level governance and true subsidiarity. On economic grounds, the existence of technological and other types of frontiers means that the implementation of similar measures in different territories may yield widely varying results. One example of this is the presence of technological thresholds, below which the benefits of investments in high-order technologies do not accrue. Regions away from the technological frontier may thus achieve lower returns on investment in R&D than metropolitan regions located in the core of Europe. In contrast, peripheral regions may achieve greater returns by investing in human capital and in developing their capacity to assimilate innovations generated elsewhere. On institutional grounds, the quality of local institutions tends to have a substantial impact on the degree to which interventions achieve their intended outcomes. Regions with poor institutional settings are ineffective in supporting innovative activity or assimilating knowledge and innovation. As a result, policies of development promotion often fail to be implemented correctly; or worse, rent-seeking elites capture or distort the benefits of the intervention, entrenching their privileged positions and exacerbating inequalities *within* the region. Arguably the EU may have been wasting money by giving, under the principle of subsidiarity, greater responsibility for cohesion interventions to institutions that lack the capacity to formulate and/or implement them effectively, or indeed who are controlled by elites with a *disincentive* to see through the changes intended by the interventions.

However, the question of how to intervene in order to improve institutions is not easy to answer. 'Institution-building' is politically appealing and appropriate institutions are strongly suggested by theory and evidence as key to creating the capacities for economic development. The problem is that there

are few systematic lessons from the literature as to how policy can improve or build institutions, and indeed, the widespread vagueness about the subject carries a risk of squandering public funds and effort on programmes that may have little impact and possibly high opportunity costs. What we do know is that there are several ways institutions can improve economic performance and reduce underdevelopment: (a) promoting openness to new ideas and agents (otherwise known as ‘absorption capacity’); (b) limiting clientelism and rent-seeking; (c) reducing transaction costs; and (d) under some circumstances, changing time horizons to improve ‘staying power’ of parties where long latency periods are at hand. There is an additional, more controversial role for institutions, which is (e) changing expectations in the economy, and breaking out of the ‘adverse selection’ dynamic which can emerge when the existing state of the economy and its actor networks determine the ‘needs’ to which institutions address themselves. This is the thorny matter of whether institutions can transform an economy by looking well beyond its current development level. Note that objectives (c) and (d) may have a potentially uncomfortable relationship to objectives (a) and (b). Whereas (a) and (b) are about newness and openness, (c) and (d) are about staying power and co-ordination. The problem is that frequently, in Europe, policies favour the latter and often degenerate into excuses for rent-seeking clientelism. The utmost care must be taken to define precisely the criteria for different policy objectives and to ensure this does not happen. We do not have good estimates of the costs of transforming institutions in sub-national regions, or of raising capacities of persistently underdeveloped regions. But international evidence – from research on ‘success stories’ such as Taiwan, Singapore, South Korea, Israel and Ireland – concludes there are high social rates of return on well-calibrated efforts in this regard.

Two other possible types of intervention can also be considered, for opposite points in the ‘opportunity spectrum’. There are certain regions relatively far from the technology frontier, but that may offer opportunities for moving up along it. In Europe, this is likely to be certain metropolitan areas in new Member States, and certain provincial metro areas in the old members. Institutional change may not suffice to help them realize this potential. Can sectoral policies – which are essentially a form of industrial policy – complement institutional change and help these areas fulfil their potential? Targeted industrial policies have a generally poor record, and more so at the regional level. But there are cases in international development – notably in east Asian regions such as Taiwan, Singapore and South Korea – where policies aimed at ‘jumping the technology queue’ have been successful (Amsden, 1989; Wade, 1990), so the question naturally poses itself as to whether such strategies might be applicable to certain EU regions.

At the opposite end of the opportunity spectrum are those regions that have little short- or medium-term possibility for moving up the technological ladder, and which suffer from problems of severe underdevelopment. Institutional modernization will be a part of the effort in these regions. But the EU's other goals may also provide justification for palliative policies such as income transfers and the provision of public goods that these regions, and their Member States, are unable to provide for themselves. It should be considered, however, that such programmes need to avoid creating dependence, clientelism or 'crowding out' developmentalist policies from the agenda and priorities of actors.

