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MACRO-REGIONS AND MICRO-REGIONAL INEQUALITIES:
THE EUROPEAN UNION AND THE COHESION FUNDS

Authors:

A Lidia Hernández López
Rosario Ramos Ramos
Sergio Ramos Ramos

The authors

Lidia Hernández López

Facultad de Ciencias Económicas y Empresariales, Universidad de Las Palmas de Gran Canaria – Campus de Tafira, 35014 – Las Palmas de Gran Canaria (SPAIN). E-mail: lhernandez@dede.ulpgc.es

Rosario Ramos Ramos

Sergio Ramos Ramos

Introduction

The grouping of countries into a bloc, macro-regions, is a frequently used strategy for countries to increase their political power and enhance the competitive position of their organizations in the context of globalization (Breslin, Higgot and Rosamond, 2002). The formation of macro-regions is not a new phenomenon. The *Deutsche Zollverein* established the economic basis for the unification of Germany; the *Customs Union of Moldavia-Wallachia* led to the creation of Romania; and the *Swiss Confederation* achieved the economic and political unification of the Swiss Cantons. Since the Second World War there has been a progressive growth in macro-region initiatives. A trend that intensified in the 1990's and has continued into the 21st century, these initiatives are called the *New Regionalism*. There are currently more than 200 preferential trade agreements in force and almost all World Trade Organization (WTO) members are party to a macro-regional agreement (World Bank, 2005).

In the *New Regionalism*, macro-regions also include the processes that evolve outside formal agreements (Winters, 1999; Yamawaki, 2001; Prins, 2001; Söderbaum, 2003). The formation of macro-regions can occur between states that seek to reduce their trade barriers "[...] independently of whether those countries are adjacent to or even close to one another" (Winters, 1999: 8) creating relations "[...] not only between countries, but also between non-state actors, particularly between private companies" (Söderbaum, 2003:1). Unlike the high degree of institutionalization in the European bloc, regionalization between China, Japan, Taiwan, and South Korea has developed around informal market dynamics (Xinning, 2001; Murshed, 2001).

A key issue in the building of a macro-region is its ability to deal with inequalities that occur between the participant territories in the bloc. The formation of a macro-region can create disparities between the member countries and between the regions within these countries. Successful regionalization requires the integration, of business and non-business organizations and the least economically developed territories, with the dynamics of the regionalization process. This integration is important for the macro-regional project as it endows it with the political and economic legitimacy that allows it to work effectively and achieve further integration. Thus, macro-regionalism necessitates micro-regional strategies that deal with the integration-induced disparities that occur in the formation of a macro-region.

The presented article looks at macro-regions and the inequalities between its micro-regions. It focuses on the specific dynamics generated in the formation of a macro-region, the inequalities induced by the integration process of a macro-region and the effectiveness of the EU cohesion funds in micro-regional growth. In the European Union (EU), there are territories that have an insufficient capacity for innovation and that have difficulties in maintaining economic growth despite having adequate infrastructures and human capital (European Commission, 2004). This is important for a macro-region that seeks "[t]o become the most competitive and dynamic knowledge-based economy with sustainable economic growth and greater social cohesion and to make a success of the pending enlargement by rapidly raising living standards in the new Member States" (Sapir *et al.*, 2004:i) and to continue to take in new members while maintaining the momentum of integration (European Commission, 2006).

The paper is organized as follows. Section 1 addresses the dynamics that generates a regionalization process generates in the *New Regionalism* and Section 2 highlights the inherent effect of macro-regionalism on the creation of inequalities between the participant territories in the bloc. Based upon the inequalities in the EU bloc, Section 3 describes the methodology of a study that aims to determine the effectiveness of EU cohesion funds on micro-regional growth, and whose results are presented and discussed in Section 4.

1.   A Macro-region Specific Dynamics

When two or more countries eliminate their trade barriers, trade flow is liberalized and market size and competitiveness increase across these countries. Macro-regions are distinctive in that these three elements evolve in the framework of an institutional structure shared by the participant countries. The joint action of the three elements place the effects traditionally associated with trade liberalization in a completely different setting. In this way, the formation of a macro-region generates a specific dynamics; namely, a territory in which the following effects occur simultaneously: the creation of trade with reduced costs, a decrease in internal efficiency, and the development of organizational collaborations (Figure 1).

