

## MEASURING TERRITORIAL COHESION

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### Abstract:

The notion of Territorial Cohesion is still very much misunderstood within the EU bodies, despite being mentioned regularly, since 2001, in the European Commission Cohesion Reports, and included the Lisbon Treaty, in 2009, alongside the goals of social and economic cohesion. Indeed, in the last couple of decades, few attempts were made to produce a widely accepted methodology which can effectively measure changes on territorial cohesion in a given territory. Under this context, this article summarizes not only existent proposals to define territorial cohesion, but also some efforts to measure it. More particularly, we start by shedding light on the notion of territory/territorial, and the related analytic dimensions, which go beyond the commonly EU triangle of policy development: economy, society, and environment. In sum, we suggest the inclusion of two additional dimensions, one related with territorial governance/cooperation, and another associated with spatial planning: polycentricity. Next, we elaborate on the notion of cohesion, and its relation to the territorial dimension of policies, which can be found in several domains/policies: urban, rural, border areas, transports, environment, etc. Also, a concrete proposal for the defining the notion of Territorial Cohesion is provided in order to make it more comprehensive to the political bodies and the scientific community. More concretely, along the text, territorial cohesion is viewed 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. Finally, we explore the ways in which it is possible to measure territorial cohesion. More pointedly, a significant number of statistical indicators are proposed build an aggregated statistical index (territorial cohesion index) which can measure the changes of the territorial cohesion in a given territory. Here, concrete examples are provided where this proposed methodology was applied: the Iberian case (NUTS2) and the Portuguese case (NUTS3), from 1990 to 2010.

## Introduction:

Territorial Cohesion is a European Union (EU) concept. More concretely, as Faludi eloquently explains in a vast set of literature (2004, 2006, 2007, 2010, 2013a, 2013b, 2014), this notion has French roots, and was firstly invoked by Michel Barnier, a former European Commissioner for Regional Policy (from 1999 until 31 March 2004), in the Assembly of European Regions. In direct response to the restricted meaning of territorial cohesion in the Amsterdam treaty, Michel Barnier made sure the Second Cohesion Report had a full topic discussing this novel EU notion (Faludi, 2014).

In a way, one can state that this Second Cohesion Report (EC, 2001) marks the genesis of the discussion of the meaning of territorial cohesion within several EU mainstream documents, since the First Cohesion Report (EC, 1996) did not made use of this term, and the European Spatial Development Perspective or ESDP, released in 1999 (EC, 1999) while referring it once, together with four mentions of the more Anglo-Saxon term of Spatial Cohesion, did not go to extreme lengths in explaining its proper meaning.

On the counterpart, the topic dedicated to explaining the notion of Territorial Cohesion in the Second Cohesion Report associated it with the goal of 'promoting a more balanced development' of the EU territory, in order to follow the goal of the Treaty of the EU, expressed in the Article 158, of achieving harmonious development of the Union as a whole. The main argument put forward to promote Territorial Cohesion policies and measures is sustained by the fact that "while the concentration of economic activity in the stronger regions may lead to greater efficiency of production in the EU in the short-term, this may be at the expense of the longer-term competitiveness of the Union economy insofar as it damages the productive potential of weaker regions and reduces their capacity to exploit their comparative advantages. Moreover, the concentration of both businesses and people in particular regions conflicts with the objective of sustainable development, not only because of the possible overcrowding and congestion which it causes in these regions but also because of the rundown and depopulation of other areas" (EC, 2001: 29).

To no one surprise, the association of the notion of Territorial Cohesion with the goal of promoting a more balanced EU territory is transversal to all the remaining EU documents which attempt to discuss it. But more importantly, the Third Cohesion Report showed an attempt to go a step further in clarifying this notion by claiming that "the concept of territorial cohesion extends beyond the notion of economic and social cohesion by both adding to this and reinforcing it. In policy terms, the objective is to help achieve a more balanced development by reducing existing disparities, avoiding territorial imbalances and by making both sectoral policies which have a spatial impact and regional policy more coherent. The concern is also to improve territorial integration and encourage cooperation between regions" (EC, 2004).

