

Territorial Cohesion: a conceptual analysis

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Abstract:

This article examines the relevance and the dimensions of the concept of Territorial Cohesion and suggests its definition based on those dimensions. Additionally, it proposes a methodology which can be used to measure the Territorial Cohesion in a given territory and applies it to three case studies: Iberian Peninsula, Scandinavian Peninsula and European Union at the NUTS II level. Furthermore, the article also highlights the importance of the territorial dimension as a key issue in the EU political agenda and, at the same time, gives a contribution to answer some questions for debate expressed in the Green Paper on Territorial Cohesion.

Keywords: Territorial Cohesion, Socioeconomic Cohesion, Territorial Governance, Territorial Sustainability, Territorial Cooperation, Polycentrism.

INTRODUCTION

The concept of Territorial Cohesion is not new to us. In fact, we started to work around this concept since 2003, by identifying its dimensions and by creating and aggregated index which could measure its evolution in a given territory. Since then, a chain of events led to an increasing discussion around this concept with two highlights: the launch of the Green Paper on Territorial Cohesion (2008) and its inclusion in the Lisbon Treaty, in 2009, as one of the three main pillars of the EU Cohesion Policy.

In the meantime, several authors brought new insights to this academic debate, in an attempt to shed some light in its clarification, thus enriching the knowledge base surrounding this crucial and comprehensive concept. Yet, in our point of view, the available studies concerning the Territorial Cohesion concept lack either a clear methodology to measure it on a given territory, or/and fail to identify some key dimensions of this concept, as they neglect some of the main findings of the European Spatial Development Perspective (EC, 1999).

In this context, this article attempts to provide an updated overview of the concept of Territorial Cohesion and its relevance to the EU objective of a more balanced and harmonious territory, by polishing our previous analysis on this subject, both in the conceptual and the methodological approach. Consequently, this research integrates new valuable insights, mainly from several EU related reports and ESPON studies, since the available academic literature concerning the Territorial Cohesion concept either disperses its analysis on its historical background or only brings to the fore its political implications.

Hence, in order to gather a more holistic perspective of the concept of Territorial Cohesion this paper is organized in two main parts. In the first part, it begins by revealing the main findings of the available literature on this concept, namely its relevance and main dimensions. Afterwards, the second part embarks on a more empirical discussion by proposing a methodological approach to measure the Territorial Cohesion and by constructing and applying an aggregated Territorial Cohesion index in the Iberian Peninsula, the Scandinavian Peninsula (trends) and the EU NUTS II (snapshot).

FROM SOCIOECONOMIC TO TERRITORIAL COHESION

No need to say that territory is, by itself, a complex concept (DAVOUDI et al., 2008). Nonetheless true is the need for a multidisciplinary approach to understand all the elements present in human sociospatial organizations. Indeed, if we regard territory as an area over which rights of ownership are exercised (HAGGETT, 2001), or an expression of the fusion of power and social space (DELANEY, 2009), several interrelated components and dimensions become implicit in this discussion, such as governance, economy, sovereignty, citizenship, etc.

By contrast, the analysis of both social and economic cohesion is clear-cut, as they focus in concrete elements which can be assessed and studied by means of available statistical indicators. More specifically, economic cohesion analysis is mostly based on the use of the GDP and employment/unemployment rates evolution in a given place or space. For its part, the socio cohesion analysis uses data related with education and health related issues. This is to say that the socioeconomic analysis of cohesion is rather simple, when compared with the Territorial Cohesion one.

This also explains why academic literature aimed to investigate regional disparities in Europe focused (and still focuses) mainly in the socioeconomic aspects of cohesion. For instance, in a study dating back from the early 1990's (DUNFORD, and KAFKALAS, 1992), the authors conclude that the divergence in national and regional economic performance and inequalities have increased in Europe, and that weaker European regions will struggle socioeconomically with such market differences in the levels of territorial development. Moreover, this analysis is supported by the use of economic (GDP, unemployment rate and R&D expenditure) and social (education) indicators, applied to EU Member States and NUTS II, as it tries to predict the consequences of the implementation of the Single European Market in eliminating non-tariff barriers.

A similar socioeconomic approach, in analysing regional disparities and the cohesion process in Europe, is followed by many other authors, as becomes evident by many articles included in a very interesting book edited by Amin and Tomaney (1995). Here, cohesion and inequalities are discussed without making any mention to the territorial dimension specifically. Other than that, most authors associate the concept of cohesion

essentially with the goal of reducing socioeconomic disparities in Europe (see MAYES, 1995). Even so, it's fair to say that some authors (AMIN and TOMANEY, 1995b ; AMIN *et al.* 1992) highlight the territorial imbalances in Europe, by invoking the regional disparities, for instance, in productivity, unemployment and GDP. However, several other components and dimensions are absent as the authors explicitly coin the cohesion term with the EU political goal to reduce social (harmonizing on the legislation on the rights of employees) and regional (improving competitiveness of less favoured regions) gaps in Europe.

Such reflections on cohesion aspects, mainly based on the socioeconomic angle, are also present in many other published articles until the present moment, with slight variations. For instance, Danson (1999) sees European diversity as having dual cultural and economic dimensions, although he recognizes that the European Commission anchors its policies mainly in the economic arena. Consequently, this author proposes a stronger EU commitment to defend and sustain social, economic and cultural diversity in Europe, rather than promoting a simple convergence process.

Besides the cultural domain, Bachtler and Michie (1994) bring to the discussion the environmental dimension of the cohesion and, more recently, Faludi (2006) also remembers that Territorial Cohesion relates to sustainability and good governance. Furthermore, the same author (FALUDI, 2007) invokes the importance of the ESDP (European Spatial Development Perspective, 1999) to understand the concept of Territorial Cohesion, by following its main guidelines and namely by strengthening a more balanced and polycentric urban system, and by encouraging cooperation and networking (FALUDI, 2006).

By comparison, other recent articles which explore competition and cohesion within the EU continue to clearly neglect a more territorial approach of the cohesion and to base their reflections on socioeconomic issues, mainly (WISHLADE, 2008; FLORIO, 2006; MAIRATE, 2006; LEONARDI, 2006, GIANNIAS *et al.*, 1999; GUERSENT, 2001), while others base their evaluation of the EU structural funds in the standalone economic dimension, by recurring to econometric models, like the input-output analysis (MARTIN and TYLER, 2006; BATTERBURY, 2006; BACHTLER and WREN, 2006; BADINGER *et al.*, 2004, CRESCENZI, 2009).

In sum, one can conclude that, even though the territorial dimension of cohesion has been referred to for more than a decade, namely on the EU cohesion reports, and that the Territorial Cohesion concept appears to be more and more discussed, both in the academic literature and the EU political meanders, due to a reinvigorated approach to territory issues in the EU, the fact remains that the socioeconomic overview of the cohesion still prevails in both domains.

The difficulty, however, in replacing a simpler and straightforward socioeconomic cohesion analysis with the huge breadth of the Territorial Cohesion, should be pursued by accommodating new concerns and considerations which complement the socioeconomic dimension of cohesion, in a solid step by step political and academic approach. This is not to say that the aim should be to cram more and more considerations into the Territorial Cohesion discussion, in a muddled attempt to inject redundant and excessive components and dimensions, making it somewhat impossible to draw useful conclusions on the evolution of Territorial Cohesion in a given territory.

Indeed, in our view, the concept of Territorial Cohesion needs to be translated into an easy to understand and easy to measure type of concept, as the economic and social ones are. Alongside, this necessary comprehensive approach of Territorial Cohesion should emphasise the aspect of cohesion within European spatial and territorial policies (SCHÖN, 2009), by bringing forward the main policy guidelines for special development, formulated in the ESDP (1999). Parallel to this, we think that the debate concerning the Territorial Cohesion concept should be left open to further discussions, due to the large scope of elements involved in it.

Presently, the European Commission aims to give an additional boost to place the Territorial Cohesion in the frontline of its policies, by proposing the reinforcement of the urban agenda, the encouragement of functional geographies, the support of areas facing specific geographical or demographic problems, and by enhancing the strategic alignment between transnational cooperation and macro-regional strategies (EP, 2011). To an extent, this goal could be a positive sign towards the application of a more strategic territorial coherence and programming in the EU policies. Only time will tell.

WHY TERRITORIAL COHESION?

As one of the first studies which discussed the Territorial Cohesion concept argues, the economic cohesion does not evolve in a similar way in all territories and individuals (COR, 2003b :8). Indeed, as the most recent EU Cohesion Report (EC, 2010: 11) recognizes, the regional disparities in GDP per head remain pronounced in the EU, although, overall, between 1996 and 2007 the coefficient of variation fell from 42,7 to 39,1. However, according to the same document, regional disparities have increased in several Member-States, during this period of time, which reflected the excessive concentration of growth in their metropolitan areas.

Indeed, according to the World Bank report (WB, 2009: 2), economic activity is increasingly concentrated within countries which arguably have been contributing to augmenting spatial disparities in living standards and welfare. These territorial trends in Member-States are widely believed to be a result of political interests and market forces which privilege the highly productive regions, normally located in capital cities, where the labor force is more qualified, the markets are larger, the economic infra-structures are available and the access to capital is facilitated. Hence, the same report argues that the “concentration of the economic activity is inevitable and usually desirable for economic growth, but the resulted spatial disparities in welfare are not”.