A final word on how different forms of equity and cohesion interrelate is necessary here. Social equity and inter-territorial equity are driven by different forces and the one does not map onto the other. Indeed, certain types of policies promoting inter-territorial equity may contribute to raising overall levels of inequality between persons, if they redistribute income from persons in lower income brackets in one place to the population in another, without changing the overall dynamics of income distribution or even redistributing income upwards in the social income distribution but horizontally in the territorial income distribution.

VIII. What Might a More Territorially Nuanced Cohesion Policy Look Like?

We therefore recommend a cohesion policy consisting of a highly tailored set of interventions designed to address specific regional contexts of underdevelopment, on the one hand, and to promote growth, on the other. In Table 1, the term 'institutional modernization' refers to the five ((a) to (e)) goals of institutional reform noted earlier.

Conclusions

The approach to cohesion policy outlined in this article departs from the traditional approach to cohesion policy in three important ways. Firstly, it places less emphasis on 'convergence' (as defined by reducing the gap in GDP per capita across regions) and instead focuses on combating underdevelopment in a way that promotes both local and EU growth. Secondly, it eschews any idea of a uniform approach to regional development, recognizing the need to develop interventions tailored to the contexts and needs of specific regions. Finally, it stresses the importance of building strong networks of capable institutions in all regions in order to ensure development over the

Table 1: Towards a Place-Tailored Cohesion Policy

<i>Type of region</i>	<i>Likely location vs technological frontier and agglomeration potential</i>	<i>Nature of interventions to support EU cohesion</i>
Core metro regions (e.g. London, Paris, Berlin, Randstad, Hamburg, Milan, Copenhagen)	<ul style="list-style-type: none"> • On/near the technology frontier • Strong agglomeration force 	<ul style="list-style-type: none"> • Growth promotion (via Lisbon Agenda) • Facilitating ongoing adjustment and innovation along the frontier
Regions adjacent to core metro regions and secondary metro regions in the EU's core (e.g. East Midlands, Scotland, Tuscany, Midi-Pyrénées, Rhône-Alpes, Helsinki)	<ul style="list-style-type: none"> • Near the technology frontier • Moderate potential to realize agglomerations 	<ul style="list-style-type: none"> • Promotion of endogenous innovation development • Promotion of integration with core metro regions • Improving agglomeration potential (institutional deepening – e.g. encouraging venture capital, business services, R&D institutions) • Essentially, these are 'extended metropolitan basin' policies
Metro regions (top of urban hierarchy) in lagging and peripheral areas (e.g. Lisbon, Athens, Warsaw, Bucharest)	<ul style="list-style-type: none"> • Moderately far from the technology frontier • Moderate potential to realize agglomerations in distinctive technology fields • Reasonable home market effect to promote scale 	<ul style="list-style-type: none"> • Institutional 'moving up' – e.g. encouraging venture capital, business services, R&D institutions, etc.) – national level • Institutional modernization and deepening – regional level • Possible targeted sectoral policies
Underdeveloped or peripheral, often semi-rural regions (Calabria, Andalusia, Ipeiros, Podlaskie)	<ul style="list-style-type: none"> • Far from the technology frontier • Limited potential to realize innovative agglomerations • Limited home market effect for scale • Limited potential to generate productive activity in the short term 	<ul style="list-style-type: none"> • Public goods provision – to facilitate development and retention of human capital and home market • Productivity-enhancing interventions at the sector/firm level – tailored to exploiting local sources of comparative advantage • Infrastructure connectivity – to link with leading regions and become attractive to delocalizing production activities • Institutional modernization, especially for openness and co-ordination • Attract branch plants and 'de-agglomerating' basic labour-intensive activities
Relatively sparsely populated rural and peripheral regions (e.g. Basilicata, Extremadura, Alentejo, East Macedonia, Upper Norrland, Východné Slovensko)	<ul style="list-style-type: none"> • Far from the technology frontier • Limited potential to realize innovative agglomerations • Limited home market effect for scale • Limited potential to generate productive activity in the short term 	<ul style="list-style-type: none"> • Public goods provision <ul style="list-style-type: none"> – Quality (for equity purposes) – Mobility-promoting (e.g. education, housing policies that avoid mobility restrictions) – Maintain limited home market effects • Promoting social enterprise/social entrepreneurship • Institutional modernization and deepening for social openness • Innovation in niche areas suitable to sparsely populated regions • Increasing education levels and connectedness to metropolitan regions for knowledge transfer and opportunity recognition

