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Emerging Topics in Italy: The Territorial Capital Value

Argomenti emergenti in Italia: il valore del capitale territoriale

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Abstract. Cohesion policy, focused on the relevance of the place-based approaches, suggests defining territorialised interventions, that is to say calibrated on the actual needs of geographical contexts as well as on specificities and local resources. The result is a rediscovered centrality of the concept of territorial capital which is deepened in this contribution, as per the methodological indications provided by the PRIN. In the first instance a brief review is proposed on the concept itself, aimed at highlighting the different theoretical interpretations present in the literature and in the policy documents, on an international / national and local scale. Subsequently some possible territorial capital measurement criteria are considered in the perspective of being able to use them in an empirical research phase that imposes the concrete choice of measurable indicators. Finally, some examples of regional ex ante analysis presented on the basis of selected indicators (as pertinent to the topic and measurable) and applied to the national scale are presented.

Keywords: territorial capital, place-based development, cohesion.

Riassunto. La politica di coesione, incentrata sulla rilevanza degli approcci place-based, suggerisce di definire interventi di tipo territorializzato, ovvero tarati sui bisogni effettivi dei contesti geografici oltre che sulle specificità e sulle risorse locali. Ne deriva una ritrovata centralità del concetto di capitale territoriale che in questo contributo è approfondito come da indicazioni metodologiche fornite dal PRIN. In prima battuta è proposta una breve review sul concetto stesso, finalizzata a mettere in evidenza le diverse interpretazioni teoriche presenti in letteratura e nei documenti di policy, a scala internazionale/nazionale e locale. Successivamente sono analizzati alcuni possibili criteri di misurazione del capitale territoriale, considerati nella prospettiva di poterli utilizzare in una fase empirica di ricerca. Sono presentati, infine, diversi esempi di regional ex ante analysis formulati sulla base di indicatori selezionati (in quanto pertinenti con il tema e misurabili) ed applicati alla scala nazionale.

Parole chiave: capitale territoriale, sviluppo place-based, coesione.
1. Introduction

The theme of territorial capital has regained adequate centrality thanks to a conceptual renewal that, by reviewing its meaning, has allowed to grasp its complexity and opportunities in a strategic vision of cohesive development (Bonora 2001; Dematteis, Governa 2005; Camagni 2009a, 2009b; Capello et al. 2009; Fratesi, Perucca 2014; Prezioso 2018).

The relevance of the theme derives from its intrinsic nature that can be attributable to the set of territorial, material and immaterial components, which, far from being considered in a decontextualized and, therefore, abstract way with respect to the places, must be able to identify the local specificities/diversities and used for the profitable activation of cohesive processes of value creation (Davoudi 2005).

On this basis, the research group, which carried out a specific in-depth study of the topic, considered it useful to add a premise that could adequately place the territorial capital within a more articulated list of concepts, which includes complementary topics such as cohesion, competitiveness, sustainability, territorial diversity, inclusion, equity, social inclusion, inner areas, internal areas, territorial cohesion, territorial capital, green economy, productivity or Territorial Impact Assessment, often included in policy documents as well as in those of the European agenda.

From the list of concepts, it has been developed an organization chart, aimed at repositioning, in a logical, consequential framework, the different pillars and in which the territorial capital is placed (Fig. 1).

The proposed framework is based on the following considerations: starting from the assumption that cohesion is the primary objective to achieve, it seemed possible to consider territorial diversity and territorial capital as the starting conditions of a process aimed at reaching cohesion.

Sustainability and the green economy represent the guiding principles of the process. Equity, inclusion and social inclusion must be set as conditions to reach and seek. Productivity and competitiveness can be considered as the levers of the territorial capacity, allowing it to act towards cohesive development models. This structure, which assumes the place-based vision as an intersectoral conjunction, can be adequately applied to the territories using TIA analysis and evaluation mechanisms, since this instrument can be applied to the different scales. Further details can be predicted using a quali-quantitative analysis methodology for more specific territorial portions, such as inner or internal areas.

The proposed conceptual scheme was the reference framework within which the research group investigated the topic of territorial capital. The study started with a brief review of the concept of territorial capital and its importance in the development of place-based policies, in literature and in policy documents, on an international/national and local scale. It emerged that the widespread reference to the subject in the main political documents, at different scales, is accompanied by an equally wide range of studies (territorialists and others) that have dealt with the issue, arriving at conceptual formulations of great interest, although autonomously exhaustive.

With respect to them, the working group has formulated its own definition of territorial capital that is configured as a set of physical-environmental and socio-cultural, material and immaterial, territorially rooted elements. The different components of the territorial capital can assume a different relevance locally, according to the choices of the local community and the value attributed to them.

In a nutshell, the territorial capital and its various components can, if recognized and activated by the local community, trigger processes of value creation, generating both economic benefits and cultural-identity values, capable of translating into new opportunities for the established community (territorial resources vs. territorial heritage).

