

# Measuring the Impact of EU Support for Cross-border Regional Cooperation

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## Abstract

The European Community has provided financial support for cross-border territorial cooperation since 1990. The justification of the European Union (EU)'s current territorial cooperation policy for cross-border contiguous regions lies in its capacity to promote functional economic links between them. This capacity is based on two assumptions, namely that there is a relation between the degree of institutional cooperation achieved and the financial support provided by the EU, and that there is a relationship between the degree of institutional cooperation achieved and the development of functional economic links. This article attempts to measure both the impact of Community support on territorial institutional cooperation intensity and the impact of institutional cooperation intensity on economic functional links. This is done using primary data for EU-15 regions for the period between 1992 and 2007.

## Keywords

European Union; Regional policy; European cohesion policy; Territorial cohesion; Territorial cooperation; Cross-border cooperation

THE EUROPEAN COMMUNITY HAS PROVIDED FINANCIAL SUPPORT FOR CROSS-BORDER territorial cooperation since 1990. This began as a community initiative entitled INTERREG. However, since 2007, it has been one of the three priority objectives of the European regional policy, together with Convergence and Regional Competitiveness and Employment. Furthermore, the importance of regional cooperation has increased since the Lisbon Treaty came into effect in December 2009, as it has become the main instrument of the European Union (EU)'s new objective of territorial cohesion. Territorial cohesion has been added to, and complements, the well-established European objectives

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of economic and social cohesion. It represents the EU's new commitment to breaking the predominant core-periphery model of economic development that is characteristic of Europe, to achieve a more balanced approach. Nevertheless, territorial cohesion is a wide concept that has led to different interpretations. To this day, there only seems to be consensus on the belief that territorial cooperation is conducive to territorial cohesion. These concepts can be linked as follows: the more regional cooperation is achieved, the greater territorial cohesion is in the EU.

Efforts have been made to research the territorial impact of various EU sector policies (ESPON 2006). Nevertheless, as Hague (2006) and Dühr *et al.* (2010) point out, each project has adopted its own methodological approach. There is no common methodology to assess the territorial impact of a policy. Moreover, the impact or added value of territorial cooperation in terms of concrete outputs is difficult to measure for two main reasons: first, the small scale of the financial resources involved, and second, the shortcomings in monitoring systems and data collection (Dühr *et al.* 2010; Milwaldt *et al.* 2009; Taylor *et al.* 2004).

Both the European Commission and researchers have tried to evaluate the impact INTERREG has had on the territorial cohesion of the regions involved through qualitative analysis. Research includes qualitative studies that assess one or more cases of cooperation in depth (Mirwaldt *et al.* 2009; Matthiessen 2005; Knippenberg 2004; Kramsch and Hooper 2004; Perkmann and Sum 2002; Koschatzky 2000; Krätke 1999; Strykiewicz 1998; Brunn and Schmitt-Egner 1997) as well as formal evaluation reports (INTERACT 2007; Taylor *et al.* 2004). All of these studies indicate that territorial cooperation contributes to making citizens from different nationalities overcome cross-cultural communication problems.

According to Mirwaldt *et al.* (2009: 31), five general consequences of INTERREG have been identified in the literature. First, cooperation programmes promote the EU goal of territorial cohesion by supporting enhanced cooperation between member states. Second, they enable specific territorial problems to be tackled. Third, they provide for learning and exchange of experience. Fourth, they can bring together different types of organization which do not regularly work together. And finally, they can result in a significant increase in the number, intensity and dynamics of cross-border contacts at national, regional and local levels.

The article aims to contribute to this effort in order to measure the impact of EU's support for territorial cooperation on territorial cohesion. Specifically, it offers an attempt to measure, on the basis of quantitative methods, the impact of Community support on the development of functional economic links between the cross-border contiguous regions of EU-15.<sup>1</sup> The research presented here is based on the argument that the impact of EU's support for cross-border regional cooperation on territorial cohesion depends upon the existence or intensity of two relations. First, its impact depends upon the existence of a relationship between the degree of institutional cooperation achieved and the financial support provided by the EU, and second, on the existence of a relation between the degree of institutional cooperation achieved and the development of functional economic links.

This article is divided into six sections. The first two sections analyse the aim of EU support for territorial cooperation in general, and of geographically contiguous border regions in particular. The third section explains the methodology that has been followed to measure the impact of cross-border territorial cooperation on the development of economic

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<sup>1</sup> EU-15 refers to pre-2004 EU Member States.

functional links between the regions involved. The fourth and fifth sections present the results, and the final section offers some conclusions, as well as limitations to the study.

### The aim of the EU support for territorial cooperation

A policy is generally considered effective when its objectives are met (Molle 2007). Therefore, the first step in an impact analysis is to determine the objective of a measure or policy. Regional cooperation is currently one of the three priority objectives of European Regional Policy (ERP). Consequently, its final objective is that stated in Article 174 of the Treaty on the Functioning of the European Union:

In order to promote its overall harmonious development, the Union shall develop and pursue its actions leading to the strengthening of its economic, social and territorial cohesion.

In particular, the Union shall aim at reducing disparities between the levels of development of the various regions and the backwardness of the least favoured regions.

To date, the EU has been characterised by a core-periphery territorial development model.<sup>2</sup> The European pentagon is delimited by London, Paris, Milan, Munich and Hamburg. It covers less than a fifth of the current surface area of the EU (14 per cent), but contains a third of its population (32 per cent) and makes up almost half of its GDP (47 per cent). This economic driving force of Europe, which is also known as the 'Blue Banana'<sup>3</sup>, is the only EU zone that can compete on a global scale. There is evidence of a gradual process of convergence between different groups of regions in the EU-15 (Molle 2007). However, according to the European Spatial Planning Observation Network (ESPON 2004, 2006), current territorial trends still indicate that many of the global scale functions are clustered in the pentagon.

The new general objective of the EU, as stated in Article 3 of the Treaty on European Union, is to attain territorial cohesion. This will lead to a new strategy to break the core-periphery model that has characterised Europe to date. It should complement and add to the ERP's well-established objectives of social and economic cohesion to achieve more balanced economic development. In the words of Dühr, Colomb and Nadin (2010: 60),

[c]oncerns about the socio-economic disadvantages that a spatial structure with a strong core and weak periphery implies for economic and social cohesion lies at the heart of EU policy-making, and is the rationale for the considerable support given under the EU Cohesion Policy to regions that are 'lagging behind'.

Debates on territorial cohesion are not new.<sup>4</sup> The European Spatial Development Perspective was agreed at Potsdam in 1999 by the ministers responsible for spatial planning after a ten-year process of deliberation; the European Commission introduced territorial cohesion in its Cohesion Reports as early as 2001, and in 2007 an informal Territorial Agenda specifying six territorial priorities for the EU was agreed.<sup>5</sup> However,

<sup>2</sup> For a classification of regions between the core and the periphery, see Molle (2007: 88-89).

<sup>3</sup> For more on the core-periphery conceptualisations of Europe, see Dühr *et al.* (2010), Chapter 5.