Figure 1   The dynamics of a macro-region
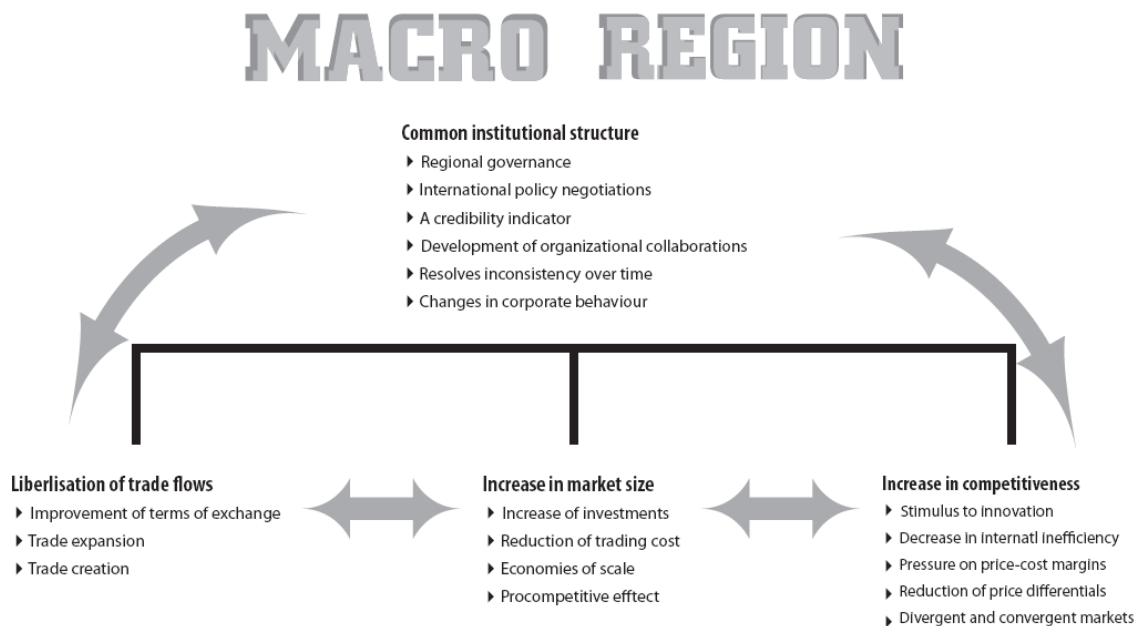
Trade liberalization within a macro-region allows for the creation and expansion of trade and improves the terms of exchange of the participant countries. With respect to the EU bloc, it has been widely demonstrated that trade is created as a result of substituting cheaper imports from another member state for the more costly domestic production of a product (Truman, 1975; Jacquemin and Sapir, 1991; Martin, 1992; Sapir, 1996, Gandoy Juste and Díaz Mora, 2000). Trade liberalization not only results in an increase of trade among the member states, but also between them and the rest of the world. In the EU, between 1980 and 1991, while the proportion of consumption of industrial goods met by domestic production fell from 67% to 56%, the proportion met by imports from other member states increased from 19% to 25% and by imports from outside the EU from 14% to 19% (Tugores, 2006).

The member states' terms of exchange improve as the prices of imports from the rest of the world are reduced. That price reduction occurs because the larger new market of the macro-region influences the prices of non-member exporting states. Chang and Winters (1999) show that Brazil's participation in the Southern Common Market (MERCOSUR) has led to a significant fall in the prices of imports from non-

member states. The increased competition in MERCOSUR's market has induced non-member exporters to reduce prices, thus improving the MERCOSUR members' terms of exchange.

