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Towards a multidimensional approach to the study of territorial attractiveness

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Abstract

The attractiveness of regions for firms, investments, tourists, students, workers, talented people, and other categories is a very relevant issue for regional economic development. Its importance is on the increase, due to the increasing relevance of the relationships and flows of investments, people, etc. between countries and regions on the global scale. The growing concern about this question therefore requires a new comprehensive approach to its study that goes beyond partial analytical approaches. The construction of a synthetic indicator that measures the territorial attractiveness multidimensionally is the methodological strategy presented in this work in order to approach this issue from a new point of view (i.e. not only the attractiveness of territories for specific types of flows). This paper discusses these new concerns about territorial attractiveness, presents the methodology chosen for the construction of a synthetic indicator, and presents the results on the basis of the Italian NUTS2 regions. The findings and thematic maps made with this synthetic indicator reveal not only usual, but also new, rather surprising, spatial patterns.

Keywords: territorial attractiveness; multidimensional approach; synthetic indicator; budget allocation process; participatory process; Italy.

JEL: R10; R12; R30.

1. Introduction

Territorial attractiveness is an increasingly important issue for regional economic development. On the one hand, the mobility of, and attractiveness for firms, investments, tourists, talented people, students, creative people (and other type of flows), are extremely important phenomena, since the growing integration of countries and territories, related to the globalisation process, results in a considerable increase in relationships and flows of, not only goods and services, but also capital and people (Capello et al., 2011; Capello and Dentinho, 2012; Fratesi and Senn, 2009; Freeman, 2006; UNCTAD, 2017).

On the other hand, in many cases endogenous development has actually failed as a strategy for lagging regions. This is, for example, the case of Southern Italy, where about two decades of development policies, based on supporting endogenous entrepreneurship, were not able to boost economic development significantly (Padovani and Provenzano, 2015; Servidio, 2015). Even the Southern Italian regions suffered, and still suffer, from the loss of productive factors (human capital, entrepreneurs, etc.), as a result of phenomena such as brain drain (Cersosimo et al., 2015; SVIMEZ, 2017; Vecchione, 2017). Therefore, nowadays they need a strategy which is also strongly based also on exogenous development: it means that they need to attract, and to retain, productive factors, thus enhancing their territorial attractiveness.

There is a very wide literature on territorial attractiveness, but usually studies on this topic have focused only on one of the types of flows concerned (investments, firms, tourists, talented people, students, creative people, etc.). This means that scholars have usually studied and analysed these dimensions of territorial attractiveness separately and exclusively. For example, many studies and analyses have been conducted only on the territorial attractiveness for foreign direct investments (FDIs), for which there is a wide international literature (Casi and Resmini, 2010; Markusen and Venables, 1999; Maza and Villaverde, 2015; Phelps and Raines, 2003; Villaverde and Maza, 2012). Also, there are tens of studies and analyses on the territorial attractiveness for tourists (Butowski, 2018; Cracolici and Nijkamp, 2008; Crouch and Ritchie, 1999; Dann, 1996; Enright and Newton, 2004; Ruhanen, 2007), a topic to which actually an entire discipline (tourism economics) is devoted. But, this topic has very rarely been approached and studied using a comprehensive analytical strategy.

Given its great and growing importance, it is considered worthwhile to deal with this topic by following an integrated and multidimensional analytical approach, in order to measure and study the overall, global, attractiveness of regions and places. Ultimately, it means following the same logic as the studies concerning territorial competitiveness (a concept which evidently has been investigated and studied much more in-depth), for which there are already several cases which take a broad and comprehensive approach, and which involve the construction of a synthetic indicator that encompasses several aspects and components. In this respect, one of the best-known examples of a synthetic indicator is the Regional Competitiveness Index developed by the European Commission (Annoni and Dijkstra, 2013).

In this paper, our main goal is first to explain why we need a new analytical perspective to study the complex issue of territorial attractiveness. Secondly, we have defined and presented our approach to the multidimensional analysis of territorial attractiveness, on the basis of the construction of a synthetic indicator, taking into consideration the case of the 20 Italian administrative regions. We applied this new approach to these spatial units, and therefore we studied their ability to attract different types of flows (investments, people, immigrants, students, etc.) from other regions (internally), and from other countries (internationally).

The structure of the paper is as follows. Next, in Section 2, we present and discuss the concept of territorial attractiveness, its complexity, and its multidimensional nature. In Section 3, we present an overview of the literature on territorial attractiveness, with reference to the latest (few) analyses conducted from a multidimensional perspective (i.e. analyses focused not only on one of the type of flows, like FDI or tourist flows). Then, in Section 4 we describe our approach, the spatial units, the geographical scales, and the variables used for the construction of the synthetic indicator. In Section 5, we introduce and explain the methodology used for the construction of the synthetic indicator, in particular which method of standardisation, weighting, and aggregation we used. In the case of weighting, we go in-depth in the illustration and discussion of the method we adopted. This was the participatory approach, which entails going into the field, i.e. we asked a set of experts to assign weights to the different types of attractiveness. In Section 6, we present the results concerning the synthetic indicator, with respect to the national and the international attractiveness of the 20 Italian administrative regions, with the help of choropleth maps to enable a direct visual comparison of the findings. Finally, in Section 7, we draw some conclusions.

2. Territorial attractiveness: an anomalous topic that has multiple interpretations

Territorial attractiveness is a topic of research that intrinsically lends itself to different interpretations (Table 1).