In simple terms, the Third Cohesion Report was pivotal in separating the notion of Territorial Cohesion and the long-term EU used notions of economic cohesion and social cohesion. However, and despite the implicit rationale behind this notion (achieve a more balanced development, reduce regional disparities, avoiding territorial imbalances, improve territorial integration, and encourage cooperation between regions), no attempt was made to propose a widely accepted definition of Territorial Cohesion.

Likewise, the Green Paper on Territorial Cohesion, released four years later (EC, 2008), launched a challenge for identifying the most appropriate definition of Territorial Cohesion. However, it reinforced the assumption that the central goal behind this notion is to promoting a more balanced and harmonious development of the EU territory. Moreover, this report advanced concrete analytic dimensions to better understand the notion of Territorial Cohesion. The first is the need to promote 'territorial concentration', by overcoming differences in density. The second is 'territorial connectivity', which should be promoted in order to overcome distances. Finally the promotion of a 'territorial cooperation' process will help to overcome existing divisions.

The next crucial step in placing the Territorial Cohesion goal in the EU political agenda was its inclusion in the Lisbon Treaty, in 2009, alongside the general goals of promoting social and economic cohesion, in the Article 3. More precisely, the Article 174 clearly states that "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. Among the regions concerned, particular attention shall be paid to rural areas, areas affected by industrial transition, and regions which suffer from severe and permanent natural or demographic handicaps such as the northernmost regions with very low population density and island, cross- border and mountain regions" (CE, 2010a).

Since then, in our view, no EU mainstream document, and more particularly neither the Fifth (EC, 2010b) and Sixth (EC, 2014) Cohesion Reports brought relevant insights to the discussion of the Territorial Cohesion notion. Inversely, some ESPON (European Spatial Planning Observatory Network) reports embarked on a quest to identify some of the main dimensions of the Territorial Cohesion concept, as we will see in the second topic of this article. But firstly, a first topic will shed some light in the crucial notion of 'territory', in a synthetic manner, in order to better understand the selection of the analytic dimensions proposed to measure this concept, which will be better explained in the last topic. Here, a concrete methodology is used to measure the territorial cohesion in the Iberian Peninsula (NUTS 2) and in the Portuguese (NUTS 3) territories.

## **1. Understanding the notion of territory.**

Territory is a complex notion (Davoudi, 2004), encompassing innumerable generic forms and expressions (Delaney, 2009). Literally, it can be defined as “a bounded, meaningful social space the ‘meanings’ of which implicate the operation of social relational power” (Delaney, 2009: 196). Broadly speaking, territorial analysis entails a myriad of interdependent and interlocked processes, which include social, cultural, economic, demographic, political, environmental, and several other analytic elements.

Indeed, the simplified EU vision of territory, in most EU mainstream documents, as a three-dimensional sum-up of economy, society, and environment is, in our view, extremely simplified. However, we do understand the need to make territorial analysis as simple as possible, in light of the limited availability of statistical indicators, which can be used to assess territorial trends at all territorial levels: European, National, Regional, Local, and Urban.

Even so, we propose that territorial analysis not only takes into consideration elements related to the economic, the social, and the environmental dimensions, but also include elements from two other crucial analytic dimensions of territory: territorial governance and territorial articulation (or spatial planning). To better understand this need, we can give the example of the implementation of the EU Cohesion Policy, which has the ultimate goal of promoting Territorial Cohesion in the EU territory.

As expected, this policy has been fundamental to foster economic competitiveness, social cohesion, and environmental sustainability. But at the same time, it has also been central in modifying processes of territorial governance by, for instance, laying the foundations to promoting multi-level governance systems. Furthermore, this Policy has had tremendous impacts in territorial articulation related components, as for instance in improving the degree of regional connectivity in several EU Member-States (see Medeiros, 2013).

## **2. Shedding light on the notion of territorial cohesion.**

During the last decade, the European Week of the Regions (Open Days), has attracted a wide number of researchers to participate in academic workshops and debates, where the discussion of the notion of Territorial Cohesion has been central. Nevertheless, and despite the challenges on reaching a common consensus on its meaning, no concrete definition of Territorial Cohesion has been advanced, so far, to the EU institutions. And probably never will, as far as we see it.

