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Regional business cycles and the emergence of sheltered economies in the southern periphery of Europe

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Abstract

Recent research has highlighted that in the last few years the evolution of regional disparities in many European states has become pro-cyclical. This represents a change with respect to the predominantly anti-cyclical pattern of the 1960s and 1970s. This paper addresses the question of whether and when this change has taken place in the southern periphery of Europe, before analyzing the factors that may have played a role in such a change. The analysis relies on a regional database that includes the evolution of the GDP per capita of NUTS II regions in five European countries (France, Greece, Italy, Portugal, and Spain) between 1980 and 2000. The results of the analysis support the hypothesis of a change towards a pro-cyclical evolution of regional disparities in the cases of Italy, Portugal, and Spain, but not in those of Greece and France. A relationship between these pro-cyclical patterns and the emergence of less dynamic sheltered economies is also detected in peripheral regions. This lack of dynamism is related to the fact that numerous peripheral areas in southern Europe have become increasingly dependent on factors such as transfers or public investment and employment, and therefore are less exposed to changes in market conditions.

Keywords: Peripheral regions, business cycles, sheltered economies, convergence, France, Greece, Italy, Portugal, Spain.

JEL codes: E32, R11.

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1. Introduction

After several decades of regional convergence (Barro and Sala-i-Martin, 1991; Tondl, 2001) the last two decades have been characterized by significant stability in the evolution of regional disparities across Europe (Magrini, 1999; Rodríguez-Pose, 1999; Puga 2002; Ezcurra et al, 2005a) or even club convergence (Quah, 1996; López-Bazo et al, 1999; Canova, 2004). Many explanations have been put forward in order to justify the decline in regional convergence trends. The centripetal effects of the economic integration process, which may be favoring the concentration of economic activity in the core of Europe to the detriment of the periphery (Brülhart and Torstensson, 1996; Midelfart-Knarvik et al., 2000), the increasing concentration of innovation (Audretsch and Feldman, 1996; Moreno, Paci and Usai, 2005), the deceleration and almost suppression of inter-European migration trends (Faini, 2003), or the coming to an end of the relative decline of agricultural employment in the periphery of Europe (Cuadrado-Roura, García-Greciano and Raymond, 1999) are among the most popular interpretations of the slowdown and reversal of regional convergence trends. Other analyses have looked at the impact of public policies on regional growth trajectories in the core and the periphery. Middlefart-Knarvik and Overman (2002) have highlighted the possible anti-cohesive effect of national public policies aimed at the protection of strategic firms or sectors, or of European Union (EU) policies, such as the Common Agricultural Policy, whose main beneficiaries have tended to be highly productive farmers in the core of Europe (De la Fuente and Doménech 2001; European Commission, 2001).

Finally, a rising number of voices are pointing to the ineffectiveness of the European cohesion effort (Boldrin and Canova, 2001; Puga 2002) or to the excessive emphasis on infrastructural and business support investment in peripheral regions (Rodríguez-Pose and Fratesi, 2004).

The impact of business cycles on convergence has, in contrast, attracted much less attention (some exceptions are Carlino and Sill, 2001; Barrios and de Lucio, 2003; Blackburn and Pelloni, 2004 and 2005; Carvalho and Harvey, 2005). Few studies have dealt with such a link, and their results are contentious. Some authors have found evidence that regional disparities tend to behave in a pro-cyclical pattern, that is, increasing in periods of economic expansion and decreasing in periods of slow growth. This pattern has been identified for short-term growth processes by Petrakos, Rodríguez-Pose, and Rovolis (2005) for the EU as a whole and by Ioannides and Petrakos (2000) and by Petrakos (2001) for Greece. Dewhurst (1998) also detected a pro-cyclical evolution of disparities in the UK for the period 1984-93, as did Cuadrado-Roura, Mancha Navarro and Garrido Yserte (1998) and Rodríguez-Pose (2000) between 1985 and 1999 for Spain. Quah (1996), by contrast, finds little or no evidence of a relationship between the business cycle and the evolution of disparities in the US. Finally, other scholars report an anti-cyclical relationship between regional disparities and regional growth, that is, disparities diminish in periods of high growth and increase in periods of low growth. This sort of pattern was pinpointed by Pekkala (2000) for Finland for the period 1988-95 and for Spain by Cuadrado-Roura, Mancha Navarro, and Garrido Yserte (1998) for the period between 1955 and 1985.

This mix of contrasting evidences implies that the association between business cycles and the evolution of regional disparities is far from clear-cut and that it is affected by the factors that shape growth in any given territory and in any given period (Pekkala, 2000).

The aim of this paper is to demonstrate that business cycles matter for regional convergence in the southern periphery of Europe. We argue that the relationship between regional disparities and business cycles in the four countries of the EU (Greece, Italy, Portugal, and Spain) that, together with Ireland, have been the greatest recipients of the EU cohesion effort, is increasingly becoming pro-cyclical. As a consequence,

‘sheltered economies’ (Trigilia, 1992; Padoa-Schioppa 1993) are emerging in the periphery of these countries leaving many of their poorest regions progressively detached from the market and more dependent on factors such as public employment and state transfers and assistance than on viable entrepreneurial initiatives. Peripheral regions in these countries are thus increasingly ill-prepared to compete in a more integrated market and less capable of maximizing their ‘potential for convergence’, which generally becomes available in periods of economic boom (Pekkala, 2000). We use France, a country at the core of Europe, characterized by the absence – with the exception of the Départements and Territoires d’Outre-Mer, excluded from the analysis, and Corsica and parts of Nord-Pas de Calais – of strongly assisted regions in the European context and by the relative small dimension of its internal disparities, as a benchmark.

The paper is divided into four further sections. Section two deals with the definition of sheltered economies. Section three studies whether sheltered economies are appearing in the southern periphery of Europe, before analyzing the link between growth trends and the evolution of regional disparities in our five case countries between 1980 and 2000 and its consequences on long-term economic growth in section four. Section five presents the main conclusions.