Afterwards, the work focused on the delicate matter related to the measurability of territorial capital and, as a consequence, on the need for identifying and choosing indicators that could be used in an empirical phase of territorial analysis.

On the basis of the obtained results, some indicators were chosen, as considered measurable at the required scale and available for a complete coverage at national level, selected as adequate to represent specific aspects of territorial capital. For this purpose, some maps have been elaborated and presented, in order to illustrate some aspects of the regional *ex ante* data analysis.
2. The Territorial Capital concept in literature

The territorial capital concept summarizes a complex of ideas developed over the last twenty years, starting from a consolidated scientific research of various disciplinary origins for the development of innovative territorial policies. Proposed for the first time by the OECD (2001) and taken up by the Directorate General of Regional and Urban Policy of the European Commission (EC 2005a, 1), it denotes a systemic, relational, progressive vision of the territories for the implementation of strategies that enhance and transform their ability to compete in mutual enhancement. It is an advantageous approach for the entire economy, if we share a “generative” vision of economic development as a process that evolves “from the bottom”, and not defined quantitatively at the macro level and subsequently attributed, for quotas, to individual territories in a “competitive” vision (Cuculelli, Mazzoni 2003, 137). Its methodological assumptions have contributed to modifying the most recent theory of regional growth and development, favouring the adoption of approaches based no longer on the implementation of demand (Keynesian approach) but on the possibilities of offer of an economic system.

Camagni (2009b, 69) quotes some theories that preceed and prepare this paradigmatic reversal: bounded rationality and decisions in conditions of uncertainty; economic “theory of contracts”; Italian school’s cognitive approach to economies and synergies of productive district; GREMI (Group of European Economists) theory of milieux innovateurs; concept of untraded interdependencies of Storper (1995). Perspective change implies a replacement of traditional functional approaches and deterministic cause-effect relationships with complex, inter-subjective links based “on the ways in which economic agents […] are capable of cooperative and synergistic behaviours”. In this manner, “the definition of possible development strategies for each region, city or territory must necessarily rely on local assets and potential and on their full – and wise – utilization”. In short, on what is known today as “territorial capital” (Camagni 2009a, 66-69).

Thus, the concept is very dynamic and does not have a univocal definition. Its main meaning derives from a great diversity of the territories, as result of centuries-old processes of synergistic, mutually evolutionary interaction between community and environment. Therefore, in the last fifteen years, the territorial capital has assumed relevance because of the need to design place-based development policies (Barca 2009) which, fleeing from spatially blinded models, recognize the diversity of the territories as a potential fulcrum of their economic development, focusing on the enhancement of local resources and specificities. These one denote material and immaterial riches: even more after the enunciation of the concept of territorialisation (the process of knowledge and control’s nature by man) (Raffestin 1984; Turco 2007, 2010), the territory is a “composite set of political, economic, social and natural values and resources […] which contribute to its characterization and to define its identity” (Martini 2010, 86). Thus, many economic studies consider as territory’s parts local knowledge, vocations, institutional and relational skills, human capital, innovative capacity (Camagni 2008, 2009a; Capello et al. 2009), i.e. everything that from the end of the last century onwards has been reworked as social capital (Bourdieu 1984; Coleman 1988; Putnam 1993; Gidwani 2002), relational capital (Camagni 1999, 2004, 2008; Camagni, Capello 2002; Fratesi, Senn 2008) or, in a somewhat different context, as knowledge assets (Foray 2000; Storper 2003; Camagni, Capello 2002; Camagni 2004). This varied and broad set of assets, at first, makes up the territorial capital: it is a set of all material and immaterial endowments characterizing a territory.

Camagni (2009a, 71), therefore, proposes an articulated taxonomy of the territorial capital’s components, based on two dimensions: rivalry (public and private goods; intermediate class of club and impure public goods) and materiality (material, or hard; intangible, or soft; intermediate class of mixed goods, with material and immaterial elements together). While the 4 extreme companies and social actors, generating a cumulative process of learning that strengthens the innovative capacity of the territorial system.
classes (high and low rivalry, tangible and intangible assets) make up the so-called “traditional square”, the 4 intermediate classes and the central class represent the “innovative cross”, i.e. the most interesting and modern elements of territorial competition. From their intersection different categories of territorial capital are obtained, summarized in four macro-classes (natural and cultural, settlement, cognitive, social capital), likely to condition territorial performances and development through “new forms of local governance [...] that may prove to be even more effective ex-post than the traditional methods of government” (Camagni 2009a, 73, 88). This political and economic approach, so, suggests how to best use territorial resources starting from a new role for local or regional decision makers, as facilitators of relations and cooperation ties between actors, to regional, inter-regional and inter-national scale, to achieve a high level of economic competitiveness.

From a geographical point of view, the “territorialist school” faces the territorial capital concept in a more complex and integrated way.