<sup>4</sup> As Dühr *et al.* (2010: 191) remind us, the story began with the Council of Europe, which "provided the main arena for international debate on spatial development and planning in Europe" until the late 1980s.

<sup>5</sup> For a detailed account of the European debate on territorial development from the 1950s until now, see Dühr *et al.* (2010).

there is still no consensus among member states and researchers on the significance of this new common objective.<sup>6</sup>

According to Mirwaldt, McMaster and Bachtler (2009), there are at least four different definitions of territorial cohesion among member states and researchers, depending on whether they are based upon polycentrism, balanced development, accessibility or networking. In the words of these authors, territorial cohesion can be seen

first, as polycentric and endogenous development, aiming to cultivate several clusters of competitiveness and innovation across Europe. Second, it can be seen as a balanced development model with the primary aim of reducing socio-economic disparities and avoiding imbalances. Third, territorial cohesion is sometimes formulated in terms of accessibility, i.e. the ambition for citizens to have equal access to facilities, services and knowledge, regardless of where they live. And finally, it could be seen as a form of networking, giving emphasis to the physical and interactive connections that exist between different communication centres and that also link them with their surrounding areas (Mirwaldt *et al.* 2009: v).

According to Doucet (2006), all those interested in territorial cohesion consider that it should lead to some sort of spatial justice while promoting the horizontal coordination of all those policies that have a spatial impact, such as agriculture or transport policy. The greatest divergence of opinion relates to what exactly territorial cohesion entails in practice. This article identifies two general approaches to this quest for the "European Holy Grail": that of "protector knights" and that of "mystical knights". For the former, territorial cohesion means a range of positive discrimination steps in favour of various penalised areas outside the EU pentagon, for which resources should be concentrated in regions of a specific category at the expense of others. The latter are "the heirs of the post-war urban and regional planning tradition" (Doucet 2006: 1478), since they believe in the need for integrated territorial planning strategies.<sup>7</sup>

In any case, both Doucet's "protector knights" and "mystical knights" consider that Community efforts in favour of territorial cooperation between sub-national units, channelled through both the current European regional policy third objective and its forerunner INTERREG, are an instrument at the service of territorial cohesion. As Mirwaldt *et al.* (2009: 2) express it: "disagreements about the meaning of territorial cohesion may abound, but there is near-universal acceptance that territorial cooperation is conducive to territorial cohesion".

In turn, this belief is based on the assumption that territorial cooperation is conducive to the reduction of the border effect between different member states (Dühr *et al.* 2010; Mirwaldt *et al.* 2009; Faludi 2009; Barca Report 2009; Fernández Tabales *et al.* 2009; European Commission 2008; Molle 2007). Cross-border regions face linguistic, regulatory, administrative, cultural and even physical (mountains, rivers, seas) barriers, which reduce spillovers from neighbouring regions. To quote van Gorp (2009: 359), "[b]ecause borders can obstruct movements (of people, business, capital, goods and services) they can not only obstruct spillovers but also the play of centripetal and centrifugal forces".

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<sup>6</sup> Along these lines, Begg (2010) argues that there is also a lack of consensus on the definition of economic and social cohesion. Molle (2007: 12) argues that "cohesion is an elusive concept. It has been made operational by selecting and defining indicators of disparity. Less disparity means more cohesion; more disparity means less cohesion".

<sup>7</sup> Faludi (2009, 2007) could be considered one of the main representatives of the "mystical knights". In his opinion, territorial cohesion implies the definition of a European spatial model and, alongside it, a European social model. In the same line, Dühr *et al.* (2010: 189) have recently explained how the "ongoing debate around the concept of territorial cohesion is helping to distinguish the characteristics of the European spatial planning model from other domestic national models".

This review of the literature on territorial cohesion led to the following conclusion. Behind the efforts to promote regional cooperation in the EU is the idea that the more cooperation we attain, the smaller the border effect will be and the easier it shall be to break the core-periphery model of territorial development that has characterised Europe to date. However, there are many ways to define and foster regional cooperation.

### The aim of EU support for cross-border regional cooperation

The EU currently distinguishes between three forms of territorial cooperation and allocates different resources to each one.<sup>8</sup> Regional cooperation in the INTERREG I (1990-1993) Community Initiative only took into account cross-border or transfrontier cooperation, that is, cooperation between geographically contiguous border regions, including maritime borders (CEC 1990). In INTERREG II (1994-1999), the area of regional cooperation was extended to large multi-national spaces, which is known as territorial transnational cooperation (CEC 1994, 1996). Finally, INTERREG III (2000-2006) included interregional cooperation, to create European cooperation and exchange networks among non-contiguous regions (CEC 2000). The objective of current territorial cooperation covers all three of these forms of cooperation, as stated in Council Regulation 1083/2006 laying down general provisions on the ERP (EC 2006).

The impact of the ERP on regional cooperation may vary according to the type of cooperation that is being addressed (Dühr *et al.* 2010). This research focused on cross-border cooperation between contiguous regions, for example, the cooperation found between regions on both sides of member states' sea or land borders within the EU. There are two reasons for our choice of focus. First, this is the only type of cooperation that has been supported by the European Community since 1990. Second, it is the type of cooperation that has received the largest financial support in the EU. As shown in Table 1, it has always been allocated more than 50 per cent of the regional cooperation budget.

**Table 1:** EU financial support for cross-border cooperation since 1990

| Community support      | Cross-border cooperation             | Territorial Cooperation |
|------------------------|--------------------------------------|-------------------------|
| INTERREG (1990-93)     | ECU 800 million                      | 100%                    |
| INTERREG II (1994-99)  | ECU 2.400 million                    | 90%                     |
| INTERREG III (2000-06) | EUR 2.437-3.900 million <sup>9</sup> | 50%-80%                 |
| THIRD OBJECTIVE ERP    | EUR 5.576 million                    | 73, 86%                 |

*Sources: European Commission Communications (CEC 1990, 1994, 1996, 2000) for INTERREG programmes and the 2006 Regulation for the third objective of the ERP (EC 2006).*

This does not amount to much money, if we take into account that over 30 per cent of the European Community budget is allocated to ERP (*i.e.* 308 billion euros for 2007-2013).

<sup>8</sup> For an account on the evolution of the support on the European Community on transboundary territorial cooperation programme and projects see Dühr *et al.* (2010).

<sup>9</sup> In the case of Interreg III, the Commission Communication 2000/C143/08 establishes in the second paragraph of section 48 that "Member States will ensure that (on an indicative basis) between 50% and 80% of their total allocation for Interreg III is allocated to cross-border cooperation under strand A". Dühr *et al.* (2010) estimate that 67 per cent of the total budget was devoted to this strand.

However, from 1990 to the present, the EU has increased the resources available for regional cooperation in general and cross-border cooperation in particular. Hence, it is giving increasing importance to this area.<sup>10</sup>

One important question is what the EU hopes to obtain with its support for cross-border cooperation. A comparative analysis of the regulations and other documents relating to cross-border cooperation shows that from 1990 to the present day Community efforts in this area have been mainly characterised by continuity (Garcia-Duran *et al.* 2009). As far as the objective is concerned, cross-border territorial cooperation has always sought to reduce the costs of the border effect by promoting permanent cooperation strategies both in the public and private environments and in the economic, social, administrative and judicial environments.