Source: Authors.

long run. These three challenges to cohesion policy have implications for the way cohesion policy is governed.

Perhaps most importantly, this approach implies a redefinition by European institutions and Member States and regions of the types of interventions to be authorized in different cases, the means to do so and the respective roles of the EU, Member States and sub-national regions.

(1) *Defining types of interventions*: the trade-offs between growth maximization through spatial unevenness and growth enhancement through combating underdevelopment must be rigorously assessed and defined. Concepts such as ‘adaptive efficiency’, ‘innovation’, ‘productive efficiency’ and ‘growth enhancing development’ require precise definition. A further set of trade-offs between these objectives and certain kinds of equity objectives – those necessary to assure *consensus minima* and to prevent ‘downward spirals’ – must also be assessed. Criteria that trigger each type of intervention then would need to be developed.

(2) *The means to do so*: in all cases, because policies need to be context-sensitive; their precise content has to be determined through interaction between the EU and the regions. How, then, to ensure conformity to policy objectives? Greater conditionality is a must if the EU is to avoid the problems of elite-capture, rent-seeking, insider–outsider problems, principal–agent problems or clientelistic and nepotistic practices that may arise in a more decentralized cohesion policy. Although this may prove problematic at first, given the EU tradition of conditionality by consent, the EU already has the powers to impose greater discretion in the allocation of funds and to generate a credible threat in order to make sure that regions abide by clear guidelines and follow set practices. Going forward, the ‘credible threat’ must be shown to be credible.

(3) *Conditionality requires effective monitoring and evaluation*: given the diversity of interventions we should expect under this approach, it is important that the Commission be able to monitor – *ex ante*, during and after – the results of interventions, using rigorous criteria preventing the possibility that greater complexity and flexibility in policy objectives simply open the Pandora’s box of non-transparency and lead to abuse, rent-seeking and equivocation. This, in our view, is the greatest danger of the approach we recommend. In order for this to work, there must be changes both to the way the Commission functions and, critically, to the nature of the relationship between the Commission (DG-Regio) and its Member States and regions, with regard to cohesion policy. There must also be significant investment in training Commission officials who will monitor, and national, regional and local officials who will propose and comply.

In light of the above, it will be *indispensable to couple a substantive foundation for cohesion policy to new methods of implementation and evaluation*. Among the innovative measures that should receive serious consideration for context-sensitive policies of the sort here advocated, we can cite several. On the new substantive foundation for cohesion policies, measures could include the establishment of a set of guidelines concerning both institutions and areas of intervention and a greater capacity by the Commission to provide technical support to local institutions in the design, development and implementation of economic development strategies. On the new methods of implementation and evaluation side a better and leaner monitoring of performance through mechanisms such as peer-to-peer mentoring systems or random project monitoring could help improve the delivery and effectiveness of intervention. Random audits of performance are another good way to increase incentives for implementing agencies, and have the advantage of avoiding special preparation for evaluation. Such audits need to be backed up by independent auditing authorities, whether within the Commission or in separate agencies. As a whole, this involves a more thorough development of a ‘check and balance structure’ permitting the Commission or any designed independent auditing authority fully to develop its monitoring role without political meddling, as well as providing regions with a clearer set of guidelines of what is expected from the implementation of the policy. Transparency – ‘sunlight’ – is essential for the smooth running of the system. Finally, policies could be built around incremental performance incentives rather than single block grants, such that progress towards objectives could be differentially rewarded. Obviously, audits and investigations should have the ability, and the incentive, to end policies and grants that are manifestly not reaching their goals.