First of all, with reference to the economic potential of the territory, due to the recognition and enhancement of the territorial capital, it is necessary to report the role of territorial capital within the contributions produced by applying the SLoT (Local and Territorial Systems) methodologies. It proposes an interpretative model composed of a set of elements (internal subjects, their networks, material and immaterial components of the local milieu), relations between these elements (social and territorial ties) and relations with other systems (supra-local networks, natural and cultural environment) characterized by a local and a territorial level. The local level is one in which physical proximity is a necessary (even if not sufficient) condition for from the place to face-to-face informal relationships between the subjects, good knowledge and sufficient mutual trust, sharing of experiences and “contextual knowledge”, training of collective identities. The territorial dimension from the objective of enhancing local territorial capital, as a common good formed by a set of local elements and local conditions (tangible and intangible).

On a homologous level, the territorial capital is considered a “localized set of common goods producing collective advantages that cannot be divided and whose is not possible to appropriate privately” (Dematteis, Governa 2005, 27). Its components, collected in four active and passive categories, are not replaceable or reproducible in the short term. To activate sustainable local development processes, in fact, it is necessary “to mobilize the specific resources of one’s own territory, without reducing the territorial capital: neither the local capital nor that of other external territories involved in the process” (Id, 28). More recently Poli (2015, 123) has distinguished an economic and an “ontological” dimension of territorial capital, through the territorial heritage concept, a “useful fertilization between the words of heritage (Choy 1995), territorial capital (OECD 2001) and territorial resource (Corrado 2005; Gumuchian, Pequer 2007)”, explored in particular by the Grenoble school (Lévy 2003).

The first perspective, according to a “productivist” territorial vision (Berque 1990), relates the territorial capital and its resources “to having, to what produces utility (of use or exchange)”. The second, “beyond the immediate use of the territorial resource and the capitalization process itself, which may not have been activated at a given historical moment”, relates instead to being. The territorial heritage, in fact, has “a value of existence in itself because includes the non-negotiable identity values and the intrinsic rules of construction of an asset that the inconsistent use could destroy” (Poli 2015, 128). In other words, it exists beyond economic capitalization. Nevertheless, “it can be the basis and at the same time the driving force for the identity and economic strengthening of a local context”. It is a goal needing a “proactive capitalization”, capable of “linking the binomial territorial resource-territorial identity” (Id, 129-130).

Its factors are 4: one or more territorial assets identified by the community; a process activating territorial resource components, according to different integrated, cultural, symbolic and economic trajectories; a simultaneous process of strengthening territorial identity, in presence of symbolic, cognitive, contextual knowledge activities; a creation of territorial added value, as centre of new opportunities for the local society, not reducible to an economic valorisation of territorial resource. So, since the same economic policies, implemented in different territories, have different impacts, the territorial capital needs analyses of local dimensions in a systemic key. It is true above all in Italy, considering diversity of its geographical areas, their internal imbalances and the need for a better understanding of the interactions observed in the different regions between European developments and local trends (Prezioso 2006). Not by chance, the European Spatial Planning Observatory Network (ESPON) highlighted the existence, by regional policy-

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2The active categories are relational goods incorporated in local human capital (cognitive, social, cultural variety, institutional capacity). The passive ones are three: conditions and resources of the natural environment (geographical position included); historical-cultural “heritage” (material and immaterial); fixed capital accumulated in infrastructures and facilities, considered as a whole for the externalities derived from it.
makers, of “a clear demand for integration between the European perspective and their territorial development strategies and in the consequent policy actions” (D’Orazio 2010, 35). The European strategy, therefore, should start from a direct comparison with the different territorial realities and leave the programming of its directives to the policy makers, with different times and methods.

3. The Territorial Capital concept in planning documents

The term “territorial capital” appeared for the first time in a policy context within the European LEADER program, aimed at fostering development of rural areas. In the report prepared by Farrell, Thirion and Soto (1999, 19), the territorial capital is defined as the complex “of the elements available to the area, both tangible and intangible, which in some respects constitute assets and in others constraints”. According to these authors it “refers to the things that constitute an area’s assets (activities, landscape, heritage, know-how, etc.) and are not part of an accounting inventory exercise, but are intended to identify the distinctive features of an area whose value can be enhanced” (Farrell et al. 1999, 19).

Deeply related to the concept of territorial capital are the notion of territorial project and the search for territorial competitiveness, since, according to Farrell, “each area endeavours to find its place by focusing on access to markets, its image, its potential to attract people and businesses, its ability to renew its governance, etc.” (Farrell et al. 1999, 19).

In other words, the territorial capital represents, in the LEADER approach, the pillar around which to build a territorial project, i.e. a project that, starting from the legacy of the past, is able to imagine and to shape the future in a shared way thanks to the establishment of virtuous interactions at different geographical scales (on a local scale, but also with the outside world).

