

Territorial capital and province performance in the Latin Arch: an econometric approach

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Abstract

This paper aims at developing a new econometric model at the province level that explains differential growth rates of provinces with respect to their regions according to territorial specificities (i.e. *territorial capital*) by transferring the logics and the working of the MASST model (Capello, 2007; Capello et al., 2008; Capello and Fratesi, 2009) from the regional level to the province level. The new model interprets local growth as a *competitive* and *socio-relational process*, based on supply rather than demand elements. Intended as *relational space*, territory is not the mere geographical place where development occurs; rather, territory generates increasing returns, cumulative self-reinforcing mechanisms of growth in the form of dynamic agglomeration economies. Therefore, local economic growth becomes the result of interregional interaction processes, rather than the result of inter-regional resource allocation decisions or of an increase in resources endowment.

Key-words: Territorial capital, spatial development, regional econometric models

1. Introduction¹

This paper aims at developing a new econometric model at the province level that explains differential growth rates of provinces with respect to their regions according to territorial specificities (i.e. *territorial capital*) by transferring the logics and the working of the MASST model (Capello, 2007; Capello et al., 2008; Capello and Fratesi, 2009) from the regional level to the province level. The new model interprets local growth as a *competitive* and *socio-relational process*, based on supply rather than demand elements. Intended as *relational space*, territory is not the mere geographical place where development occurs; rather, territory generates increasing returns, cumulative self-reinforcing mechanisms of growth in the form of dynamic agglomeration economies. Therefore, local economic growth becomes the result of interregional interaction processes, rather than the result of inter-regional resource allocation decisions or of an increase in resources endowment.

Given this interpretation of local growth, the reasons that explain the relative performance of a sub-regional territory have to be found in its territorial capital, that covers all genetic aspects of local growth. Territorial capital may be seen as the set of localised assets – natural, human, artificial, organizational, relational and cognitive – that constitute the competitive potential of a given territory (Camagni, 2008; Camagni, Capello, 2010).

The econometric model explains the differential GDP growth rate at NUTS3 compared to the GDP growth rate at NUTS 2. In other words, the model aims at identifying the reasons that explain why a sub-regional area is able to grow more or less than its region.

¹ This paper builds upon the results of a research project carried out for the ESPON 2013 Programme at Politecnico di Milano (ESPO, 2010). In spite of the fact that the work was the result of a joint effort, sections 2 and 4 were written by R. Camagni and section 3 by A. Affuso. The authors wish to thank Roberta Capello, also member of the project team, for support and suggestions on methodological and econometric matters.

The econometric model is developed with reference to the “Latin Arc” represented by Spain, France and Italy and, more in depth, to the Mediterranean coastal provinces of the same countries.

In the analysis similar information for the three countries is used, because the goal is to make the best use of existing information on the different structural elements that characterize sub-regional territories (their “territorial capital”). Therefore, the explanatory variables are grouped into four sets of factors: infrastructure capital and settlement structure, sectoral and natural specificities, cognitive capital and social capital.

2. Theoretical Framework

The main theoretical element that drives the philosophy of the paper resides in the concept of “territorial capital”. Territorial capital may be defined as the set of localised assets – natural, human, artificial, organizational, relational and cognitive – that constitute the competitive potential of a given territory (Camagni, 2008). In the model, it is used to interpret the performance of (Nuts-3) provinces with respect to their (Nuts-2) region.

The concept of *territorial capital* was first proposed in a regional policy context by the OECD in its *Territorial Outlook* (OECD, 2001), and it has been recently reiterated by DG Regio of the Commission of the European Union: “Each Region has a specific ‘territorial capital’ that is distinct from that of other areas and generates a higher return for specific kinds of investments than for others, since these are better suited to the area and use its assets and potential more effectively. Territorial development policies (policies with a territorial approach to development) should first and foremost help areas to develop their territorial capital” (European Commission, 2005, p. 1).

As is widely apparent from current research work, ‘territory’ is a better term than (abstract) ‘space’ when referring to the following elements:

- a system of localised externalities, both pecuniary (where their advantages are appropriated through market transactions) and technological (when advantages are exploited by simple proximity to the source);
- a system of localised production activities, traditions, skills and know-how;
- a system of localised proximity relationships which constitute a ‘capital’ – of a social psychological and political nature – in that they enhance the static and dynamic productivity of local factors,
- a system of cultural elements and values which attribute sense and meaning to local practices and structures and define local identities; they acquire an economic value whenever they can be transformed into marketable products – goods, services and assets – or they boost the internal capacity to exploit local potentials;
- a system of rules and practices defining a local governance model.

Accordingly, the OECD has rightly drawn up a long, sometimes plethoric but well-structured, list of factors acting as the determinants of territorial capital, and which range from traditional material assets to more recent immaterial ones. “These factors may include the area’s geographical location, size, factor of production endowment, climate, traditions, natural resources, quality of life or the agglomeration economies provided by its cities, but may also include its business incubators and industrial districts or other business networks that reduce transaction costs. Other factors may be ‘untraded interdependencies’ such as understandings, customs and informal rules that enable economic actors to work together under conditions of uncertainty, or the solidarity, mutual assistance and co-opting of ideas that often develop in clusters of small and medium-sized

enterprises working in the same sector (social capital). Lastly, according to Marshall, there is an intangible factor, ‘something in the air’, called the ‘environment’ and which is the outcome of a combination of institutions, rules, practices, producers, researchers and policy makers that make a certain creativity and innovation possible” (OECD, 2001, p. 15).