For a start, there is the question of conceptualising territorial attractiveness, which can be seen from a number of points of view (Ballotta, 2004; Dubini, 2004, 2006; Russo et al., 2012; Musolino, 2016). First, it can be regarded as ‘revealed attractiveness’, which is associated with the size and the characteristics of the actual incoming flows in a geographical area. These flows therefore ‘reveal’ its attractiveness. For example, a considerable level of FDIs in a certain region ‘reveals’ the attractiveness of that region for FDI.

Secondly, from a completely different point of view, the concept of territorial attractiveness can be seen as ‘perceived attractiveness’, when it refers to how people, or groups, see, perceive, and evaluate a geographical area in which they have a particular interest. For example, this concerns

entrepreneurs interested in investment opportunities, potential migrant workers interested in moving to search for better job opportunities, tourists planning where to go for holidays, etc. According to this second conceptualisation, we do not deal with information about actual phenomena that have actually occurred (flows of people, investments, etc.), but instead we deal with the perception, the cognition, and the image of a place¹. It is something that can be interpreted and studied by shifting into different scientific disciplines, like behavioural geography, sociology, psychology, etc.

As a third conceptualisation, territorial attractiveness can even be viewed as ‘real attractiveness’. In this respect, we mean the ‘real’, the actual endowment of tangible and intangible resources – infrastructure, services, human capital, innovative capacity, etc. – which are assumed to make an area attractive (for example, in the case of attractiveness for investments, these resources are also called attractiveness factors, or location factors). These factors, intuitively, also serve as explanatory factors of territorial attractiveness as variously defined above.

The multiple ‘facets’ of the concept of territorial attractiveness are also determined by its different dimensions: that is to say, the types of flows that a territory can attract. For example, we can have flows of investments (financial resources used to get control of a company, or to invest in real estate), flows of tourists, flows of immigrant workers, or even of other specific categories of people, such as researchers, talented people (called the ‘creative class’), university students, etc. Finally, we should also not forget that territorial attractiveness can be examined at different spatial scales, from the macro-scale (countries) to the micro-geographical scale (municipalities, cities, etc.).

Interestingly, the complexity of this concept is something unique, which ignores other popular issues and concepts in the regional sciences. If we think, for example, of the concept of territorial competitiveness, which seems to be similar to the concept of territorial attractiveness that we focus on here, but in fact is rather different, as it concerns, according to some of the basic definitions (Martin, 2003; Martin et al., 2006)², the ability of a place to be competitive on the global markets (and, therefore, it is related to the export of goods and services). Territorial competitiveness is different from territorial attractiveness, as it is a concept that obviously has

¹ Perception concerns the way a place is perceived in a psychological sense by each individual. As pointed out by Golledge and Stimson (1987, p. 38), this perception is then filtered and stored as knowledge, according to ‘previous cognitive structures in the brain’. In this respect, perception is a subjective part of cognition. As a consequence, according to Meester (2004, p. 29) spatial cognition should be understood as the ‘objective and subjective knowledge of spatial structures, units and relations’. Place image concerns instead the ‘feelings and impressions about a place’ (Spencer and Dixon, 1983), and how it is perceived by individuals or by a group of people. In this second case, the same feelings and impressions about a place are shared by many individuals (Pellenbarg, 1985), and become a collective impression of that place. Such impressions can considerably affect and influence the way people behave, as explained by some contributions in the marketing literature (Kotler et al., 1993; Angelis and Dimaki 2011), which distinguish between projected place image (the ideas and impressions of a place available for people’s consideration) and received place image (the result of the interaction between the projected messages and people’s own needs, motivations, preferences, and other personal characteristics).

² See also Camagni (2002) for the debate around the conceptualisation and the meaning of territorial competitiveness.

only one nature: it is just a fact, something concerned with actual economic phenomena. It is not perceived, i.e. it is not concerned at all with aspects such as perception and image.

Table 1 - Concepts of territorial attractiveness

Nature of the concept	Underlying phenomenon	
Revealed attractiveness	Inflows (or retention of outflows)	<i>Types of flows</i>
		FDI
		Human capital flows (students, researchers, etc.)
		Tourist flows
		Others
Perceived attractiveness	Perception/Image of a place	<i>Type of perceiving actors</i>
		Entrepreneurs / Business community
		Tourists
		Students, researchers, other kinds of people with high (or potential) human capital, etc.
		Other categories of people (residents, etc.)
Real attractiveness	Location factors (attractors)	<i>Type of location factors</i>
		Transport accessibility
		Quality of living
		Basic services
		Etc.

3. Territorial attractiveness: a topic rarely studied using a comprehensive, all-encompassing approach

However, territorial attractiveness has seldom been studied from a comprehensive, all-encompassing analytical perspective, which aims to include and synthesise all of its different ‘facets’, i.e. its different dimensions.

For example, in the case of revealed territorial attractiveness, which is the object of our analysis, studies have generally been concentrated, as we said in the Introduction, only on one of the many types of flows. For each of them there is a wide international literature (see, for example, the literature on FDI³, migration, brain drain⁴, and the attraction of talented people), so that

³ See, for example, with regard to Italy and the Mezzogiorno, Barba Navaretti et al. (2009); Bentivogli et al. (2015); Daniele and Marani (2011); Siemens-Ambrosetti (2007); Resmini (2014); Santangelo (2004).