According to Farrell the components of the territorial capital that can be used as levers in the competitive strategies for the territories are eight:
1. physical resources and their management – in particular natural resources, public facilities and infrastructures, the historical and architectural heritage;
2. the culture and identity of the area;
3. human resources;
4. implicit/explicit know-how and skills;
5. local institutions and administrations (governance and management of financial resources);
6. economic activities and networks of firms;
7. markets and external relations;
8. the image and perception of the area.

The concept of territorial capital was taken up by the OECD in the report Territorial Outlook (2001), with reference to the set of territorialized resources – unique assets – which can be used by to initiate endogenous development paths and reach higher levels of productivity, competitiveness and well-being.

The various assets identified in the report, listed in a rather non-systematic way, are attributable to three main categories: tangible assets, non-market interdependencies and intangible factors.

The first category includes “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” (OECD 2001, 15).

The second category concerns non-market 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)” (OECD 2001, 15).

The third category consists of intangible assets that are created thanks to the atmosphere that characterizes the different places defined in the relationship as “something in the air, which we can call environment or context which is the outcome of a combination of institutions, rules, practices, producers, researchers and policymakers, that make a certain creativity and innovation possible” (id., 15).

The European Commission also assigns a primary role to territorial capital. This has become a key concept within the European territorial agenda and cohesion policies. Each region, according to the European Commission’s Territorial state and perspectives of the European Union (EC 2005, 3), “has a specific territorial capital that is distinct from that of other areas and generates a higher return for certain kinds of investments than for others, since these are better suited to the area and use its assets and potential more effectively. (…) Public policies aimed at promoting territorial development and limiting disparities should first and foremost help areas to develop their territorial capital and to maximize their competitive advantage”.

This approach is taken up in the Territorial Agenda 2020 (EC 2011) which assigns great importance to the territorial capital of places to achieve the objectives of the Europe 2020 strategy. “Places – the document states
– can use their territorial capital to implement optimal solutions for long-term development and contribute in this way to the achievement of the Europe 2020 Strategy objectives” (id., 5).

Although it does not explicitly refer to territorial capital, the report *An agenda for the reform of cohesion policy* represents an important document, both on a European and national scale, for the operational translation of the concept in terms of policy. The place-based paradigm proposed by the economist Barca (2009) focuses, in fact, on the recognition of the specificity of places (“not everyone wears the same measure”) and on the need to direct public action towards targeted interventions, aimed supporting the advantages regional competitiveness and increasing the well-being and quality of life.

The theme of territorial capital is resumed in Italy in policy and planning documents, without, however, introducing major innovations or conceptual insights with respect to the theoretical corpus formalized in the European context.

Nevertheless, it is worth mentioning the National Strategy for Internal Areas (SNAI) which devotes great attention to the concept of territorial capital, interpreting it in a functional and relational sense.

The document (Barca et al. 2014) focuses in particular on the “unused territorial capital” present in the internal areas, read as a “measure of the development potential” of these difficult and vulnerable territories. In this document the term includes “natural, cultural and cognitive capital, the social energy of the local population and of potential residents, the productive systems (agricultural, tourism, manufacturing)” (Barca et al. 2014, 11).

This concept was also considered by the 2014-2020 Italian Partnership Agreement (DPS 2014), which in several points refers to the development potential inherent in the territorial capital of the internal areas and to the need to re-activate it, with particular reference to its intangible and relational components (i.e. human capital, social capital).

Although the territorial dimension of EU programs assigns a fundamental role to local development projects participatory and attentive to the local needs, the concept of territorial capital has not found great space or centrality in the planning activity at regional scale. This is what emerges from the analysis of planning documents proposed in the areas under scrutiny in our research unit: the Calabria and the Basilicata Regions.

For these areas, the examination of regional and local planning documents (Fig. 2) showed a weak focus on the topic.

In most documents, even those concerning European programs, there is no explicit reference to the term or the concept of territorial capital, although there is no lack of references to its specific components listed above. As for Basilicata, only the regional OP ERDF 2014-2020, in referring to SNAI, makes direct reference to the unused territorial capital of the internal areas (2 occurrences in the document). The enhancement of human capital is, instead, at the center of the OP ESF (16 occurrences in the text) and the Rural Development Program (RDP) EAFRD (33 occurrences). Alternatively, other components are mentioned, such as social capital, relational capital, natural capital (and biodiversity), without however explicitly defining the concepts.

The provincial structural plan of Potenza is an exception, as it recognizes “the potential for new development” of the territorial capital and its key role “for an ‘educated’ use” of the territory, i.e. for a use based on the cultural matrix of the places, on the irrepresible diversity of rural landscapes, cities and paths, on the identity of the forms, materials and colors of the territory” (Provincia di Potenza 2009, 31).