In the EU, the recognition that wide territorial disparities are intolerable was expressed in the Maastricht Treaty (article 130a – 1993), which calls for the promotion of a more harmonious development, in order to strengthen the socioeconomic cohesion within the EU. This can be achieved by reducing “disparities between the levels of development of the various regions and the backwardness of the least-favored regions, including rural areas”. Since then, the EU enlargement process has widened these already large territorial disparities, which are deeper than the ones occurring in similar economies, like Japan and the U.S.A., when it comes to economic output and income (EC, 2009: 7).

Surely, a direct reference to the territorial dimension of the cohesion is not present in the Maastricht Treaty. Nevertheless, it is implicit, since it shows concern for the EU regional disparities. The same recognition was put forward soon after by a “Commission’s 1993 White Paper”, which invoked the competitiveness improvement of

the EU weaker regions (EC, 1996: 11). A few years later, in 1997, the Amsterdam Treaty used the term Territorial Cohesion (Article 16) alongside with necessity to promote Social Cohesion in the Union. Yet, the territorial dimension was only officially added as the third pillar of the Cohesion in the Lisbon Treaty (article 3 - 2009), together with the 'old EU' goals of Social and Economic Cohesion. This explicit recognition to include Territorial Cohesion as a main EU political concern was also accompanied with "a new definition of subsidiarity, providing the opportunity to strengthen the role of regional and local actors" (SAMECKI, 2009).

In the meantime (between the Amsterdam Treaty and the Lisbon Treaty) the importance of the territorial dimension in several EU flagship reports was consistently solidified, with particular emphasis to: the European Spatial Development Perspective (EC, 1999), some ESPON reports (ESPON, 2006 ...), the Territorial Agenda (EC, 2007) the Green Paper on Territorial Cohesion (EC, 2008b), and finally the EU Fifth Report on Economic, Social and Territorial Cohesion (EC, 2010).

Curiously, and according to Faludi (2004: 1349), the initial focus of the Territorial Cohesion idea has been on regional economic development. The same author claims that the roots of this concept are to be found in the French expression 'Aménagement du Territoires', and that there is a decisive French political influence in including this dimension of the cohesion into the EU political agenda, to support the European Model of Society, in order to resist the liberal Anglo-Saxon model of development (FALUDI, 2004: 1350).

In this regard, the former EU Commissioner, Michel Barnier, had a crucial role in including the territorial dimension of the cohesion in the Second Report on Economic and Social Cohesion (EC, 2001b), which invoked a more balanced and harmonious development, by following the principles expressed in the ESDP, released two years earlier: a polycentric urban development and a new relationship between urban and rural areas; equal access for all European regions to infrastructure, and know-how and prudent management of the natural and cultural heritage (EC, 1999).

This gradual recognition of the importance of the territorial dimension in the EU policy agenda was, in a large extent, a consequence of the incredible rich EU territorial

diversity (EC, 2008b and EC, 2009), which enhances the need to embark on a more integrated approach when searching for development opportunities (ESPON, 2006), in order to make the best use of the EU territorial resources.

Accordingly, the Territorial Agenda (2007: 6) recommends the integration of the territorial dimension in the strategic processes underpinning the Cohesion Policy at the National and EU level. At a lower level (regional and local), a background of this document (EC, 2005b: 3) states that the EU Cohesion Policy has the greatest indirect and direct impact on the EU territorial development. However, it does not take on account the distinctive regional features of the EU territory, which justifies the implementation of a more place-based European development policy, expressed in the 'Barca Report' (BARCA, 2009), with a view to rely on local knowledge, in order to better mobilize territorial potentials.

It is also noteworthy that the Territorial Cohesion is gradually becoming an important aim of the EU policies (ESPON, 2006) with the purpose of stimulating a more balanced EU territory, mainly because of the growing horizontal interdependences between EU policies and territorial development issues, even though the territorial policy is not a formal UE policy competence (SCHOUT and JORDAN, 2007: 836; FERRÃO, 2003). Anyhow, the main challenge for the Territorial Cohesion is the process of globalization (EC, 2005b) ruled by market forces which tend to drive the geographical concentration and accelerate the relocation of activities, leading to greater territorial disparities.

Given these challenges, should we believe that the European Cohesion Policy financial support can effectively contribute to promote and achieve the Territorial Cohesion objective in Europe or, instead, a kind of EU Territorial Protection Agenda should be put in place to shield the less competitive regions in Europe from the globalization effects?

In this regard, the Territorial Agenda (EC, 2007: 2) sustains that the Territorial Cohesion is a "prerequisite for achieving sustainable economic growth and implementing social and economic cohesion - a European social model". In similar vein, the ESDP (EC, 1999: 7) advocates the use of spatial planning at earlier stages, in order to avoid increases in regional disparities. In equal measure, several EU reports

suggest that public policies should help areas to develop their territorial capital (EC, 2005b: 3), and also stimulate territorial impact assessments of the national and EU policies (COR, 2003, EC, 2010). Finally, the need to use a more integrated and territorial approach to policy making has recently emerged as an EU key policy priority (SCHOUT and JORDAN, 2007), in order to better articulate the different EU policies with territorial dimension (Table 1).

Table 1. EU policies with explicit territorial dimension

Policy/Report	Green Paper on Territorial Cohesion	ESDP	European Environment Agency
Transport	X	X	X
Energy	X		X
Telecommunications	X		
Agriculture/Rural Develop.	X	X	X
Employment / Social affairs	X		X
Maritime and fisheries	X		X
Environmental	X	X	X
Research	X	X	
Competition	X	X	
Regional Policy		X	X
Investment		X	

Source: (EC, 2008b; EC, 1999, EEA, 2010)

In conclusion, as far as we are concerned, even though the EU territorial development is still highly dependent on the Market Forces will, in this ‘globalization era’, the Territorial Cohesion objective should be taken as a primary goal to the EU Political Agenda, to correct the unfair, inefficient and unsustainable (EC, 2010) EU territorial disparities. In addition, we hope that the next EU Cohesion Report will be called the ‘Sixth Report on Territorial Cohesion’, since the Social and the Economic dimensions are intrinsic dimensions of the former, as we will try to propose later in this article. As such, the Territorial Cohesion objective should guide all the European main strategic guidelines, plans and priorities, unlike the EUROPE 2020 strategy (EC, 2010b, and EC, 2008c) which includes the territorial dimension in the Inclusive Growth priority, detaching it from the other fundamental dimensions of this concept, as we will also discuss latter in this article.

WHAT IS TERRITORIAL COHESION?

The Shorter Oxford English Dictionary defines Cohesion as “the action or condition of cohering” (OXFORD, 1970). Nonetheless, no observations are found concerning the meaning of Territorial Cohesion, which is considered to be a quite recent and ambiguous concept. Thereby, in this part of our article we will try to propose a definition of the Territorial Cohesion concept. Yet, before long, we would like to argue that this challenge, posed by the ‘Green Paper on Territorial Cohesion (EC, 2008: 12), should not be regarded as a priority in itself. The reverse holds true when it comes to the challenge of identifying the additional elements brought by the Territorial dimension of the cohesion, in close articulation with the economic and social ones.

This line of reasoning leads us to concentrate our analysis in identifying the main dimensions and components of this concept, rather than finding a ‘neat dictionary type of definition’, in order to provide a clear meaning, which is notably absent in the Lisbon Treaty. Even so, this document represented a step forward in institutionalizing the territorial dimension of the Cohesion as a goal of the European Union, alongside the goals of economic and social cohesion. The paradox here is that the socioeconomic cohesion is one of the pillars of the territorial dimension. Hence, the EU Treaty and the EU reports on Cohesion should only refer the Territorial Cohesion as the main EU political target to Cohesion.

Be that as it may, the Lisbon Treaty is not completely vague when it refers to the territorial dimension, by advocating the need to promote a harmonious development of the Union by “reducing disparities between the levels of development of the various regions and the backwardness of the least favored regions” (article 174). However, this intention was already expressed in the two previous EU Treaties (article 130a – Maastricht; article 158 – Amsterdam), and the only major modification was the replacement of the expression ‘rural areas’ with the “northernmost regions with very low population density and island, cross-border and mountain regions”, probably influenced by the Nordregio reports on this issue, since it really does not make any sense to invoke a specific geographical area in the EU, when it comes to the presence of demographic and natural handicaps, as they also exist in large Southern and Eastern European areas.

As we can see, both the EU Treaty (Lisbon) and the Green Paper on Territorial Cohesion lack a clear definition of the concept of Territorial Cohesion and, most importantly, the former is quite vague when it comes to its main components. On the other hand, the latter observes that “Territorial cohesion is about ensuring the harmonious development” and “about making sure that ... citizens are able to make the most of inherent features” of the EU territory. In addition, it tries to be more specific when it speaks about the need to promote a more balanced and harmonious development, by indirectly specifying three main goals of this objective: (i) overcoming differences in density; (ii) connecting territories by overcoming distance; (iii) and cooperation by overcoming division (EC, 2008b: 5-8). To complete this picture we decided to present some of the attempts to propose a definition of Territorial Cohesion over the last decade (Table 2).