In the midst of these academic debates, several ESPON studies embarked on a quest to identify the main dimensions and components of the Territorial Cohesion notion. Some directly, like the one which proposed a Territorial Impact Assessment (TIA) tool named TEQUILA (ESPON 3.2 (2006), and other two recent ones: INTERCO (2011), and

KITKASP (2012), as well as other indirectly, by suggesting alternative TIA methodologies (ESPON EATIA, 2012; ESPON ARTS, 2012).

In sum, the TEQUILA TIA model identified three main dimensions of Territorial Cohesion: territorial efficiency, territorial quality, and territorial identity, which included several components mostly related with the economic, society, and environmental dimensions of territorial analysis (Figure 1). On the other hand, the INTERCO ESPON Report advanced six main analytic dimensions of the Territorial Cohesion Concept, base in six main Territorial objectives (Figure 2), which separate a clear territorial articulation related goal: promote an integrated polycentric territorial development.

On a different perspective, we suggest that the concept of Territorial Cohesion should be based on four main analytic dimensions and respective components (Figure 3) and that it should be defined 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 (see Medeiros, 2016).

### **3. Measuring territorial cohesion:**

Understandably, the measuring of the Territorial Cohesion trends in a given territory need to take into account the changes in several indicators associated with some components of those four main analytic dimensions of the concept of Territorial Cohesion. One way of achieving this goal is by creating four aggregated indexes (socioeconomic, environmental sustainability, morphologic polycentricity, and territorial governance/cooperation), with the methodology used by the United Nations (UN, 2013), to build the widely known Human Development Index, for two periods of time.

In the end, the Territorial Cohesion Index, for each period of time, will be a result of the arithmetic average of all those four indexes, and the final Territorial Cohesion Index, is a result of the subtraction of the index value of the most recent period of time Territorial Cohesion index (ex: 2010), with the index value of the oldest period of time Territorial Cohesion Index (ex: 1990).