The stated objectives of the plan, reported below, are permeated by the concept of territorial capital in all its components:

– the diffusion of a widespread development culture, aimed at enhancing the elements of identity and belonging;
– the strengthening the elements of institutional and social cohesion;
– the identification and the enhancement of the characters and components of territorial social capital;

Figure 2. The local-scale planning documents examined by the local research unit⁸. Source: authors’ elaboration.

the focus on the needs and the demands by the territory;
the consolidation of local relationship networks with other territorial systems.

With regard to Calabria, in the context of local planning (regional and provincial plans) an explicit mention to the territorial capital is present in the Regional Framework of the Landscape. The document plan interprets the landscape and the territory as an *unicum* on which “the quality of life of the citizens (...) and the balanced and sustainable development of their living spaces” depend (Regione Calabria 2013, 10) and, in this perspective, it recognizes the need to “focus on the ‘territorial capital’ (...) in all its articulations”, including cultural, landscape and natural heritage, territorial excellences, productive vocations and all the elements that contribute to the strengthening of territorial values (Regione Calabria 2013, 11). Conversely, the concept is not explicitly mentioned in the Provincial Coordination Plans (PTCP), while in the documents relating to the 2014-20 EU programming period, the only reference to the notion of territorial capital “is contained in the Strategic Orientation Document that defines it “a paradigm of multiple values” (Regione Calabria 2015a, 109). Direct references to natural, cultural and human capital are more frequent.

The weak attention paid to the topic by local institutional actors is confirmed by the results of the direct survey conducted by the research unit of Salerno in the first months of 2017, with the aim of verifying the level of familiarity and knowledge of the key concepts (Preziuso 2018) by regional and local territorial stakeholders active in the areas of competence. One of the queries in the administered questionnaire concerned the concept of territorial capital. The 10 respondents, active in the public or in the private sector at a regional or local scale (policy makers, experts and practitioners in the field of EU financed local policies, administrators), were asked to define the notion of “territorial capital” and to indicate policies and actions that could be ascribed to the conceptual framework educed by the term.

The answers given by the institutional actors who participated in the survey (2 regional managers and 2 heads of the provincial political community offices) were largely incomplete: they did not provide any definition of the notion, they did not or very imprecisely identify policies and actions related to the concept. Only in one case the level of knowledge/familiarity of the notion was quite satisfactory, although far from the complexity of the concept.

4. Measuring the Territorial Capital

The evolution of the concept of territorial capital reflects its complexity in the definition of the empirical factors which can quantitatively assess it. As already seen, in fact, more intangible elements have recently been added to traditional tangible assets. Thus, indicators of consolidated use in territorial analysis are integrated with more complex elements of measurement (such as tradition, “genius loci”, culture, territorial identity, territorial narrative, etc.), which can contribute to better explain the potential and the diversity of the territories.

The issue of territorial capital with specific reference to the aspects of its measurement has been proposed by various studies that have hypothesized the decomposition of the general concept into “thematic dimensions”. Five of these studies will be examined below.

The first study, drafted in 1999 by Farrell (Director of the European LEADER Observatory) is the one that, addressing the broader concept of competitiveness, introduces the concept of territorial capital as “the analytical description of the territory made by those who are looking for a margin of maneuver to act” (Farrell et al. 1999). This approach links the definition of territorial capital to that of territorial project (Fig.3), focusing...
on the competitive placement of the territory in the markets. In this view, the territory is rooted in its own history, but also depends on the idea of the future territory.

The territorial development is thus conditioned both by commercial exchanges and by the local milieu. Eight analytical components are therefore proposed, closely related to the eight points that determine the development opportunities of a territory, also described in the “Methodological guide for the analysis of local innovation needs” (LEADER European Observatory 1998). These components are: 1) physical resources and their management; 2) the culture and identity of the territory; 3) human resources; 4) the know-how and skills, as well as the mastery of technologies and skills in the field of research and development; 5) local institutions and administrations, political “rules of the game”, collective operators and, more generally, what is now known as the “management of public affairs” of the territory; 6) activities and companies, their geographical concentration and the way in which they are structured; 7) markets and external relations; 8) the image and perception of the territory. In particular, this study focuses on the Institutions and all the active subjects involved in the territory, their interests, the perception that they have of their own territory as well as the financial commitment that the local operators are ready to assume in the planning.

Also leveraging on the issue of territorial competitiveness, a second study edited by Blangiardo (2012) focuses on a more restricted field of analysis, concerning in particular the demographic characteristics of human capital and the population dynamics, according to a model with 28 indicators, grouped within five sub-dimensions: 1) attractiveness and demographic growth; 2) births and generational turnover; 3) seniority and social burden; 4) multiculturalism and immigration; 5) education and human capital.

The third study considered is that of Camagni and Dotti, who – in the volume “The Italian crisis in the global world, Economics and Northern society” (2010) – articulate the analysis of territorial capital into seven components, deriving from the assumption that “the concept of territorial capital unifies all those diversified assets that can guarantee competitiveness, attractiveness and well-being to a territory”: a) productive component; b) cognitive component; c) social component; d) relational component; e) environmental component; f) settlement component; g) infrastructure component.