Enlarging markets of imperfect competition creates a more competitive environment in which the adoption of a takeover and merger strategy can be more effective (Jaramillo, 2002). A macro-region gives companies the opportunity to increase their production activities, with a consequent reduction of unit production costs. It allows strong rivalry in the market, generated by competition from foreign firms that operate in the domestic market, which makes oligopolistic behaviour difficult (Muñoz de Bustillo and Bonete, 2002). Furthermore, the potential demand can increase continuously as the participant countries remove tariff and non-tariff barriers among themselves. On the one hand, this ongoing elimination of intra-regional barriers reduces access costs to the member states' markets, which results in lower prices, higher profits, and increased market shares. Mentzoni (2003) shows that, since the end of the 1980s, EU companies have reduced their expenditure on logistics from 14.3% to 6.8%. On the other hand, this generates a heterogeneous context that can act as a source of competitive advantage for companies, as it allows the combination of operational efficacy and strategic positioning (Ketels, 2003). Operational efficacy is directly related to costs and is more difficult to achieve in small markets where technology is a key factor. Strategic positioning measures the benefits that companies receive by occupying a distinctive market position that is more likely to be reached in heterogeneous markets with different demands and where location is a key factor. The combination of operational efficacy and strategic positioning may result in improved company performance.

For Holmes and Smith (1998), the reduction of the risk premium on investments is one of the greatest potential effects of macro-regions. If companies are persuaded that others may enter if they delay investment, a firm that undertakes to open markets to them could induce additional investment and growth, even in the absence of higher profits. Moreover, increased market size and greater competitive pressure in the integrated market boosts investment aimed at increasing business efficiency and competitiveness. The exploitation of economies of scale requires investments to rationalise the production process and optimise factory size.

The formation of a macro-region creates greater competitive pressure that stimulates product diversity, technical progress, and the spread of innovation. As participant countries eliminate intra-regional barriers, price differences tend to result from additional factors that justify the continuance of differentials, i.e. transport costs and taxes. That opening up trade reduces price-cost margins has been corroborated by several authors (Levinsohn, 1993; Harrison, 1994; Roberts and Tybout, 1996; Krishna and Mitra, 1997), as has the relationship between the opening up of economies and greater internal efficiency in companies (Nishimuzi and Page, 1982; Tybout *et al.*, 1991; Haddad, 1993; Haddad and Harrison, 1993; Tybout and Westbrook, 1995; Harrison, 1996). Directive 1999/5 on radio equipment and telecommunications terminals and mutual recognition of their conformity replaces various European directives and some 1,500 national technical regulations (European Commission, 2002). The harmonisation of legislation and the liberalization of the telecommunications sector have contributed significantly to the competitive position of European industry in the world market.

In a macro-region, the liberalization of trade flows, increase in market size, and greater competitive pressure are sustained on a common institutional structure. Companies in the EU can be sure that, if a member state hinders transactions, they will face legal action. Macro-regions provide cooperative structures that are based on openness and mutual interference, which are necessary for (i) developing mutual trust between actors and a congenial climate for negotiation, and (ii) guaranteeing the implementation of jointly adopted decisions. Hence, membership of a macro-region can force a member country to adopt optimum policies that, without such an agreement, would be inconsistent over time (Kydland and Prescott, 1977). For Albania and Bosnia and Herzegovina, their future membership of the EU has served as an indicator of their credibility in guaranteeing political, judicial, and economic reforms (European Commission, 2006).

Having an institutional structure in a macro-region opens "a process and a state whereby public and private actors engage in the intentional regulation of societal relationships and conflicts" (Kohler-Koch and Rittberger, 2006:28). A political system emerges that is characterised by (i) competition between various levels of government tiers for functions and resources, and (ii) new modes of governance, such as multi-level governance, network governance, and open methods of co-ordination. This political system offers participant countries better bargaining power in international negotiations, subject to their

perception of whether "to pursue their external interests either unilaterally or in cooperation" (Allen and Smith, 2007:165).

2.   Macro-Regionalism and Inequalities

One of the most important aspects of a macro-regional project is its ability to deal with inequalities that occur between the participant territories in the bloc. Note that the importance of this ability does not derive from the fact that inequalities across a macro-region may inhibit its ability to compete as an economic actor. After all, it is quite possible that only a few productive regions or member countries within a macro-region would allow the aggregate unit as a whole to compete. In other words, a balanced territorial development across a macro-region does not seem to be a necessary aspect in terms of aggregate competitiveness.

Rather, its importance lies in the fact that it endows the macro-region with the political and economic legitimacy that allows it to work effectively and achieve further integration. In a macro-region, further integration is essential because (i) "while integration can create regional disparities, further integration will reduce [them]" (Venables, 2005: 15), and (ii) if participant territories perceive that the distribution of gains is uneven, development will be constrained (Venables, 2005:2).