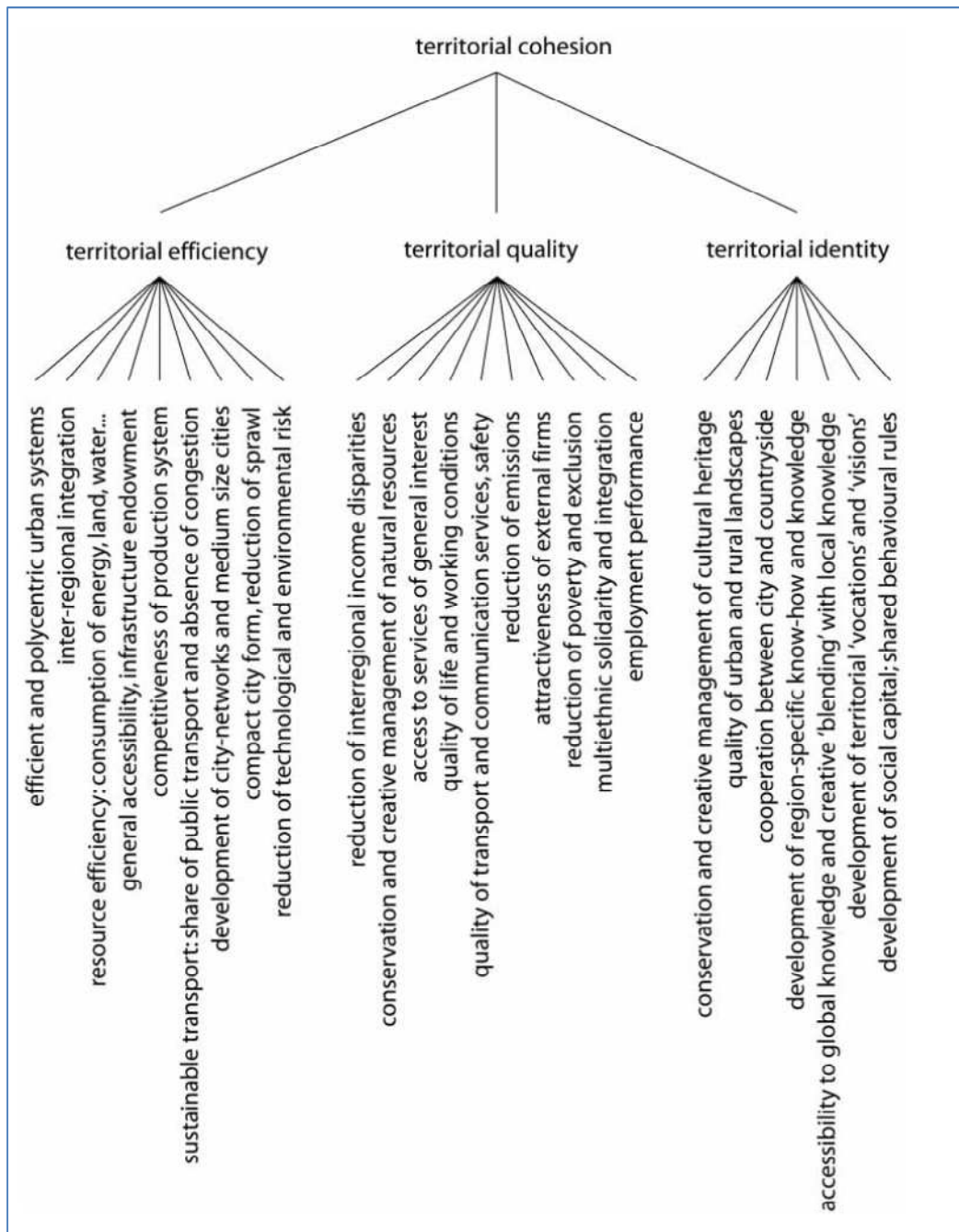


Figure 1 - The TEQUILA dimensions and components of Territorial Cohesion: source Abrahams, 2016.

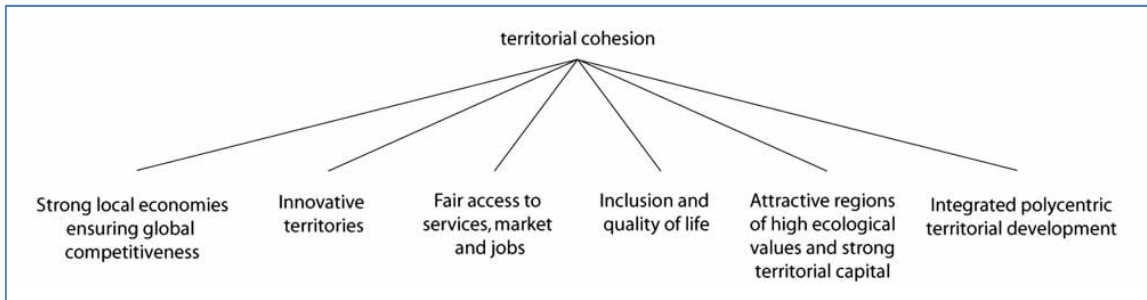


Figure 2 - The INTERCO dimensions and components of Territorial Cohesion: source Abrahams, 2016.