2. Definition of a sheltered economy

The economic performance of nations and regions is affected by long and short business cycles. Yet not all nations and regions are equally exposed to the shifts in the cycle. Open economies tend, as a general rule, to be more affected by the economic ups and downs, growing faster in the periods of boom and experiencing lower growth during the troughs of the cycle. Less open economies are likely to be less influenced by changes in the cycle, either as a consequence of their relative isolation or of the predominance of sectors less exposed to the market.

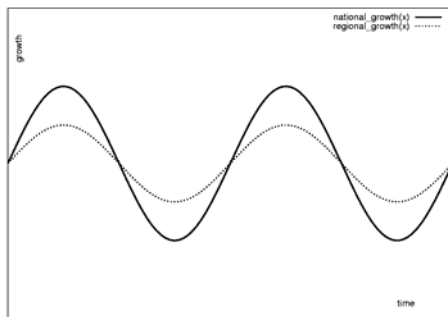
The degree of exposure of an economy to business cycles greatly depends on the level of interaction between that economy and the rest of the world, generally measured by the level of trade, a factor which is, in turn, influenced by the sectoral mix within the

economy. Economies largely reliant on manufacturing and business-oriented services, which are heavily exposed to competition, are generally more open than economies with large agricultural and non-market oriented sectors, that are by definition less affected by changes in the overall economic conditions in the case of the latter, or whose markets have become greatly protected and regulated in the case of the former (Kangasharju and Pekkala, 2004). Factors other than pure market forces also play a part in the level of exposure of an economy to business cycles. The presence of large and comprehensive welfare systems or of systems of direct or indirect income support, the prevalence of rigid labor market legislation, and/or of structures of political and social patronage and clientelism are also indicators of how an economy will react to changes in market conditions.

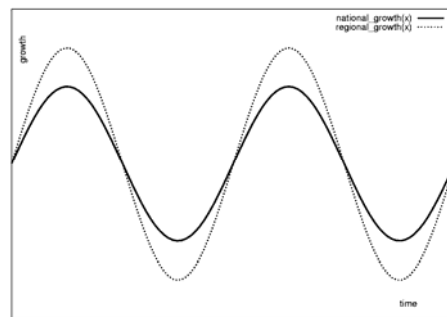
Sheltered economies can be defined as those economies that are more impervious to changes in the business cycle. These economies are more protected from the risk of downturn in the cycle, but, as no gain is costless in economics, the structure of a sheltered economy will in general also be less capable of taking advantage of high growth periods. Sheltered regions become thus less responsive than the average of the country where they are located to variations in the business cycle. As economic mobility patterns are highly dependent on the relative importance of specific sectors (Ezcurra, Pascual and Rapún, 2006: 220), the factors that determine this low level of responsiveness are normally related to the greater reliance of these regions relative to their country on sectors less exposed to market changes and on transfers. Sheltered regions are also generally featured by a lower use of their internal resources, reflected in lower overall levels of employment, which affect especially women and the young and higher unemployment levels, often combining higher long-term and youth unemployment. Another characteristic of sheltered regions is their reliance on non-market oriented sectors, and especially on the public sector, for the genesis of employment. In contrast to employment in manufacturing or in business-oriented sectors, the creation and destruction of employment in the public sector is more related to political than to economic decisions and therefore less affected by changes in economic conditions or by the business cycle.

Figure 1a represents the typical growth pattern of a sheltered region with respect to the national average, assuming that the peaks and troughs coincide in both spaces, as is usually the case of regions within highly integrated national economies (Rodríguez-Pose, 1998). Either as a result of the predominance of relatively protected sectors and/or the occurrence of mechanisms that allow a large percentage of the population to remain outside the labor market, sheltered regions tend to grow below the national level in periods of economic growth, but to be less affected by the downs in the business cycle. Open regions or regions more exposed to market forces have an opposite behavior. They outperform the national economy in periods of economic expansion, but lag behind in period of recession (Figure 1b).

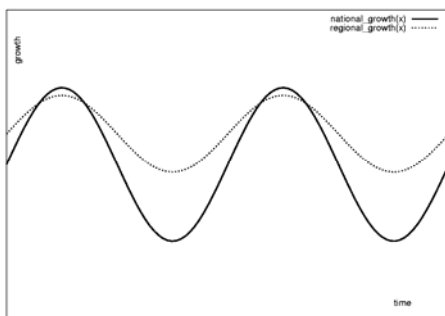
Figure 1. Different theoretical links between regional and national business cycles.