As we can see, different types of arguments are advanced to justify the importance of the territorial dimension of the cohesion. However, in some cases, they show a narrow conceptual exploration of the concept, by highlighting one or two aspects which are already in line with what is stated in the EU Treaty and the ESPD (EC, 1999) in supporting a more balanced and harmonious EU territory. Notwithstanding, the Green Paper on Territorial Cohesion (EC, 2008b) and the Fifth Report on Cohesion (EC, 2010) make an interesting attempt to identify some paramount dimensions of this concept. In this regard, it is worth noting that the latter brings to the discussion the idea of ‘functional geographies’, indeed quite connected with the territorial cooperation dimension which we also proposed in our previous work (Medeiros, 2005).

Concomitantly, and according to what we expressed earlier in this article, we will propose a definition of Territorial Cohesion - based on the main dimensions of this concept, which will be discussed in the next topic - as the process of promoting a more cohesive and balanced territory, by: (i) supporting the reduction of socioeconomic territorial imbalances; (ii) promoting environmental sustainability; (iii) reinforcing and improving the territorial cooperation/governance processes; and (iv) reinforcing and establishing a more polycentric urban system.

Table 2. Definitions of Territorial Cohesion

Source	Definition
Green Paper on Territorial Cohesion	To ensure a balanced and sustainable territorial development of the EU as a whole, strengthening its economic competitiveness and capacity for growth while respecting the need to preserve its natural assets and ensuring social cohesion It builds bridges between economic effectiveness, social cohesion and ecological balance, putting sustainable development at the heart of policy design
Third Cohesion Report	A policy seeking to ensure that people should not be disadvantaged by wherever they happen to live or work in the Union.
Fifth Cohesion Report	Territorial Cohesion reinforces the importance of access to services, sustainable development, 'functional geographies' and territorial analysis
Community Strategic Guidelines	To achieve a more balanced spatial development
Territorial Agenda background document	To achieve a more balanced development by reducing existing disparities, avoiding territorial imbalances and by making both sectorial policies which have a spatial impact and regional policy more coherent
Sixth Progress Report on Cohesion	Harmonious and sustainable development of all territories by building on their characteristics and resources
ESPON 2.2.1	Territorial Cohesion is seen to address the potential, the position and the relative situation of a given geographical entity. It can be analysed and operationalized at various geographical levels or scales, i.e. at the micro, meso or macro levels.
Kiruna Conference on Territorial Cohesion	It is about ensuring a balanced development of all these places and about making sure that our citizens are able to make the most of inherent features of their territory
Conference of Peripheral Maritime Regions	To offer fair access to services of general interest and to ensure optimal competitiveness conditions for all territories
Rotherham Declaration	Translates the goal of sustainable and balanced development assigned to the Union into territorial terms
Roberto Camagni	May be seen as the territorial dimension of sustainability (beyond the technological, the behavioural and the diplomatic dimensions)
Andreas Faludi	To reduce the dominance of a central urban area not only economically but also in terms of access to decision making
Willen Molle	A situation whereby people and firms are not unduly handicapped by spatial differences in access to basic services, basic infrastructure and knowledge.

Source: (EC, 2008b; EC, 2004; EC, 2010; EC, 2005; EC, 2005b; ESPON, 2005; EC, 2009b ; EC, 2009; ESPON, 2010; CAMAGNI, 2010; FALUDI, 2004; MOLLE, 2007)

WHAT ARE THE DIMENSIONS OF THE TERRITORIAL COHESION?

As noted in the previous topic, we propose a conceptual approach in which the Territorial Cohesion concept is divided in four main dimensions, sustained by our previous work on this matter (Medeiros, 2005). Yet, prior to sustaining those conclusions, we will begin this discussion by revealing some other academic findings and opinions expressed over the last five years, concerning this complex and paramount concept.

To begin with, we will deal with some European Commission (EC) reports as the Green Paper on Territorial Cohesion and the Cohesion Reports. Concerning the former, as we already mentioned, it clearly relates the notion of Territorial Cohesion to a more balanced and harmonious development by counteracting excessive concentration of people and activities. Furthermore, it calls for a coherent effort to improve territorial connectivity and territorial cooperation (EC, 2008: 6-9). Beyond these three ‘main intervention dimensions’ of the Territorial Cohesion (Table 3), which are clearly in line with the rationale behind the European Spatial Development Perspective (ESDP), this report also outlines the need to address specific political actions to the EU regions with specific geographical features (mountain regions, island regions and sparsely populated areas) as concrete examples of ‘excluded territories’.

In equal measure, the first Cohesion Report (EC, 1996: 126) claims that one of the main problems affecting the EU is the observed territorial imbalances. However it does not use the term ‘Territorial Cohesion’, which will appear only in the following Cohesion Report (EC, 2001b: 29). What is more interestingly, in spite of dedicating a whole topic to its discussion, it does not add much to the aims expressed in the ESDP (EC, 1999) of promoting a more polycentric urban development, equal access to infrastructure and know-how and prudent management of the natural and cultural heritage.

To a certain degree, the Third Cohesion Report (EC, 2004: 27-36) places a greater emphasis on the Territorial Cohesion concept by dedicating it an even larger topic and by claiming the obvious conclusion that it “extends beyond the notion of economic and social cohesion by both adding to this and reinforcing it”, thus sparking new ground to

better understand this concept. Furthermore, it brings to mind the necessity of promoting better coordination between EU development policies (Territorial Governance) and also the need to facilitate a more equal access to Services of General Economic Interest. It is curious, however, that it does not relate the EU territorial imbalances with the need to promote a more polycentric EU territory, in view with the ESDP principles.

Contrary to the previous two Cohesion Reports, the fourth one does not discuss the Territorial Cohesion on a single dedicated topic. Instead, it opens up to the more and more accepted idea of including it in the same topic where the twin goals of economic and social cohesion are discussed. Ironically, this option diluted a strong and genuine territorial approach, since it led the EU cohesion problematic to focus mainly on economic related issues (GDP, employment and productivity). Even so, contrary to the previous Cohesion Report, it highlights the importance of supporting a polycentric development, the supply of key services to surrounding rural areas, a more efficient and effective public administration and environmental protection. In addition, it brings to the discussion the different scales of the cohesion, which can be studied from a small urban settlement to the EU territory as a whole (EC, 2007c).

Table 3. Territorial Cohesion Dimensions/Components from several reports

Dimensions/Report	Green Paper on Territorial Cohesion	ESDP	Third Cohesion Report	Fourth Cohesion Report	Fifth Cohesion Report	Eduardo Roberto Medeiros Camagni
Territorial Balanced Growth	X	X	X	X	X	
Territorial Connectivity	X					
Territorial Cooperation	X				X	X
Territorial Polycentricity		X		X		X
Access to services/infrastructure		X	X	X	X	X
Environmental Sustainability		X		X	X	X
Socioeconomic Cohesion			X	X		X
Territorial Governance			X	X		
Functional Regions					X	
Territorial Impacts					X	

Source: (EC, 1996; EC, 1999; EC, 2004; EC, 2007c; EC, 2010; MEDEIROS, 2005; CAMAGNI, 2010)

Finally, the recently released fifth Cohesion Report lays the foundation of a new set of Cohesion Reports which include the territorial dimension in its title. Arguably, this is a EU political recognition of the importance of the Territorial Dimension of the cohesion

“based on a broad vision, which encompasses not just the economic development of lagging regions and support for vulnerable social groups, but also environmental sustainability and respect for the territorial and cultural features of different parts of the EU” (EC, 2010: XX).

Indeed, it is curious, at minimum, the understanding that this report has of the third dimension of the cohesion, by associating it with the need to pay more attention to the environmental dimension of sustainable development, the territorial dimension of access to services, territorial analysis (territorial impact assessment) and territorial cooperation/functional regions. Regarding the latter, the use of the term functional regions is a novelty in the Territorial Concept analysis, at least in such type of reports, and implies a more flexible and functional approach, ranging from a Macro-Regional perspective to the metropolitan, cross-border and rural areas territorial scale, in order to “better capture the positive and negative externalities of concentration, improve connections and facilitate cooperation and so be more effective in furthering territorial cohesion” (EC, 2010: 24).

Further on, the same report shows some inconsistency to its territorial analysis by referring that the Territorial Cohesion is associated with the third goal of the EU Cohesion Policy in achieving an harmonious development of the Union and its regions (protecting and enhancing the environment), while the economic and the social cohesion are related, respectively, with the first (increasing competitiveness especially in less developed regions) and the second goal (expanding employment and improving people’s well-being). Curiously, the ESDP proposal of a more polycentric urban development is not referred in this report, probably due to some of the ESPON findings regarding the Territorial Impact Assessments (ex: ESPON 2006d), which tend to disregard this crucial territorial dimension as main component of the Territorial Cohesion analysis.

Concerning the ESPON reports, the TEQUILA Model was, pioneering operational tool proposed in the ESPON 2006 project 3.2 to assess territorial impacts, which was then ‘renovated and upgraded’ to be applied in two EU specific policies: transport and common agriculture (ESPON 2010b). Based on this model, Camagni (2010) proposed three main components of the Territorial Cohesion:

- Territorial Efficiency: resource-efficiency with respect to energy, land and natural resources; competitiveness and attractiveness of the local territory; internal and external accessibility;
- Territorial Quality: the quality of the living and working environment; comparable living standards across territories; similar access to services of general interest and to knowledge;
- Territorial Identity: presence of “social capital”; landscape and cultural heritage; capability of developing shared visions of the future; creativity; productive “vocations” and competitive advantage of each territory.