Although it is clear that some items in the above list belong to the same abstract factor class and differ only in terms of the theoretical approach of their proponents, and some others are lacking, the concept appears sound and fruitful. A full and possibly complete taxonomy of elements of territorial capital was presented elsewhere (Camagni, 2008), underlining the relevant dichotomies encompassed by the concept:

- material and immaterial elements: social overhead capital, infrastructure, public goods and private fixed capital on the one side, and human capital, entrepreneurship and social capital on the other. Agglomeration and urbanization economies present a mix of both elements;
- private and public goods, but also an intermediate category of impure public goods and club goods, for which new governance styles are requested. In fact, in order to avoid opportunistic behaviour by some actors and excessive exploitation of “commons” and public goods, new policy styles are needed, addressed towards the creation of wide consent, reciprocal trust, synergies and cooperation;
- functional and relational elements, the latter constituting the novelty and the most interesting development factors nowadays. Relational assets, in the form of inter-personal and inter-institutional linkages, represent a “capital” as they are costly to build and maintain but they facilitate innovation, creativity, enhancement of economic competitiveness.

Acting on territorial capital in policy making means acknowledging the integrated nature of any policy strategy, the added value on intervening on different but linked assets at the same time, promoting network relations and cooperative agreements and supporting innovative projects emerging thanks to these agreements instead of supporting the single partners.

For the sake of simplicity, we may mention four large classes of territorial capital elements on which attention should be given in a policy context:

- *infrastructure capital and settlement structure*, encompassing also the characteristics of the urban system and the quality of the environment;
- *cognitive capital*, in the form of knowledge, competence, capabilities, educational and research structure, embedded in both productive capital and human capital;
- *cultural and identitarian capital*, encompassing cultural heritage, landscape and natural capital;
- *social and relational capital*, in the form of both civiness and associative capabilities.

3. Methodology

The model explains differential growth rates of provinces with respect to their regions according to territorial specificities (i.e. territorial capital) by transferring the logics and the working of the MASST model (Capello, 2007; Capello et al., 2008; Capello and Fratesi, 2009) from the regional level to the province level. The analysis is focused on countries of the so called “Latin Arc”: France, Italy, and Spain.

The reasons that explain the relative performance of a sub-regional territory have to be found in its *territorial capital*, a general concept that covers all genetic aspects of local growth.

In particular, the territorial capital elements included in the model are:

- *infrastructure capital and settlement structure*, captured through the urban and settlement structure of regions, a good proxy to capture the role of agglomeration and urbanisation economies on regional performance; parameters of the different explanatory variables are enabled to vary across different settlement structures present in space;
- *sectoral and natural specificities*, captured by the share of tertiary activity and of touristic activities, self-employment;
- *cognitive capital*: quantity and quality of human capital, young population, migratory balance;
- *social and relational capital*: although it is not simple to find empirical evidence of the economic role played by “social capital”, some indirect measures have been proposed in the literature (Putnam, 1993). Following this literature we use the growth of the electoral turnout rate in the European elections as an indicator of civic duty and active population in public issues;

3.1. The Model

The model estimates the territorial elements that explain the relative growth of each NUTS3 with respect to its NUTS2;

In the model we assume that the relative provincial GDP growth rates with respect to the region ($\Delta y_p - \Delta y_R$), depend linearly on the vector X_i of structural and territorial variables:

$$\Delta y_p - \Delta y_R = f(X_i) \quad \text{where } p \in R$$

In the analysis we use similar information for the three countries and we take the differences between countries into consideration by interacting the independent variables with the dummies of countries. In fact, the goal is to make the best use of existing information on the different structural elements that characterize sub-regional territories (their “territorial capital”), both those already taken into consideration in the MASST model and other ones.

According to the elements of territorial capital the explanatory variables are grouped into the four sets of factors, as said before: *infrastructure capital and settlement structure*, *sectoral and natural specificities*, *cognitive capital* and *social capital*.

The territorial structure is captured through infrastructure and the settlement structure of region, a good proxy to capture the role of agglomeration and urbanisation economies on regional performance. In particular, the following variables are used:

- *the share of road and rail infrastructure*. Their effects should be positive.

Moreover, the following dummies, interacted with different explicative variables, are used:

- dummy for Coastal provinces;
- dummy for Rural provinces;
- dummy for Urban provinces
- dummy for “Agglomerated” provinces;
- dummy for “Mega” provinces².

² In the ESPON idiom, “Mega” cities are the large Metropolitan European Growth Areas, the engines of territorial development; “agglomerated” regions are regions with a city of more than 300 000 inhabitants and a population density more than 300 inhabitants per km², or a population density of 150–300 inhabitants per km².

The second set of factors is related to sectoral and natural specificities and contains:

- *the share of service employment*, a useful variable to capture the role of services in explaining the economic performance. We expect that this variable positively affect the provincial performance since the service sector is on average a more value-added activity than manufacturing;
- *the share of industrial employment*;
- *the share of craft and related trades workers*, which is used as a proxy of self-employment;
- *the share of touristic structures*, considering the geographic position and vocation of the Arc-Latin countries it is not possible to leave tourism and its impact apart. Our expectation is that it positively affects province differential growth.