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References

- Acemoglu, D. (2006) ‘Modelling Inefficient Institutions’. NBER Working Paper No. 11940, National Bureau of Economic Research, Inc.

- Acemoglu, D. and Johnson, S.H. (2006) 'De Facto Political Power and Institutional Persistence'. *American Economic Review*, Vol. 96, No. 2, pp. 325–30.
- Acemoglu, D. and Robinson, J.A. (2000) 'Political Losers as a Barrier to Economic Development'. *American Economic Review*, Vol. 90, No. 2, pp. 126–30.
- Aghion, P. and Howitt, P. (2005) 'Appropriate Growth Policy: A Unifying Framework'. Joseph Schumpeter lecture of the European Economic Association.
- Amsden, A. (1989) *Asia's Next Giant: South Korea and Late Industrialization* (Oxford: Oxford University Press).
- Audretsch, D.B. and Feldman, M. (2004) 'Knowledge Spillovers and the Geography of Innovation'. In Henderson, J.V. and Thisse, J.F. (eds) *Handbook of Urban and Regional Economics*, Vol. 4 (Amsterdam: Elsevier).
- Barro, R.J. (1991) 'Economic Growth in a Cross Section of Countries'. *Quarterly Journal of Economics*, Vol. 106, pp. 407–43.
- Boldrin, M. and Canova, F. (2001) 'Inequality and Convergence in Europe's Regions: Reconsidering European Regional Policies'. *Economic Policy*, Vol. 16, pp. 207–53.
- Bourguignon, F. and Morrison, C. (2002) 'Inequality among World Citizens: 1820–1992'. *American Economic Review*, September, pp. 727–44.
- Bussoletti, S. and Esposti, R. (2004) 'Regional Convergence, Structural Funds and the Role of Agriculture in the EU. A Panel-Data Approach'. Working Paper No. 220 (October 2004), Università Politecnica delle Marche, Dipartimento di Economia.
- Cappelen, A., Castellacci, F., Fagerberg, J. and Verspagen, B. (2003) 'The Impact of EU Regional Support on Growth and Convergence in the European Union'. *JCMS*, Vol. 41, No. 4, pp. 621–44.
- Crescenzi, R., Rodríguez-Pose, A. and Storper, M. (2007) 'The Territorial Dynamics of Innovation: A Europe–United States Comparative Analysis'. *Journal of Economic Geography*, Vol. 7, No. 6, pp. 673–709.
- Dall'erba, S. and Le Gallo, J. (2007) 'Regional Convergence and the Impact of European Structural Funds 1989–1999: A Spatial Econometric Analysis'. Working Paper No. 01-07, Department of Geography and Regional Development of the University of Arizona.
- Dupont, V. and Martin, P. (2003) 'Regional Policies and Inequalities: Are Subsidies Good for You?' Mimeo, CERAS-ENPC.
- Duranton, G. and Puga, D. (2000) 'From Sectoral to Functional Urban Specialisation'. *Journal of Urban Economics*, Vol. 57, pp. 343–70.
- Fujita, M., Krugman, P. and Venables, A.J. (1999) *The Spatial Economy: Cities, Regions and International Trade* (Cambridge, MA, and London: MIT Press).
- Grossman, E.H. and Helpman, E. (1991) 'Quality Ladders in the Theory of Growth'. *Review of Economic Studies*, Vol. 58, pp. 43–61.
- Grossman, E.H. and Helpman, E. (2001) *Special Interest Politics* (Cambridge, MA and London: MIT Press).
- Hirschman, A.O. (1958) *The Strategy of Economic Development* (New Haven, CT: Yale University Press).