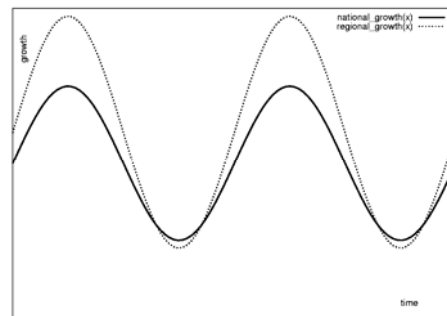
1a. Sheltered region



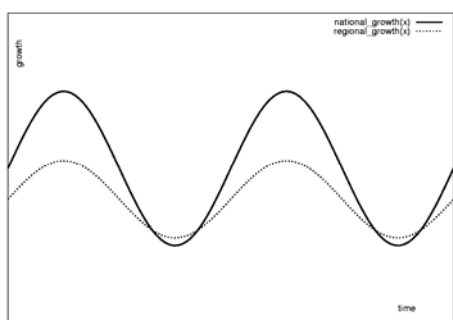
1b. Exposed region



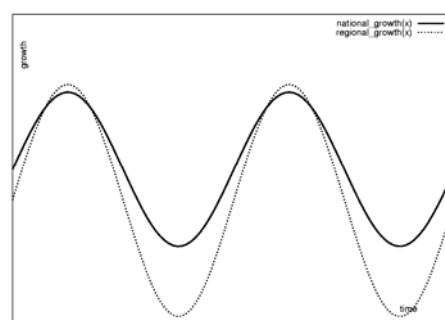
1c. Sheltered region expanding



1d. Exposed region expanding



1e. Sheltered region declining



1f. Exposed region declining

In the two ideal models of a sheltered and an open economy, long term growth rates will remain identical, implying economic stability and a lack of convergence or divergence. However, the ideal situation depicted in Figures 1a and 1b is rather uncommon in reality. Several variations of these ideal situations can occur, leading to higher or lower overall growth and to long-term convergence or divergence. Under certain circumstances, it can be envisaged that sheltered economies can outperform open economies. This will occur in cases where the relative economic decline of a sheltered economy in relation to national economic growth during periods of economic boom is lower than the relative economic expansion in periods of recession (Figure 1c). Conversely, the relative economic expansion of an open region in periods of boom can outperform its decline in recessions (Figure 1d), leading to a higher overall economic performance in regions exposed to the market. Other possibilities are that sheltered regions have a worse overall economic performance than the average of the country, in cases when the relative decline of a sheltered region in periods of economic crisis exceeds the relative catch-up of the expansion phases (Figure 1e), or that open economies can marginally outperform the country in the expansion periods and suffer a strong decline in periods of economic decline (Figure 1f). Assuming that sheltered regions are poorer than open regions¹, different combinations of the above scenarios will lead to either convergence (the combination of Figure 1c and 1f) or divergence (Figure 1d with 1e).

¹ Which is the most likely scenario, as poorer regions tend to have lower employment levels, higher unemployment, higher levels of public employment, and a higher dependency on transfers, which are the key features of sheltered economies.

Which outcome is likely to prevail? Although, in theory, in the short run the existence of sheltered economies does not necessarily have to lead to economic divergence and can in some cases generate convergence, in the long-run regional divergence is more likely to take place than convergence. The reason for this is related to the frequent generation of a downward spiral that prevents sheltered economies from fulfilling their ‘potential for convergence’ (Pekkala, 2000). The increasing reliance of sheltered economies on public employment and transfers is likely to produce a vicious circle of political practice, described by Trigilia (1992) for the case of southern Italy, in which local politicians and public opinion in sheltered regions demand greater transfers from the centre and employment generation in the public sector as a means to combat their lack of competitiveness in increasingly integrated economic systems. As these transfers and public employment are generally used as a means of income support and of maintaining social and political stability, rather than of setting the bases to allow these regions to compete, the outcome is likely to be an even greater detachment from the market. In numerous cases, transfers and public employment are used as a way of keeping unemployment at manageable levels, of satisfying clientelistic compromises and of maintaining political networks by local politicians (Hopkin, 2002). Moreover, the greater stability and, in some cases, relatively higher wages of public sector jobs (which tend to be set according to national scales and not reflecting local conditions) in the periphery tend to crowd out the private sector (e.g. Boltho, Carlin and Scaramozzino, 1997). As a result, these practices frequently bring about less economic activity exposed to market competition, greater protection and, eventually, even greater backwardness. Hence, “in periods of faster growth the contrast between the dynamism of well-off regions, with competitive market-oriented sectors, and the lethargy of lagging regions, with an economy largely dependent on non-market-oriented services and transfers, will be greater than in periods of slow growth or economic decline” (Petraikos, Rodríguez-Pose and Rovolis, 2005: 849), generating thus a pro-cyclical evolution of regional disparities that will contribute to economic divergence and the relative decline of the more sheltered regions.

3. The emergence of sheltered economies in the southern periphery of Europe

The question that needs to be addressed at this stage is whether what we have defined as sheltered economies are now the norm in the southern periphery of Europe and whether such a pro-cyclical pattern in the evolution of regional disparities in our case studies is a recent phenomenon. In order to do this, we build a simple indicator of sheltered economies for each region using the regional growth differentials with respect to the national growth rate in the years of expansion and of recession. The indicator adopts the following form:

$$Shelter = EXP - REC$$

Where:

$$EXP = \frac{\sum_{year=1}^n (regional_growth - national_growth) \cdot I_{EXP}}{\sum_{year=1}^n I_{EXP}}$$

$$REC = \frac{\sum_{year=1}^n (regional_growth - national_growth) \cdot I_{REC}}{\sum_{year=1}^n I_{REC}}$$

EXP and *REC* are indicators of the performance of regional economies relative to the national growth patterns in years of economic expansion and years of recession. I_{EXP} is an indicator of whether the country is in an expansion or recession phase, which takes the value of 1 in the years of expansion and the value of 0 in recession. In the same way, I_{REC} takes the value of 1 in the periods of recession and the value of 0 in expansion. The years of expansion and recession are defined as the years in which national growth rates are above or below respectively the average national growth rate over the period taken into consideration, which expands between 1980 and 2000. When aggregating groups of regions, we weigh by the GDP in the middle of the period taken into consideration, in order to avoid the possible distortions associated with the different economic size of regions.

The sheltered economy indicator takes a value of 0, if the regional economic performance is completely independent from business cycles; a positive value if the regional economy shows a performance that is closer to that of an open economy, as defined in Figure 1b; and negative values if, on the contrary, the regional economy is sheltered, as defined in Figure 1a².

Defined in this way, the sheltered economy indicator has the advantage of being independent from a possible medium-term economic decline or expansion of any given region, since a region growing above or below the country's average both in expansion and in recession – that is any of the behaviors described in Figures 1c to 1f – will have a value of 0.

The results of the analysis are reported in Table 1, where, according to the number of regions for each country, the results are aggregated for the regions whose GDP is above and below the national average during the period of analysis, as well as for the richest and the poorest regions. Three different results are presented in order to give a more dynamic picture of the evolution of regional growth patterns vis-à-vis the national business cycle: for the whole period of analysis, for the 1980s and for the 1990s.

The results highlight that, as a whole, sheltered economies are progressively becoming the norm in southern Europe. Over the last two decades we observe that, with the only exception of Greece, poorer regions in the periphery of Europe have increasingly adopted patterns of growth akin to those of economies that are less exposed to the market, growing on average below the national rate in periods of economic expansion and above it in periods of recession. Such behavior implies a pro-cyclical evolution of regional disparities in most of the countries covered in the analysis.