⁴ See, for example, Brandi (2014); Beine et al. (2013); Cattaneo et al., (2017); Cersosimo et al. (2015); Ciriaci (2014); De Angelis et al. (2017); Dotti et al. (2013); Halme et al. (2012).

these branches of the literature almost represent the whole field of knowledge of the social and economic sciences, i.e. they are disciplines on their own.

In the case of perceived territorial attractiveness, past studies have generally focused on the specific dimensions of attractiveness (for example, attractiveness for investments), and were generally conducted either at the country-level or at the macro-regional level. As concerns Italy, we can find several surveys which target the international business community in order to investigate the relevant location factors that explain, in their opinion, the attractiveness of Italy (see, for example, AmCham, 2013; Annushkina and Dubini, 2004; IPSOS, 2008). There are also some surveys on the Mezzogiorno which aim to analyse its attractiveness either for business or for tourism (Fondazione Nord-Est, 2002; GPF&A, 2003). Only some specific works (in this case, on the perceived attractiveness for potential investors) have focused on the regional and local scale, in particular on the administrative regions and provinces (Musolino, 2015).

In the (few) cases where scholars have adopted a wide and all-encompassing approach⁵, they accomplished it only or partially, or by overlapping and confusing the different conceptualisations of attractiveness.

For example, in the study on Italy undertaken by The European House-Ambrosetti (2016), the authors created an indicator called the GAI (Global Attractiveness Index), with the objective to measure a country's global attractiveness. They took several aspects into account: openness, innovation, endowment, and vulnerability. 'Openness' concerns and synthesises different types of flows (FDI, tourists, etc.). The crucial point of such an approach is that, first, such a synthetic indicator was constructed only at the country level, but not at the sub-national scale (hence, it is not territorial); secondly, there is an evident 'confusion' between different concepts of attractiveness, as they do not distinguish between attraction of flows (revealed attractiveness) and attractiveness factors (real attractiveness).

The study by Russo et al. (2012) is definitely remarkable and interesting, but they focused only on the attraction of residents and visitors at the NUTS2 EU regions level, with the aim of understanding which are the major determinants of territorial attractiveness⁶. Also relevant is the work by Baldazzi et al. (2015), which develops a composite tourist attraction indicator at the provincial level⁷ in Italy, combining the perception of the attractiveness of the provinces by tourists with the actual tourist flows, the tourist supply (amount of tourist accommodation), and

⁵ Incidentally, many of these studies focused on Italy.

⁶ The study identifies some major categories of determinants: environmental capital (protection); human and economic capital (welfare and work); anthropic capital (tourist attraction); socio-cultural capital (welfare and social cohesion); institutional capital (public services).

⁷ It is the NUTS3 geographical scale, according to the EU official classification of the spatial units in the European Union made by the European Commission.

factors of environmental and cultural attractiveness. Again, it is an extremely interesting work, but it combines, without explanation, different meanings of territorial attractiveness.

There are then some studies that approach the issue of attractiveness using a global analytical perspective, but with an extremely limited and focused geographical scope. For example, we can mention the study by Politecnico di Milano et al. (2010), in which the perceived attractiveness of Milan is investigated from different perspectives, that is, of different actors (business community, tourists, etc.). Alternatively, in a study on Letgallia, a region in Latvia (Ezmale, 2012), the author analysed the perceived attractiveness of the area for residents, tourists, and businesses potentially interested in settling in that territory⁸. Or, there is even some works on islands, such as the Cyclades in Greece (Spilanis et al., 2003), which approach attractiveness in a multidimensional way, but ultimately they only analyse the determinants of attractiveness for residents, and attempt to identify only the most significant location factors.

As far as we know, Rizzi and Pianta (2012) is the only study that has been able to encompass all the multiple types of flows (in terms of revealed attractiveness, in this case, as we do in our work), by conducting an analysis at the regional and local scale. The authors of this work built a synthetic indicator of the revealed attractiveness of the Italian administrative regions and provinces. In particular, they were interested in exploring the role of some explanatory variables, such as cultural heritage, environment, and social capital, in the territorial attractiveness. This study is therefore one of the key references for our work.

4. Our multidimensional approach: spatial units, geographical scale, variables and indicators for the analysis of territorial attractiveness

How then is it possible to define and operationalise a global analytical approach to the study of territorial attractiveness, based on a synthetic indicator?

First, we considered that we need to keep separate the two main conceptualisations: perceived and revealed territorial attractiveness, as both the nature of these concepts and their theoretical background is so different that this prevented us merging them substantially and meaningfully in one indicator.

Secondly, having decided to study the case of Italy, we chose as the spatial units of our analysis of territorial attractiveness, the 20 Italian administrative regions (i.e. the NUTS2 level, according to the official classification of the EU's spatial units). In fact, at this geographical scale, on the one hand, we could have a sufficiently detailed geographical division of Italy,

⁸ In this work, it has been argued that for different subjects priorities are different. For example, for the security of the inhabitants, health, employment and welfare are extremely important; while, for entrepreneurs, it is more important that the territory is accessible, has tax incentives, good infrastructure quality, and a good supply of suitable workers.

widely used in the territorial analysis of Italy; and, on the other hand, we could obtain useful official statistics for a high number of variables. This means that we could include a high number of different types of flows (as mentioned above). At a more detailed geographical scale (for example, the Italian provinces, the EU NUTS3 level), some of these data would be lacking: for example, data about FDI, one of the most important types of flow analysed in the international literature, are not available. And, at a more aggregated geographical scale (for example, the Italian macro-regions, the EU NUTS1 level), the territorial analysis obviously would not make sense. Of course, in order to use official statistics, we had to take into consideration only administrative territorial units, necessarily excluding other kinds of spatial division, although meaningful (for example, functional areas like local labour markets).

