THE MULTIDIMENSIONAL POSITIONING OF ITALIAN DESTINATIONS

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Abstract: In Italy, tourism is traditionally one of the most important driving sector of economic growth at the local level. The aim of the work is to explore the domestic inter-regional flow (the major share of Italian tourism) of the 20 Italian regions. This paper adopts a Multidimensional Scaling technique based on origin-destination matrix of domestic tourism flows. The findings point out geographical proximity, infrastructural factors and economic strength, in addition to specific place-based tourist resources, appears to be the determining factors of the competitive positioning. These results are useful to improve the further decision-making of different agents involved in tourism industry and the region’s capacity to attract domestic tourists.

Key words: Domestic tourism, Italian regions, Origin-Destination matrix, Multidimensional Scaling

INTRODUCTION

In Italy, as in many other countries, tourism is a major sector of economic activity. The direct contribution of travel and tourism to GDP in 2015 (UNWTO, 2016) was EUR68.8bn (4.2% of GDP) (Figure 1). This contribution is forecast to increase by 2.1% to EUR70.2bn in 2016. This increase primarily reflects the economic activity generated by industries such as hotels, travel agents, airlines and other passenger transportation services (excluding commuter services). It also includes the activities of the restaurant and leisure industries. The direct contribution of travel and tourism to GDP is expected to grow by 2.2% per annum to EUR87.2bn (4.8% of GDP) by 2026 (UNWTO, 2016).

The total contribution of travel and tourism to GDP (including the wider effects of investment, the supply chain and induced income impacts) was EUR167.5bn in 2015

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(10.2% of GDP) and is expected to grow by 1.9% to EUR\texteuro 170.7bn (10.3% of GDP) in 2016. It is forecast to continue increasing by 1.9% per annum to EUR\texteuro 206.3bn by 2026 (11.4% of GDP) (UNWTO, 2016). Italian travel and tourism directly generated 1,119,000 jobs in 2015 (5.0% of total employment), and this number is forecast to grow by 2.0% in 2016 to 1,142,000 (5.0% of total employment). The total contribution of travel and tourism to employment was 2,609,000 jobs in 2015 (11.6% of total employment). This value is forecast to increase by 1.7% in 2016 to 2,653,000 jobs (11.7% of total employment).

![Figure 1. Direct contribution of Travel & Tourism to GDP (Source: UNWTO data)](image)

Most of the tourism activity in Italy is generated by domestic demand, and it has a significant economic impact on the Italian economy as a whole. Domestic tourism tends to lead to increased employment, improved standards of living of the host community and development of attractions. Domestic travel spending generated 70.7% of direct travel and tourism GDP in 2015 compared with 29.3% for visitor exports (i.e., foreign visitor spending or international tourism receipts) (UNWTO, 2016). The consistency of these data is due to multiple factors, among which may be mentioned that Italy is home of the greatest number of UNESCO World Heritage Sites in the world. High art and monuments are found everywhere around the country. The great cities of art, such as Rome, Venice and Florence, are world famous and have been attracting visitors for centuries. In addition to its art treasures, Italy features beautiful coasts, alpine lakes and mountains. Italy has an abundance of high-quality natural and cultural heritage, which constitute unique resources for tourism development. Italy has a very strong tourism identity, consistently ranking as one of the top country brands, renowned particularly for its culture and art, gastronomy and wine, and sightseeing and nature.

Many visitors consider Italy “a dream destination”. In addition, the typical Italian tourism business structure is small, and the lifestyle entrepreneurs who often own and run these businesses are more likely to provide unique tourism experiences. The present research attempts to explore the positioning by comparing twenty competitive Italian destinations in a manner that is useful for destination management organizations and tourism-related firms in order to improve the competitiveness and attractiveness of the Italian regions (Figure 2). Based on origin-destination matrix of bilateral domestic tourism flows, we aim to discover which regions can be considered competitors or potential partners. Our study contributes to the literature about competitive positioning of the tourism destinations by using official aggregate data, in order to check whether they can be useful for the attainment of such goals.

Italy can count on thousands of touristic sites, which are distributed all throughout the national territory. Tourist arrivals are concentrated in big cities, coastal
areas, and ski resort destinations because many Italian regions have identified tourism as a major industry for their economic development. However, regional structures for developing and promoting tourism products are often dispersed and sometimes lack the capacity to operate effectively in foreign markets.