The third set of factors, namely cognitive capital, is included by:

- *the share of people with less than 20 years*, a proxy of future potential growth which should positively affect economic performance. In fact, young people are the most dynamic part of the population and ensure the basis of the economic growth;
- *the migratory balance*, which shows the attractiveness capacity of the territory: a positive migratory balance helps success provinces with a low fertility rate to dispose of an adequate labour force. This variable too is expected to show a positive impact on economic growth;
- *the share of managers on the labour force*: this variable is used in order to analyze the impact of high level functions on economic growth.

Finally, a proxy for social capital elements is used. Although it is not simple to find good variables for social capital, some indirect measures have been proposed in the literature (Putnam, 1993). Here, the growth of the electoral participation rate in the European elections is used, as an indicator of civic duty and active population in public issues. The expectation is that the civic duty is positively correlated with economic growth.

All variables are calculated in differential terms with respect to the relative region. The dependent variable of the regression is the average annual differential GDP growth rate 2001-2005 between each province and its region; all independent variables are calculated at the beginning of the period in order to avoid the problems of endogeneity and reverse causation.

3.2. *Econometric Results*

The results obtained are generally in line with our expectations (Tab 1). In the econometric exercise, the model is estimated firstly for the three countries of the Latin Arc as a whole, and then country by country separately. In this respect, it is interesting to observe that all the variables that are significant in the Latin Arc are also significant in each country. The sole exceptions are: the share of urban fabric, which is significant for the Latin Arc, and the endowment of road and rail infrastructures and the endowment of managers that are significant at the country level only.

Tab.1 - Econometric Results⁺

	LATIN ARC	FRANCE	SPAIN	ITALY
The share of urban fabric	0.037**			
The share of road infrastructure endowment	0.605			
The share of rail infrastructure endowment	-2.221			
The share of touristic structures endowment in "agglomerated" provinces	4.174***			
The participation growth rate in the european elections (1994-1999)	-0.049*			
The share of managers on total employment	15.836			
The share of people with less than 20 years in French urban provinces	0.001	0.001*		
The share of service employment in French coastal provinces	-6.737**	-5.444*		
The share of Craft and related trades workers on total employment	2.874	8.7570		
The share of Craft and related trades workers on total employment in "Megs"	37.050**	35.340**		
The share of rail infrastructure endowment in French provinces	-2.561	3.528***		
The share of the migratory balance on population	0.013***	0.015***	0.009***	
The share of people with less than 20 years	-0.000	-0.000***	0.086**	
The share of service employment	1.09	1.0230	3.984	
The share of people with less than 20 years in Spanish urban provinces	0.260***		0.234***	
The share of touristic structures endowment in Spanish rural provinces	30.749***		11.612*	
The share of service employment in Spanish "agglomerated" provinces	13.680***		12.614***	
The participation growth rate in the european elections (1994-1999) in Spanish provinces	4.525***		3.457**	
The share of road infrastructure endowment in Spanish provinces	3.278		3.539**	
The share of touristic structures endowment	-4.297***		-5.259	-5.378***
The share of people with less than 20 years in Italian provinces	0.297***			0.386***
The share of touristic structures endowment in Italian "agglomerated" provinces	-1.184			4.951***
The share of managers on total employment in Italian provinces	8.344			13.922*
The share of rail infrastructure endowment in Italian internal rural provinces	34.120**			31.482***
The share of rail infrastructure endowment in Italian provinces	-2.221			0.103
The share of industry employment in Italian "agglomerated" provinces	7.623*			9.793**
The share of industry employment	-6.277***			-8.480***
Italian Coastal provinces	0.248*			0.426**
Constant	-0.216***	-0.144*	-0.233**	-0.300*
Number of observations	223	96	41	95
F	47.54	6.75	21.13	17
Prob > F	0	0	0	0
R-squared	0.371	0.232	0.656	0.336
Root MSE	0.767	0.688	0.630	0.901

*Significant at the 10% level; ** significant at the 5% level; and *** significant at the 1% level

⁺ Spatial autocorrelation in our OLS results is tested for using *Moran's I* and *Lagrange Multiplier* tests and the hypothesis that there exists spatial autocorrelation can be rejected.

In analyzing the Latin Arc, it is noteworthy that *the share of urban fabric* shows a positive effect, as expected. It means that provinces with a dense urban fabric grow more; generally speaking, economies of agglomeration and network effects emerge, overweighting possible problems of excessive crowding and congestion.

In recent years, tourism has become an important growth engine thanks to enhanced international openness, booming geographical mobility, cheap air fares and rising income levels in many countries. Unexpectedly, *the endowment of touristic structures* is negative and significant. In spite of the positive effect of the variable multiplied by the dummy "agglomerated", indicating a positive effect of urban tourism, the overall effect remains negative. A possible reason for this effect is an excessive increase of touristic structures in rural regions, not adequately matched by a proportional increase in touristic flows.

As regards *human capital*, as expected, we found that the migratory balance has a positive and significant effect, as well as the share of people with less than 20 years. However, this latter independent variable is slightly significant for all countries as a whole.