Thirdly, once we had decided about the spatial units, and given the data availability at that geographical scale, we could identify the variables, and then the types of flows, which would be the objects of our analysis: direct investments from foreign countries⁹, and from other Italian regions; immigration, internal and external (from abroad)¹⁰; incoming, domestic and foreign, tourist movements; and enrolled university students, coming from other Italian regions and from other countries¹¹.

What is necessary to point out is that each of these four types of flows obviously describe extremely relevant phenomena, in particular with respect to Italy. Consider, for example, that although Italy is less attractive than other European and world countries in terms of FDIs, nevertheless in 2014 the incoming FDIs still amounted to about €22 billion (with 291 investment operations) (ICE, 2015). While, as regards the attractiveness of tourist flows, it is enough to consider that, according to the World Tourism Organization, in 2015, Italy, with more than 60 million arrivals, was the fifth world tourism country (after France, US, Spain and China)¹². Therefore, this means that it is not so serious that in our analysis there is an absence

⁹ 'Foreign direct investments' refers to incoming investment flows at the international level: namely, the acquisition of shares in an Italian company (*brownfield*), or the establishment of a subsidiary in Italy (*greenfield*), by a foreign investor (according to the IMF and OECD, FDIs are defined as investments in an enterprise located in a foreign country for which the investor holds at least 10% of ordinary shares with the aim of establishing a 'lasting interest' in the country, a long-term relationship, and a significant influence on the management of the enterprise). On the other hand, all investments directed from one region to another, or to the creation of new branches of firms from other Italian regions, can be defined as internal direct investments.

¹⁰ 'Immigration' means the permanent transfer or temporary movement of persons in a country different from their country of origin (according to the definition by Istat with reference to immigration from abroad, these persons are all residents who are born abroad with foreign citizenship). In our case, we mean the ability of a territory to attract human resources/workforce from other regions or from abroad. Here, for the sake of the synthesis, we have not distinguished them on the basis of characteristics such as their level of education, or their professional profile.

¹¹ Finally, as far as the attractiveness of Italy and its regions for university students is concerned, we refer to foreign students who choose our country for their university education by enrolling in Italian universities, or Italian students moving from their region of origin to study at universities based in another region.

¹² While, with reference to immigration from foreign countries, we can point out that, according to Eurostat, on 1 January 2015 Italy was the fifth EU country for immigrant population or those born abroad, with 5.8 million immigrants.

of other relevant types of flows (variables), for which, unfortunately, there are no available data at the NUTS2 geographical scale¹³.

As a last remark, it is important to point out that we further distinguished the type of flows taken into consideration in our analysis by the scale of their geographical origin: the national and international level. That is, we distinguished between flows coming from other regions, and flows coming from abroad. Since Italy is a country of a certain demographic and economic size, in fact, it makes sense to make this distinction, thus, giving weight to no less important internal flows: in other words, to the internal mobility of businesses, tourists, workers, and university students. If small countries do not have an internal market (of goods, factors, etc.) of a certain size, then they necessarily have to open their borders for their economic development strategies (flows from foreign countries)¹⁴; big countries, on the other hand, can also count on their internal market (if not exclusively, at least partially) for their economic growth¹⁵.

Finally, we are able to define the indicators for each of these types of flows. With regard to the national attractiveness, they are as follows (Table 2):

- Incidence of employees in local business units with headquarter outside the region: the ratio of employees working in local units (whose headquarters are outside the region) to employees of all local units located in the region;
- Domestic tourist rate: the ratio of domestic overnight stays in a region to the total population of the same region;
- Incidence of Italian students enrolled in the population: the ratio of Italian students enrolled in the universities in a region to the total population of the same region;
- National immigration rate: the ratio of residents coming from other Italian regions to the total population of the same region.

As for international attractiveness, instead we have:

- Incidence of employees of foreign-owned enterprises: the ratio of employees working in foreign-owned enterprises to the total number of employees working in firms located in the region;

⁹ There are of course other types of incoming flows absolutely relevant from the economic point of view (for example, investment in real estate, as well as flows related to health services, known as 'health tourism'), but they were not taken into account in our work, because of the lack of systematically found and available data at the NUTS2 regional scale.

¹⁴ Consider, for example, the cases of the Netherlands and Ireland, where how opening up to foreign flows was an almost unavoidable strategy for economic growth (Barry, 1999; Sluyterman, 2005; Sweeney, 2008).

¹⁵ As an example, consider that the United States, a country certainly not closed to international trade, is strongly self-sufficient, as it has a final market made up of more than 300 million consumers. Looking, for example, at the degree of commercial openness (exports and imports in relation to GDP), it can be seen that in 2015 the US was at the bottom of the world rankings, in the 155th place, with a degree of opening 28% (source: www.theglobaleconomy.com, based on The World Bank data).

- Foreign tourist rate: the ratio of foreign overnight stays in a region to the total population of the same region;
- Incidence of foreign students enrolled in the population: the ratio of foreign students enrolled in the universities in a region to the total population of the same region;
- International immigration rate: the ratio of foreigners settling in a regional territory to the total population of the same region¹⁶.