Intra-regional inequalities are inherent to macro-regionalism. The formation of a macro-region can create disparities between the participant countries and between the regions within these countries. Venables (2002:1) points to various regional projects where an uneven distribution of gains has constrained further macro-regional development amongst the participant countries. The failure of the East African Common Market in 1977 was partly due to the internal tensions caused by the increasing concentration of manufacturing in Kenya. In the Economic Community of West Africa, the combined share of Cote d'Ivoire and Senegal in manufacturing value added rose from 55% in 1972 to 71% in 1997.

Venables (2005) notes four main forces that explain how macro-regionalism creates disparities between the participant territories of a macro-regional bloc[1]. The first is trade liberalization, which can bring about changes in factor prices. Trade liberalization can disequalize factor prices in macro-regional blocs that do not meet the conditions under which factor price equalisation occurs[2]. This can encourage factor mobility, with the negative consequence that a territory in the bloc may experience factor outflow and a decline in its per capita income.

The second force is the preferential reduction of tariffs between a group of countries which may carry with it the costs of trade diversion (see Viner, 1950) for an explication of the concept of trade diversion). If these costs are distributed unevenly between the participant territories, inequalities between them can increase, and some territories may experience a real decline in income.

The third force arises from the location of firms in imperfectly competitive industries. Venables (2005) points out that, in the presence of intermediate levels of transport costs, the liberalization of trade may encourage the relocation of some sectors because locations that have good market access will attract firms. This creates disparities in wages between the participant territories of the bloc.

The fourth force refers to the cumulative causation mechanisms which point out that regional integration might lead to concentration of economic activity in the bloc, due to factors such as the efficiency

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[1] For a detailed explanation of how these four mechanisms present in a macro-region can create disparities between the participant territories of a bloc, see Venables (2005).

[2] Identical technologies, and at least as many traded activities as immobile factors.

advantages of thick labour markets, the linkages between firms, and the provision of business infrastructure. Such concentration will favour established centres at the expense of the periphery, thus creating disparities and the development of cities or city-regions with a core-periphery development pattern.

3. Methodology

The research reported herein studied the cohesion funds granted by the EU to its micro-regions during the years 1994-2000. These are the years in which EU expenditure on its cohesion policy has been the highest since 1958. The aim of this study was to determine the effectiveness of EU cohesion funds in dealing with the intra-regional inequalities in the EU dynamics.

The European regions

The Nomenclature of Territorial Units for Statistics (NUTS) is a system that divides the EU territory into five administrative levels: three regional (NUTS-1, NUTS-2, NUTS-3) and two local (NUTS-4, NUTS-5). The study was based on the region of NUTS-2. It is an administrative level included in the political-territorial organization of all EU15 countries, and the most used level in the management of EU cohesion funds. The analysis discarded the regions of the 2004 and 2007 enlargements and the European regions that are not part of the Union territory.

Objectives

Objective 1: To identify the relationship between EU cohesion funds, and the levels of per capita income in the NUTS-2 regions during 1994-2000.

Objective 2: To analyse the effect of EU cohesion funds on the economic growth of NUTS-2 regions during 1994-2000.

Data gathering techniques

The study aimed to identify the relationships between the variables *EU cohesion funds, per capita GDP,* and *growth;* hence, secondary statistical data were used. A longitudinal analysis was conducted for the years 1994-2000 in order to compare the European regions of the EU15 countries. The variable *EU cohesion funds* was prepared from data provided by various EU bodies. The indicator *per capita GDP* was provided by Eurostat. The variable *growth* was calculated from the regional values of per capita GDP for the years 1994-2000.

Treatment of data

Variables of analysis. The variable *EU cohesion funds* represents the sum of all payments made directly by the European Commission from the four financial instruments for cohesion (ERDF, ESF, EAGGF-G and FIFG[1]) and from the POSEI programmes[2] in the years 1994-2000 to the level of NUTS-2. All payments identifiable at the level of NUTS-2 were included, whether or not they corresponded to the programme period that included the year in question. The variable *per capita GDP* was used at a NUTS-2 regional level and expressed in terms of purchasing power per inhabitant. In some cases, the values of this variable were not available for certain regions. Those regions were omitted from the analysis. The variable *growth* refers to the increase in the value of per capita GDP for each region from one year to the next. This variable was important in the analysis, because one aim of the study was to identify the effect of the variable *EU cohesion funds* on the economic growth of the regions.