Nevertheless, there has been a change in the definition of these costs. Thus, where previously support was sought for underdeveloped regions facing a range of economic problems deriving from the elimination of border controls, today support is required to stimulate the benefits of border effect reduction (*i.e.* to reduce the costs still arising from border effects). In INTERREGS I (1990-1993) and II (1994-1999), the primary goals were to promote the economic development of regions suffering the effects of their peripheral border location and to provide them with compensation for the loss of income resulting from the elimination of internal customs within the European Community. From INTERREG III (2000-2006) onwards, the objective is to reduce border effects because they hinder economic and social integration. In other words, we have gone from compensating the costs of the border effect reduction caused by the internal market to seeking the benefits of border effect reduction, such as developing functional economic links.

To sum up, the EU has shown a continuous commitment to the promotion of stable cooperation between border regions. With its support, the EU hopes to increase the level of cooperation between border regions and thus ensure the development of functional economic links. Two analyses are needed to measure the effectiveness of this policy. First, we should establish whether there is a relation between the degree of institutional cooperation achieved and the financial support provided by the EU. Second, we should assess whether there is a relation between the degree of institutional cooperation achieved and the development of functional economic links.

### Measuring the impact of EU support

The definition of the EU's objective in supporting regional cooperation between contiguous regions has restricted the scope of this article to a study of the EU-15. Consequently, cross-border cooperation between the first 15 members of the EU has been analysed, as more data are available on these members and the period of analysis is longer (1992-2007).

The database used here is therefore that of the EU-15 regions; the nomenclature of territorial units for statistics (NUTS) for 1999 is also used.<sup>11</sup> On the basis of these data and information on the cross-border associations that have formed along the internal EU borders of these countries, which was provided by Perkmann (2003) and INTERACT (2007), a sub-database of the NUTS-3 regions was created that belong to some of the 24 cross-border regions (CBRs) that were identified. A list of the 24 CBRs can be found in Table 2, as

<sup>10</sup> However, the increase in 2007-2013 was largely due to the entry of 12 new Member States into the EU (Garcia-Duran *et al.* 2009).

<sup>11</sup> NUTS was established by the EU statistical office to provide a single uniform breakdown of territorial units. As Dühr *et al.* (2010: 34) put it: "[i]t is a five-level hierarchical classification that subdivides each member state into NUTS 1 regions, each of which is in turn subdivided into NUTS 2 regions and so on".



well of an account of the NUTS-3 regions that form each of them.

**Table 2:** The 24 CBRs selected for this study

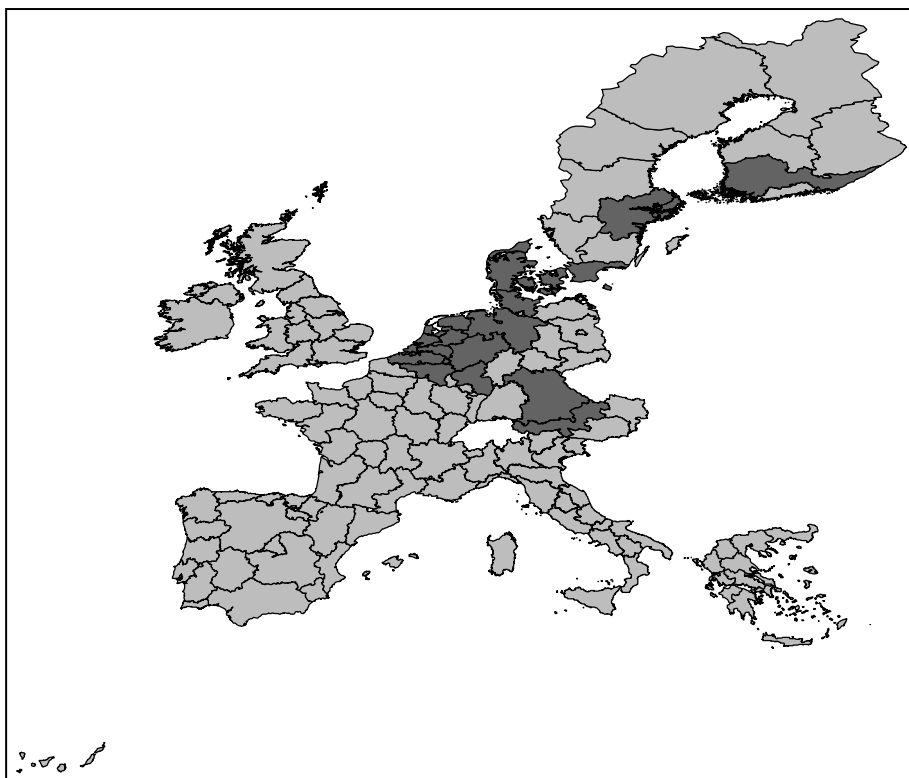
|    | <b>Euroregions or Work Communities</b>  | <b>Member states</b>        | <b>NUTS 3</b> |  |
|----|---|-----------------------------|---------------|--|
| 1. | <b>Euroregio Salzburg-Berchtesgadner Land - Traunstein (Interreg Bayaut)</b>                            | Austria/Germany             | 27            | Innviertel, Mühlviertel, Pinzgau-Pongau, Salzburg und Umgebung, Außerfern, Innsbruck, Tiroler Oberland, Tiroler Unterland, Bludenz-Bregenzer Wald, Rheintal-Bodenseegebiet, Rosenheim Kreisfreie Stadt, Altötting, Berchtesgadener Land, Bad Tölz-Wolfratshausen, Garmisch-Partenkirchen, Miesbach, Rosenheim Landkreis Traunstein, Passau Kreisfreie Stadt, Freyung-Grafenau, Passau Landkreis, Rottal-Inn, Kaufbeuren Kreisfreie Stadt, Kempten (Allgäu) Kreisfreie Stadt, Lindau (Bodensee), Ostallgäu, Oberallgäu. |
| 2. | <b>Ems Dollart Region</b>   | Germany/Netherlands         | 8             | Oost-Groningen, Delfzijl en omgeving, Overig Groningen, Zuidoost-Drenthe, Emden Kreisfreie Stadt, Aurich, Emsland, Leer.   |
| 3. | <b>EUREGIO/Euregio Rhine-Waal/Euregio Rhine-Meuse-North</b>   | Germany/Netherlands         | 18            | Landkreis Emsland (Emsbüren, Salzbergen, Spelle), Grafschaft Bentheim, Mönchengladbach Kreisfreie Stadt, Kleve, Viersen, Wesel, Borken, Steinfurt, Noord-Overijssel, Twente, Achterhoek, Arnhem/Nijmegen, West-Noord-Brabant, Midden-Noord-Brabant, Noordoost-Noord-Brabant, Zuidoost-Noord-Brabant, Noord-Limburg, Midden-Limburg.  |
| 4. | <b>Sonderjylland-Schleswig</b>  | Denmark/Germany             | 4             | Sønderjyllands Amt, Nordfriesland, Schleswig-Flensburg, Kreisfreie Stadt Flensburg.  |
| 5. | <b>Euregio Meuse-Rhine</b>  | Belgium/Germany/Netherlands | 12            | Arr. Maaseik, Arr. Tongeren, Arr. Liège, Arr. Verviers, Aachen Kreisfreie Stadt, Aachen Kreis, Düren, Euskirchen, Heinsberg, Bitburg-Prüm, Daun, Zuid-Limburg.   |
| 6. | <b>Grensregio Vlaanderen-Nederland (Euregio Benelux Middengebied/Euregio Schedelmond (Flanders-NL))</b> | Belgium/Netherlands         | 15            | Arr. Antwerpen, Arr. Turnhout, Arr. Maaseik, Arr. Tongeren, Arr. Eeklo, Arr. Gent, Arr. Sint-Niklaas, Arr. Brugge, Zeeuwsch-Vlaanderen, Overig Zeeland, West-Noord-Brabant, Midden-Noord-Brabant, Zuidoost-Noord-Brabant, Midden-Limburg, Zuid-Limburg.  |
| 7. | <b>Oresund Region</b>   | Sweden/Denmark              | 6             | Skane Län, Kobenhavn og Frederiksberg Kommuner, Kobenhavns Amtskommune, Frederiksborg Amtskommune, Roskilde Amtskommune, Bornholms Amtskommune.  |
| 8. | <b>Skargarden</b>   | Finland/Sweden              | 6             | Åland (coast lines), Uusimaa, Varsinais-Suomi, Stocokholms Län (coast lines), Uppsala Län, Södermanlands Län.  |
| 9. | <b>Europaregion Tirol</b>   | Italy/Austria               | 10            | Tiroler Oberland, Innsbruck, Tiroler Unterland, Osttirol, Pinzgau-Pongau, Oberkärnten, Klagenfurt-Villach, Udine, Belluno, Bolzano-Bozen.  |