The fourth proposed study is a 2012 report by Brasili for the RegiosS Association, which adds an octave to the previous seven dimensions, the “human capital”, essentially measured in terms of education indicators. This report also tries to detail the variables representing the different dimensions of territorial capital, especially in relation to the availability of data at regional level, thus reaching the definition of 43 indicators:

a. **Human capital**: (1) Participation rate in upper secondary education, (2) Abandonment rate at the end of the first two years of upper secondary schools, (3) University attractiveness index, (4) Graduates in science and technology;

b. **Cognitive capital**: (5) Research and Development employees per 1000 inhabitants, (6) Innovative capacity, (7) Patent intensity, (8) Degree of dissemination of theatrical and musical performances, (9) People reading books, (10) People who have visited museums and exhibitions;

c. **Social capital**: (11) Voluntary activities, (12) People who have paid money to associations, (13) Ability to offer regular work, (14) Frequency with which we inform ourselves or talk about politics, (15) Number of environmental crimes;

d. **Infrastructural capital**: (16) People using buses, trolleybuses and trams satisfied with the frequency of the trips, (17) People using the bus satisfied with the frequency of the runs, (18) Degree of satisfaction of the rail transport service, (19) Index of utilization of railway transport, (20) Use of public transport vehicles, (21) Motorway network, (22) Railway network in operation, (23) Passengers on scheduled and charter flights;

e. **Productive capital**: (24) Entrepreneurship Index, (25) Labour productivity in industry in the strict sense, (26) Employed in industry out of total employment, (27) Energy intensity of industry;

f. **Relational capital**: (28) Ability to export, (29) Degree of openness of markets, (30) Ability to export in sectors with dynamic global demand, (31) Index of bank branch spread, (32) Number of Spin-off assets;

g. **Environmental capital**: (33) Air quality, (34) Expenditure for environmental protection, (35) Availability of urban greenery, (36) Use of plant protection in agriculture, (37) Separate collection of urban waste, (38) Irregularities in water distribution, (39) Interruptions of the electricity service;

h. **Settlement capital**: (40) Total density of the population of the municipalities, (41) New authorized dwellings, (42) New habitable sqm granted, (43) Degree of proliferation of new buildings.

Finally, a fifth study worthy of mention (Franzato 2009) emphasizes the contribution of “cultural capital”. Taking as a reference the study of the LEADER observatory coordinated by Farrell, it synthesizes the analytical components into four pillars (environmental, economic, social and cultural) and focuses on the details of the
resources (or clusters) that can be ascribed to each component. Of particular interest, as we said, is the attention dedicated to the resources associated with the cultural component of the territorial capital, in which the intangible assets are highlighted, the “genius loci” (understood as mentality, modus operandi, spirit of the place, characters and traditions), symbolic capital, local identity and the local milieu as “cultural and identity idiosyncrasy of the territory”, that is a path-dependent, specific and non-transferable resource.

In summary, the various studies agree on the centrality of human capital, examined according to classical indicators of measurement of the population structure, often in relation to the social structure and skills (which in some cases become cognitive capital, sometimes “know-how”). Relational capital also becomes central but is variously understood and measured (both in reference to markets and businesses, and in relation to multiculturalism, therefore with greater attention to the community of people). The component concerning physical resources, or environmental capital, is always present, sometimes even contemplating the image of territory. The infrastructures as well as the settlement capital (also in terms of consumption of land as in Brasili’s work. See Brasili, 2012) always complete the analytical framework.

Especially the latest study, by Franzato (2009), emphasizes the weight of the cultural capital, symbol and identity of the territory, whose measurement is yet to be defined but which is certainly a component to be valued in analytical studies. In that study emerges the need to underline the intangible aspects of territorial development which is unanimously considered central for the growth of the economy and the consolidation of greater wealth and better standards of living (Panno 2011).

Thus, for example, in the document National Strategy for Internal Areas: definition, objectives, tools and governance⁹, some components such as historical-artistic capital, agro-systems, the protection of the territory, the “know-how” and the handicraft are described as “unused territorial capital”.

In all the works examined, the concept of territorial capital appears to be closely linked to the concept of territorial competitiveness. So, just as the reflections on competitiveness have been transferred from companies to the territorial systems in which companies operate (Schoenberger 1998), also the insights on the quantification of intangible resources is born in the corporate world, to interpret the complexity of the trajectories of development (Fig. 4) but occupies more and more space in the definition of territorial capital, in order to emphasize more its human and creative dimensions (such as cultural, cognitive, social and relational factors).