The most extreme case is that of Italy, where a pro-cyclical pattern in the evolution of regional disparities has been the norm throughout the whole period of analysis (Table 1). Since at least the late 1980s richer regions in Italy have been more affected by

² Data used in this analysis are annual GDP data from Eurostat's REGIO database. Although in a business cycle analysis quarterly data would have been more adequate, such comparative data do not exist for regions across Europe. A further limitation is that the available time series only allows for the analysis of no more than a couple of short business cycles. It also needs to be noted that the structure of regions can also change over time, making their economic behaviour change across business cycles.

changes in market conditions than poorer regions. This happens both when we consider all the regions whose GDP has remained above the national average or just the richest five regions (which correspond exactly to the top quartile). In contrast, regions with a GDP below the national average and the five regions in the bottom quartile displayed a regional behavior which is typical of sheltered regions: lower growth in times of economic expansion, but higher than the national average in times of recession. This behavior remained relatively stable throughout the 1980s and 1990s in a country which has had the longest experience in Europe of development and assistance policies to the poorer regions of the South. Moreover, in the Italian case openness to the market seems to have paid off for the richest regions. The five richest regions in the country saw their economic behavior shift from a situation more akin to that of the open economy of Figure 1b to that of regions whose growth is similar to that of the country in recession phases but higher than the average in periods of boom (Figure 1d). In contrast, the poorest five regions moved in an opposite direction. Whereas in the 1980s a relative good performance in the periods of recession more than compensated for their relative decline in periods of expansion, during the 1990s the decline in periods of expansion far exceeded the higher than average growth in recessions (Table 1).

In the Spanish case sheltered economies are also the norm among the poorest regions for the whole period of analysis. As in the Italian case, for the two decades considered, both the regions whose GDP has remained below the national average and the poorest four regions displayed growth behaviors relative to the national business cycle typical of sheltered economies (Table 1). Regions with an above average GDP per capita and the five richest regions, by contrast, had economic growth behaviors similar to those of open economies. However, the shift to sheltered economies in the Spanish periphery has taken place more recently than in Italy. During the 1980s only the regions whose GDP was below the national average belonged in the sheltered economy category. The four poorest regions, on the contrary, had an economic behavior that was more akin to that of open economies. The sheltered economy index of the group did not differ greatly from that of the five richest regions, a behavior that indicated a higher exposure to the market than even the set of regions whose GDP was above average.

Table 1. Sheltered economies indicator.

GROUP	WHOLE PERIOD			1980s			1990s		
	expansion	recession	Sheltered economy indicator	expansion	recession	Sheltered economy indicator	expansion	recession	Sheltered economy indicator
Italy									
Below nat average	-0.572	0.421	-0.993	-0.577	1.023	-1.601	-0.563	0.162	-0.725
Above nat average	0.234	-0.115	0.349	0.293	-0.212	0.505	0.116	-0.073	0.189
bottom5	-0.638	0.414	-1.051	-0.680	1.098	-1.778	-0.553	0.120	-0.673
top5	0.348	-0.240	0.588	0.407	-0.477	0.884	0.231	-0.138	0.369
Spain									
Below nat average	-0.301	-0.174	-0.128	-0.397	-0.332	-0.065	-0.225	-0.015	-0.209
Above nat average	0.244	0.137	0.107	0.361	0.301	0.060	0.150	-0.028	0.178
bottom4	-0.207	-0.053	-0.154	0.028	-0.421	0.449	-0.396	0.314	-0.710
top5	0.586	0.205	0.381	0.895	0.262	0.633	0.339	0.148	0.192
Portugal									
Lisboa	0.028	-0.410	0.438	-1.747	-0.148	-1.599	1.211	-0.673	1.884
Rest	-0.778	0.211	-0.989	-0.064	-0.001	-0.062	-1.254	0.423	-1.677
Greece									
top3	-0.554	0.117	-0.671	-0.834	-0.400	-0.434	-0.394	0.978	-1.372
Rest	0.483	-0.040	0.523	0.713	0.448	0.265	0.352	-0.855	1.207
bottom3	0.452	0.677	-0.225	0.262	1.393	-1.130	0.560	-0.515	1.076
France									
Below nat average	-0.427	-0.228	-0.200	-0.649	-0.257	-0.391	-0.151	-0.051	-0.100
Above nat average	-0.141	0.055	-0.196	-0.393	0.458	-0.851	0.174	0.063	0.111
bottom5	-0.048	-0.478	0.430	-0.327	-1.183	0.856	-0.074	-0.080	0.006
top5	-0.167	0.038	-0.205	-0.440	0.419	-0.858	0.208	0.065	0.143

* Sheltered economy indicators in bold

The 1990s marked a shift in the economic trajectory of the four poorest Spanish regions, which became much more impervious to changes in the market, adopting the typical pattern of a sheltered economy. As in the Italian case, there seems to be an overall association between the degree of exposure of an economy to the market and economic growth. The five richest Spanish regions, which remained relatively exposed to changes in the business cycle throughout the period of analysis, grew above the Spanish national average both in periods of economic expansion and recession (Table 1). The more sheltered areas – the set of regions below the Spanish average in terms of GDP and the poorest five regions in the 1990s – either had lower levels of growth than the national average in all phases of the business cycle or the slightly higher than average growth in

periods of recession did not compensate the strong relative declines during economic boom phases, as is the case of the bottom five regions during the 1990s.

Portugal is another case of a country which has recently witnessed the emergence of sheltered economies in its periphery. Given its limited number of regions, we have divided the subset into Lisbon and the Tagus Valley – the richest region – and the remainder of the country. The division is a familiar one: whereas for the whole period the capital and richest region has remained open to market forces and its growth patterns put it in the category of open economies, the remaining regions display the growth behavior of sheltered economies (Table 1). As in the case of Spain, this shift has taken place only recently. During the 1980s the economic performance of Lisbon put it in the category of sheltered regions, with a higher relative decline in periods of expansion than in years of below average growth. The economic trajectory of the remainder of the country was much closer to 0 and thus relatively independent of the behavior of business cycles. In the 1990s the situation changed radically, with Lisbon's economic performance conforming to the archetypical trajectory of regions open to the market and that of the remainder of the country to that of sheltered economies. Portugal is a third case where exposure to the market is associated to higher growth, at least in the 1990s: during this period the relative high growth of Lisbon during the years in which national growth exceeded the national average was higher than the relative decline in relative recession years (Table 1). The remaining regions were in the exact opposite situation.