|     |   |                             |    |   |
|-----|---|-----------------------------|----|---|
| 10. | <b>Alcotra</b>                                      | Italy/France                | 9  | Alpes-Maritimes, Alpes-de-Haute-Provence, Savoie, Haute-Savoie, Hautes-Alpes, Cuneo, Imperia, Torino, Valle d'Aosta.  |
| 11. | <b>Isole</b>  | Italy/France                | 4  | Corse de Sud, Haute Corse, Livorno, Sassari.  |
| 12. | <b>Ireland-North Ireland</b>                        | Ireland/Great Britain       | 4  | Border Region (Donegal (counties), Leitrim, Sligo, Cavan, Monaghan, Louth), North of Northern Ireland, East of Northern Ireland, West and South of Northern Ireland.  |
| 13. | <b>Ireland-Wales</b>                                | Ireland/Great Britain       | 5  | Dublin, Mid-East, South-East, South-West Wales, Conwy.  |
| 14. | <b>Pamina</b>                                       | France/Germany              | 9  | Bas-Rhin (Haguenau, Saverne, Wissembourg), Südwestpfalz, Südliche Weinstraße, Germersheim, Landau in der Pfalz, Landkreis Karlsruhe, Stadtkreis Karlsruhe, Rastatt, Stadtkreis Baden-Baden.                           |
| 15. | <b>Fyn-KERN</b>                                     | Denmark/Germany             | 4  | Fyns Amtskommune, Rendsburg-Eckernförde, Plön, Kreisfreie Stadt Kiel.   |
| 16. | <b>Storstroms Amt/Ostholstein Interreg</b>          | Denmark/Germany             | 3  | Ostholstein, Lübeck Kreisfreie Stadt, Storstroms Amt.   |
| 17. | <b>Germany/Luxembourg /Belgium</b>                  | Germany/Luxembourg /Belgium | 6  | Verviers, Trier-Saarburg, Bitburg-Prüm, Kreisfreie Stadt Trier, Merzig-Wadern, Luxemburgo.  |
| 18. | <b>France/Germany</b>                               | France/Germany              | 8  | Moselle, Merzig-Wadern, Saarlouis, Saar-Pfalz-Kreis, Stadtverband Saarbrücken, Südwestpfalz, Kreisfreie Stadt Pirmasens, Kreisfreie Stadt Zweibrücken.  |
| 19. | <b>Working Community Extremadura Alentejo</b>       | Spain/Portugal              | 17 | Alentejo Central, Algarve, Alto Alentejo, Alto Tras-os-Montes, Baixo Alentejo, Beira Interior Norte, Beira Interior Sul, Cavado, Douro, Minho-Lima, Badajoz, Cáceres, Huelva, Ourense, Pontevedra, Salamanca, Zamora. |
| 20. | <b>Pyrenees Working Community</b>                   | France/Spain                | 10 | Pyrénées-Atlantiques, Hautes-Pyrénées, Haute-Garonne, Ariège, Pyrénées-Orientales, Guipúzcoa, Navarra, Huesca, Lleida, Girona.  |
| 21. | <b>SaarlorluxRhein/Wallonia-Lorraine-Luxembourg</b> | Belgium/France/Luxembourg   | 7  | Arlon, Bastogne, Virton, Meuse, Moselle, Meurthe-et-Moselle, Luxembourg.  |
| 22. | <b>Transmanche region/Rives Manche</b>              | France/Great Britain        | 8  | Seine-Maritime, Somme, Pas-de-Calais, Nord, Brighthon and Hove, East Sussex CC, Kent CC, Medway.  |
| 23. | <b>France/Belgium</b>                               | France/Belgium              | 15 | Veurne, Leper, Mouscron, Kortrijk, Tournai, Ath, Mons, Thuin, Philippeville, Dinant, Neufchateau, Virton, Nord, Aisne, Ardennes.  |
| 24. | <b>Greece/Italy</b>                                 | Greece/Italy                | 12 | Ionnina, Preveza, Achaia, Aitolokarnania, Zakynthos, Kefallinia, Thesprotia, Lefkada, Kerkyra, Bari, Brindisi, Lecce.   |



The 24 present CBRs of EU-15 are not homogeneous. As shown in Table 2, most of the CBRs (*i.e.* ten of them) are composed of between six and ten NUTS-3 regions. Six CBRs are formed by between 11 and 15 regions, six by less than six regions and just two by more than 16 regions. This is because Cooperation projects based on proximity at European level include the so-called Euroregions, as well as the Work Communities. The former have been widely developed among contiguous territories of the Rhine basin, but typically include few regions. The latter, which include the Western Alps and Galicia-Northern Portugal, typically group together more than four regions. Nevertheless, this article considers the degree of institutional cooperation in the CBRs, rather than their size. To classify these CBRs according to the degree of institutional cooperation achieved, data from a detailed article by Perkmann published in 2003 was used. In this article, Perkmann established a typology of cross-border associations for regional cooperation. Specifically, he enabled us to classify cross-border associations as high intensity or low-intensity, depending on the degree of institutional cooperation. According to his data, at the beginning of this century, only eight of the 24 EU-15 CBRs maintained a permanent secretariat and had drawn up both development plans and comprehensive cooperation schemes. As Figure 1 shows, most high-intensity CBRs are found in the European pentagon and the Scandinavian countries.