Figure 2. The map of 20 Italian regions (Source: Euro GeoGrafiche Mencattini, scale: 1:1,000,000)

Figure 3. Trends of foreign and domestic tourist arrivals in Italy from 2008 to 2015 (Source: Authors’ elaboration of ISTAT data)
Evidence indicates that there is a lack of clarity and coordination of promotion activities between the government, regions, provinces and municipalities (OECD, 2011). To analyse domestic tourism, it is necessary to study regional flows. All data are provided by the Italian National Statistics Institute (ISTAT, various years). The data of regional flows are from the survey "Occupancy of tourist accommodation establishments". This census survey collects data each month, at the municipality level, about arrivals and nights spent by residents and non-residents at tourist accommodation establishments, divided by category of hotel and similar accommodation and by type of the other collective accommodation establishments. Data are broken down by country of residence in the case of non-residents and by region of residence for Italian residents. Figure 3 shows the main dynamics of arrivals over the 2008-2015 period for both domestic and inbound components. In Italy, there are more domestic tourists than international ones. The number of domestic Italian arrivals increased from 2008 to 2011 (53.7 to 56.26 million) but decreased from 2011 to 2013 (to 53.6 million in 2013) (perhaps because of the terrorist attacks or economic crisis), and they have started to increase since 2013 (to 58.32 million in 2015). The number of foreign arrivals in Italy increased over the period 2008 to 2015 (from 41.8 to 55.03 million), except for a reduction in 2008-2009.

With respect to national destinations, the data indicate that Italian tourist preferences have not changed during the last eight years. The regional market shares, in terms of domestic arrivals, have also remained constant over time, with Lombardia, Emilia Romagna, Toscana, Veneto and Trentino Alto Adige being among the most frequently chosen destinations. For domestic arrivals, in 2015, the Northeast received the highest proportion of visitors (32.31%), followed by the Northwest regions (23%), and were again the most popular destinations in the south of Italy (Campania and Puglia).

The distribution of trips in the Italian regions is stable during this period, with no variation in arrivals over the period under study. Arrivals declined during the period 2012-2014. With respect to departures, because the Italian regions are very different in terms of population (they vary from 300,000 residents in Valle d’Aosta to more than 9 million in Lombardia), the flows were normalized by population to remove the size effect. The data show that Lombardia is the greatest source of trips, followed in recent years by Veneto and Molise. The inhabitants of Trentino Alto Adige, Friuli Venezia Giulia, Sardegna, Sicilia and Calabria are the least likely to travel.

The ranking of the top departures remained unchanged during the study period, with a change in position of Liguria and Trentino Alto Adige. Stability in the arrival and departure rankings over time is verified by the value of the Spearman’s ordinal correlation coefficient, which never falls below 0.97 in the correlations. After providing a first approximation of the distribution of arrival and departure tourist flows, the net balance is calculated as the difference between trips received by the region (tourism arrivals) and trips originated from the region (tourism departures). Regions with a negative net balance are the origin more trips than they receive, while those with a positive balance are those that receive more trips than they originate. According to the average values for the years 2008-2015, Lombardia, Piemonte, Lazio, Campania, Molise, Sicilia and Puglia are net emitter regions; all the other regions are net recipients (Trentino Alto Adige, Emilia Romagna and Toscana are the higher net recipients). The paper is structured as follows: Section 2 provides a short background research, detailing previous important results related to the objectives of this paper. A description of the methodology applied to analyse the main features of inter-regional tourism flows in Italy and to perform the empirical analysis is in Section 3. Section 4 presents our principal results, and Section 5 offers some concluding remarks.
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MAIN BACKGROUND

The main aim of this paper is to present how Italian regions are positioned in relation to each other by constructing an Origin-Destination matrix of domestic tourist flows. This matrix is the most complex spatial interaction model able to capture the tourist flows from region $i$ to region $j$ ($i$ and $j$ can be the same), which are measured in terms of annual trips. At the best of our knowledge, the analyses of competitive positioning of Italian regions are few and mainly refers to specific regions or some areas of the country. Most of the studies on tourist flows focuses on the main determinants of the tourism demand.

Some of the studies that have focused exclusively on domestic tourism demand are Gardini (1979), Cracolici and Nijkamp (2008), Massidda and Etzo (2012), Patuelli, Mussoni and Candela (2013), Marrocu and Paci (2013), Cafiso et al., (2016). Gardini (1979) considers inter-regional tourism flows and studies the relationship between the Leontief-Strout gravitational coefficients, distance, and regional market shares evolution. He finds that the distance between the region of origin and destination increased until the oil shock of the early 1970s.