Greece is the only of our peripheral countries that has not witnessed yet the appearance of sheltered economies. Whereas for the whole period of analysis the poorest three regions have adopted the sheltered economy pattern, the same could be said for the top three regions (Table 1). And whereas the poorest regions seem to be becoming progressively more open, the economic trajectory of the top three regions makes them increasingly sheltered with a much higher growth than the national average in times of recession and a lower growth in times of economic decline. The remaining regions in the country respond to the classification of open economies throughout the period of analysis. The sheltered economy behavior of the richest regions in Greece does not imply that there has been convergence. Although that was the case in the 1980s, when the richest three regions grew below the national average during the ups and downs of

the cycle, in the 1990s the expansion of the core regions during recession years outstripped their relative decline in the expansion years. In contrast, in the remaining regions – the bottom three excluded – the catch up in expansion years did not compensate for the decline during the recession periods (Table 1).

Finally in our control case, France, we find less evidence of any association between economic growth and business cycles. The poorest five regions remain relatively exposed to market changes throughout the period of analysis, whereas the richest five are more sheltered in the 1980s than in the 1990s (Table 1). There does not seem to be a significant difference in growth behavior among regions whose GDP was above and below the national average, although the former seem to have become more open and the latter more sheltered as the period of analysis progresses. In any case, for the 1990s the values of our sheltered economy indicator are close to 0, regardless of the chosen subset, indicating an overall lack of association between business cycles and economic performance.

4. The effect of sheltered economies on long-term growth

The results of the previous analysis indicate that the most peripheral regions in our case countries, with the only exception of the poorest regions in Greece, have been for long or have become increasingly sheltered from market conditions, leading to a pro-cyclical evolution of regional disparities. In this section we first look at the evolution of economic growth and regional disparities in our five case studies, before conducting a regression analysis linking regional growth in the last two decades to a series of structural factors that may have an influence on this shift according to our definition of sheltered economies.

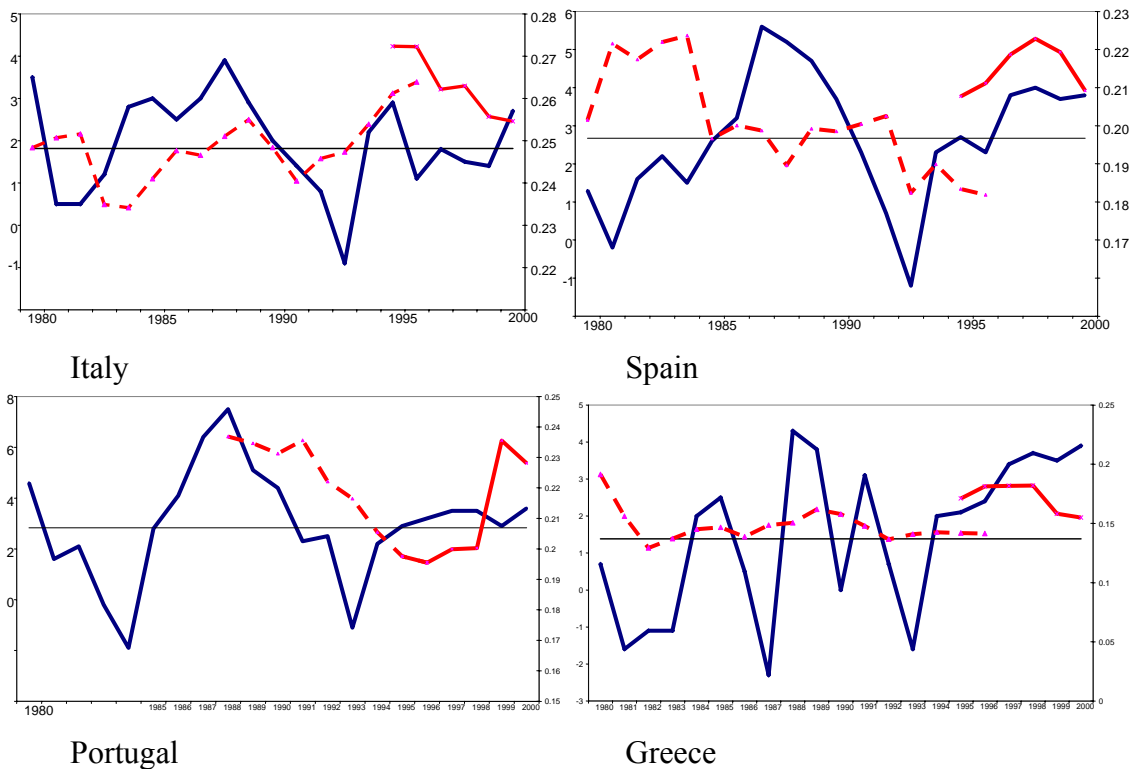
4.1. Economic growth and regional disparities