In sum, while the territorial efficiency results from the interplay of the economic cohesion and the environmental sustainability, the territorial quality is situated in a middle term of the social cohesion objective and the environmental protection. Finally, the territorial identity encounters components related with the socioeconomic cohesion. All of these main components have several sub-components (Fig. 1), which include, for instance, the need to establish an efficient and polycentric urban system. Yet, this fundamental goal of the ESDP to promote an EU Polycentric Development Model is not taken as a key pillar, or dimension, in this proposed model.

Be that as it may, the exclusion of a fundamental dimension of the Territorial Cohesion concept (Polycentrism), both in the ESPON/Camagni proposal and in the latest Cohesion Report, seems illogical to us, as we still regard the ESDP report as the ‘cornerstone’ of the EU spatial policy. Additionally, we proposed three other dimensions as the main pillars of this concept: the socioeconomic cohesion, the environmental sustainability and the territorial cooperation/governance (Fig. 2), which will be subject of a deeper analysis in the next topic.

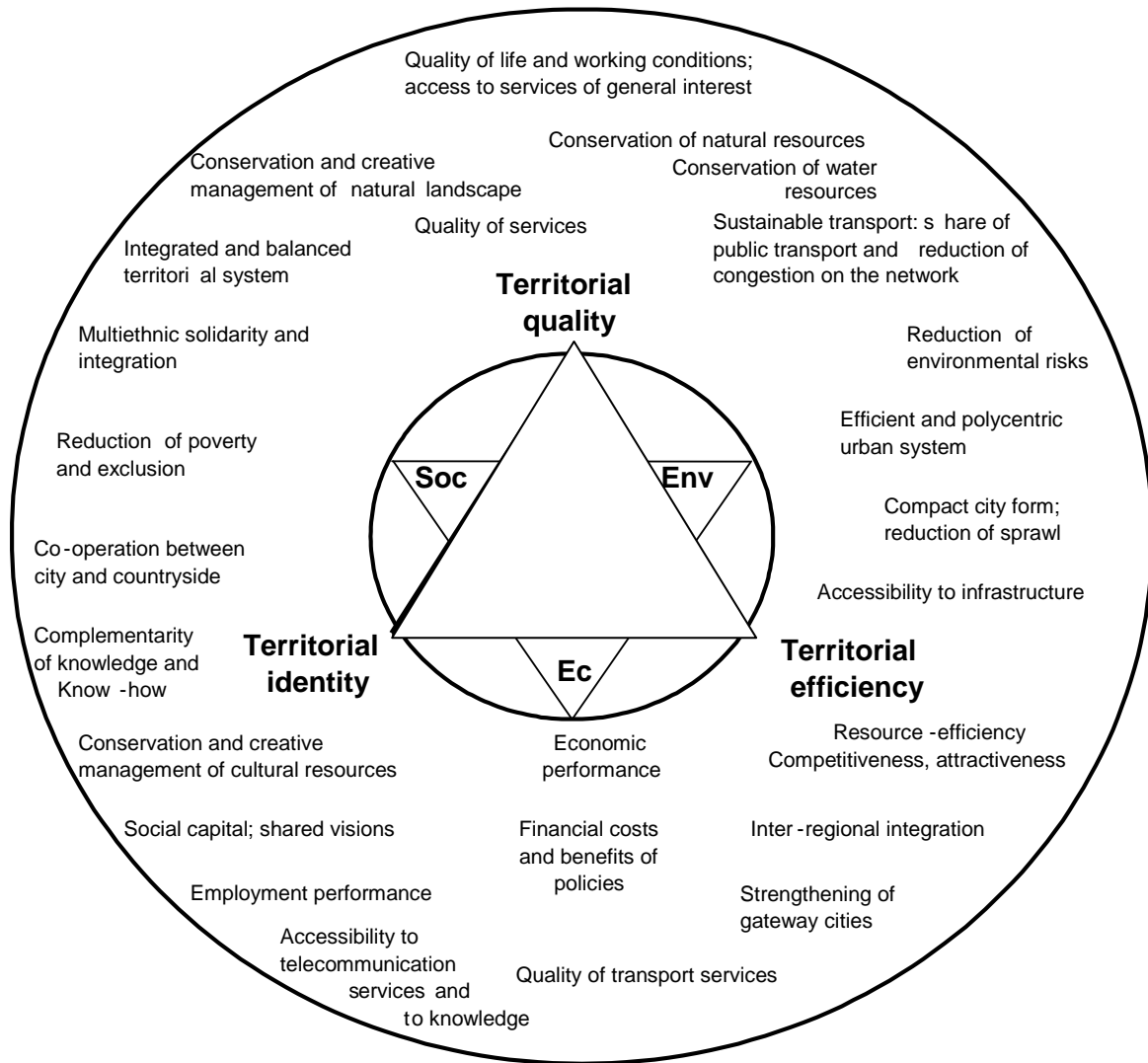


Fig. 1 – An integrated strategy for territorial cohesion: objectives and assessment criteria – based on the TEQUILA model
 Source: (ESPON 2006d: 669, CAMAGNI, 2010)

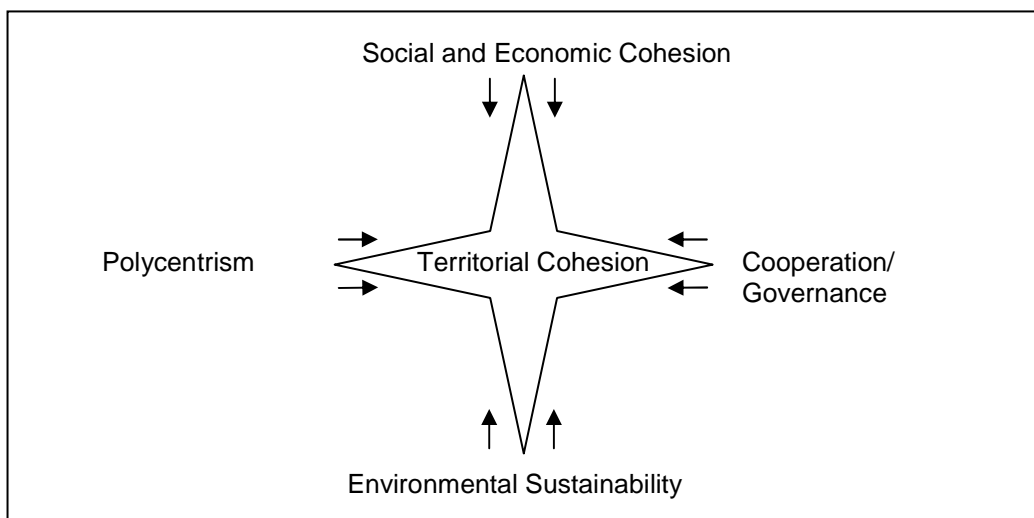


Fig. 2 - The star of the Territorial Cohesion (MEDEIROS, 2005) - adapted

HOW TO MEASURE TERRITORIAL COHESION?

One of the main achievements of the EU Cohesion Reports has been the production of an abundant set of cartography and data analysis, thus providing a necessary and updated vision of the EU territorial trends in many crucial indicators. However, only in the last one an aggregated indicator was presented called 'EU Human Development Index', in an attempt to "gain a better perspective on the human development diversity within the EU" (EC, 2010: 113). In parallel, the discussion of the Territorial Cohesion concept will be useless if it cannot be measured, even though "the quantification of indicators that would permit the measurement of its development over time is not very far advanced" (MOLLE, 2007: 98). Likewise, the Green Paper on Territorial Cohesion recognizes the need of using quantitative/qualitative indicators to improve the understanding and to closely monitor the trends in Territorial Cohesion (EC, 2008b: 12).

Yet, first and foremost, it is necessary to define the main dimensions of the Territorial Cohesion concept and its components, which will be associated with one or several statistical indicators, with the overall aim of creating an aggregated Territorial Cohesion index (see for example UN, 2010), built with a similar methodology used in the United Nations Human Development Index. Subsequently, the results could be territorialized at different scales. In an ideal scenario, results should be obtained for two different periods of time in order to show the territorial trends on Territorial Cohesion. However, this kind of analysis tends to encounter several setbacks due to lack of comparable indicators, which poses, many times, insoluble obstacles, thereby urging the need to create our own indicators based on 'spread around' government departments information.

In spite of these barriers and difficulties, some years ago, we were able to create a Territorial Cohesion index for two periods of time (1991-2001) and applied it in the Portuguese border NUTS III, making it possible to conclude that, in general, in spite of the positive contribution of the INTERREG-A initiative to foster the development of the border area (MEDEIROS, 2005) this was not enough to achieve the Territorial Cohesion objective in the Portuguese continental territory. Indeed, this attempt to quantify this concept proved to be an exceptionally difficult task, although it provided some guidance and established a rationale, on the academic level, to the possibility of measuring the Territorial Cohesion.