Techniques of data analysis. The techniques used to treat the data were as follows. 1) Cluster analysis, to group the European regions according to their level of wealth and power, as well as to simplify the analysis, due to the high number of regions (n=211). 2) Analysis of relationships between variables, to identify the relationships between the variable *EU cohesion funds, per capita GDP* and *growth,* and the degree of association between them. We used Pearson's correlation or Pearson's r coefficient, which measures the degree of association in a group of variables. 3) One-way variance analysis (ANOVA), to compare statistically the variance between the groups defined by the categories of the dependent variable; 4) Regression analysis, to predict the behaviour of a dependent variable. The result of this analysis establishes values for the ß coefficients of the independent variables, which indicate the variables' influence or contributions to the model.

## 5.   Results

The EU regional context: cluster analysis

The cluster analysis technique was used to form groups of homogeneous regions, according to their levels of per capita income. To identify the least economically developed regions, the study adopted the criterion of the European Community, i.e. a per capita GDP below 75% of the EU average. The per capita income is expressed in percentages of the EU average. In forming the groups, the study used the values of per capita GDP for the year 1993; one year before the beginning of the period under study (1994-2000). This was done in order to take into account the economic situation prior to the study period.

The results of the cluster analysis revealed the existence of eight groups. Figure 2 shows the number of regions in each group and the average per capita GDP for each group expressed as percentages of the EU15 average. In 1993, most of the regions fell into Groups 1, 2 and 5. They are all regions with per capita GDP below the EU15 average. Thirty-five of the 211 analysed regions (Group 1) were well below the threshold of 75% of the EU15 average. This group comprises regions that, in EU terms, are

considered to be *the least developed regions* (previously known as Objective 1 and, from 2007, as Convergence Objective) where the European cohesion funds are, for the most part, concentrated.

A substantial number of regions (Group 6) were significantly above the EU15 average, followed by 12% whose per capita GDPs, at 137% (Group 7) and 164% (Group 3), are notably above the EU15 average. Finally, Groups 4 and 8 contain three regions whose per capita GDPs are extraordinarily higher than the Union average and whose per capita incomes are too distant from one another to form one single group. Those regions are Hamburg with a value of 193% (Group 4), and Brussels and London with 247% (Group 8).