Table 2. - Indicators by type of flow, sources, and years

National territorial attractiveness	International territorial attractiveness
<i>1. Attractiveness for foreign direct investment (or from other Italian regions)</i>	
1a. Incidence of employees of local business units with headquarter outside the region (2010) Source: Rapporto Unioncamere 2012, Istat	1b. Incidence of employees in foreign-owned enterprises (2013) Source: Banca dati Reprint, Politecnico di Milano - ICE, Istat
<i>2. Attractiveness for tourists</i>	
2a. Domestic tourist rate (2013/2015 average) Source: Istat	2b. Foreign tourist rate (2013/2015 average) Source: Istat
<i>3. Attractiveness for university students</i>	
3a. Incidence of Italian students enrolled in the population (2013) Source: Istat	3b. Incidence of foreign students enrolled in the population (2013) Source: Istat
<i>4. Attractiveness for immigrants</i>	
4a. National immigration rate (2013/2015 average) Source: Istat	4b. International immigration rate (2013/2015 average) Source: Istat

From a first glance at the above indicators calculated for the 20 Italian regions (Table 3), we can see that the best performances in terms of attraction are recorded in Northern and Central Italy, while most of the South turns out to be less attractive. With regard to the national attractiveness, a very good performance is recorded by Aosta Valley and Trentino Alto-Adige, which show very positive data for their attractiveness for tourists, students and immigrants. As far as international attractiveness is concerned, apart from the result of Lombardy based on its high attractiveness for FDIs, what draws the attention is Lazio, which is characterised by a high level of attractiveness for foreign investment, foreign tourists, and foreign immigrants. Very

¹⁶ As far as the years are concerned, our approach for all eight indicators was to take the average of the three years 2013-2015. Otherwise, in the case of indicators for which data for these years were not available, we took into consideration the latest year available.

positive figures also emerge in other regions like Tuscany, Piedmont and Friuli, in terms of their attractiveness, at both the national and international scale.

Table 3 - Indicators of national and international attractiveness by type of flow and by region (NUTS2)

	National	International	National	International	National	International	National	International
	Incidence of employees of local business units with headquarter outside the region	Incidence of employees of foreign-owned enterprises	Domestic tourist rate	Foreign tourist rate	Incidence of Italian students enrolled in the population *	Incidence of foreign students enrolled in the population *	National immigration rate *	International immigration rate *
ITALY	0.06	0.21	3.11	3.22	1.2	26.9	4.8	21.9
Valle d'Aosta	0.04	0.20	9.39	14.54	0.5	8.6	3.6	37.4
Piedmont	0.07	0.20	1.22	1.76	2.0	21.7	4.5	28.2
Liguria	0.04	0.25	3.44	5.20	1.6	19.3	4.7	23.3
Lombardy	0.11	0.06	2.04	1.53	1.6	24.5	6.0	28.2
Trentino AA	0.05	0.09	25.11	17.40	1.5	16.9	5.4	25.9
Veneto	0.03	0.14	8.44	4.23	1.0	20.3	4.7	24.5
Friuli VG	0.05	0.20	3.42	2.93	1.9	24.0	4.6	24.6
Emilia-Romagna	0.04	0.11	2.21	5.96	1.9	29.4	5.9	25.6
NORTH	0.06	0.16	6.91	6.69	1.5	20.6	4.9	27.2
Tuscany	0.03	0.16	6.28	5.36	1.6	28.6	5.8	23.7
Marche	0.01	0.14	1.36	6.07	1.7	28.1	4.8	19.7
Umbria	0.03	0.15	2.39	4.13	1.8	25.9	4.6	17.8
Lazio	0.08	0.20	3.51	1.87	1.7	42.5	6.4	19.3
CENTRE	0.04	0.16	3.38	4.36	1.7	31.3	5.4	20.1
Abruzzo	0.07	0.19	0.67	4.18	0.9	44.2	4.1	20.3
Molise	0.01	0.31	0.14	1.31	0.2	23.1	4.3	15.8
Campania	0.01	0.17	1.43	1.70	0.2	31.9	3.6	19.9
Basilicata	0.00	0.23	0.36	3.31	0.1	12.6	3.4	10.5
Apulia	0.01	0.18	0.63	2.66	0.3	22.0	2.8	11.9
Calabria	0.01	0.18	0.83	3.21	0.4	24.5	4.6	14.5
Sicily	0.00	0.15	1.40	1.49	0.2	24.9	3.3	15.8
Sardinia	0.01	0.16	3.23	3.70	0.2	24.7	2.6	18.0
SOUTH	0.02	0.20	1.09	2.69	0.3	26.0	3.6	15.8

* x 1.000. *Sources:* Our calculations based on several sources.

5. The methodology for the construction of a synthetic indicator

For the construction of the composite index that takes into account and synthesises the four types of flows that characterise the national and international attractiveness of the Italian regions, reference is made to the methodologies defined in the international literature¹⁷.

The first step was to define an adequate standardisation method, which would make all ‘sectoral’ indicators comparable. Initially, we thought of using classical standardisation (z-scores), but the point is that this produces some results with a negative sign, which is counter-intuitive for the issue under examination¹⁸. We have therefore opted for standardisation using the Min-Max method¹⁹, a standardisation method that can be derived as follows:

$$I^x = \frac{x - \min(x)}{\max(x) - \min(x)}$$

where $\min(x)$ and $\max(x)$ are, respectively, the minimum and maximum x . Using this method, all data fall within a range from 0 (corresponding to the $\min(x)$) to 1 (corresponding to the $\max(x)$).