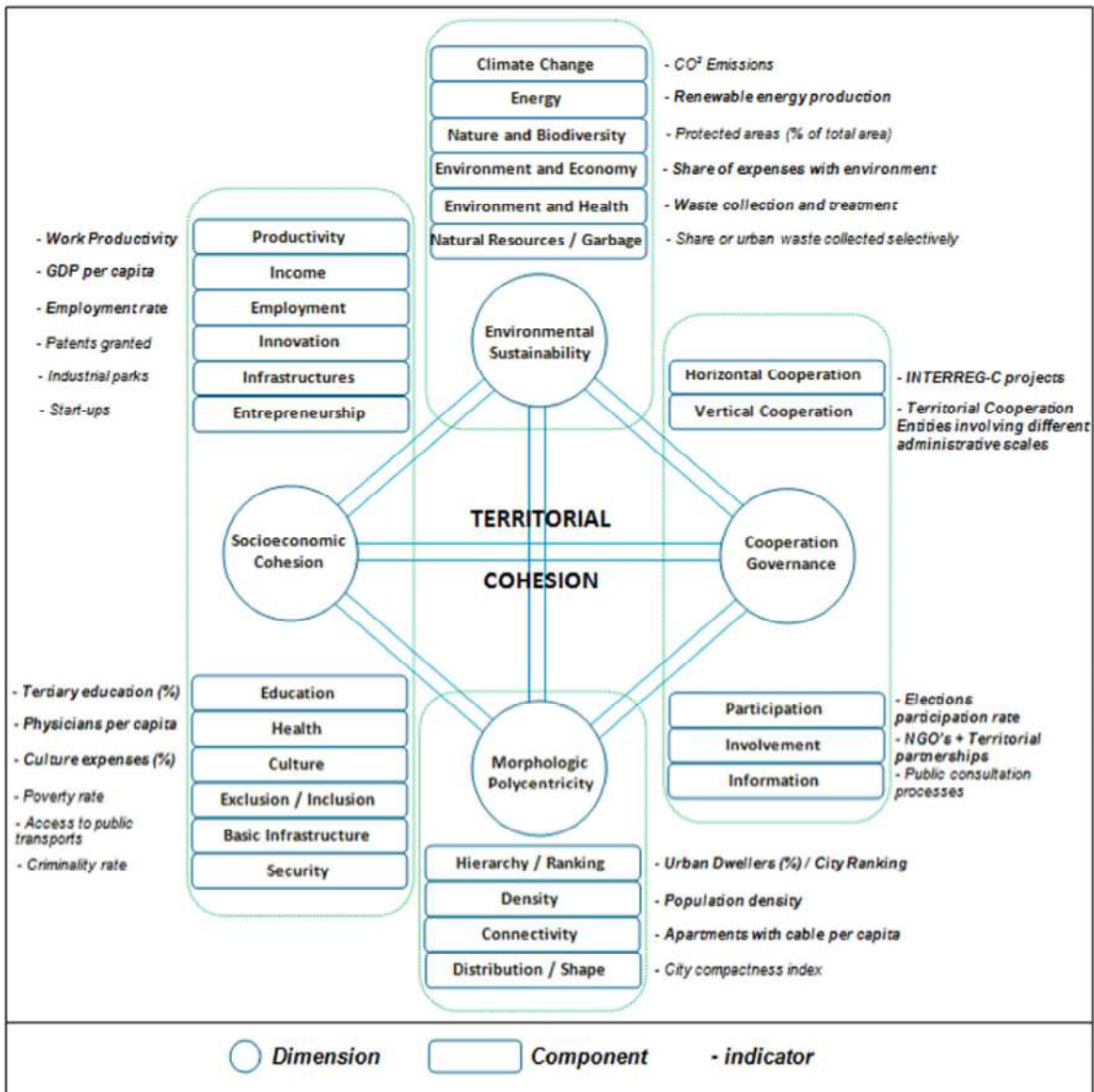


Figure 3 - The analytic model of the Territorial Cohesion. Source: Medeiros, 2016

As one would expect, the proposed methodology can be used at several territorial scales of analysis (from European to local). In this article we present two examples. The first, portrays the case of the Territorial Cohesion trends in the Portuguese NUTS 3, during two decades: 1990 to 2010. Based on presented results (Figure 4), it is possible to detect more positive results in the south part of the Continent and the Azores Islands, in contrast with the north part of the country.

In a different scale of analysis (Iberian Peninsula NUTS 2), the Portuguese regions were, by far, the one with lower territorial Cohesion indexes, in contrast with some north-eastern Spanish NUTS 2, (La Rioja and Navarra) (Figure 5). Indeed, from these results it is possible to conclude that, during the last couple of decades, the Iberian Peninsula is not following a path of Territorial Cohesion, rather, it is following a path of Territorial Exclusion.