Figure 2   Per capita GDP of NUTS-2 regions
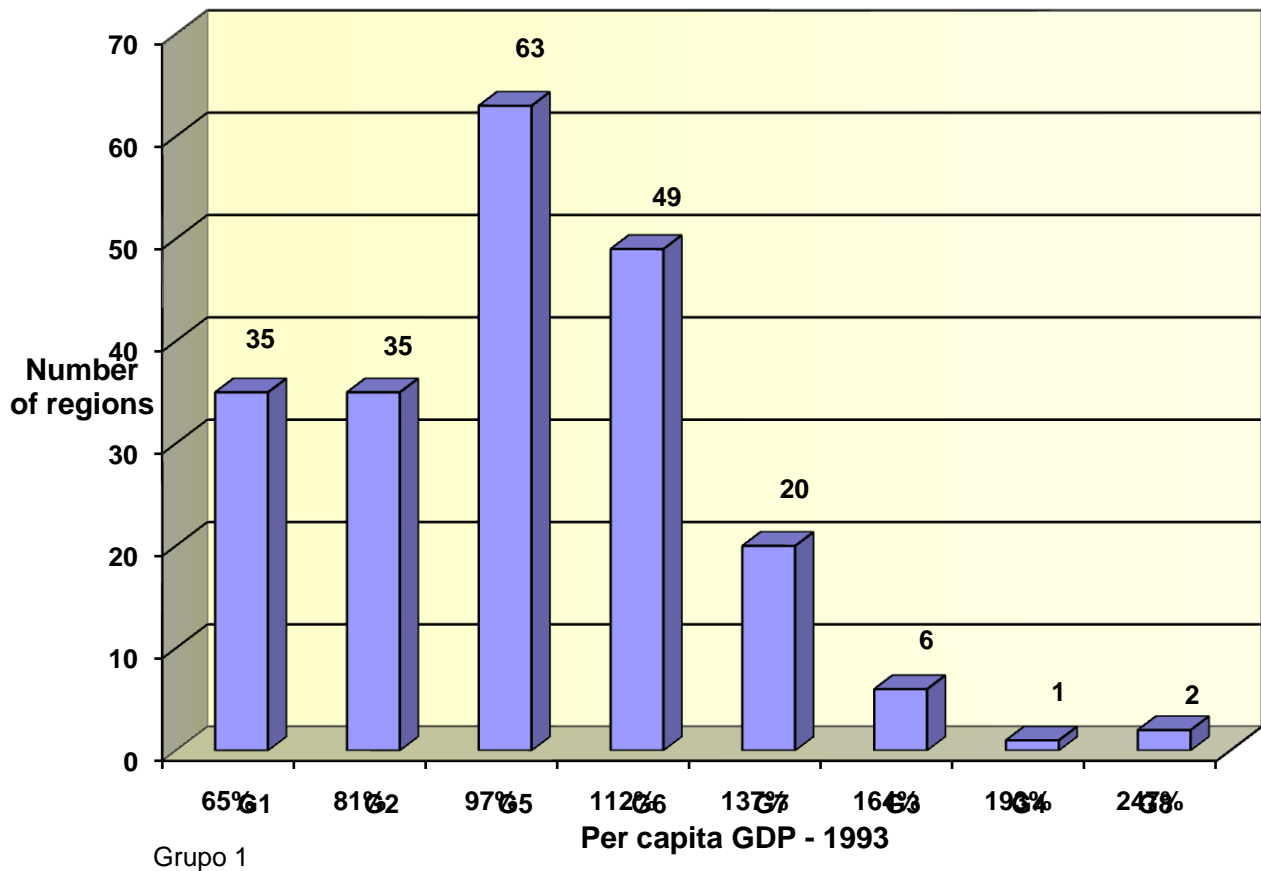
Group 1 comprises Greek, Portuguese and Spanish regions, French ultraperipheral regions, the regions of East Germany, the Italian regions of Puglia and Campagna, and the UK regions of Cornwall and the Isles of Scilly. In terms of nationality, Group 2 is similar but with a higher presence of regions from the United

Kingdom, France and Italy. Group 5, with a per capita GDP close to the EU15 average, consists of regions from the UK, France and Germany, followed by regions from the Netherlands, Belgium, Spain, and Italy. Group 6 has regions from all the countries but is dominated by regions from Germany, followed by regions from the UK and Italy. The remaining groups, with values well above the EU average, are formed by regions from all 15 member states except Spain, Portugal, Greece, and Ireland.

Regional distribution of EU cohesion policy

We used the levels of per capita income for 1993 as the basis to identify the relationship between *EU cohesion funds* and the levels of per capita income in NUTS-2 regions during the period 1994-2000. The year 1993 was used in order to avoid possible changes in the values of per capita GDP in the analysed years due to the transfer of funds, which may have distorted the results.

The Pearson's r coefficient value of -0.7, which explains 52% of variance (r2= 0.52), with an alpha risk of 5%, indicates a strong negative relationship between the variables *EU cohesion funds* and *per capita GDP* (Table 1). The regions with lower per capita GDP receive higher levels of EU cohesion funds and, the higher the per capita GDP, the lower the amount of EU cohesion funds received. EU cohesion funds are distributed inversely to the per capita GDP.

Table 1 Results for relationship between EU cohesion funds and per capita GDP

F (p)	7.3 (0.035)
Pearson's r	-0.7
r^2	0.52
T (p)	-2.7 (0.035)

The exception is the relationship for Group 6, with a per capita GDP of 112%. This group received an amount of EU cohesion funds similar to that received by regions whose average per capita GDP is 97%. This exception is explained by EU cohesion funds being transferred to NUTS-2 regions, and also to the lower NUTS-3, 4, and 5, although the NUTS-2 region per capita GDP may be above the Union average. For NUTS-3, 4, and 5 regions, other criteria of eligibility are applied, such as the long-term industrial unemployment rate and population density. These criteria for the transfer of EU cohesion funds assume an important role, because of the growing intra-regional inequalities occurring in the EU territory (Dunford, 2002; European Parliament, 2007) and also because it allows rich member states to recoup some of the money that they contributed to the EU budget (Molle, 2006).