The result on *services employment* is quite surprising because it shows a non significant influence on GDP growth in the Arc-Latin countries, with the exception of Spanish urban areas.

An interesting result is linked to *the share of craft and related trade workers*. In fact, it is strongly positive and significant in "Mega cities", signalling that these areas are the best places for self-

employment, thanks to their market dimension and the possibility of exploiting their relational capital.

In the next paragraphs the territorial capital elements are analysed in the results country by country.

France

In analyzing the elements of territorial capital in French provinces, the importance of sectoral specificities in explaining the differential growth rates emerges. In fact, *migratory balance* is the only element not belonging to this set of factors.

An interesting result is linked to *the share of craft and related trade workers*. Even if it is not significant as a whole, it is strongly positive and significant in “Mega” cities, signalling that these areas are the best places for self-employment, thanks to their market dimension and the possibility of exploiting their relational capital.

Of some interest is also the negative and significant sign of *service employment* in French coastal provinces which is probably correlated with the negative impact of the endowment of touristic structures.

According to the idea that the stock of public capital matters in explaining the evolution of productivity and that basic infrastructure (mainly in transport, water and energy) shows the closest relationship to productivity (Aschauer, 1989), the positive effect of *rail infrastructures* on differential growth rates should not be surprising.

Finally, in analyzing *cognitive and human capital*, migratory balance was found to have a positive and significant effect. This result reinforces the idea that the immigrant workforce generates income for the host areas. Particularly in a context of rapid population ageing where demographic factors may act as a constraint on labor markets, in-migration plays an important role in driving economic growth.

Italy

While in France sectoral specificities represent relevant explanatory elements of province differential growth rates, in Italy the same role is played by the territorial structure: it is fundamental in explaining differential growth rates and also in diversifying the impact of sectoral specificities. Moreover, *cognitive capital* also plays a role through the *share of young people* and the *share of high-level functions*.

As in the Latin Arc, the share of the endowment of touristic structures is negative and significant.

In this country, the spread of globalization apparently generates a twofold effect. On one hand, in case manufacturing activities are coupled with an urban or metropolitan environment (second-rank cities and metropolitan areas), there appears a strong positive effect on total growth rates. Evidently, these territories look to be the best suited and equipped to manage globalization processes with success. On the other hand the effect is weaker in manufacturing areas with low or intermediate technologies and a relatively high labour intensity. This twofold effect seems to be caught by our results showing that the share of *industrial employment* has positive and significant effects in agglomerated province, but a negative effect as a whole.

Our results seem to confirm previous results on Italy in which infrastructure does not affect growth (Forni and Paba, 2000). Actually, it is interesting to underline that *rail infrastructures* have a strong, positive and significant effect on differential growth rate of rural provinces, showing that peripheral areas benefit from public investments.

In analyzing *cognitive capital* in Italy it was found that the share of *people with less than 20 years* has a positive effect on province differential growth rates. This is due to the stagnation of demography and the intensification of the ageing process that also affect the role of young people in economic growth. In fact, young people become a competitive advantage, because they are the most productive part of the population.

With respect to high-level functions, the proxy *share of managers on total employment* is used. Our results show that it positively influences the differential growth rate of a province compared to its region, supporting the hypothesis that high-level functions play a relevant role in economic growth (Affuso et al., 2010).

Finally, the condition of coastal province has a positive impact on differential growth rates, probably rebalancing the negative statistical effect of tourist infrastructure.

Spain

Differently from the other two countries, the territorial elements explaining differential growth rates in Spain belong to all four sets of factors.

Transport infrastructure also plays an important role here. Our results show that *road infrastructures* affect positively the differential growth rates of Spanish provinces. This result is in line, for example, with the findings of Holl (2004): she finds that in the context of a country such as Spain, where the motorway network has only been developed recently and where considerable inter- and intra-regional differences exist, access to road transport infrastructure plays an important role in manufacturing plant location, and that motorways affect the spatial distribution of new manufacturing establishments by increasing the attractiveness of areas close to the new infrastructure.

Differently from the other countries of the Latin Arc, in Spain, and in the Catalonia region in particular, the *young age of the population* (sustained natural growth and positive migration balance) favours further population increase and limits the ageing process. Indeed, between 2000 and 2008 average population growth has been above 1.5% per year only in Spain and other two EU member States. In this context, we found that, also inside Spain, the effect of young population age is positive and significant on the differential growth rate, as well as the migratory balance.

The result on *service employment* shows a significant and positive influence on GDP growth in urban provinces. The positive sign is certainly linked to the present economic transformation towards the service sector.

The *participation growth rate* in the European elections is not significant in Italy and France, but it is strongly significant and positive in Spain.

The effect of the share of touristic structure is interesting because it is unexpectedly strongly positive in Spanish rural provinces, probably showing a new type of tourism, far from cities and close to the natural world.

In the following Map 1, the forecasted average annual differential growth rates of Latin Arc provinces with respect to their regions in the period 2005-2025 are charted, as they were projected according to a reference “after crisis” scenario in the full project already mentioned (ESPON, 2010).