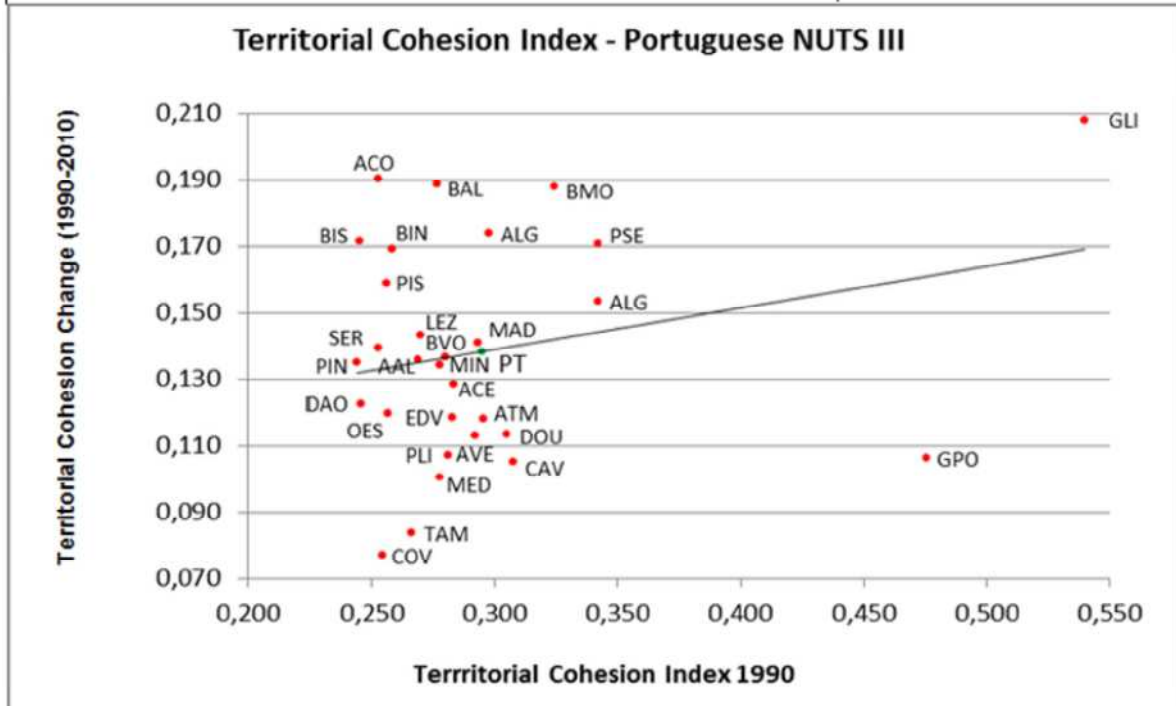
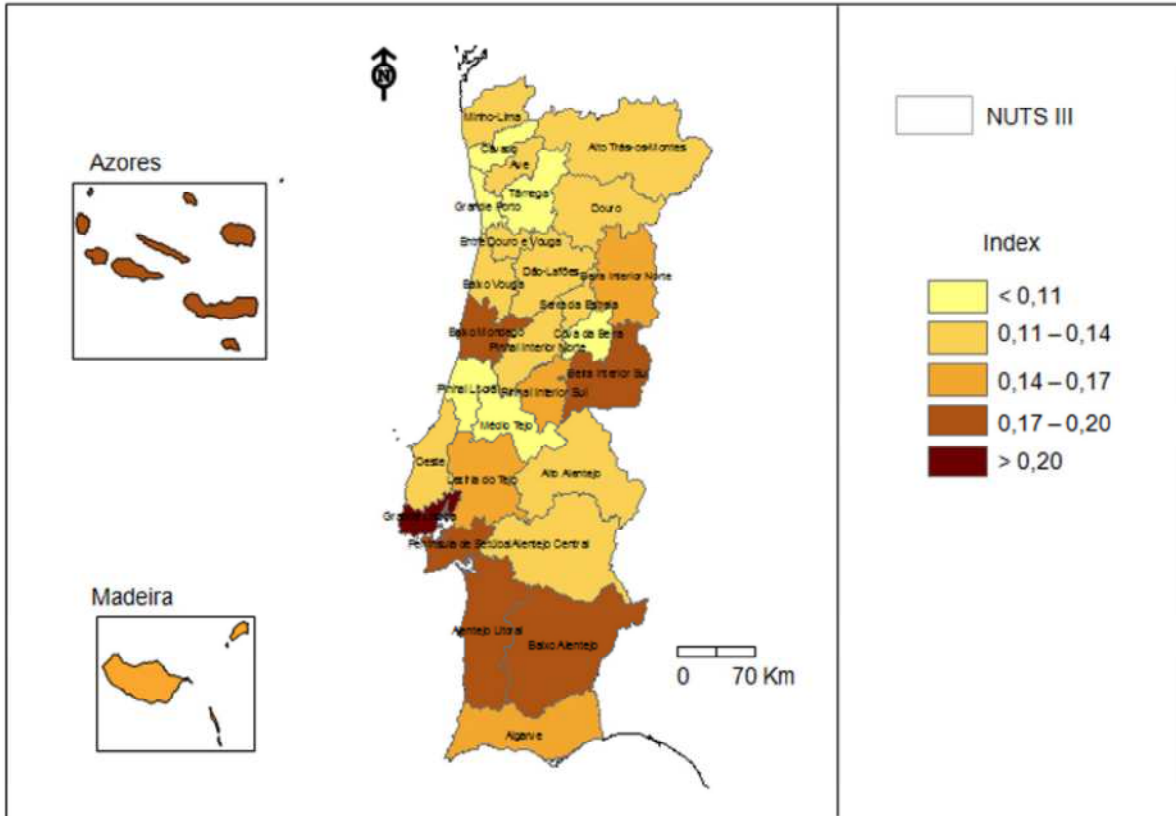