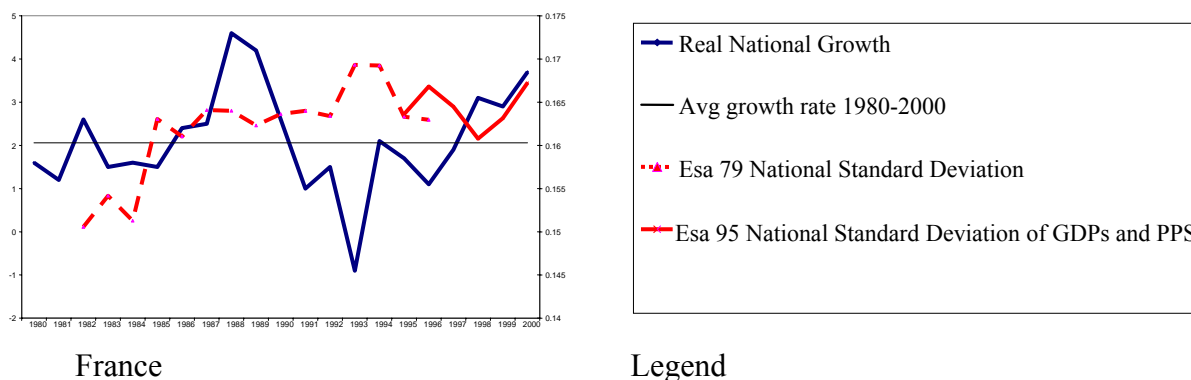
Figure 2 charts the evolution of the business cycle (measured on the left-hand y axis) and the coefficient of regional variation as a measure of regional disparities (represented on the right-hand y axis) for our five case countries during the period of analysis. In the countries where lagging regions were already sheltered at the beginning of the period (Italy) or where they have become increasingly sheltered (Portugal and Spain) there is

evidence of the existence or of a shift towards a pro-cyclical evolution of regional disparities.

In the Italian case regional disparities have followed a pro-cyclical pattern since almost the beginning of the 1980s. The economic expansion which characterized the second half of the 80s was associated with an increase in regional disparities that came to an end with the economic slowdown, which started in 1989. The years leading to the trough of the crisis were also years of a reduction in regional disparities. A better relative performance in the mid-1990s was linked to a renewal in the growth of disparities. The second part of the 1990s, characterized by languishing growth, has been accompanied by a decrease in regional disequilibria (Figure 2). Hence the evolution of regional disparities in Italy is one of growth in periods of expansion and decline in periods of recession, a behavior that is fully consistent with the observation of Trigilia (1992) who focused on the increasing dependence of the South on state aid and non-market services.

Figure 2. The link between growth cycles and regional disparities





The Portuguese and Spanish cases show that the shift to a pro-cyclical evolution in regional disparities is more recent than in Italy. In the Spanish case this change takes place in the late 1980s. The early and mid-1980s are still featured by an anti-cyclical evolution of regional disparities: disparities increase in periods of decline and decrease in periods of boom. Since the late 1980s and coinciding with EU membership there is a shift in this pattern and the evolution of disparities becomes clearly pro-cyclical, coinciding in time with the emergence of sheltered economies in the periphery of the country (Figure 2). In the Portuguese case lack of reliable regional data prior to 1988 and questions about the reliability of some of the data provided – which may explain the steep increase in disparities in 1999 – suggest caution when interpreting the results. In any case, the evolution of regional disparities since 1988 presents a similar picture to that of Spain: a sharp decline in disparities following the slowdown in the business cycle of the late 1980s, followed by a less evident increase in regional inequality coinciding with the recovery of the mid- and late-1990s (Figure 2).

No overall link is, however, observed for Greece prior to 1994. Whereas regional disparities remain fairly stable during this period, there is a strong variability in growth rates which make the identification of recession and expansion periods difficult. The years of relative prosperity which start in 1994 are associated with a marginal increase in the dispersion of regional income, which, as mentioned earlier, is not associated with the emergence of sheltered economies in peripheral regions.

In the French case no clear cut link is observed between regional disparities and business cycles. Regional disparities increase in France between 1980 and 2000, a period that includes two episodes of low growth in the early 1980s and early 1990s

flanking the expansion of the late 1980s. Since 1998 some sort of pro-cyclical pattern begins to appear.

4.2. The factors behind the emergence of sheltered economies

At this point we need to ask ourselves to what extent the emergence of sheltered economies in southern Europe is associated with a medium- and long-run economic decline in the affected regions. In the theoretical section of the paper we indicated that the emergence of sheltered economies does not necessarily have to be associated with medium- and long-term economic decline, but that given the characteristics that lead to the emergence of a sheltered economy in a region, it may be the case that sheltered regions may not be able to fulfill their potential for convergence. Regions that are incapable of using their human resources (either through exclusion from the labor market or unemployment), that rely on public employment for the genesis of a large percentage of new employment or on transfers are likely to be less able to withstand competition, jeopardizing thus regional convergence across Europe. In order to assess whether this is the case, we conduct a simple OLS regression, regressing the variation of the percentage ratio of regional per capita GDP with respect to the country³ on a series of indicators that lie behind the definition of a sheltered region presented in section 2. The reason for using the variation of the percentage ratio of regional per capita GDP with respect to the country rather than regional growth is to minimize the problems of spatial autocorrelation detected when growth rates are used (Armstrong, 1995; Magrini, 1995). The equation adopts the following form:

$$VGDP_i = f \{GDP_0, TRANS, EMP_0, \Delta EMP, UNEM_0, \Delta UNEM, ADSER_0, \Delta ADSER, NMSER_0, \Delta NMSER\}$$

Where:

$VGDP_i$ is the variation of the percentage ratio of per capita GDP of the region with respect to the country, expressed in percentage;

GDP_0 denotes the GDP per capita at the beginning of the period of analysis;

³ Calculated by using the following formula $\left(\frac{Y_{t+1}^R / Pop_{t+1}^R}{Y_{t+1}^N / Pop_{t+1}^N} - \frac{Y_t^R / Pop_t^R}{Y_t^N / Pop_t^N} \right) * 100$

TRANS is a dummy variable which adopts the value of 1 in current or former Objective 1 regions, used as an imperfect proxy for transfers (since no comparable time series exist for transfers);

EMP_0 denotes the initial rate of employment;

ΔEMP represents the change in the rate of employment throughout the period of analysis;

$UNEM_0$ denotes the initial rate of unemployment;

$\Delta UNEM$ is the change in the rate of unemployment throughout the period of analysis;

$ADSER_0$ is the rate of employment in banking, insurance and real estate services – as a proxy for advanced services – at the beginning of the period of analysis

$\Delta ADSER$ denotes the change in the rate of employment in banking, insurance and real estate services

$NMSER_0$ represents the initial rate of employment in non-market oriented services, as a proxy for public employment; and

$\Delta NMSER$ denotes the change in the rate of employment in non-market oriented services.