Thus, although no automatic mechanisms exist to give each territory a role within the global economy (Krugman 1994; Camagni 2002), the dimension of belonging, which concerns “those elements that allow the area in question to be part of a specific geostrategic grouping” (Caroli 1999), becomes central. The growing weight of the creative sectors in the economy has made the function of the territories central as places generating dynamic competitive advantages. Thus, the territories increasingly serve as both incubators of new ideas and catalysts of creative talents able to enhance them (Glaeser, Maré 2001; Bianchi, Ferrante 2008). Therefore, to express these competitive advantages, indicators related to research and development and the number of patents do not appear sufficient, but further indicators representative of all those sectors where the human factor is fundamental (such as culture, publishing, art or “know-how”) and knowledge, memory, creativity and the spirit of initiative take on a strategic value, are needed.

The abilities, the experience, the capability to face a crisis and the social and relational values, “skills” that are not perfectly transferable or rather difficult to transfer unless losing part of their value (Attanasio 2011), occupy a significant role in the definition of territorial capital. They are the most difficult components to intercept and assess because they do not concern the “terri-

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⁹ Draft Agreement transmitted to the EC on December 9, 2013.
tory” in the strict sense but the people who own them. Therefore, the greatest effort in identifying the variables and indicators of measurement of territorial capital must be directed to these latter aspects, which still do not seem to have found full definition.

5. Mapping ex-ante regional indicators: methodology and some examples

Using as a reference the conceptual positions of the analysis of territorial capital and the studies concerning its measurement, the application part of the research, as a whole, had the objective of identifying territorial indicators, measurable and available at national level and with an acceptable degree of updating, in order to analyse the territorial conditions, on an Italian scale, connected with the objectives defined in the Europe2020 perspective.

The measurement of territorial capital is based on three specific Development Determinants (Smart Growth – SG, Sustainable Growth – SuG, Inclusive Growth – IG), respectively declined in classes of categories and indicators specifically detected, systematized and mapped, in ex ante and ex post versions, at the scale of NUTS2 and NUTS3. The general research scheme also provides for the data acquired and processed with territorialized data according to advanced EU protocols (ESPON Database 2013, Prezioso 2018) to appear, identifying different types and geographical clusters and related policies.

In this regard some aspects must be specified.

- Starting from the widest configuration of data of interest for the measurement of territorial capital, taken from the literature and from the programmatic plans and coherent, against a wide range of interesting indicators, it was necessary to make a very strict selection because many indicators, interesting in co-inventive terms, were not (adequately) measurable or, if measurable, they were not a guarantee of a national coverage at the level of NUTS 2 and NUTS 3.
- The processing of the selected data which, in application of the STeMA framework, was carried out through the use of an application presented and described in the initial part of this Special Issue.
- The specific contribution focuses only on the ex ante process and uses the representation of three different indicators, one for each determinant, tries to provide evidence of the geographical divergences existing in Italy.

Among the discussed topics, the National Technological Clusters (NTC) was selected as indicator of the Smart Growth and potential coordination tools of the strategic technological areas for the country system and aggregation nodes of competences, proposals and projects. According with the idea that the development of the economy must be pursued through the competition of territorial systems and the participation of all public and private actors involved in research and innovation, the NTCs should act as multipliers of contacts and relationships, guaranteeing a systematic way to promote unequivocal agendas, in coherence with research and innovation needs for increased competitiveness.

The analysis of the eight Italian permanent NTCs, recognized as representative of the best models of public-private collaboration and characterized by a high level of internationalization, considers the regional institutions as formally involved in the NTCs as well as the provinces that host one or more coordination and management bodies.

Using the PRIN structure, in a synthesis matrix, the value 1 is assigned to the Institutes institutionally involved in the cluster and to the provinces that host the headquarters of the cluster management coordination bodies, whether public or private and value 0 to those that are not involved in the cluster (Fig. 5).

In the territorial distribution of the NTCs, at a regional level, the 38,1% of the NUTS 2 are classified with A value, bearing witness to a high performance of the indicator, 28,6 to the B class, while, respectively, 23,8% and 9,5 in C and D classes. Specifically, Lombardy is the most virtuous region, considering the presence of all 8 active districts, followed by Piedmont and Emilia Romagna with 7 districts. Aosta Valley and Calabria don’t host any district.

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10 Cf. Introduction of this Special Issue.
11 As example: Index of Centrality of the Cultural Heritage of the municipalities, assumed as $\sum (Pc \times 100/p)$, in which $Pc$ = number of elements by type of cultural heritage present in single municipality, P= provincial total for each province expressed in 4 classes (high, medium high, medium low, low) (Provincial structural Plan of Potenza, 2013).
At NUTS3 level, the provinces that host the headquarters of cluster management coordination bodies (public or private) reveal some significant trends.

On a general level, 40 provinces were classified with value A, while the other 70 received a value B. The resulting division into two classes only gives a territorial picture in which the weakness of some Regions in which no Province reaches the level A, such as Basilicata, Calabria, or Sardinia characterized by the presence of only one province on level A (Cagliari), or Sicily, where only two NUTS (Caltanissetta and Palermo) have value A.