**Figure 1:** High-intensity cross-border regions



*Sources: Perkmann (2003) and NUTS (1999)*

Two highly intuitive indicators to assess whether there is a relationship between the level of cooperation and the financial support provided by INTERREG were used in this study. The first indicator depends on the date of creation of the CBRs and how they are financed. The more associations were formed after the implementation of INTERREG in 1990 and the more INTERREG-funded projects they carry out, the greater the impact of EU support is. The second indicator is related to the classification of CBRs by the intensity of their cooperation. This article analysed whether the high-intensity CBRs received more or less

INTERREG funding than the others. As stated by Molle (2007: 227), “[w]hat needs to be measured is the difference between the ‘without intervention’ and ‘with intervention’ situations”.

Finally, an indirect indicator to establish whether there is a relationship between the degree of institutional cooperation achieved and the development of functional economic links was used. To obtain data on changes in functional links between regions, the article measured the impact of CBRs on the extent of economic specialisation. The higher the level of cooperation is in the CBR, the greater their impact should be on the levels of economic specialisation of regions.

The spatial distribution of regional economic activity in the EU has been the focus of growing research interest (Cutrini 2010; Mora and Moreno 2010; Mora *et al.* 2006; Ecurra *et al.* 2006; Hallet 2002; Molle 1996). Research in this field provides contradictory conclusions on the role of CBRs. On the one hand, these empirical contributions have proved the relevance of regional contiguity in explaining EU regional sectorial specialisation, and therefore CBRs may have an important role to play in the European regional specialisation pattern. However, due to the existence of the border effect, one would also expect the specialisation levels of CBR economies to be less prone to the influence of foreign contiguous neighbours than they are to that of their national counterparts alone (van Gorp 2009; Grasland 2006).

To identify the effects coming from cross-border neighbours, this article has used spatial econometrics techniques to compare the specialisation pattern of regions involved in cross-border cooperation, both high and low intensity, with that of all the adjoining regions of the EU-15 – whether cross-border or not – for the period 1992–2007. The article assessed whether the border effect is lower in high-intensity CBRs than in low-intensity CBRs, by measuring the impact of cross-border associations on the economic specialisation pattern of regions.

A spatial error model was built, as Equation (1) shows, that explains specialisation in region  $i$  in time  $t$ , *i.e.*  $Y_{i,t}$ . The period analysed is  $t = 1992, \dots, 2007$  and  $i$  represents each EU-15 region. The NUTS 2 level was chosen as the spatial unit for performing our analysis, given that this is the highest level of disaggregation for which statistical information is available.<sup>12</sup>

$$\text{Equation (1): } \begin{aligned} y_{i,t} &= X_{i,t}\beta + \alpha_i + \eta_t + z_{i,t} \\ z_{i,t} &= \rho Wz_{i,t} + v_{i,t} \end{aligned}$$

The vector  $X_{i,t}$  collects the regional macroeconomic variables that are useful for proxying the determinants of specialisation (in our case, annual employment levels from a panel of European regional data from the Cambridge Economics database).  $\alpha_i$  represents regional fixed effects and  $\eta_t$  identifies time-fixed effects.  $z_{i,t}$  represents the error term.

The connectivity matrix by  $W$  is denoted, where a typical element  $W_{ij}$  (the degree of connectivity between regions  $i$  and  $j$ ) has a value one if regions  $i$  and  $j$  are connected (for example if they belong to the same CBR association), and zero otherwise. This implies that the specialisation in each region is potentially affected by the specialisation in their connected regions.

<sup>12</sup> To achieve a more homogeneous database with respect of the geographical size of the European regions, our sample comprises regions from the NUTS 0, 1 and 2 classifications. The result is a division of EU-15 into 130 sub-national units (which we refer to simply as regions). NUTS-2 regions are used for Greece, Finland, France, Italy, Portugal, Spain and Sweden, and NUTS-1 regions for Austria, Belgium, Germany, the Netherlands and the United Kingdom. We consider Ireland, Denmark and Luxembourg as single regions (NUTS-0).

This article compares the results obtained when considering connectivity on three different bases: membership of CBR associations, membership of a high-intensity CBR and contiguity in space. Therefore, three spatial weight matrices have been constructed: the 'contiguity matrix' accounted for all neighbouring regions - whether cross-border or not - and represented an upper limit for our estimates using CBR information, while the 'CBR matrix' accounted solely for cross-border regions and the 'CBR High-intensity matrix' accounted only for regions involved in high-intensity cooperation associations.<sup>13</sup>

To ensure the robustness of the results, the coefficient  $W_{ij}$ , *i.e.*  $\rho$ , was calculated in three different ways. Thus, in order to measure economic specialisation, three specialisation indices were used: the Mutual Information Index, the Dissimilarity Specialisation Index and the Krugman Specialisation Index. These three indices have the same aim: to measure the degree of concentration or dispersion of a region's economy in terms of the distribution of activities in different sectors. This enabled the results to be triangulated, as it was found that neighbouring impact presented little sensitivity to the choice of specialisation index.<sup>14</sup>

### The degree of cross-border regional cooperation achieved in the EU-15 and the financial support provided by the EU

Table 3 presents for each of the 24 cases of cross-border cooperation analysed the following information: whether the CBR was created before or after 1990, whether it has received financial support from INTERREG II and/or III, and whether it is a high or low intensity CBR according to Perkmann's classification.

**Table 3:** The nature of cross-border cooperation in the EU-15

|    | Euroregions or Work Communities in internal frontiers of EU-15                                   | Member states               | High | Pre - 1990 | INTERREG |
|----|--|-----------------------------|------|------------|----------|
| 1. | Euroregio Salzburg-Berchtesgadner Land -Traunstein (Interreg Bayaut)                             | Austria/Germany             | YES  | YES        | NO       |
| 2. | Ems Dollart Region   | Germany/Netherlands         | YES  | YES        | YES      |
| 3. | EUREGIO/Euregio Rhine-Waal/Euregio Rhine-Meuse-North   | Germany/Netherlands         | YES  | YES        | YES      |
| 4. | Sonderjylland-Schleswig  | Denmark/Germany             | YES  | NO         | YES      |
| 5. | Euregio Meuse-Rhine  | Belgium/Netherlands/Germany | YES  | YES        | YES      |
| 6. | Grensregio Vlaanderen-Nederland (Euregio Benelux Middengebied/Euregio Schedelmond (Flanders-NL)) | Belgium/Netherlands         | YES  | YES        | YES      |
| 7. | Oresund Region   | Sweden/Denmark              | YES  | YES        | NO       |
| 8. | Skargarden   | Finland/Sweden              | YES  | YES        | NO       |

<sup>13</sup> Although analysing the impact of neighbouring regions was our main goal, we also needed to control for other variables. We have therefore also analysed the following control variables: human capital and the existence of a specialised regional labour pool, the presence of agglomeration economies, regional investments and innovation activities.