Surprisingly, since then, we cannot find many attempts to embark in a similar endeavour, and consequently we still regard our proposed model (Fig. 2), which identifies four main dimensions of this concept, as the most appropriate and complete one, since we consider that it captures the fundamental building blocks behind the idea of promoting Territorial Cohesion: to achieve a more balanced, harmonious, cooperative and sustainable territory. Two main reasons justify the lack of reformulations of our Territorial Cohesion concept rationale. In one hand, the lack of alternative models and, on the other hand, the absence of a geographical approach in view with the ESDP premises, in the existing ones.

This holds true for the ‘TEQUILA Model’ (Fig. 1), since it clearly neglects the spatial planning related with a more polycentric territorial approach, as one of the main components of the Territorial Cohesion concept. The same holds true, for instance, for bringing to the fore the concept of ‘territorial efficiency’, as something placed in between the economic and environmental dimensions, which is largely inappropriate in our point of view, since this concept is largely holistic and should include all the territorial development dimensions, like for instance the social and institutional ones. Hence, in the following lines we will look, in a brief way, more closely to each one of the four dimensions and their main components, which should be viewed as the main pillars of the Territorial Cohesion concept.

Socioeconomic Cohesion dimension (distribution):

As previously said, in our view, the Socioeconomic Cohesion dimension - which can also be referred as the ‘distribution dimension’ of the cohesion - should be included as one of the main dimensions of the Territorial Cohesion concept, and not at the same level as the latter, as expressed in the Lisbon treaty and in the Fifth Cohesion Report, since it is fairly obvious that to achieve Territorial Cohesion the EU needs to tackle persistent socioeconomic imbalances.

The same idea is expressed in the ESPON Synthesis Report III, which notes that “territorial cohesion adds to the concept of economic and social cohesion by translating the fundamental EU goal of balanced and sustainable development into a territorial setting” (ESPON, 2006: 1). In the same line of thought, the fourth Cohesion Report

claims that the Territorial Cohesion extends beyond the notion of Socioeconomic Cohesion, as stated previously.

In fact, it is commonly agreed that the EU Cohesion policy is essentially aimed at addressing economic and social inequalities (BACHE, 2008), and that the access to services of general economic interest is recalled in the Article 14 of the EU Treaty (former article 16) as having a crucial role in promoting social and territorial cohesion. In the same vein, a European Commission report (2007b: 4) completes this picture by stating that these services (energy, telecommunications, transport, audio-visual broadcasting and postal services, education, water supply, waste management, health and social services) are essential for the daily life of citizens and enterprises, and reflect Europe's model of society, since “they play a major role in ensuring social, economic and territorial cohesion throughout the Union and are vital for the sustainable development of the EU in terms of higher levels of employment, social inclusion, economic growth and environmental quality”.

Simply put, we can associate this dimension to one of the main ESDP objectives: *Securing parity of access to infrastructure and knowledge*, with a view to reduce territorial imbalances in the socioeconomic domain. For instance, these imbalances can be observed in the access to markets and essential services, knowledge and basic infrastructure. As such, we propose three main components related with this dimension: (i) knowledge, (ii) income and (iii) access to public services.

Environmental Sustainability dimension:

As in the previous discussed dimension, the choice for the Environmental Cohesion aspects was mainly due to another paramount ESDP objective towards a more balanced and harmonious EU territory: *Sustainable development, prudent management and protection of nature and cultural heritage*. Curiously, by the time we defended the inclusion of this dimension as one of the main pillars of Territorial Cohesion, some of our academic colleges showed their scepticism concerning this decision, since, according to them, there was no solid ground theory relating both at the time (2003). On the other hand, the lack of environmental regional indicators at the EU regional level (namely in the 1990s), raises barriers to a solid ground analysis of this dimension.

Accordingly, as a recent European Environment Agency report stresses: “much of the discussion has focused on economic and social aspects rather than the environmental dimensions” of the Territorial Cohesion concept (EEA, 2010: 7). So it was with great satisfaction that we saw an EU report discussing the importance of the environmental issues to promote a more balanced and sustainable EU territory, and suggesting the full integration of the environmental dimension in the EU Cohesion Policy. To that end, this report also states that “to ensure that sustainable development is pursued throughout Europe, the concept of territorial cohesion needs to incorporate the idea of sustainable development - including the environmental dimension”.

In other words, the environmental and sustainability dimensions of Territorial Cohesion need to be seen as an integrated part of this concept. In this regard, the referred report goes a step further by expressing the idea that “Territorial Cohesion can be seen as the 'spatial representation of sustainability', which would mean that assessing policies in terms of the environmental dimensions of territorial cohesion could become an important step towards the better integration of environment and sustainability” (EEA, 2010: 8). This idea might sound a bit too restricted when viewed with the complexity and the vast scope of the territorial dimension of development. Whatever the case, the integration of the environmental dimension into the Territorial Cohesion concept seems logical since it seems unreasonable to exclude the environmental issues from the EU Cohesion Policy discussion in Europe nowadays. Thus, ultimately, we argue the inclusion of the Environmental Sustainability as one of the four pillars of the Territorial Cohesion concept sustained by two main components: (i) environment and (ii) energy.

Territorial polycentricity dimension (morphology):

The reduction of territorial disparities is one of the main objectives of the European Spatial Policy (ESPON, 2006b, 14). Accordingly, the EU Territorial Cohesion objective should be concerned with counteracting the present European core-periphery pattern, by supporting policies which provide opportunities and living conditions in all parts of Europe. In this regard, the Third ESPON Synthesis Report is clear when it predicts that “in the long-term the enlargement or dispersion of the Pentagon, and strong urban agglomerations in more remote locations, might contribute to increased territorial cohesion” (ESPON, 2006: 15). Equally, the ESDP emphasizes that “the concept of polycentric development has to be pursued, to ensure regionally balanced development”

in order to avoid excessive economic and demographic concentration in the core area of the EU (EC, 1999: 20).

Moreover, according to the Leipzig Charter, one of the three main strategic principles for the EU development policy with a view to achieve Territorial Cohesion is related to the establishment of a balanced territorial organization based on a European polycentric urban structure to make better use of available resources in European regions. (LC, 2007: 1 and EC, 2007: 3). Of course, the analysis of polycentrism largely depends on the studied territorial scale. For this reason, some authors consider the concept of polycentric development to be ‘rather fuzzy’ since it means different things to different actors and on different scales, and also that the “the concepts of territorial cohesion and polycentric development still need to crystallize out on the European scale” (MEIJERS, WATERHOUT and ZONNEVELD, 2007: 3).

Nonetheless, we argue that there is strong case in putting the territorial polycentricity as one of the main pillars of the Territorial Cohesion concept, as a means to enhance the EU territorial capital in a more balanced and connected Regional/National/European urban network. The use of this dimension, however, requires particular attention to the fact that polycentricity has two complementary aspects: one relates with the *morphology* (number of cities, connectivity, distribution and hierarchy) and the other with the *relations* between urban settlements (flows, networks, cooperation, functional complementarity) (ESPON, 2004: 3). As such, and since the next discussed Territorial Cohesion dimension covers, in large measure, the latter one (relations), we decided to focus entirely on three components related with the morphologic aspect: (i) hierarchy, (ii) density and (iii) connectivity.

Territorial cooperation/governance dimension:

The last dimension is not directly related to any main objective of the ESDP. Yet, this document supports the idea that an integrated spatial development requires new ways of horizontal and vertical cooperation, with a view to reinforce urban and regional networks and partnerships. It is also important to notice that even though we decided to name this dimension as ‘Territorial Cooperation’, the notion of ‘Territorial Governance’ - which is regarded “as a process of the organization and co-ordination of actors to develop territorial capital in a non-destructive way in order to improve territorial cohesion at different levels.” (ESPON, 2006c: 13) - was also implicit, although it was

not particularly developed in our previous study (MEDEIROS, 2005). For that reason, we decided to make an upgrade of our model by placing both names in the designation of this fourth and last pillar of the Territorial Cohesion concept.

Clearly, we can see a complement in the ‘barrier breaking effect/bridging territories’ aim of the territorial cooperation objective and its crucial contribution to achieve the ESDP goals (ESPON, 2007: 3) - both in the cross-border strand and in the transnational one – and the territorial governance objective as a “*conditio sine qua non* to guarantee more balanced development across Europe and to achieve territorial cohesion” (ESPON, 2006c: 12), because it offers an alternative to a typical ‘hierarchical type of government’ (SCHOUT and JORDAN, 2007: 838), thus allowing a more active public intervention and collective action to take place at different territorial levels, through a more integrated territorial development policy.

From this territorial governance perspective, which views the Territory as a rich complex system of public and private actors (FALUDI, 2004: 1353), the territorial cooperation brings an additional contribution to the Territorial Cohesion by enhancing a more integrated territorial approach through the development of multi-level spatial development strategies. Equally, Gualini (2008) also suggests that the Territorial Cohesion “can only gain effective meaning through its appropriation and enactment by local-regional governance actors”. However, one should note that a dilution of policy responsibilities should not result from this multiplicity of intervention in several territorial scales, since this might undermine the efficiency of policies (MNE, 2009: 8).