All variables included in the analysis, with the exception of the dummy TRANS are weighted nationally in order to minimize possible spatial autocorrelation problems. Two stepwise regressions are performed for the whole period of analysis, the 1980s, and the 1990s. The first regression [1] includes all the variables in the equation. The second regression [2] represents the most satisfactory simplification of the general regression at a 90 percent level of significance. VIF and Moran's I tests have been carried out in order to check for multicollinearity and spatial autocorrelation respectively. Any violation of assumptions is reported.

The results of the OLS regression generally support the idea that regions whose structural characteristics are closer to those of the definition of sheltered economies tend in the medium run to grow at a lower rate than their more open counterparts.

Table 2. Regression results

Indep. Var.	1980-2000		1980-1990		1990-2000	
	[1]	[2]	[3]	[4]	[5]	[6]
<i>GDP</i> ₀	-0.5237***	-0.4280***	-0.6932***	-0.5026***	-0.2128	-0.1649
	<i>-3.2422</i>	<i>-3.4123</i>	<i>-3.9108</i>	<i>-3.6702</i>	<i>-1.0989</i>	<i>-1.4262</i>
TRANS	-0.0765		0.1867		-0.2878**	-0.1965*
	<i>-0.5982</i>		<i>1.3307</i>		<i>-2.1597</i>	<i>-1.7745</i>
EMP ₀	0.2441	0.4338***	0.2107		0.1079	
	<i>1.4598</i>	<i>3.3762</i>	<i>1.1485</i>		<i>0.5184</i>	
ΔEMP	0.1254	0.3044***	0.2337		-0.0621	
	<i>0.7292</i>	<i>2.8414</i>	<i>1.2385</i>		<i>-0.3832</i>	
UNEM ₀	-0.2351		-0.1809	-0.2157*	-0.1788	-0.2513*
	<i>-1.5793</i>		<i>-1.1077</i>	<i>-1.7689</i>	<i>-1.0471</i>	<i>-1.8980</i>
ΔUNEM	-0.1694		-0.2476	-0.3202**	0.0799	
	<i>-0.9563</i>		<i>-1.2739</i>	<i>-2.5114</i>	<i>0.5168</i>	
ADSER ₀	0.1078		0.3843**		-0.0596	
	<i>0.6182</i>		<i>2.0074</i>		<i>-0.3816</i>	
ΔADSER	-0.2076	-0.2681**	0.2228		-0.4212***	-0.3908***
	<i>-1.6620</i>	<i>-2.6628</i>	<i>1.6256</i>		<i>-3.6582</i>	<i>-3.6125</i>
NMSER ₀	0.3128**	0.3183**	-0.0287		0.2785*	0.2388*
	<i>2.0932</i>	<i>2.4959</i>	<i>-0.1752</i>		<i>1.7980</i>	<i>1.8836</i>
ΔNMSER	-0.2853**	-0.2857**	-0.4047***	-0.4540***	-0.1567	
	<i>-2.2816</i>	<i>-2.4124</i>	<i>-2.9495</i>	<i>-3.9330</i>	<i>-1.2427</i>	
<i>F</i>	5.0475	7.9508	3.0912	5.2365	4.1350	7.7345
<i>Prob>F</i>	0.000	0.000	0.003	0.001	0.000	0.000
<i>df</i>	10,65	6,69	10,65	4,71	10,65	5,70
R ²	0.4371	0.4087	0.3222	0.2278	0.3888	0.3558
Adj. R ²	0.3505	0.3573	0.2180	0.1843	0.2947	0.3098
Multicollinearity	No	No	No	No	Yes	No
Sp. Autocorrelation	No	No	No	No	No	No

Standardized coefficients reported. t-statistics in italics under coefficients

***, **, and * denote significance at the 99%, 95%, and 90% respectively

A large majority of the significant coefficients reported in Table 2 indicate that regions with lower overall levels of employment and with lower growth in employment levels, with greater initial unemployment and greater unemployment growth, and with higher levels of employment in the public sector and a greater dependency on transfers experience lower growth than the remaining regions. However not all these factors play

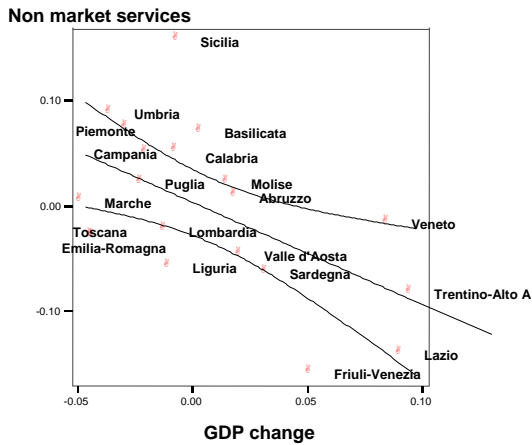
the same role in different periods of time. For the whole period of analysis low overall employment levels and low employment growth have a greater association with lower growth than unemployment and changes in unemployment rates. High initial unemployment rates have, however, a stronger connection with low growth, if the 1980s or the 1990s are considered separately (Table 2). As stressed by Ezcurra et al. (2005b: 690), the creation of employment in the non-market oriented service sector is associated with lack of economic dynamism for the whole period of analysis and for the 1980s, but not in the 1990s. In this latter period, transfers to Objective 1 regions have, in contrast, a stronger association with low growth. This negative connection between transfers and growth is, nevertheless, not statistically significant during the 1980s, when the level of transfers via the European Structural Funds was much lower than in the 1990s, and for the whole period of analysis (Table 2). The overall initial level of employment in the non-market oriented sector is, by contrast, positively associated with economic dynamism, a fact that may be related to the presence of a more developed public sector at the beginning of the period in the central regions, which led to a catching up by the peripheries.