Secondly, after the normalisation process, we addressed the question of weighting. We wondered whether all the dimensions of attractiveness (types of flows) have the same weight in the creation of the final synthetic indicator; that is to say, if they all have the same importance in terms of regional economic development. Of course, it is not said that they have the same ‘theoretical impact’ on the economic development of a region. In order to answer this extremely complex question, which clearly requires extensive expertise and experience on the subject of regional economic development, and as we decided to make use of a transparent and easily understandable weighting method²⁰, we chose the participatory weighting method, known as the BAP (*Budget Allocation Process*)²¹.

This method required us to ask directly a number of experts in regional economic development, by means of a questionnaire, what relative importance they assign to the four dimensions of attractiveness (four types of flows), in terms of their impact on the regional economic development.

¹⁷ See in particular OECD (2008), and Nardo et al. (2005).

¹⁸ When dealing with the territorial attractiveness for inflows (without considering outflows), it is intuitive that a negative sign does not make sense.

¹⁹ This choice was also dictated by the fact that, for each of the eight indicators taken into account, none of them had values that fall within a very limited range, nor do they have particularly extreme values (*outliers*) (OECD, 2008, ch. 1.5).

²⁰ OECD, 2008, ch. 6.5.

²¹ Op. cit.

The experts were selected from among academics and representatives of the Italian institutions dealing with studies on regional economic development, thus being able to assess the contribution of the various types of flows to regional economic development. They were mainly, but not exclusively, economists²²; in any case, they had a broad multidisciplinary background, focused not just on one of the four specific topics associated with the four types of flows taken into consideration (tourism, FDI, immigration, university education). In this respect, our goal was indeed to avoid having a group of experts who were too much biased in favour of one of these topics.

Since a database on such profiles is not available in Italy, experts, according to a non-probabilistic sampling principle, were identified by selecting them from among the members of some of the major national research institutions working on the matter under consideration²³. In making this selection and identification of the experts, we also tried to maintain a certain representativeness in terms of geographical origin²⁴.

Then we created an ad hoc electronic questionnaire, in Microsoft Excel format, which we submitted to the selected experts (see Appendix 1), contacting them by email. Using a total score of 100, the experts could therefore give a weight to the four different types of flows that can be attracted by a region, based on the importance that they assigned to each of them for regional economic development. In other words, they allocated a budget of 100 points among the four different types of flows.

The average weight assigned to each category by the experts was as follows:

- Attractiveness for direct investments: 38.82%;
- Attractiveness for tourists: 26.82%;
- Attractiveness for university students: 19.53%;
- Attractiveness for immigrants: 14.82%.

As can be seen, the weighting given by the experts is far from a mere assignment of equal weights (25% to each category). There are clear differences, and there is therefore a clear hierarchy in terms of relevance for the regional economic development of the four different types of flows. Clearly, the direct investments are the most important type of flows, according to the experts; this means the flows that can have the biggest impact on the regional economic

²² Although our study concerns the subject of economics, we also decided to involve experts with a background in other areas (e.g. geography, spatial planning), since regional economic development is typically assumed to be a multidisciplinary theme.

²³ For example, Politecnico di Milano, IPRES Puglia, Università di Pisa, di Torino, etc.

²⁴ In total, 18 experts replied and completed the questionnaire: eleven were from Northern Italy, three from the Central Italy, and four from Southern Italy.

development. These are followed in importance by the tourist movements. The final index was created using a linear aggregation method, for which the formula is:

$$CI_c = \sum_{i=1}^n w_i I_{ic}$$

where CI_c represents the composite indicator; n is the number of elementary indicators; and w_i is the weight associated with the i -th elementary indicator with $\sum_{i=1}^n w_i = 1$ e $0 \leq w_i \leq 1$.

6. Results

The main results of the calculation of the synthetic indicator of the multidimensional attractiveness of the Italian regions obtained with our methodology show a range from 0 (minimum value) to 1 (maximum value), and are illustrated in the table below.

Table 4 - Synthetic indicator of multidimensional attractiveness: ranking by region (NUTS2).

Trentino-Alto Adige	0.57
Lazio	0.55
Piedmont	0.47
Abruzzo	0.46
Liguria	0.45
Aosta Valley	0.45
Friuli-Venezia Giulia	0.44
Lombardy	0.44
Tuscany	0.43
Emilia-Romagna	0.41
Umbria	0.34
Veneto	0.34
Marche	0.33
Molise	0.29
Campania	0.23
Calabria	0.22
Sardinia	0.20
Basilicata	0.17
Apulia	0.17
Sicily	0.16

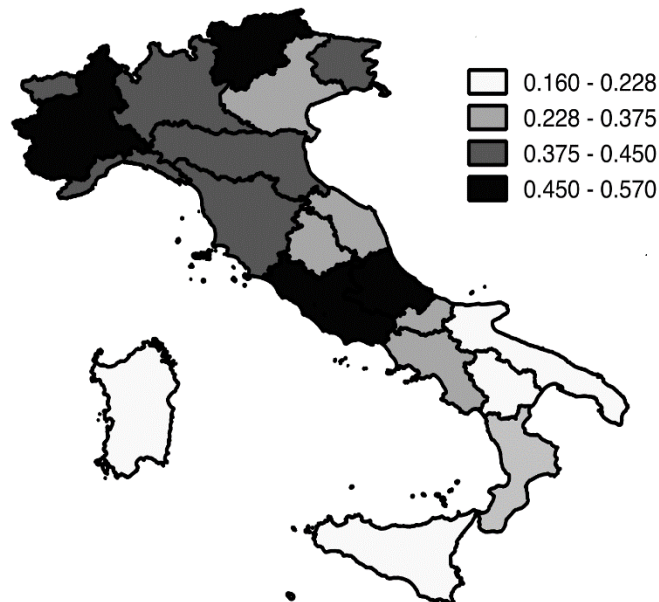
Source: Our own calculations.