As one might have understood by now, the task of measuring both territorial cooperation and territorial governance is far from being an easy and simple task, due to lack of appropriate data related with its three components: (i) horizontal cooperation, (ii) vertical cooperation and (iii) openness/participation. Even so, concerning the governance components, the Eurostat proposes the use of several indicators, like the E-government availability and usage, and the level of confidence in EU institutions, as we will see in the next topic, dedicated to suggest indicators and to build an aggregated index to measure the Territorial Cohesion concept. In sum, in our proposed analytic model of the Territorial Cohesion concept, (Fig. 3) one can clearly see its four dimensions and their related components, together with some chosen indicators.

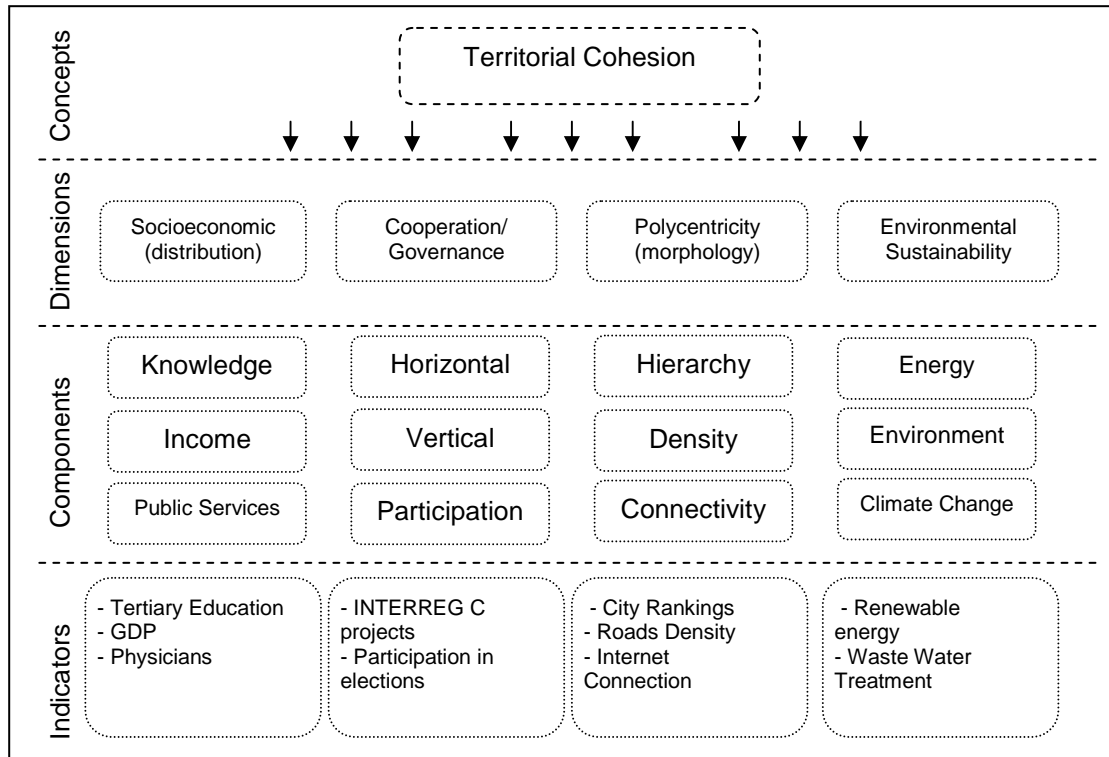


Fig. 4 – The analytic model of the Territorial Cohesion concept

A TERRITORIAL COHESION INDEX APLIED IN EUROPEAN TERRITORY

It is not the purpose of this paper to explore all the possible methods which can be used to measure the Territorial Cohesion concept. Nevertheless, despite the fact that some might argue that several multivariate data technics (like the factor analysis) can be used to get an aggregated indicator of the Territorial Cohesion in a specific territory, several studies (DPP, 2009) show that the methodology used in the United Nations Human Development Reports, to create the Human Development Index, is the most appropriate one to paint a clear picture of the territorial imbalances, at distinct territorial levels.

Yet, first and foremost, it is necessary to choose the most adequate indicators for each one of the Territorial Cohesion dimensions and components, preferably on a balanced matter, i.e., not choosing too much statistical indicators in one or two dimensions and neglecting the remaining ones. Of course, it is needless to say that this task requires a meticulous and hard search for adequate statistical data. Then again, it is not certain that by choosing many indicators, in all four dimensions, will result in a more accurate and adequate Territorial Cohesion index. In fact, we understand that to gain a better perspective on the Territorial Cohesion trends, the most important step is to choose by

quality rather than by quantity. For this reason, we elaborated a table, where some indicators are suggested for each one of the four chosen dimensions (Table 4).

Table 4. Territorial Cohesion Dimensions/Components suggested indicators

Indicator - Socioeconomic (distribution) Dimension	Component	Source
EU Human Development Index	<i>Transversal</i>	(EC, 2010)
GDP	Income	Several
Competitiveness Index	Income	(EC, 2010)
Net adjusted disposal income of private households	Income	(EC, 2010)
Tertiary education	Knowledge	Several
Access to the information society	Knowledge	(EC, 2007)
Research Centres	Knowledge	Several
Physicians	Public Services	Several
Public transports	Public Services	Several
Schools	Public Services	Several
Indicator – Cooperation/Governance Dimension	Component	Source
Cooperation Projects Intensity (same territorial level)	Horizontal	(ESPON, 2006b)
Twin Cities	Horizontal	(Medeiros, 2005)
Inter-Municipal Cooperation	Horizontal	(ESPON, 2004)
Cooperation Projects Intensity (different territorial level)	Vertical	(ESPON, 2006b)
Regional and Local Cooperation Associations	Vertical	(Medeiros, 2005)
International Trade	Vertical	(Medeiros, 2005)
E-government use/availability	Open/Partic	Eurostat
Administrative Decentralisation	Open/Partic	(EC, 2004b)
Participation in Elections	Open/Partic	(EC, 2004b)
Indicator – Environmental/Sustainability Dimension	Component	Source
Renewable Energy Production	Energy	(Medeiros, 2005)
Energy Efficiency	Energy	(DPP, 2009)
Eco-Efficiency	Environment	(DPP, 2009)
Waste Treatment	Environment	(EC, 2010)
Environmental Risk Reduction	Environment	(ESPON, 2006d)
Indicator – Polycentricity (Morphology) Dimension	Component	Source
Polycentric Index	<i>Transversal</i>	(ESPON, 2004)
City Rankings	Hierarchy	(ESPON, 2004)
Specialized Functions	Hierarchy	(Medeiros, 2005)
Population Density	Density	(Medeiros, 2005)
Compact City Form	Density	(ESPON 2006d)
Road Density	Density	(Medeiros, 2005)
Transports Accessibilities	Connectivity	(Medeiros, 2005)
Accessibility to Infrastructures	Connectivity	(ESPON 2006d)
Telecommunications Infrastructures	Connectivity	(Medeiros, 2005)

Note: The source indicates the report where this indicator is suggested/used.

Finally, attention must be brought to the fact that, in most cases, these indicators should be chosen according to the studied territorial scale (ex: some authors might suggest that polycentrism indexes should not be applied at local/regional levels), and should not be used in absolute values, in order to enable regional comparisons.

In the end, these suggestions are made to facilitate the search for more adequate statistical indicators which might, or not, be available at the desired territorial level. Evidently, several others could be used instead, if available. The next step would require a standardization and normalization procedure (see MATEUS, 2006), in order to create four comparable indexes (one for each dimension) and, in the end, the Territorial Cohesion index would be the result of their arithmetic average. Of course, in an ideal scenario, two Territorial Cohesion Indexes should be produced. One for an initial period of time, and another for a latter period (preferably longer than a decade).

With this in mind, we built a simple Territorial Cohesion Index (one statistical indicator for each one of the components) with the indicators shown in Figure 4, both for the Iberian Peninsula regions (NUTS II – Fig. 5), and for the Scandinavian Peninsula regions (NUTS III – Fig. 6), one for 1998 and another for 2008. Based on the use of the selected indicators the results show a disturbing picture of marked unbalanced territorial trends in the Iberian Peninsula, with the Portuguese regions (Except from Lisbon), clearly lagging behind in this Index, when compared with their Spanish neighbours (exceptional growth in La Rioja and Navarra NUTS II). One thing is for certain, despite all the possible discussion behind our indicators choice, no one can dispute the worse Portuguese territorial performance in the Iberian Peninsula, in the last decade, when it comes to reach the goal of Territorial Cohesion (Appendix 1).