4. Policy implications

The present post-crisis context of advanced economies is deeply characterized by a re-launch of public intervention in the economic field, in the form of:

- rescue policies, especially in the financial field,
- short-term, anti-cyclical policies, addressed towards the boosting of internal demand and mainly involving the building, construction and infrastructure sectors,
- drafting new rules and regulations mainly concerning the control on financial risks and most speculative financial products,
- long-term, structural policies addressed towards the strengthening of production sectors and their orientation towards new technologies and new production paradigms.

One of the most relevant efforts in economic policy making for the years to come concerns – according also to EU suggestions – the strengthening of the link between short and long-term interventions, to be achieved through what are increasingly called “smart investments”. The general aim should be to revitalize internal demand while at the same time boosting local and national competitiveness of the production fabric.

The necessary structural policies become central, because they orient in a consistent and synergic direction both public and private investments. But linking short and long-term goals and tools is not the only request for effective economic and structural policies. A similar consistency is requested among the actions of different government levels, from Community to national, regional and local. This goal can be achieved through explicit coordination efforts (“multi-level governance”) or implicit synergetic behaviour, each policy layer operating with its own instruments and inside its own competences with a full complementary attitude. This requested cooperative behaviour implies, in operational terms, two main elements:

- a strong permeability between policy layers, in particular linking together top-down processes of policy design, programming and financial support with bottom-up processes of project design and operational implementation; and
- the relevance of local policies, acting on the different aspects of territorial capital and implemented through inclusionary processes of vision building and project elaboration.

The main areas of policy design and implementation refer to two main fields: (aggregate but also local) demand policies and (regionalized) supply policies.

Demand policies.

- a. The most urgent part of demand policies concerns the design of an exit strategy from the present deficit of Member States budgets, reducing reliance on public expenditure. Direct public intervention through public demand should be substituted by less expensive, indirect public expenditure - e.g. in the form of incentives to private demand - or by appropriate regulatory policies. This could be achieved in the fields of building and construction, through incentives and cautious de-regulation policies; in the case of those sectors in which still monopoly positions persist, like in telecommunications and many private, trade and professional services; in the support to new demand fields, like cultural and education services, more than simply trying to force an anticipation of private expenditure in durable goods, like cars and electrical appliances.

- b. The creation of new sources of aggregate demand, like the opening up of new international markets in developing countries. This strategy implies trade agreements with these countries, concerning both their internal markets and the EU market, e.g. in the agricultural products field; support to their development policies, through multiple forms of cooperation; in case of emerging countries with huge surplus in trade balance, joint international effort towards an agreement on a re-evaluation of their currencies.
- c. The full support to the launching of new production paradigms, implying multiple technological advances, multiple applications in a wide array of sectors, multiple possibilities of product innovations. The case of the green economy paradigm is the perfect example nowadays: its emergence could be supported by appropriate environmental regulations and some public financial support; it encompasses a wide spectrum of innovations, touching sectors like energy production, building and construction, advanced R&D and manufacturing activities, transport and agriculture. In the last case, an interesting example concerns the recent spread of the “zero-km agriculture” model, which implies only a change in public perception and preference and allows achieving important reductions in transport emissions and costs, new agricultural organization and local markets, easier defence of peri-urban agricultural land against urbanisation and real estate speculation.
- d. The conquest of new internal and international markets through enhanced competitiveness of local production. Appropriate strategies at the macro-economic level concern cautious wage increases, (facilitated) private investments in technology, organization and management culture, focalization on advanced and excellence production. This strategy, though, can be widely supported by supply actions, implemented mainly at the regional and local level.
- e. A smart utilization of existing public procurement of goods and services, although due to shrink, for the creation of an initial market for advanced, environment friendly products, in the building and construction field, in advanced telecommunication networks and services, in the provision of many e-services like health, social assistance, e-governance in general.

Supply policies

Supply policies mainly concern the efficiency and innovativeness of the production fabric, which, on its turn, depends widely upon national context elements but also, and particularly, upon local context elements.

National policy actions concern the general cultural and educational context of countries, the main internal infrastructure networks, the general regulatory framework in the field of anti-trust and land-use controls, the structure of industrial incentives and regional policies. All these elements are particularly relevant in the achievement of the general goal, already mentioned, of driving a fast rescue from the crisis reorienting production towards more advanced and more innovative sectors, products and firms. Selective fiscal policies, allowing a de-taxing of firms investments but also far-looking regulatory policies in the fields of environmental characteristics of production processes, products and living standards (heating, mobility, energy production) may widely help the necessary inter-sectoral reallocation of resources.

The second task assigned to these national, supply-side policies concern wide investments with an inter-regional interest. Cooperation among regional governments (or among states in federal systems) looks particularly difficult to achieve: in the provision of large infrastructure networks, in the management of large river and hydro-geological basins, in the design of integrated, network strategies for tourism.