The results of the one-way ANOVA reveal an association, with a significance of 0.035, between the groups' receipts of EU cohesion funds and per capita GDP. Finally, the results of the statistic *t* are below 0.05, which permits the influence of the variable *per capita GDP* on the behaviour of variable *EU cohesion funds* to be determined.

The results of the analyses point to a linear relationship, albeit not perfect, between per capita GDP and EU cohesion funds. A large part of European cohesion funds are allocated according to the indicator *per capita GDP*, which results in most of the funds being concentrated in the *least developed regions*. Notwithstanding, an important part of EU cohesion funds are allocated according to other socioeconomic criteria.

The growth of the regions in the period of 1994-2000

To attain the second objective of the study, we first identified the European regions that experienced a higher growth rate in the period under study. Then we determined the relationship between growth and the receipt of EU cohesion funds. From Table 2, we see that the regions that experienced greater growth in the years 1994-2000 were those that received the most financial resources from the EU cohesion policy, i.e. the regions with lower per capita GDP. Likewise, between 1988 and 1999, the major financial recipients of the EU cohesion policy (the regions with lower per capita GDP) were the regions that most converged toward the EU mean in terms of per capita GDP (Leonardi, 2005). In the period 2000-2006, these regions continued to exhibit impressive growth rates (European Commission, 2007).

Table 2 Results for relationship between EU cohesion funds and regional growth

F (p)	3.95 (0.048)
Pearson's r	0.136
r^2	0.019
Y (p)	1.99 (0.048)
β (coefficient of model)	0.136

Pearson's r coefficient shows an apparently low value (r=0.136 and r^2=0.019). Given the high number of cases (211 regions), we could consider the value as significative of the relationship between the variables *EU cohesion funds* and *growth* during 1994-2000. The *F* statistic obtained from the *one-way* ANOVA,

with a level of significance of 0.048, confirms that relationship. The value of the *t* statistic, with a significance of 0.048, also indicates the influence of *EU cohesion funds* on *growth.* Lastly, the value of coefficient β (0.136) obtained from the regression model indicates that the influence of *EU cohesion funds* on the behaviour of *growth* is significant.

The effectiveness of the EU cohesion policy on regional growth

Accordingly, the regions that experienced the highest growth between 1994 and 2000 are those in which European cohesion funds have mostly been concentrated, i.e. the regions with lower per capita GDP. This trend is also observed from 1988 to 2006. However, to identify the EU cohesion policy as a force that leads to interregional economic convergence in Europe (Sala-i-Martin, 1996), the link between the EU cohesion policy and regional growth needs to be further examined: What role do EU cohesion funds play in the economic growth of a region regarding its level of wealth? Regions have used EU cohesion funds to build strategic infrastructure, such as airports, technological parks, research centres, and to finance training programmes for human resources. However, there is a concern as to whether EU cohesion funds are really as effective for the growth of regions as the data seem to indicate. To address this issue, we constructed a model that explains how the variables *per capita GDP* and *EU cohesion funds* determine growth.

Table 3 Results for relationship between growth, EU cohesion funds, and per capita GDP

F (p)	16.45
	(0.00)
Pearson's r	var. GDP89
	-0.43
	var. LogTotCoFu
	0.015
Model r^2	R = 0.47
	$r^2 = 0.22$

T (p)	var. GDP89
	-5.73
	(0.00)
	var. LogTotCoFu
	-2.30
	(0.023)
β	var. PIB89
(coefficient of model)	-0.52
	var. LogTotCoFu
	-0.20

Where:

var. GDP89 = variable of per capita GDP (1989)

var. LogTotCoFu = variable logarithm of total EU cohesion funds

The regression models constructed so far have shown, on the one hand, the existence of a relationship between the variables *EU cohesion funds* and *per capita GDP* and, on the other hand, the existence of a relationship between the variables *EU cohesion funds* and *growth*. Therefore, a multiple regression model with the variables *growth*, *per capita GDP* and *EU cohesion funds* should show significative values. From the results (Table 3), a regression model was obtained that shows a relationship between the variables *growth* and *per capita GDP*. However, the model variance of the relationship between *growth* and *EU cohesion funds* is 22%, which is low. In other words, this regression model shows a strong relationship between *growth* and *per capita GDP* but a hardly significant relationship between *growth* and *EU cohesion funds*. This was due to the strong relationship between the variables *growth* and *per capita GDP*.