<sup>14</sup> For more details on the spatial error model, see Garcia-Duran *et al.* (2009) and Mora *et al.* (2011).

|     |  |                                |    |     |     |
|-----|--|--------------------------------|----|-----|-----|
| 9.  | Europaregion Tirol   | Italy/Austria                  | NO | NO  | YES |
| 10. | Alcotra  | Italy/France                   | NO | NO  | YES |
| 11. | Isole  | Italy/France                   | NO | NO  | YES |
| 12. | Ireland-North Ireland  | Ireland/Great Britain          | NO | NO  | YES |
| 13. | Ireland-Wales  | Ireland/Great Britain          | NO | NO  | YES |
| 14. | Pamina   | France/Germany                 | NO | YES | YES |
| 15. | Fyn-KERN   | Denmark/Germany                | NO | NO  | NO  |
| 16. | Storstroms Amt/Ostholstein Interreg                              | Denmark/Germany                | NO | NO  | YES |
| 17. | Germany/Luxembourg/Belgium                                       | Germany/Luxembourg/<br>Belgium | NO | NO  | YES |
| 18. | France/Germany   | France/Germany                 | NO | NO  | YES |
| 19. | Working Community Extremadura Alentejo                           | Spain/Portugal                 | NO | NO  | YES |
| 20. | Pyrenees Working Community                                       | France/Spain                   | NO | NO  | YES |
| 21. | SaarlorluxRhein/Wallonia-Lorraine-Luxembourg                     | Belgium/France/Luxembourg      | NO | YES | YES |
| 22. | Transmanche region/Rives Manche                                  | France/Great Britain           | NO | YES | YES |
| 23. | France/Belgium   | France/Belgium                 | NO | NO  | YES |
| 24. | Greece/Italy   | Greece/Italy                   | NO | NO  | NO  |
|     |  |                                |    |     |     |
|     | <b>HIGH</b> -high intensity cooperation                          |                                |    |     |     |
|     | <b>pre 1990</b> - cross-border association created before 1990   |                                |    |     |     |
|     | <b>INTERREG</b> - financial support from INTERREG II and/or III. |                                |    |     |     |

The table shows that most associations appeared after the birth of INTERREG. Only the border regions of the pentagon and the Nordic countries had developed links before INTERREG was established. Moreover, almost all Euroregions and Working Communities post-1990 have received money from INTERREG II and/or INTERREG III. According to INTERACT (2005) and Lrdp Kantor Ltd (2003), 19 of the 24 instances of cross-border cooperation in the EU-15 received money from INTERREG between 1994 and 2006. Only two of the 14 post-1990 CBR associations did not received money during this period. These data indicate that the EU's support may have had an impact on the formation of cross-border associations. There are now cross-border cooperation associations along all the internal borders of the EU-15. This was not the case prior to INTERREG. However, to

assess the extent of this impact, we should take into account the information on the level of cooperation attained by these associations.

There is no automatic relationship between the level of intensity of the cooperation and its duration. Most of the high-intensity CBRs, namely seven of them, were set up before 1990, but three of the CBRs that were set up before 1990 continue to be low-intensity. There does not appear to be a relation between the degree of intensity of cooperation and the participation of the association in INTERREG. Curiously enough, of the eight high-intensity CBRs, three have not received any funding from INTERREG II or III<sup>15</sup>, whereas 14 of the low-intensity CBRs have.

To conclude, this analysis of the nature of CBRs in the EU-15 therefore seems to indicate that there is no relationship between the degree of cooperation achieved and the funding received from the EU, at least until 2006. What the analysis seems to suggest instead is that community funding helps create cross-border cooperation that would not otherwise have existed, so that it cannot be ruled out that they become high-intensity CBRs later on.

### The degree of institutional cooperation achieved and the development of functional economic links

As Table 4 shows, the results from the spatial error model are similar for each of the three specialisation indices. These results confirm neighbouring effects on regional economic specialisation. They indicate that European regional specialisation is driven by contiguous economic regions. However, the estimated spatial impact is found to be lower when using cross-borders. In other words, the impact exerted by associated regions (in general, that is, both high and low intensity) on each other in terms of European regional relative specialisation is lower than that exerted by neighbouring national regions. Autocorrelation coefficients after taking into account CBR associations range from 0.36 to 0.41, whereas the use of a contiguity matrix shows a greater impact (ranking from 0.70 to 0.74).

**Table 4:** Coefficients of neighbouring regions (contiguity) and cross-border regions impact

| Mutual Information Index |            | Dissimilarity Index |            | Krugman Index |            |
|--------------------------|------------|---------------------|------------|---------------|------------|
| CBR                      | Contiguity | CBR                 | Contiguity | CBR           | Contiguity |
| 0.361                    | 0.696      | 0.409               | 0.740      | 0.407         | 0.735      |

*Source: authors' own calculations.*

These first results are as expected: what is known as the border effect continues to exist along the internal borders of the EU-15. As far as the subject under discussion is concerned, nevertheless, these results also indicate that it cannot be ruled out that cooperation between cross-border regions has an impact on regional specialisation.

To observe whether the intensity of cooperation affects the impact of CBRs on the economic specialisation pattern of regions, the results in Table four with those in Table five need to be compared. The latter shows the correlation coefficients obtained through the three specialisation indexes when using the 'CBR high-intensity matrix' instead of the 'CBR matrix'.

<sup>15</sup> They may have received funding from their national administrations (Perkmann 2003).

**Table 5:** Disentangling CBR associations based on intensity

| Mutual Information Index | Dissimilarity Index | Krugman Index |
|--------------------------|---------------------|---------------|
| 0.713                    | 0.736               | 0.721         |

*Source: authors' own calculations.*

As the coefficients are impacts that are calculated using the residues of each equation, which change for each specification, we must be cautious about the comparisons that are drawn. For example, the fact that the high-intensity results are very similar to those of the contiguity matrix does not mean that the impact of high-intensity CBRs is the same as that of national contiguous regions. However, we can conclude that the higher the coefficient is, the greater the impact of some regions on others is.

We can see that the autocorrelation coefficients for high-intensity cross-border associations are higher than those obtained for all CBRs for each of the specialisation indexes. This means that regions participating in a high intensity cross-border association (eight out of 24) have a greater influence on each other than border regions with a low-intensity institutional link, at least in terms of the degree of economic specialisation in the regions.

In other words, this quantitative analysis leads us to believe that there may be a relation between the degree of cooperation achieved by CBRs and the degree of economic interdependence between them. However, there is no information as to the direction of the causal relationship between these two variables. Thus, one possibility is that cooperation between CBRs with a high degree of economic interdependence is more effective, which leads them to become high-intensity CBRs. Another possibility is that, when cooperation works, the border effect is reduced sufficiently to render the impact of neighbourhood on the degree of regional specialisation similar to that of neighbouring national regions.

## Conclusion

The EU has provided financial support for cross-border regional cooperation since 1990. This support has been confirmed in each programming period to become in the last period a priority objective of the ERP. Moreover, it is considered to be one of the main EU instruments for achieving territorial cohesion and therefore promoting growth and employment.