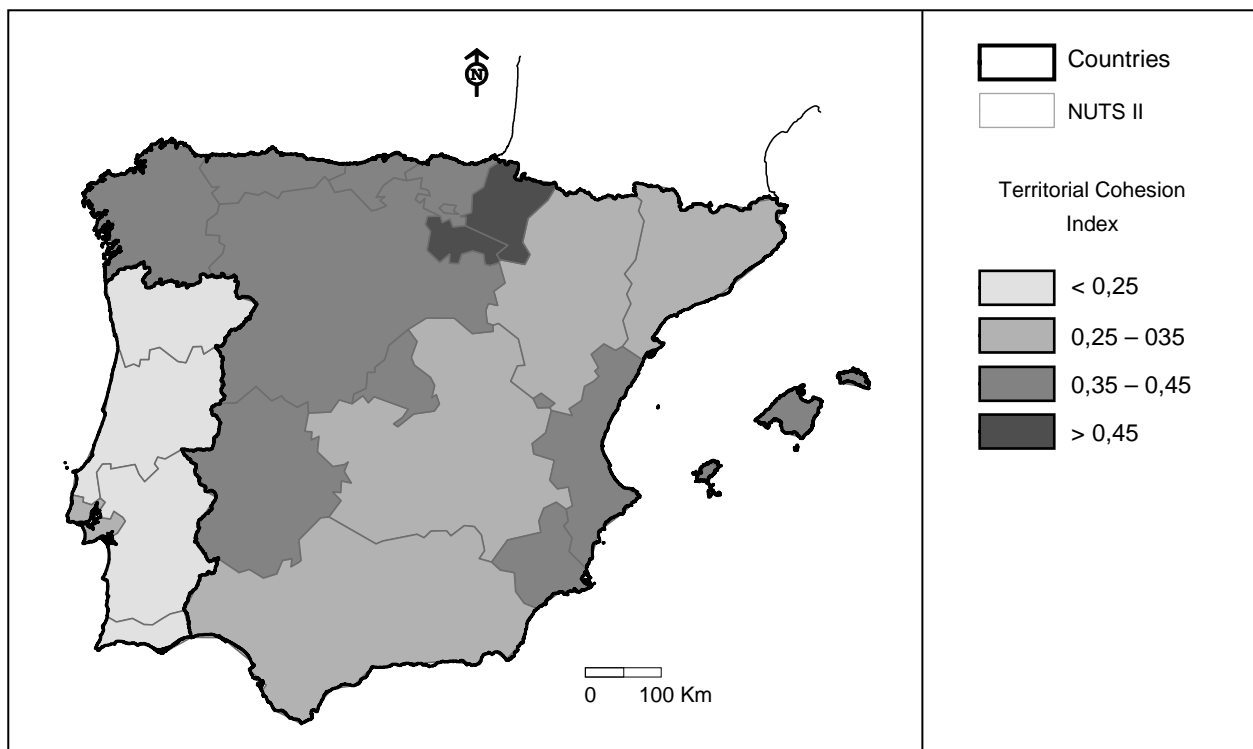


Fig. 5 – Territorial Cohesion Index (1998-2008) in the Iberian Peninsula - NUTS II
Source: Data (several). Author Cartography

In a wide sense, the evolution of the Territorial Cohesion indexes in the Scandinavian provinces (Fig. 6) demands a more complex analysis, as the contrast between Sweden and Norway is not so evident, even though the two main metropolitan areas (Oslo and Stockholm – see Appendix 2) got the best results, overall. Curiously, or not, the fact that Territorial Cohesion emphasises aspects other than the economic performance, justifies the above average results obtained in several peripheral and depopulated Scandinavian provinces (NUTS III). Here, the quite positive trends obtained by the Scandinavian Northern provinces in this index are partly explained by their performance in the environmental sustainability chosen indicators.

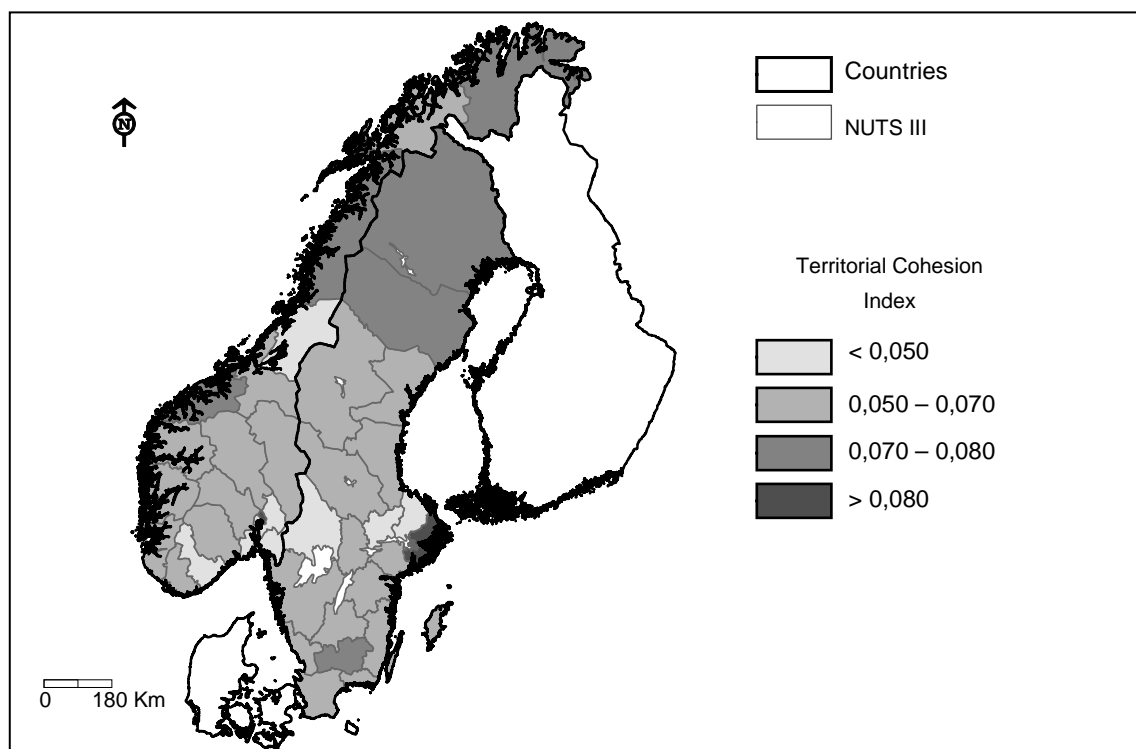


Fig. 6 – Territorial Cohesion Index (1998-2008) in the Scandinavian Peninsula - NUTS III.
Source: Data (several). Author Cartography

Suffice it to say, that these results should be read with care, since they are based on the evolution of the chosen indicators. Even so, they encompass several territorial cohesion dimensions and counteract the common socioeconomic assessing tools which overvalue the economic (GDP) dimension. In this light, a recent UN report expressed that “it is now almost universally accepted that a country’s success or an individual’s well-being cannot be evaluated by money alone. Income is of course crucial: without resources, any progress is difficult. Yet, we must also gauge whether people can lead long and healthy lives, whether they have the opportunity to be educated and whether they are free to use their knowledge and talents to shape their own destinies” (UN, 2010).

To complement the previous analysis of two European peninsulas, and to offer a regional European overview of the Territorial Cohesion, we built a similar Territorial Cohesion index for all the European regions (NUTS II). Yet, due to lack of enough comparable data, we could only produce a Territorial Cohesion snapshot for 2008 (Fig. 7), which used available aggregated indexes: Socioeconomic Dimension (competitiveness index + human development index – EC, 2010); Cooperation/Governance (cooperation intensity – (ESPON, 2006b); Polycentricity/Morphology (Polycentric Index - available for NUTS I, but adapted to each NUTS II - ESPON, 2004); Environmental Vulnerability Index (EC, 2010).

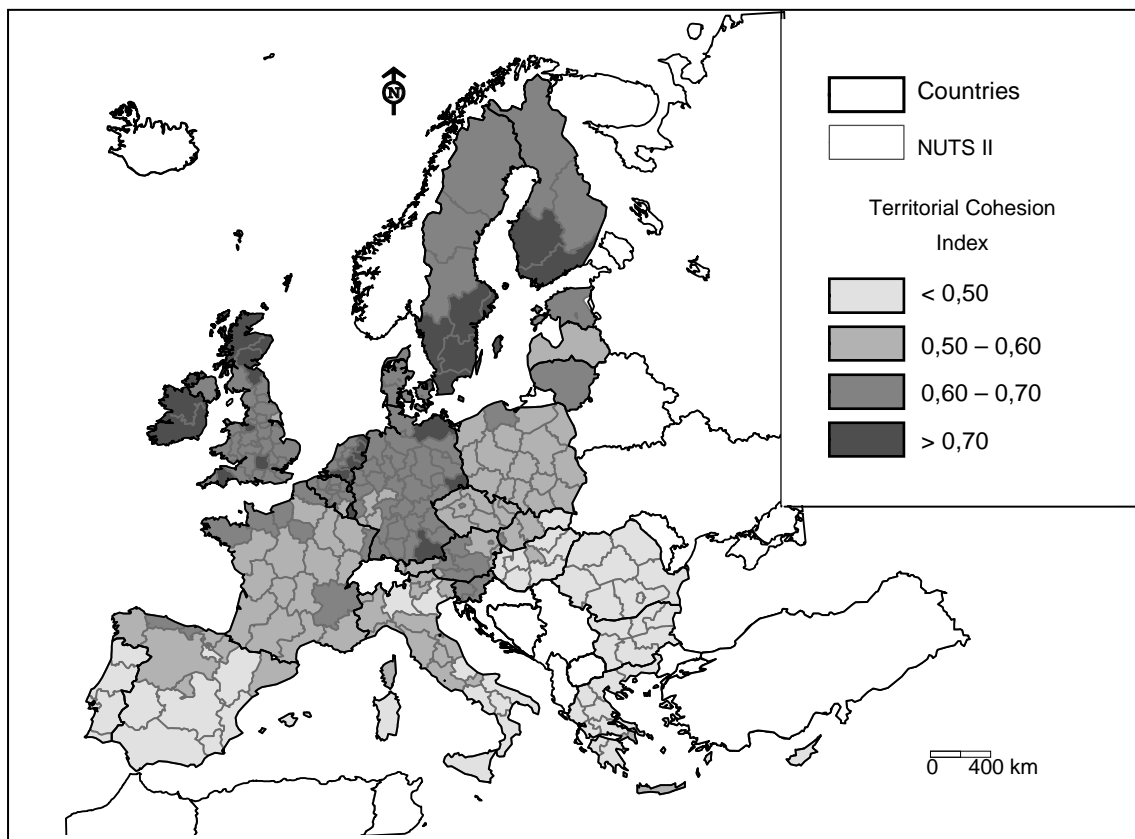


Fig. 7 – Territorial Cohesion Index Snapshot (2008) in the EU - NUTS II
Source: Data (several). Author Cartography