Figure 4 - Territorial Cohesion Index evolution in Portugal - NUTS III (1990-2010).  
Source: Medeiros, 2016

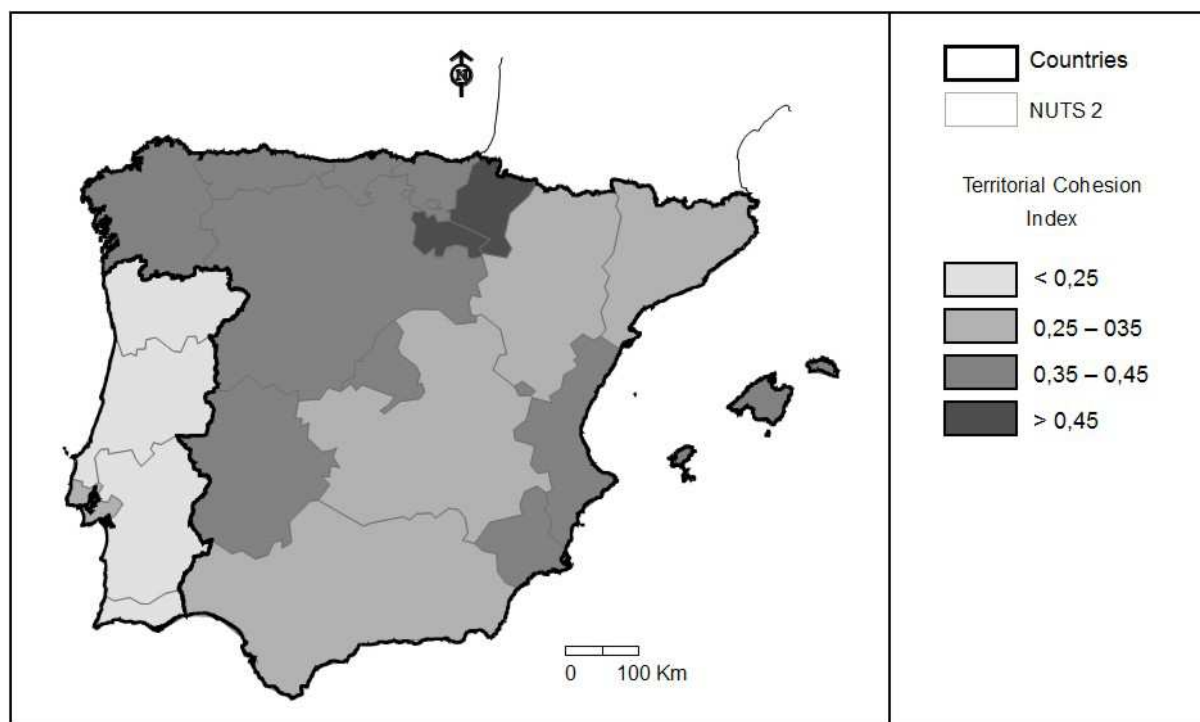


Figure 5 - Territorial Cohesion Index evolution in Iberian Peninsula - NUTS II (1990-2010). Source: Author own elaboration

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