The article began by referring to the qualitative studies that explain how cross-border cooperation can help create new links between regions on both sides of EU internal borders. Many of these studies also show how INTERREG has promoted cross-border cooperation. The research presented here does not dispute their findings. Rather, it aims to measure the effectiveness of the policy from a quantitative point of view.

The comparative analysis of regulations and other documents relating to cross-border cooperation shows that this policy is currently based on the hypothesis that financial support enhances cooperation among cross-border regions and that the higher the degree of cooperation between border regions is, the lesser the border effect is and therefore the greater the impact on growth and employment is. For this hypothesis to be valid, we should find evidence that the following relations between the variables involved exist: a relation between the degree of cooperation achieved and the financial support



provided by the EU, and a relation between the degree of cooperation achieved and the development of functional economic links.

If INTERREG helps maximise the level of cooperation, and this in turn promotes the development of functional economic links between border regions, then the third objective in the current economic and social cohesion policy makes sense and has a role to play in territorial cohesion. If not – *i.e.* if previous economic interdependence determines good cross-border cooperation –, then Community efforts to promote cross-border cooperation may make less sense.

The analysis of the nature of the 24 cases of cross-border cooperation in the EU-15 shows that the relationship between the degree of cooperation achieved and INTERREG financial support is not clear. Of the 24 CBRs, eight are high-intensity, seven of these eight instances of high-intensity cooperation already existed before INTERREG came into being, and three have received no funding from either INTERREG II or INTERREG III. Nevertheless, since the European Community began to provide financial assistance, the number of CBRs has increased. Therefore, we should consider that the intensity of cooperation may increase in the future.

As to the relationship between the degree of cooperation achieved and the development of functional economic links, this study on the specialisation pattern of regions involved in cross-border cooperation shows that this relation does exist. However, there is a lack of information as to which variable affects which. Therefore, it is not known whether higher-intensity cooperation promotes more functional economic links or whether such cooperation became high-intensity because there were already more functional economic links between the regions.

To sum up, this impact analysis indicates that the EU's policy of cross-border regional cooperation could be effective. The promotion of cross-border cooperation may help to form functional economic links between cross-border regions and thus improve the territorial cohesion of the EU.

However, this study has several technical limitations. First, a classification of the level of cooperation that only has two categories was used. Hence, the analysis of how the level of intensity of cooperation could affect the results cannot be refined. Second, it should be noted that CBRs are made up of NUTS-3 regions. This means that, since the database takes into account different NUTS classifications for partially solving the modifiable administrative unit problem, associations were assigned to its upper category. Last but not least, the omitted variable problem might be present. Although non-contemporaneous data was used for the covariates considered, unobserved shocks might be correlated with accounted explanatory variables throughout the empirical analysis or with regional effects.

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## References

- Barca, F. (2009). *An agenda for a reformed cohesion policy: a place-based approach to meeting EU challenges and expectations*, Independent Report prepared at the request of Danuta Hübner, Commissioner for Regional Policy. Available at: [http://ec.europa.eu/regional\\_policy/policy/future/pdf/report\\_barca\\_v0306.pdf](http://ec.europa.eu/regional_policy/policy/future/pdf/report_barca_v0306.pdf), last accessed 25 February 2010.
- Begg, I. (2010). 'Cohesion or Confusion: A Policy Searching for Objectives', *Journal of*

- European Integration*, 32(1), pp.77-96.
- Brunn, G. and Schmitt-Egner, P. (1997). *Grenzüberschreitende Zusammenarbeit in Europa*, Baden-Baden: Nomos Verlagsgesellschaft.
- Commission of the European Communities (2008). *Green Paper on Territorial Cohesion. Turning Territorial Diversity into strength*, COM(2008) 616 final, Brussels. Available at: [http://ec.europa.eu/regional\\_policy/consultation/terco/paper\\_terco\\_es.pdf](http://ec.europa.eu/regional_policy/consultation/terco/paper_terco_es.pdf), last accessed 25 February 2010.
- CEC (2007) *Fourth Report on Economic and Social Cohesion*, COM(2007) 273 final, Brussels. Available at: [http://ec.europa.eu/regional\\_policy/sources/docoffic/official/reports/cohesion4/pdf/com\\_en.pdf](http://ec.europa.eu/regional_policy/sources/docoffic/official/reports/cohesion4/pdf/com_en.pdf), last accessed 22 March 2010.
- CEC (2000) *Communication from the Commission to the Member States of 28 April 2000 laying down guidelines for a Community initiative concerning trans-European cooperation intended to encourage harmonious and balanced development of the European territory - Interreg III*, 2000/C 143/08, OJ C 143, 23/5/2000. Available at: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2000:143:0006:0029:EN:PDF> , last accessed 13 December 2010.
- CEC (1996) *Communication to the Member States laying down guidelines for operational programmes which Member States are invited to establish in the framework of a Community Interreg initiative concerning transnational cooperation on spatial planning (INTERREG II C)*, 96/C 200/07, OJ C 200, 10/7/1996.
- CEC (1994) *Communication to the Member States laying down guidelines for operational programmes which Member States are invited to establish in the framework of a Community Interreg initiative concerning cross-border cooperation and energy networks*, 94/C 180/13, OJ C 180, 01/07/1994.
- CEC (1990) *Communication to the Member States laying down guidelines for operational programmes which Member States are invited to establish in the framework of a Community Interreg initiative concerning cross-border cooperation*, 90/C 215/04, OJ C 215, 30/8/1990.
- Cutrini, E. (2010). 'Specialization and concentration from a twofold geographical perspective: evidence from Europe', *Regional Studies*, 44(3), pp. 315-336.
- Doucet, P. (2006). 'Territorial Cohesion of Tomorrow: A Path to Cooperation or Competition?', *European Planning Studies*, 14(10), pp. 1473-1485.
- Dühr, S., Colomb, C. and Nadin, V. (2010) *European Spatial Planning and Territorial Cooperation*, Oxon: Routledge.
- European Community (2006) *Council Regulation (EC) No 1083/2006 of 11 July 2006 laying down general provisions on the European Regional Development Fund, the European Social Fund and the Cohesion Fund and repealing Regulation (EC) No 1260/1999*, OJ L 210, 31/07/2006. Available at: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2006:210:0025:0078:EN:PDF> , last accessed 13 December 2010.
- ESPON (2006) *European Territorial Research in Progress: Conference Proceedings of the 1<sup>st</sup> ESPON Scientific Conference, 13-14 October 2005*. Available at: [http://www.espon.eu/main/Menu\\_Publications/Menu\\_ESPON2006Publications/scientificreport1.html](http://www.espon.eu/main/Menu_Publications/Menu_ESPON2006Publications/scientificreport1.html), last accessed 24 November 2010.
- ESPON (2004). *Mid-Term Evaluation 2003*. Available at: [http://www.espon.eu/main/Menu\\_Programme/Menu\\_ESPON2006Programme/midterevaluation.html](http://www.espon.eu/main/Menu_Programme/Menu_ESPON2006Programme/midterevaluation.html) , last accessed 30 November 2010.
- Ezcurra, R., Pascual, P. and Rapún, M. (2006). 'Regional specialisation in the EU', *Regional Studies*, 40(6), pp. 601-616.
- Faludi, A. (2009). 'A turning point in the development of European spatial planning? The "Territorial Agenda of the European Union" and the "First Action Programme"', *Progress in Planning*, 71, pp. 1-42.