After that time, higher transportation costs discouraged long-distance travelling. Cracolici and Nijkamp (2008) assess the relative attractiveness of competing tourist destinations in Southern Italy. They find that natural and cultural resources give only a comparative advantage to tourist destinations, because the domestic tourists is strongly connected to the complementary elements of tourism supply, such as information, tourist services and living costs. Massidda and Etzo (2013) investigate the main determinants of Italian domestic tourism demand as measured by regional bilateral tourism flows, emphasizing the role of supply-side variables as driving forces of tourist choice. The analysis is developed at both the aggregate level and for two traditional macro-areas of the country, namely, Centre-North and South. For the whole nation, the importance of traditional economic variables in determining domestic tourism flows indicates that domestic tourism is a luxury service in Italy. They confirm the negative impact of distance and find that the actual tourist choices also appear to be influenced by past experiences and by regional differences in the quality of the wider environment. In their policy remarks, they state that at a microeconomic level, domestic tourism would be boosted if lower income households gained access to it. In that respect, a reduction of holiday prices could be a fruitful policy.

Patuelli et al., 2012 investigate the effects of UNESCO’s World Heritage Sites designation on Italian domestic tourism flows, rather than on the overall effects of ‘cultural heritage’ or generic cultural sites and attractions. Marrocu and Pacì (2013) analyse the combined effects of demand and supply on the domestic tourism flows for the 107 Italian provinces. They find that neighbouring territories, as well as those that are less crowded, are more attractive destinations.

The origin’s income, the destination’s accessibility and available attractions are also important factors. More recently there are other papers that analyse the domestic tourism flows across Italian regions during times of economic crisis to study how distance influences tourist choice about their holiday destination. Cafiso et al., (2016) suggest that distance gained weight during the years of the Great Recession and therefore confirm, from a macroeconomic perspective, that tourists tend to choose closer destinations in times of crisis. Summing up, the aim of all these papers is to investigate the main determinants of the domestic tourism flows in Italy, such as income, distance, tourist services, infrastructure. Furthermore, the intent of our analysis is to explore the competitive positioning of each Italian regions, using aggregate data, rather than just from tourists’ perceptions in survey interviews.
METHODOLOGY

To study bilateral tourism flows across the twenty (Nuts 2) Italian regions, we used the annual survey of domestic vacation in Italy from 2008 to 2015 and obtained the full origin-destination (or in-flow/out-flow) matrix of tourist arrivals, including all cases of intra-regional flows (when the origin region \( i \) is equal to the destination region \( j \)). The values of the flows were obtained by taking the value of arrival flow at the destination region from the region of origin. The origin-destination matrix has the following structure:

\[
\begin{pmatrix}
  x_{11} & x_{12} & \cdots & x_{1j} & X_1 \\
  x_{21} & x_{22} & \cdots & x_{2j} & X_2 \\
  \vdots & \vdots & \ddots & \vdots & \vdots \\
  x_{i1} & x_{i2} & \cdots & x_{ij} & X_i \\
  Y_1 & Y_2 & \cdots & Y_j & T
\end{pmatrix}
\]

where \( x_{ij} \) is the number of tourists departing from region \( i \) and arriving in region \( j \); \( X_i \) is the total number of tourists departing from region \( i \); \( Y_j \) is the total number of tourists received by region \( j \); and \( T \) is the total number of tourists. The diagonal entries of the matrix contain the intra-regional flows, while the off-diagonal entries contain the inter-regional flows. To study the possible attraction of trips between regions, we calculated a tourist attraction index between regions, as proposed by Guardia-Galvez, Muro-Romero and Such-Devesa (2014). The index measures the cross-sectional attraction between each pair of regions. The tourist attraction coefficient is formulated as follows (Guardia et al., 2014):

\[
CA_{ij} = \frac{x_{ij}}{X_i} \cdot \frac{T}{Y_j}
\]

where \( CA_{ij} \) is the coefficient of tourist attraction between regions \( i \) and \( j \).