In the highest part of the regional rankings, apparently far above the other regions, are Trentino-Alto Adige and Lazio. The strong and well-known tourist vocation of these two regions

(consisting of cultural and artistic heritage, environment, quality of living, winter tourism, etc.), and the role of the Italian capital city (Rome) as a ‘natural’ investment attractor for multinational companies interested in settling close to the headquarters of the main Italian institutions, are probably the determining factors for this outstanding result for these two regions. However, the presence of important universities in these two regions should also not be ignored.

Next, in a very narrow score range, between 0.47 and 0.42, there is a group of large and small Northern and Central regions, as well as a Southern region, Abruzzo. Again, tourism flows play an important role in explaining the results of these regions, together with the relevance of the FDI flows in highly internationalised and developed regions such as Lombardy. After another small group of North-west regions, which are evidently less well performing in the field of investment attraction, there are all the other Southern regions. Interestingly, they get rather different scores: some of them (Campania, Calabria, Molise and Sardinia) get a score even higher than 0.2. As far as multidimensional territorial attractiveness is concerned, we can state that the results for the regions of Southern Italy are rather heterogeneous.

Figure 1 - Synthetic indicator of multidimensional attractiveness by region (NUTS2).



Source: Our own elaborations.

Looking at the cartographic representation of the regional ranking (see Figure 1), it emerges, on the one hand, that the spatial pattern that traditionally mark the economic geography of the country, the North-South divide (Cannari and Franco, 2010; Daniele and Malanima, 2007; Svimez, 2011; Wolleb and Wolleb, 1990), is confirmed. On the other hand, however, looking within the three macro-regions, and at the cases of individual regions, we can point out hierarchies and patterns that are not so usual and intuitive. A central region like Lazio is, for example, at the top of the ranking, while in other kinds of regional rankings in Italy this does not happen. Similarly, it is surprising that a strongly developed region like Veneto is much lower in the ranking than other Northern regions such as Lombardy and Piedmont, where the Padana area is assumed a rather homogeneous area in terms of its level of socio-economic development. And, as concerns the Mezzogiorno, we can highlight differences in regional performance and “new” patterns, such as the fact that the Adriatic – Central – regions, and the Tyrrhenian regions, turn out to be more attractive than the islands and the Adriatic (Southern) regions.

If we distinguish between territorial attractiveness at the national scale (internally) and at the international scale (see Table 5 and Figures 2 and 3), always using the BAP method, it is easier to find a first interpretation of these patterns. We can immediately observe that the North-South divide concerns in particular the attraction of flows from foreign countries. The Southern regions in fact “languish” in the lowest part of the ranking regarding the multidimensional international attractiveness, which is much more “stretched” than the general ranking. While in the – ‘short’ - ranking in terms of multidimensional national attractiveness, the North-South gap almost vanishes, with some Southern regions at the top of the ranking (Abruzzo and Molise), and regions of the Centre-North Italy at the bottom (Veneto and Umbria) .

Table 5 - Synthetic indicator of multidimensional, national and international, attractiveness: ranking by region (NUTS2).