- Faludi, A. (2007). 'Territorial Cohesion Policy and the European Model of Society', *European Planning Studies*, 15(4), pp. 567-583.
- Fernández Tabales, A., Pedregal Mateos, B., Rodríguez Mateos, J.-C., Pital López, M.F. and Zoido Naranjo, F. (2009). 'El concepto de cohesión territorial. Escalas de aplicación, sistemas de medición y políticas derivadas', *Boletín de la A.G.E.*, 50, pp. 157-172.
- García-Durán, P., Millet, M. and Casanova, E. (2009). 'The new cross-border cooperation and its impact on Spain', *Revista de Derecho Comunitario Europeo*, 13 (32), pp. 121-150.
- Grasland, C. (2006) 'Spatial analysis tools and the measure of territorial cohesion', in ESPON, *European Territorial Research in Progress: Conference Proceedings of the 1<sup>st</sup> ESPON Scientific Conference, 13-14 October 2005*. Available at: [http://www.espon.eu/main/Menu\\_Publications/Menu\\_ESPON2006Publications/scientificreport1.html](http://www.espon.eu/main/Menu_Publications/Menu_ESPON2006Publications/scientificreport1.html) last accessed 24 November 2010.
- Hague, C. (2006) 'ESPON and Territorial Research and Practice in Europe', in ESPON, *European Territorial Research in Progress: Conference Proceedings of the 1<sup>st</sup> ESPON Scientific Conference, 13-14 October 2005*. Available at: [http://www.espon.eu/main/Menu\\_Publications/Menu\\_ESPON2006Publications/scientificreport1.html](http://www.espon.eu/main/Menu_Publications/Menu_ESPON2006Publications/scientificreport1.html) last accessed 24 November 2010.
- Hallet, M. (2002). 'Regional specialisation and concentration in the EU', in J. Cuadrado-Roura and M. Parellada (eds), *The EMU and Regional Convergence*. Heidelberg: Springer.
- INTERACT (2007). *Cross-Border Cooperation – Cross-Thematic Study of Interreg and Espon activities*, INTERACT Programme Secretariat. Available at: <http://archive.interact-eu.net/913123/0/0/0/>, last accessed 25 February 2010.
- INTERACT (2005). *A Study of the Mid Term Evaluations of INTERREG programmes for the Programming Period 2000-2006*, INTERACT Programme Secretariat. Available at: [http://www.interact-eu.net/downloads/258/Mid\\_Term\\_Evaluation\\_Study.pdf](http://www.interact-eu.net/downloads/258/Mid_Term_Evaluation_Study.pdf), last accessed 18 March 2010.
- Knippenberg, H. (2004). 'The Maas-Rhine Euroregion: a laboratory for European integration?', *Geopolitics*, 9(3), pp. 608-626.
- Koschatzky, K. (2000). 'A River is a river-cross-border networking between Baden and Alsace', *European Planning Studies*, 8(4), pp. 429-440.
- Kramsch, O. and Hooper, B. (2004). *Cross-Border Governance in the EU*. London: Routledge.
- Krätke, S. (1999). 'Regional integration or fragmentation? The German-Polish border region in a New Europe', *Regional Studies*, 33(7), pp. 631-641.
- Lrdp Kantor Ltd (2003). *Ex-Post Evaluation of the INTERREG II Community Initiative (1994-99)*, Brief Report. Available at: [http://ec.europa.eu/regional\\_policy/sources/docgener/evaluation/inter2a/summary\\_en.pdf](http://ec.europa.eu/regional_policy/sources/docgener/evaluation/inter2a/summary_en.pdf), last accessed 18 March 2010.
- Matthiessen, C. (2005). 'The Öresund Area: Pre- and post-bridge cross-border functional integration: the bi-national regional question', *GeoJournal*, 61(1), pp. 31-39.
- Mirwaldt, K., McMaster, I. and Bachtler, J. (2009). 'Reconsidering Cohesion Policy: The Contested Debate on Territorial Cohesion', *European Policy Research Paper 66*, European Policies Research Centre, University of Strathclyde. Available at: [http://www.eprc.strath.ac.uk/eprc/documents/PDF\\_files/EPRP\\_66\\_Reconsidering\\_Cohesion\\_Policy.pdf](http://www.eprc.strath.ac.uk/eprc/documents/PDF_files/EPRP_66_Reconsidering_Cohesion_Policy.pdf), last accessed 25 February 2010.
- Molle, W. (2007) *European Cohesion Policy*. London: Routledge.
- Molle, W. (1996). 'The regional economic structure of the EU: an analysis of long-term developments', in Peschel K. (ed.), *Regional growth and regional policy within the framework of European integration*. Heidelberg: Physica-Verlag.
- Mora, T., García-Durán, P. and Millet, M. (2011). 'Cross-national neighbouring effects on European regional specialisation', *Spatial Economic Analysis*, 6(3), pp. 271-290.
- Mora, T. and Moreno, R. (2010). 'Specialisation changes in European regions: The role played by externalities across regions', *Journal of Geographical Systems*, 12(3), pp. 311-334.

- Mora, T., Vayá, E. and Suriñach, J. (2006). 'Changes in the spatial distribution pattern of European regional activity: the enlargements of the mid-eighties and 2004', in Artis M., Banerjee A. and Marcellino M. (eds), *The Central and Eastern European Countries and the EU*. Cambridge: Cambridge University Press.
- Oosterlynck, S. (2009). 'Book Review: Territorial Cohesion and the European Model of Society edited by Andreas Faludi', *European Planning Studies*, 17(7), pp.1101-1103.
- Perkmann, M. (2003). 'Cross-Border Regions in Europe: Significance and drivers of regional cross-border cooperation', *European Urban and Regional Studies*, 10(2), pp. 153-171.
- Perkmann, M. and Sum, N.L. (2002). *Globalization, Regionalization and Cross-border Regions*. Basingstoke: Palgrave Macmillan.
- Strykiewicz, T. (1998). 'The changing role of border zones in the transforming economies of East-Central Europe: The case of Poland', *GeoJournal*, 44(3), pp. 203-213.
- Taylor, S., Olejniczak, K. and Bachtler, J. (2004). *A study of the Mid Term Evaluations of INTERREG Programmes for the Programming Period of 2000-2006*, Report to the INTERREG Secretariat. Available at: <http://www.interact-eu.net/documentation/downloads/10/379>, last accessed 25 February 2010.
- Van Gorp, N. (2009). 'Backwardness of border regions', *Tijdschrift voor Economische en Sociale Geografie*, 100(3), pp. 358-364.
- Waterhout, B. (2007). 'Territorial Cohesion: The Underlying Discourses' in Faludi, A. (ed.) *Territorial Cohesion and the European Model of Society*. Cambridge, MA: Lincoln Institute of Land Policy.

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