The attraction of trips by one region to another is defined as strong if the coefficient is greater than one. When the coefficient is less than or equal to one, the degree of attraction between regions is weak. According to the interpretation of the formula, the coefficient of attraction is greater than 1 if the number of trips from \( i \) to \( j \) as a proportion of the total received by \( j \) is greater than the total trips originating in \( i \) as a proportion of total global travel. This would imply that the \( x_{ij} \) flow has a higher relative weight in the total trips to \( j \) than the total trips originating from \( i \) in the overall number of trips.

While the descriptive analyses enable an appreciation of the individual relations between each region and the other 19 regions, our objective is to investigate the nature of the similarity/dissimilarity between all of the Italian regions. This means treating the 20 regions as a whole and examining their internal dynamics, thereby it can help the researcher to identify which regions are competitors or potential partners. In order to reach a rapid geometric representation, or spatial map, of the different destinations, the mathematical technique of multidimensional scaling (MDS) enables insight into the proximity between each region. This technique is used to reduce the dimensionality of data by transforming the original set of correlated variables into a smaller set of uncorrelated variables (O’Connell, 1999). The input data requirement for MDS is that it be in a square, symmetric 1-mode matrix indicating the relationships between a set of objects. For the Italian regions, the set of objects was the regions themselves and the relationships were the tourist arrivals between regions.

In a recent study, Marcussen (2014) reviews 64 papers, published between 1975 and 2014, that apply MDS to tourism research. MDS is also known as Principal
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The author uses MDS to evaluate the application of the technique in the tourism literature, finding that the most common themes are images and the positioning of destinations. Multidimensional scaling (MDS) takes the origin-destination matrix of tourism flow as input and generates a matrix of coordinates of a point configuration. For a given set of tourism flows, MDS attempts to find a set of points such that the distances \( d_{ij} \) between these points correspond as closely as possible to their proximities. This involves solving the following objective function (Kruskal & Wish, 1978):

\[
\sum [d_{ij} - f(\delta_{ij})]^2
\]

where \( f(\delta_{ij}) \) is a hypothesized proximity function. A zero value for equation 1 indicates a perfect fit between the proximities and the distances, with increasingly positive values indicating increasingly poor fit, indication that it is difficult to find a set of consistent distance relationships that capture the proximity relations. In the MDS literature, a value of less than 0.100 is acceptable (Kruskal & Wish, 1978). Eq. (1) is difficult to solve exactly; heuristic methods are available. The applications in this paper use the PROXimitySCALing (PROXSCAL) technique, which implements the IterativeMajorization (IM) algorithm (Commandeur and Heiser, 1993) to calculate, at each step, a linear auxiliary function that summarizes the local neighbourhood of the current solution. PROXSCAL automatically performs multidimensional scaling of proximity data to obtain a least-squares representation of the objects in low-dimensional space.

RESULTS

The results of the coefficient of attraction considering the aggregate matrix are presented in table 1 (coefficients greater than 1 are marked in bold). The intra-regional flows are the highest values of almost all regions, except for Liguria, Trentino Alto Adige, Friuli Venezia Giulia, Umbria, Marche, Lazio, Molise and Basilicata. These regions are attractive destinations for all regions except themselves. The Italian regions attracted more tourists from regions that are geographically closer: Trentino attracted Northern regions, Emilia Romagna attracted Northern and Central regions, the others attracted Southern regions. Almost all the regions are the most attractive destination for their own residents (as already reported by Marrocu and Paci, 2013).

The results show that the regions that attract the most trips from a greater number of other regions are Trentino Alto Adige, Emilia Romagna, Umbria, Marche, Lazio, Abruzzo, Molise, Campania, Puglia, Basilicata and Calabria. This is especially the case in Southern Italian regions, with a strong attraction for the regions that are geographically closer. Geographical proximity and the location-specific tourist resources (the so called notion of “local for local”), in addition to economic strength, appear to be the factors determining the tourism habits of residents of these regions (Bernini et al., 2017).

Additionally, except for Lombardia, Umbria and Lazio, that are unattractive destinations for its residents, the coefficients of the flows on the diagonal of the matrix are classifiable as strong, suggesting that many Italians regularly perform domestic tourism within their region. This is true again for the Southern regions and the islands, namely Sardegna (the region with the highest index of attraction), Sicilia, Basilicata, Calabria, Puglia, Molise, Abruzzo. Even Friuli Venezia Giulia has a high coefficient of intra-regional tourist attraction. This means that both the distance and economic, social and infrastructural factors (in this group there are two islands and one mountain region), and place-based tourist resources, seem to be important aspects for residents when they come to deciding the destination of a trip. Particularly, the former exert a negative influence,
not allowing the residents of these regions to make more trips outside their region, while
the latter exert a positive influence since these regions already have tourist resources.