In this field, the role of national governments is still crucial, coupled by a relevant lobbying role of leading regional governments. An important case was found during this research work: the transport integration of the Latin Arc regions. In fact, the western Mediterranean macro-region, in spite of the many common characteristics and the sharing of the sea resource, still shows a striking fragmentation in terms of mobility infrastructure (and consequently, in terms of economic integration). This fragmentation is even more striking if compared with the clear inter-regional and also inter-national integration strategy pursued and implemented in the northern part of the EU, in the area of the large, leading capital city-regions (London-Paris-Bruxelles-Randstad Holland-Frankfurt), and with the historical territorial integration of the large central European axis running along the Rhine, the so-called “blue banana”. In particular, the condition of the rail infrastructure is not satisfactory at all: for a long time, technical problems between the French and Spanish rail systems, difficulties in the Liguria and southern Italian regions, lack of priority in the French southern east-west axis, clear priorities given, in almost all countries to north-south connections, linking the large Mediterranean ports with their continental hinterlands; all this has prevented the realization of an efficient Mediterranean network, reinforcing the historical lack of cooperation among the European southern regions.

For a long time, similarities among these regions were felt as more important than potential complementarities, and this led to explicit competition: in the field of tourism, maritime transport, agriculture. Nowadays, an increasing differentiation is emerging – among regions and among cities – potentially leading towards a deeper inter-regional specialization and consequent integration of the respective markets. The case is also present for exploring deeper inter-regional co-operation, in the form of the creation of “synergy networks” (Camagni, 1993; Camagni, Salone, 1993; Camagni Capello, 2004): between ports, with a commodity and branch specialization; in the spheres of tourism, building – and selling in the global market – integrated “itineraries” in both maritime cruise and city/cultural tourism; among knowledge centres, for cooperation in R&D and advanced education.

But another relevant case for supply-side policies implies important responsibilities for regional and local governments. Here the focus of actions refers to the accumulation and best utilisation of “territorial capital”, as indicated by an important statement of DG Regio of the EU Commission, still not sufficiently elaborated both by the scientific and the operative policy milieu: “Each Region has a specific ‘territorial capital’ that is distinct from that of other areas and generates a higher return for specific kinds of investments than for others, since these are better suited to the area and use its assets and potential more effectively. Territorial development policies (policies with a territorial approach to development) should first and foremost help areas to develop their territorial capital” (European Commission, 2005, p. 1).

4.1. Local and regional policies: acting through “territorial platforms”

As mentioned, regional supply-side policy strategies should address explicitly the conservation, best use, completion and improvement of the different forms of territorial capital. The main messages in this case reside in the necessity to better integrate the traditional spatial development policies into each territory, through an harmonious merging of material and immaterial elements, functional and relational assets, economic, social and environmental aspects; to create new cooperation networks among local actors and between them, policy makers and external bodies, acting on the creation of willing and cohesive local communities; to focalize on excellence assets in the spheres of knowledge, culture, natural and cultural heritage, and support innovation through synergetic behaviour (Camagni, 2008; Camagni, Maillat, 2006).

This integration strategy could be properly synthesized through the concept of “territorial platforms”, a concept used in recent times by the Italian Government in order to depict its territorialisation strategy of main infrastructure and development actions. Intervening through territorial platforms means exactly to aim at a full integration – in physical, economic, social and aesthetic terms – of new development projects into the local realm, engaging at the same time multiple local resources in supporting public action with all possible synergies.

In parallel with the four large categories of territorial capital already mentioned, we could speak about three main forms of “platforms”: infrastructure platforms, knowledge platforms and identity platforms (the fourth category of territorial capital, namely relational capital, providing at the same time a sort of precondition for success and a policy implementation method. The different possible actions pertaining to the three forms of platforms are symbolized in Map.

Infrastructure platforms

New infrastructure platforms will allow the achievement of some basic priorities for the Latin Arc, namely: improving the internal integration of the entire area; boosting external accessibility of each region with respect to the Latin Arc and external territories, in order to achieve enhanced competitiveness and attractiveness; reaching a higher internal efficiency of large metropolitan areas through a polynuclear urban structure.