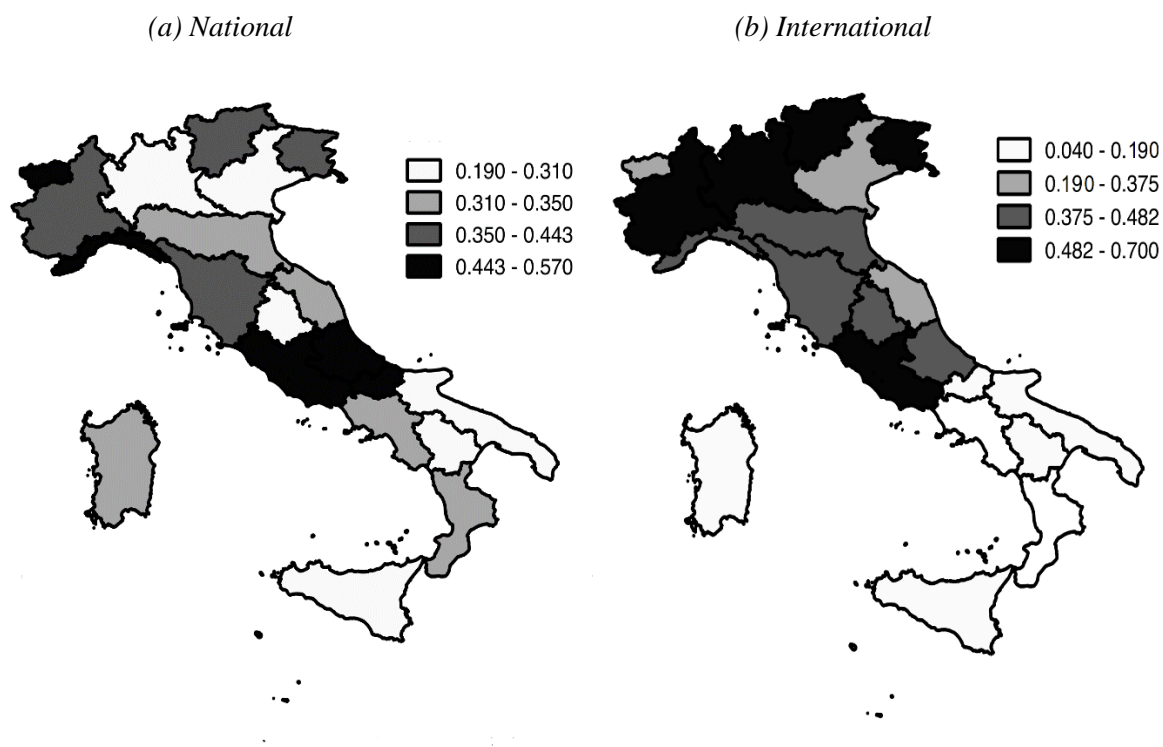
NATIONAL		INTERNATIONAL	
Aosta Valley	0.57	Trentino-AA	0.70
Molise	0.50	Lombardy	0.69
Abruzzo	0.49	Lazio	0.65
Liguria	0.48	Piedmont	0.55
Lazio	0.45	Friuli-VG	0.49
Trentino-AA	0.44	Emilia-Romagna	0.48
Friuli-VG	0.40	Tuscany	0.46
Tuscany	0.39	Liguria	0.43
Piedmont	0.39	Abruzzo	0.42
Marche	0.35	Umbria	0.38
Campania	0.35	Veneto	0.37
Emilia-Romagna	0.34	Aosta Valley	0.33
Calabria	0.32	Marche	0.30

Sardinia	0.32	Calabria	0.13
Umbria	0.31	Campania	0.10
Basilicata	0.31	Molise	0.09
Veneto	0.30	Sardinia	0.09
Apulia	0.29	Apulia	0.06
Sicily	0.26	Sicily	0.06
Lombardy	0.19	Basilicata	0.04

Source: Our own calculations.

Therefore, while looking at the flows within the Italian borders, the regions in the Mezzogiorno are ‘competitive’, just like those in the North in attracting investments, tourists, students, and workforce, it is in the international scenario (the most important one, even in potential terms), that the South is worst off in its disadvantages. This presumably arises first of all from its peripherality in Europe.

Figure 2a-b - Synthetic indicator of multidimensional, national and international, attractiveness by region (NUTS2).



Source: Our own elaborations.

7. Concluding remarks

This attempt to build a new multidimensional approach to the study of territorial attractiveness, by constructing a synthetic indicator, has actually allowed us to observe how Italian regions perform in terms of the attraction of human, financial, entrepreneurial, etc. resources, i.e. in terms of each one of the key issues for regional economic development in the age of globalisation. We could then cast light on the new issue of territorial attractiveness, whose importance is on the increase, which otherwise would remain unexplored, and on which policy makers should increasingly focus their attention in the future in order to design appropriate regional development strategies.

Interestingly, the results of our analysis were quite counter-intuitive, showing that the geography of attractiveness in Italy seems less simple than other geographies that typically describe the Italian economy and society. Thus, we bring potentially new elements into the debate concerning regional economic development in Italy.

The traditional North-South pattern of regional development does not fully comply with the results of our analysis. Some Northern regions emerge as scarcely attractive areas, although they are highly competitive in exporting and are developed (see, for example, Veneto and Marche), so highlighting potential future weaknesses of their development model. The same applies to Southern Italy, which seems somewhat heterogeneous, thus contradicting an incorrect homogeneous image that emerges from other analyses, presumably rooted in a stereotyped image of this part of the country (Musolino, 2016). Abruzzo and Molise, for example, score very well, so showing the potential strength of their economy.

Focusing on the attraction of resources only at the international scale, Northern and Central Italy are still quite heterogeneous, while the South (all but Abruzzo) lags far behind, being in this respect more homogeneous. If we consider that global markets are clearly the 'place' of greater potential development in the future for several type of flows and economic relationships, it means that, as yet, the evaluation of the attractiveness of Southern Italy can still not be positive. But, we are far from abandoning the explanatory power of the North-South divide. Therefore, peripherality, poor accessibility, the inefficiency of public institutions, the presence of serious phenomena such as organised crime, i.e. all location factors that typically penalise the Mezzogiorno have been observed by several studies (Barba Navaretti et al., 2009; Bentivogli et al., 2015; Daniele, 2005; Daniele and Marani, 2011; Resmini, 2014), still matter even here. They are negative location factors of the Mezzogiorno that affect in particular the spatial behaviour of foreign firms and people when they take location decisions with respect to Italy.

This means that policy makers at the national and regional scale should not abandon considering the North-South divide as an important spatial pattern, but they should also start to take into account less intuitive data like these, in order to investigate in-depth and be aware of either the potential weaknesses of areas, which are now supposed to have a very competitive development model, or the potential strengths of areas which are now not sufficiently developed. In light of this, they should design policies aimed to address these new emerging questions in the Italian regions. In this respect, this issue should be further investigated by regional scientists, in order not only to provide additional empirical evidence on other countries and regions, but also to improve the methodology and make the dimensions, i.e. the types of flows, included in this new approach to the study of territorial attractiveness, more robust.

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