Not all coefficients conform to the hypothesis that more open economies perform better in the longer run. The relationship between the initial levels of employment in advanced services and economic performance is insignificant and, more importantly, the association between the employment growth in this sector and economic performance is significant and negative for the both whole period of analysis and the 1990s (Table 2).

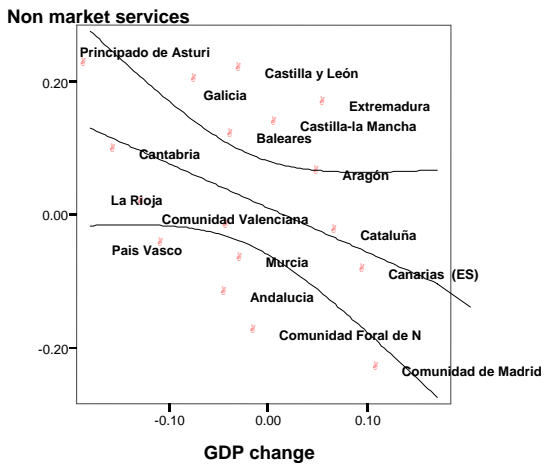
Of special interest in the negative relationship between the growth of employment in the non-market oriented sectors and regional economic performance, in evidence for the whole period of analysis and, more specifically, during the 1980s. Such a negative association seems to hold both for countries whose lagging regions have become increasingly sheltered, such as Italy or Spain, and for a country like France, where this is not the case. Figure 3 plots the relationship between the change in non-market oriented employment and regional economic performance for the period of analysis in Italy, Spain and France, taking 3 years averages of all the variables both at the beginning and at the end of the period in order to limit the possible cyclical effects and the possible distortions created by annual statistical variations. In all the three cases a

robust – albeit not particularly significant – negative association between both factors is observed. This shows that, on average, regions falling behind increased their quota of employment in non-market oriented sectors. In the three countries, the regions with the best economic performance coincide with the capital regions (Lazio, Madrid and Île de France), which had in all cases the highest initial level of employment in non-market oriented sectors, but where the sector experienced the strongest relative decline during the period of analysis (Figure 3). This evidence can be interpreted in three ways. On the one hand, the detachment from the market and lower productivity of employment in the public sector and other non-market oriented sectors may have contributed to the relative decline of these regions. On the other, the causality can be reversed, making the creation of public sector employment a tool used by governments in order to combat economic decline and prevent social unrest in lagging regions. Finally, as we use relative values, any increase in private employment will, by definition, lead to a relative decline of the public sector's incidence on regional employment. In any case all these explanations reinforce the hypothesis that regions relatively sheltered from market forces underperform in comparison to those more exposed to it.

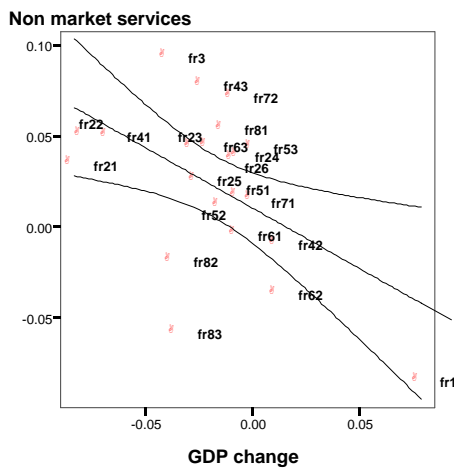
The fact that during the 1990s employment generation in the non-market oriented sector is no longer associated to economic performance is probably related to the limitations and budgetary constraints imposed on governments by the Maastricht treaty. The restructuring of public finance in order to comply with the Maastricht criteria on public deficit and debt meant a serious reduction in the expansion of the public sector, in general, and of public employment, in particular. This factor could also explain the increasing negative association of other factors like Objective 1 assistance and unemployment with economic performance (Table 2).



Italy



Spain



France

Figure 3. Variation of GDP per capita vs the variation in the importance of non-market services in regional employment.

5. Conclusions

This paper has been aimed at addressing two important questions. First, if business cycles matter for regional disparities and if the evolution of regional disparities is becoming pro-cyclical and leading to the emergence of sheltered economies in the southern periphery of Europe and, second, if the possible generation of sheltered economies is affecting long-term growth prospects for regional convergence in Europe. We have tested these two questions in four countries of southern Europe (Greece, Italy, Portugal and Spain), using France as a control country. The results of the analysis have highlighted that there is evidence of an increasing emergence of sheltered economies in the poorest regions of these countries, with the only exception of Greece. The pattern of growth of regional disparities in periods of boom and decline in periods of relative economic crisis was established in Italy more than two decades ago. In Portugal and Spain the emergence of a pro-cyclical evolution of regional inequalities and of sheltered economies in lagging regions is more recent. No such pattern has been identified in Greece – although there are incipient signs that it may be taking place since 1994 – or in our control country, France.

Our research has also uncovered a link between the genesis of sheltered economies and the relatively poor economic performance of lagging regions. Two indicators point in that direction. First, in the countries where pro-cyclical patterns in the evolution of regional disparities are now established, the relative decline of lagging regions in phases of economic expansion is greater than the relative catch-up in phases of decline. Conversely, richer regions in these countries experience a greater relative growth in periods of expansion than their relative decline in the downturns of the business cycle. Second, many of the structural characteristics that define a sheltered region (low levels of employment, high unemployment, or dependence on non-market oriented sectors for the genesis of employment and on transfers) are negatively associated with economic performance.

The results of this paper seem thus to confirm that, first, business cycles matter for regions disparities and that, second, as a result the future prospects for many regions in the more established periphery of Europe – as opposed to those in areas of Central and Eastern Europe – may be rather bleak. Not only do they seem to be increasingly

detached from the market, but this detachment seems to be little by little eroding their capacity to compete in a more integrated market. This may ultimately lead to the generation of permanently assisted regions and of vicious cycles of economic dependency, thus preventing many of these regions from fulfilling their economic potential.

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