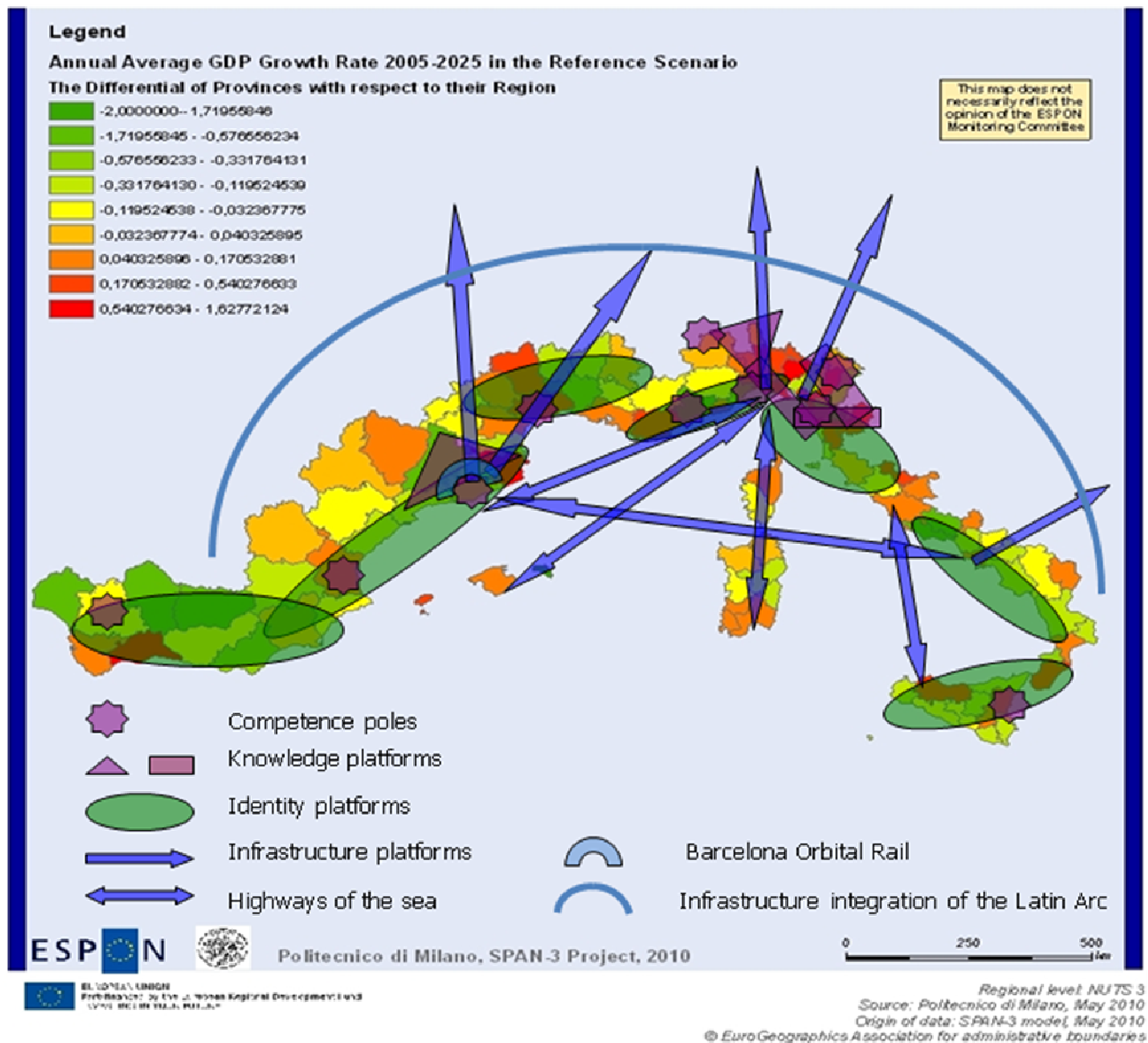
New infrastructure platforms encompass (Map 1):

- a better and integrated rail network along the entire Latin Arc, as already stated;
- the use of new “highways of the sea” in order to achieve the same goal;
- improved linkages of large metropolitan areas with the main European corridors: the Corridor of the Two Seas (Genoa-Rotterdam); links with Corridor 1 (through the new rail and road axis TI-Bre, Tirreno-Brenner from La Spezia to Parma, Mantua and the Brenner); Corridor 8 (Naples-Bari-Patras); improved infrastructure linking Barcelona with Marseille, Lyon, Turin and the Po Valley, Strasburg and Central Europe;
- an Orbital railway system internal to the Barcelona metropolitan area, allowing the structuring of a strong ring of subcenters.

Knowledge platforms

Knowledge platforms represent systems of cooperation networks between the main actors of the knowledge society: advanced research institutions, high education institutions, advanced and dynamic firms. Local firms are not only the recipients of the output of the specialised knowledge plexus (institutions working on scientific and applied research), but the carriers of long standing local production competence and know how, and therefore they represent a crucial partner in any innovation and technological advancement strategy. Particular attention should be paid by policy makers not just to achieve fruitful cooperation between these three local actors (in line with the up-to-now successful experience of the French “poles de compétitivité”), but also to monitor the persistence of local production knowledge which could be jeopardised by the selective delocalisation of parts of the production filières.

Map 1 – Policy actions and territorial platforms for the Latin Arc (*)



(*) In the map, annual average differential growth rates of provinces with respect to their regions are charted, as forecasted for the 2005-2025 period in a reference “post-crisis” scenario in ESPON, 2010.

Knowledge platforms may be structures through (Map1):

- the synergy and cooperation between the above-mentioned main actors of the knowledge society into what may be called the local “competence poles”. Examples of such existing or developing poles may be found in Sevilla (bio-technologies and links with the agri-food filière), Valencia (mechanical engineering for light sectors), Barcelona (wide array of sectors), Montpellier (bio-technologies and green technologies), Nice (ICTs), Genoa (ICTs and medical appliances), Turin (industrial automation), Pisa (advanced physical applications), Florence and Bologna (mechanical engineering, bio-medical appliances), Catania (ICTs);
- the enlargement of cooperation in the applied scientific field between local competence poles and similar but complementary realities in the wider urban region or even outside it.

This strategy could be realised engaging the entire Catalonian territory or the triangle Genoa-Turin-Milan;

- the inclusion of innovative firms in these cooperation agreements, working on the industrial “vocations” and the specificities of territories. Examples range from marine technologies, very advanced and incorporated by the local shipbuilding industry in the arc Genoa-La Spezia-Viareggio-Livorno, to mechanical engineering and industrial automation competences on the axis Bologna-Florence;
- the development of other filières, linking excellence local natural and productive assets with knowledge and competence poles. The agri-food-tourism filière supplies huge potential benefits in the Latin Arc area. Similar virtuous circles, building on local “vocations” and supplying wide potential synergies refer to the health and wellness filière, linking local know-how in medical technologies with the increasing specialisation in wellness services and accommodation facilities for an increasing population of European retirees. A last example concerns a possible increasing engagement in the green economy paradigm, particularly in the supply of bio-mass and solar energy production possibilities, linked with the production and servicing for new energy technologies.