Therefore, in order to avoid the variable *EU cohesion funds* being disallowed in the regression model, because of the greater weight of the variable *per capita GDP,* we created a new variable to replace *EU*

cohesion funds. This new variable represents the interaction between EU cohesion funds received and the 1989 per capita GDP, so variable *interaction* = variable *logarithm of per capita GDP (1989) x logarithm of total cohesion funds.* Thus, we can have a multiple regression model able to show the existence of a relationship between the variables *per capita GDP*, *EU cohesion funds* and *growth*.

From the results of the analyses (Table 4) we may conclude that, although the regions that received most EU cohesion funds are those that experienced higher growth rates, the factor *EU cohesion funds* is not as effective when the region's level of wealth is included in the analysis. More specifically, there is a certain negative relationship between the variables *EU cohesion funds* and *growth* in the years 1994-2000. The statistical results indicate that EU cohesion funds hinder the regional growth rate.

Table 4 Results for relationship between growth, per capita GDP, and variable of interaction

F (p)	16.50 (0.00)
Pearson's r	var. GDP89 -0.43
	var. Interaction -0.15
Model r^2	R = 0.47
	r^2 = 0.22
T (p)	var. GDP89 -5.44 (0,00)
	var. Interaction -2.24 (0.02)

	var. GDP89
β	-0.45
(coefficient of model)	var. Interaction
	-0.18

Where:

var. GDP89 = variable of per capita GDP (1989)

var. Interaction = variable logarithm of per capita GDP (1989) x logarithm of total EU cohesion funds

These statistical results reveal that the negative relationship between the variables *growth* and *per capita GDP* was maintained during the period 1994-2000, with the variable *interaction* showing a certain negative influence of EU cohesion funds on regional growth. This *"perverse"* effect that EU cohesion funds appear to have on regional growth occurs in the years when the transfer of financial resources from the EU cohesion policy was much higher than in previous years.

Conclusions

This work aims to highlight the importance of the relationship between the dynamics of a macro-region and the inequalities between its micro-regions. There are various aspects involved in such a relationship, such as: the inhibiting effect that micro-regional inequalities within a macro-region can have on the positive effects of macro-regionalism; the perceptions of uneven distribution of gains between the participant territories and the regionalization process; and the integration capacity of the dynamics of a macro-region to integrate business and non-business organizations and the least economically developed territories with the dynamics of the bloc.

In the case of the EU bloc, data on the relationship between EU cohesion funds and growth show that the European regions that experienced greater growth in the years 1994-2000 were the least developed economically and the greatest beneficiaries of the EU cohesion policy. Such a trend was also observed

between 1988 and 2006. When using a model that included the variables *per capita GDP*, *EU cohesion funds*, and *growth* we found no evidence that the financial interventions of the EU cohesion policy are related directly and positively to growth. The findings presented here corroborate previous empirical investigations on the EU regional policy (Boldrin and Canova, 2001 and 2003; Ederveen *et al.*, 2002; Midelfart-Knarvik and Overman, 2002), which point to the inconclusive evidence regarding the effectiveness of the EU cohesion policy (Tarschys, 2003; Sapir *et al.*, 2004; OECD, 2004; Martin and Tyler, 2006) for reducing inequalities in EU integration.

These results suggest the need for knowledge of how the forces behind the EU dynamics, the operation of the market itself with the intensification of trade flows, the increase in investments, the elimination of intra-regional barriers, the access to previously closed markets, the establishment of institutional conditions for an efficient regional market, and an increased mobility (Allen, 2000; Tarschys, 2003; Crespo and Fontoura, 2007) can reduce or eliminate the territorial inequalities present in the EU bloc and the coordination of these forces with the EU cohesion policy.

Notes

1   European Regional Development Fund (ERDF), European Social Fund (ESF), European Agriculture Guidance and Guarantee Fund – Guidance Section (EAGGF-G), Financial Instrument for Fisheries Guidance (FIFG).
2   POSEI programmes are directed exclusively to the ultraperipheral regions (Reunion, Martinique, Guadeloupe, French Guiana, Azores, Madeira, and Canary Islands) and to the Greek peripheral islands.

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