- Kanbur, R. and Venables, A.J. (2005) *Spatial Inequality and Development* (Oxford: Oxford University Press).
- Krugman, P. (1991) 'Increasing Returns and Economic Geography'. *Journal of Political Economy*, Vol. 99, pp. 484–99.
- López-Bazo, E., Vayá, E., Mora, A.J. and Suriñach, J. (1999) 'Regional Economic Dynamics and Convergence in the European Union'. *Annals of Regional Science*, Vol. 33, pp. 343–70.
- Lucas, R. (1988) 'On the Mechanics of Economic Development'. *Journal of Monetary Economics*, Vol. 22, No. 1, pp. 3–42.
- Lundvall, B.-A. (ed.) (1992) *National Innovation Systems: Towards a Theory of Innovation and Interactive Learning* (London: Pinter).
- Martin, P. (2000) 'The Role of Public Policy in the Process of Regional Convergence'. *EIB Papers*, Vol. 5, pp. 69–79.
- Martin, P. (2005) 'The Geography of Inequalities in Europe'. *Swedish Economic Policy Review*, Vol. 12, pp. 83–108.
- Midelfart-Knarvik, K.H. and Overman, H.G. (2002) 'Delocation and European Integration: Is Structural Spending Justified?' *Economic Policy*, Vol. 35, pp. 323–59.
- Myrdal, G. (1957) *Economic Theory and Under-Developed Regions* (London: Duckworth).
- Nelson, R. (ed.) (1993) *National Innovation Systems: A Comparative Analysis* (New York/Oxford: Oxford University Press).
- Overman, H.G. and Puga, D. (2002) 'Unemployment Clusters across Europe's Regions and Countries'. *Economic Policy*, Vol. 17, pp. 115–47.
- Patel, P. and Pavitt, K. (1991) 'Large Firms in the Production of the World's Technology: An Important Case of "Non-globalisation"'. *Journal of International Business Studies*, Vol. 22, No. 1, pp. 1–21.
- Percoco, M. (2005) 'The Impact of Structural Funds on the Italian Mezzogiorno, 1994–1999'. *Région et Développement*, Vol. 21, pp. 141–52.
- Persson, T., Roland, R. and Tabellini, G. (1997) 'Separation of Powers and Political Accountability'. *Quarterly Journal of Economics*, Vol. 112, pp. 1163–202.
- Puga, D. (1999) 'The Rise and Fall of Regional Inequalities'. *European Economic Review*, Vol. 43, pp. 303–34.
- Puga, D. (2002) 'European Regional Policies in Light of Recent Location Theories'. *Journal of Economic Geography*, Vol. 2, pp. 373–406.
- Puigcerver-Peñalver, M. (2007) 'The Impact of Structural Funds Policy on European Regions Growth: A Theoretical and Empirical Approach'. *European Journal of Comparative Politics*, Vol. 4, pp. 179–208.
- Quah, D.T. (1996) 'Twin Peaks: Growth and Convergence in Models of Distribution Dynamics'. *Economic Journal*, Vol. 106, pp. 1045–55.
- Rodríguez-Pose, A. (1999) 'Convergence or Divergence? Types of Regional Responses to Socioeconomic Change'. *Tijdschrift voor Economische en Sociale Geografie*, Vol. 90, pp. 363–78.

- Rodríguez-Pose, A. and Fratesi, U. (2004) 'Between Development and Social Policies: The Impact of European Structural Funds in Objective 1 Regions'. *Regional Studies*, Vol. 38, pp. 97–113.
- Rodríguez-Pose, A. and Gill, N. (2004) 'Is there a Global Link between Regional Disparities and Devolution?' *Environment and Planning A*, Vol. 36, No. 12, pp. 2097–117.
- Romer, P.M. (1986) 'Increasing Returns and Long-Run Growth'. *Journal of Political Economy*, Vol. 94, No. 5, pp. 1002–37.
- Wade, R. (1990) *Governing the Market: Economic Theory and the Role of Government in East Asian Industrialization* (Princeton, NJ: Princeton University Press).
- World Bank (2009) *World Development Report 2009: Reshaping Economic Geography* (Washington, DC: World Bank).