Identity platforms

Identity platforms exploit natural wealth and local cultural heritage for the development of new economic and employment opportunities. Local identities may become effective “brands” for new, selective and sustainable forms of tourism, but also for the advertising of ancient local competences embedded in food and wine productions and in local handicraft products. An integrated strategy for linking up all the preceding elements with new physical accessibilities, careful site information, worldwide marketing and enhanced logistic receptivity may prove extremely effective.

Local identities have to be re-discovered and interpreted on a wide area level; single pieces of cultural heritage have to be linked with each other in larger and consistent “itineraries”, integrated in both information and logistic terms, in order to reach appropriate critical mass and new visibility on the international tourist market.

In the definition of identity platforms the role of citizens and local population is crucial, as they bring in their sense of belonging and place pride, their values and expectations, adding real culture and life to what could easily end up in a trivial commodification of the local atmosphere. Beyond that, they are the natural beneficiaries not just of the new employment potential, but of the improvements that a wise development strategy could bring in terms of accessibility and services.

As it is shown in Map 1, the possibility of devising identity platforms along the Latin Arc is wide and extremely rich: diversities are widespread, but also the commonalities brought in by history and geography are clear.

Conclusions

The aim of this paper is to develop a new econometric model at the province level to analyze differential growth rates of Southern European provinces with respect to their regions according to territorial specificities, i.e. their territorial capital. Territorial capital is the main theoretical element that drives the philosophy of the paper: it may be defined as the set of localised assets – natural,

human, artificial, organizational, relational and cognitive – that constitute the competitive potential of a given territory. Accordingly, the explanatory variables are grouped into four sets of factors: *infrastructure capital and settlement structure, sectoral and natural specificities, cognitive capital and social capital*.

The analysis was run on the provinces of the “Latin Arc” countries, Spain, France, and Italy. In particular, the model was estimated firstly for the three countries of the Latin Arc as a whole, and then country by country separately. Our findings have shown that the Latin Arc is not a homogeneous space, and that the elements of territorial capital explaining the differential growth rates among the three countries are different.

Indeed, it has been possible to show that in French provinces the sectoral specificities play the main role. In Italy, instead, the territorial structure is fundamental in explaining differential growth rates and also in diversifying the impact of sectoral specificities, while in Spain provinces the explanation of differential growth emerges from elements belonging to all four sets of factors.

From previous observations descends further, that although these three countries are considered to be similar in their characteristics, they are deeply different in the territorial elements explaining differential growth rates. In speaking about Latin Arc as a homogeneous space, this issue should be taken into account.

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Appendix

Tab. A.1. - Variables used by the MAN-3 model

<i>Indicators</i>	<i>Definition</i>	<i>Source of raw data</i>
GDP growth rate of province with respect to its region	The difference between Province (NUTS3) GDP growth rate and the Regional (NUTS2) GDP growth rate, in real terms in the period 2001-2005, computed from the nominal one, using national GDP deflators.	Eurostat
Differential of the share of urban fabric	The difference between the share of urban fabric at Nuts3 level and the share of urban fabric at NUTS2 level, 1986-1996.	Espon Database (Project 3.1)
Differential of the share of services employees	The difference between the share of services employees at Nuts3 level and the share of services employees at NUTS2 level, in the year 2001.	Eurostat
Differential of the share of industries employees	The difference between the share of industries employees at Nuts3 level and the share of industries employees at NUTS2 level, in the year 2001.	Eurostat
Differential of the share of managers	The difference between the share of managers at Nuts3 level and the share of managers at NUTS2 level, in the year 2001.	Eurostat
Differential of the share of craft and related trades workers	The difference between the share of craft and related trades workers at Nuts3 level and the share of craft and related trades workers at NUTS2 level, in the year 2001.	Eurostat
Differential of the share of touristic structures	The difference between the share of touristic structures per Km2 at Nuts3 level and the share of touristic structures perkm2 at NUTS2 level, in the year 2001.	Eurostat
Differential of the share of road infrastructures	The difference between the share of road infrastructures at Nuts3 level and the share of road infrastructures at NUTS2 level, 1986-1996.	Espon Database
Differential of the share of rail infrastructures	The difference between the share of rail infrastructures at Nuts3 level and the share of rail infrastructures at NUTS2 level, 1986-1996.	Espon Database
Differential of the share of people with less than 20 years	The difference between the share of people with less than 20 years at Nuts3 level and the share of people with less than 20 years at NUTS2 level, 2001.	Eurostat
Differential of the share of migratory balance	The difference between the share of migratory balance on population at Nuts3 level and the share of migratory balance on population at NUTS2 level, 1996-1999.	Espon Database
Differential of the growth of the electoral turnout growth rate in the European elections	The difference between the the electoral turnout growth rate in the European elections at Nuts3 level and the electoral turnout growth rate in the European elections at NUTS2 level, 1994-1999.	NSD European Election Database