The second indicator, analyzed by G. Iovino, was chosen in the Sustainable Growth determinant and regards Commercial Integration (CI). It is the result of the difference between exports and imports compared to regional GDP; expresses the correlation between Economic Interaction and Financial Interaction and constitutes the basis for a series of reflections on the current condition of the territorialisation process of internal areas and metropolitan suburbs in Italy, from the point of view of economic development and sustainable competitiveness. In particular, the indicator connects to the measurement of important variables, such as the functionality and accessibility of the regional and provincial territories (which in turn recall variables such as the topography and available infrastructures) and, consequently, the speed and transport costs of people and goods.

The cartographic representation of this indicator on a regional scale (NUTS2 level) and, in particular, on a provincial scale (NUTS3 level), highlights a “leopard spot” structure of its distribution on the national territory, which seems to indicate an overcoming of the classic dichotomy between the north and south of the country, revealing a series of more complex and articulated territorial imbalances within the same regional territories, made even more evident by the passage from the level of regional analysis to that of provincial ones (Fig. 6).

As for the latest data available for the calculation of the indicator at NUTS2 level, six regions (Piedmont, Veneto, Friuli Venezia Giulia, Emilia Romagna, Tuscany and Abruzzo), corresponding to 28.5% of the total, have the value A (= High); six others (Aosta Valley, Autonomous Provinces of Trento and Bolzano, Marche, Umbria and Basilicata) the B value (=medium-high); four (Lombardy, Molise, Calabria and Sardinia), corresponding to 19% of the total, the C value (=medium-low); five (Liguria, Lazio, Campania, Apulia and Sicily), corresponding to 23.8% of the total, the D value (=Low).

The third indicator is related to Early leaving from education and training (ELET), i.e. population aged between 18 and 24 who has only reached the eighth grade and does not attend any other training or schoolastic course—and, therefore, it does not complete the compulsory education required by law. It represents, a strategic indicator for assessing the quality of human resources in a territory, in promoting inclusive growth.

The data reflects the populousness of the considered area, so that the most populous regions/provinces...
tend to register the highest values and, therefore, they fall in the D class with the worst performances, i.e. with the highest number of dropouts (Fig. 7).

On a regional scale, the negative record belongs to Campania, with 94,000 dropouts equal to 16.2% of the national total. It is followed by Sicily, Lombardy, Apulia and Lazio, all of them falling into the class D, which overall accounts for almost 62% of Italian ELETs. On the contrary, the most virtuous Regions, those that, having a smaller number of dropouts, fall into class A (high performances), are the less populous regions (Aosta Valley, the two autonomous Provinces, Molise, Umbria and Basilicata).

By disaggregating the indicator on a provincial scale, the picture is more articulated, even if it is always strongly conditioned by the population of the provinces of reference. Not surprisingly, all the metropolitan cities fall into class D, with the exception of Venice and Bologna, which are in class C. Naples is the province with the largest number of dropouts, followed at a certain distance by Rome, Milan, Palermo, Catania and Bari.

6. Some policy suggestions

In relation to the conceptual and representative framework outlined above, some successful critical emerged.

First of all, the theme of territorial capital, in its conceptual meaning as well as in the variegated range of
analytical possibilities, leads back to an evident logical-conceptual complexity.

This versatility, however, is the element that allows the territorial capital to recover all the value of a geographical element which, despite its obvious flexibility, is suitable for being applied to a varied range of context, in order to facilitate the understanding and representation of territorial qualities.

Despite the great opportunities of a cognitive nature, instead, a widespread poor (institutional) awareness about the theme emerged clearly in:
- poor presence in the programmatic documents, that is a theoretical problem;
- little reference to measurability, that represents an empirical obstacle.

With respect to this main goals / objective of cohesion, it is necessary to start from the consideration of the territorial capacities to face the challenge. However, the analysis of the factors that determine it and the choice of the variables for its representation clearly reveal the need for further reflections on the approaches to its measurement and on the methods of its use to support development policies. This consideration derives from the circumstance that with reference to the local political documents in most cases there is no explicit reference to territorial capital while in some documents only specific components are recalled.

In addition to this it is not possible to neglect the problem associated with the difficulty of finding updated metadata on a sub-provincial scale.

In any case, the research follows the ability to delineate the geography of planning and the collective action of a territory, starting from the integrated social and territorial ties; identify the current state of these links and evaluate ex ante the possibility of activating the missing ones; evaluate the “territorial added value” of the projects in itinere and ex post; suggest the most suitable territorial governance architecture; evaluate the territorial sustainability of the projects (Bonora 2001)

The aim of this research is to provide cognitive frameworks to support policy makers towards territorial needs and place-based policies, and PRIN results seem to offer solutions in this direction.

References


Regione Calabria (2013). Quadro Territoriale Regionale Paesaggistico.