In a wide sense, the lack of a territorial trend overview (for instance, over the last decade) constrains the Territorial Cohesion analysis in the EU. Nevertheless, the obtained results show an interesting snapshot of the present territorial imbalances, with a clear north/south and east demarcation line, despite the lack of important statistical data related with the use of renewable energy and a more regionally detailed polycentric index data. The next step would be to suggest that the Eurostat produces comparable data related with the proposed four dimensions of the Territorial Cohesion for all the European regions in order to have a more concise picture of the territorial trends in the EU.

CONCLUSION

It goes without saying that the persisting territorial asymmetries between the European Regions paved the way to the inclusion of the Territorial Cohesion as a fundamental goal of the European Union in the Lisbon Treaty in 2009. However, the use of this term goes way back in time, at least to the last couple of decades. Indeed, it has been used and discussed in several EU official documents, including the Amsterdam Treaty in its article 16, where the general ideal of the Territorial Cohesion is viewed as a complement of the social cohesion goal.

Another EU institutional breakthrough in the use of the Territorial Cohesion concept came with the inclusion of this expression in the Second Report on Economic and Social Cohesion (EC, 2001), associated with the notion of a ‘more balanced territorial development’, following the rationale for the formulation of the ESDP (EC, 1999). Nevertheless, this and other subsequent EU reports, and many other academic papers, always lacked a comprehensive analysis of the concept of Territorial Cohesion, by identifying its main dimensions, and by proposing a feasible methodology to measure it, which justified the debate questions concerning this concept, launched in the EU Green Paper on Territorial Cohesion (EC, 2008b).

In this context, and due to the restricted vision in which the Territorial Cohesion concept is presented in many papers and reports, and the several attempts to propose a clear and accepted definition, even without the identification of its main dimensions, we decided to review our previous work on this subject, by taking into account the most recent discussions around the third pillar of the Cohesion, in order to provide an updated operational meaning of the concept of Territorial Cohesion, and also to propose a measurement tool and criteria to obtain a Territorial Cohesion index, which can be used as an operational instrument for producing valid territorial impact assessment results in the EU territory.

To reach this goal, this paper begins with the discussion of the relevance and the identification of the main dimensions of the Territorial Cohesion concept, since ultimately its definition should be built around them. Consequently, as we indicated previously in this paper, we suggest a definition of Territorial Cohesion as ‘the process of promoting a more cohesive and balanced territory, by: (i) supporting the reduction of socioeconomic territorial imbalances; (ii) promoting environmental sustainability; (iii) reinforcing and improving the territorial cooperation/governance processes; and (iv) reinforcing and establishing a more polycentric urban system.

Following from the above, the next step would be to structure the previous conceptual analysis into an operational package (construction of a Territorial Cohesion Index), which can be both useful and comprehensible for policy makers and regional/local stakeholders, in order to identify the major territorial impacts of the EU Cohesion Policy funds in achieving the goal of Territorial Cohesion at the regional, national and European levels. In this regard, this paper suggests several statistical indicators, for each one of the Territorial Cohesion dimensions, in spite of the well-known fact that relevant and comparable data at the EU regional level is scarce, in many specific areas, especially in the previous century.

Nevertheless, we managed to collect appropriate data which made it possible to build a Territorial Cohesion Index, which presented a Territorial Cohesion trend in the Iberian Regions (NUTS II) in the last 10 years (1998-2008), making it possible to observe significant differences between the lagging Portuguese regions (in general) and the better territorial performances of their Spanish counterparts. On its part, Territorial Cohesion trends in Scandinavia Peninsula did not produce such a clear distinction between the Norwegian and the Swedish regions, although it favoured the main urban agglomerations and, perhaps unexpectedly, some northern and depopulated provinces.

To venture furthermore in this analysis, at the European scale, we also produced a 'snapshot of the Territorial Cohesion' in 2008 in the EU. Unfortunately, comparable data for 1998, or close, was largely unavailable. Anyhow, the obtained results in all studied cases look convincing. As such, the proposed methodology can provide a sound solid ground to measure the Territorial Cohesion in the EU territory, thus contributing to further improving of the EU policies, and their particular attention to the territorial dimension as a strategic starting point, and not as a sidelined objective.

Finally, we would like to stress that we look forward to seeing a growing and deeper debate around the territorial dimension of the EU Cohesion Policy goal, in a context of a severe financial crisis, which affected mainly the EU lagging regions. In this regard, this article intends to make an additional contribution to this political and academic debate, by developing and testing a theoretical model which can be easily applied in the EU regions, and also by tackling its multiple dimensions. At the same time, we hope that the Territorial Cohesion objective is finally brought to the centre of the EU Political agenda, in a practical manner, with a view to attain the 'old EU goal' of a more balanced and harmonious EU territory.

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Appendix 1. Territorial Cohesion Indexes in Iberian Peninsula (NUTS II)

NUTII	TCI 1998	TCI 2008	TCI 1998-2008
Norte	0,10	0,24	0,24
Centro (p)	0,11	0,26	0,22
Lisboa e Vale do Tejo	0,26	0,51	0,53
Alentejo	0,05	0,26	0,20
Algarve	0,18	0,33	0,39
Andalucia	0,09	0,50	0,34
Aragon	0,33	0,52	0,41
Principado de Asturias	0,28	0,63	0,56
Islas Baleares	0,20	0,64	0,51
Canarias	0,12	0,59	0,39
Cantabria	0,26	0,67	0,48
Castilla y Leon	0,35	0,61	0,49
Castilla-La Mancha	0,20	0,47	0,33
Catalu±a	0,14	0,61	0,43
Comunidad Valenciana	0,19	0,61	0,46
Extremadura	0,24	0,42	0,45
Galicia	0,28	0,53	0,52
Comunidad de Madrid	0,18	0,70	0,50
Region de Murcia	0,22	0,59	0,51
Comunidad Foral de Navarra	0,41	0,85	0,69
Pais Vasco	0,19	0,69	0,48
La Rioja	0,46	0,73	0,61

TCI – Territorial Cohesion Index

Appendix 2. Territorial Cohesion Indexes in Scandinavian Peninsula (NUTS III)

NUTII	TCI 1998	TCI 2008	TCI 1998-2008
Stockholms län	0,33	0,42	0,09
Uppsala län	0,29	0,34	0,05
Södermanlands län	0,24	0,30	0,06
Östergötlands län	0,26	0,32	0,06
Jönköpings län	0,23	0,30	0,07
Kronobergs län	0,24	0,31	0,07
Kalmar län	0,23	0,29	0,06
Gotlands län	0,23	0,29	0,06
Blekinge län	0,26	0,31	0,06
Skåne län	0,27	0,33	0,06
Hallands län	0,25	0,31	0,06
Västra Götalands län	0,27	0,34	0,07
Värmlands län	0,26	0,30	0,04
Örebro län	0,25	0,32	0,07
Västmanlands län	0,25	0,30	0,05
Dalarnas län	0,25	0,30	0,06
Gävleborgs län	0,25	0,31	0,06
Västernorrlands län	0,29	0,35	0,06
Jämtlands län	0,25	0,32	0,07
Västerbottens län	0,27	0,34	0,07
Norrbottens län	0,27	0,35	0,08
Østfold	0,23	0,27	0,04
Akershus	0,27	0,32	0,05
Oslo	0,36	0,46	0,10
Hedmark	0,23	0,29	0,06
Oppland	0,24	0,29	0,05
Buskerud	0,25	0,31	0,06
Vestfold	0,24	0,28	0,05
Telemark	0,26	0,31	0,05
Aust-Agder	0,24	0,29	0,05
Vest-Agder	0,26	0,31	0,06
Rogaland	0,27	0,34	0,07
Hordaland	0,27	0,34	0,07
Sogn og Fjordane	0,30	0,37	0,07
Møre og Romsdal	0,26	0,33	0,07
Sør-Trøndelag	0,25	0,32	0,06
Nord-Trøndelag	0,24	0,29	0,05
Nordland	0,26	0,33	0,08
Troms	0,25	0,32	0,07
Finnmark	0,25	0,33	0,08

TCI – territorial Cohesion Index