**Table 1.** Index of attraction between Italian regions, 2008-2015 average
(Source: Authors’ elaboration of ISTAT data)

|    | Pie | VA  | Lig | Lo | TA | A  | Ven | FV | G  | ER | Tos | Um | b  | Mar | Laz | Abr | Mol | Ca | m | Pug | Bas | Cal | Sic | Sar |
|----|-----|-----|-----|----|----|----|-----|----|----|----|-----|----|----|-----|-----|-----|----|----|-----|-----|-----|-----|-----|
| Pie| 6,0 | 2,9 | 2,8 | 0,7| 0,4| 0,7 | 0,8 | 0,8| 0,5| 0,6| 0,6 | 0,4 | 0,4 | 0,4  | 0,4 | 0,4 | 0,3 | 0,4 | 0,7 |
| VA | 1,8 | 6,7 | 2,7 | 1  | 0,6| 0,8 | 0,8 | 1,3 | 0,9| 0,4| 0,6 | 0,7 | 0,4 | 0,3  | 0,4 | 0,7 | 0,2 | 0,4 | 0,6 |
| Lig.| 1,9 | 3,9 | 2,5 | 1  | 1,1| 0,8 | 0,8 | 0,7 | 1,3 | 0,7 | 0,4 | 1   | 0,3 | 0,3  | 1,1 | 0,5 | 0,3 | 0,3 | 0,6 |
| Lom| 0,7 | 1,5 | 1,6 | 2,1| 1,1| 0,9 | 0,1 | 0,8 | 0,6| 0,9| 0,7 | 0,6 | 0,4 | 0,4  | 0,5 | 0,3 | 0,3 | 0,3 | 0,8 |
| TAA| 0,4 | 0,4 | 0,4 | 0,7 | 2,8 | 2,4 | 1,4 | 1,2 | 0,6 | 0,5 | 0,5 | 0,3 | 0,5  | 0,5 | 0,5 | 0,2 | 0,4 | 0,7 |
| Ven| 0,5 | 0,4 | 0,4 | 0,7 | 2,1 | 3  | 2,2 | 0,8 | 0,7 | 0,7 | 0,8 | 0,6 | 0,3  | 0,3 | 0,3 | 0,3 | 0,3 | 0,6 |
| FVG| 0,5 | 0,3 | 0,5 | 0,9 | 1,6 | 1,9 | 8,1 | 0,8 | 0,6 | 0,7 | 0,7 | 0,8 | 0,4  | 0,3 | 0,5 | 0,5 | 0,3 | 0,2 |
| ER | 0,4 | 0,7 | 0,7 | 0,7 | 1,7 | 0,9 | 0,9 | 2,2 | 0,9 | 0,8 | 1,5 | 0,7 | 0,7  | 0,5 | 0,5 | 0,7 | 0,3 | 0,7 |
| Tos | 0,5 | 0,8 | 0,6 | 0,7 | 1,1 | 0,8 | 0,6 | 1,1 | 3,1 | 1   | 0,8 | 0,9 | 0,5  | 0,4 | 0,5 | 0,6 | 0,4 | 0,5 |
| Umb | 0,4 | 0,5 | 0,4 | 0,6 | 0,8 | 0,6 | 0,6 | 1,5 | 1,1 | 2,2 | 4,1 | 1    | 1,7  | 0,8 | 0,9 | 1   | 0,6 | 0,5 |
| Mar | 0,3 | 0,4 | 0,3 | 0,7 | 1,1 | 0,7 | 0,6 | 0,9 | 0,8 | 1,4 | 4   | 0,9  | 1,3  | 1,2 | 2,9 | 1   | 1,1 | 0,7 |
| Laz | 0,4 | 0,5 | 0,6 | 0,7 | 0,8 | 0,7 | 0,7 | 0,8 | 1,4 | 2,1 | 1   | 1,8  | 2,3  | 1,4 | 0,8 | 1,3 | 1,1 | 1,2 |
| Abr | 0,4 | 0,3 | 0,4 | 0,7 | 0,6 | 0,7 | 0,6 | 1,1 | 0,8 | 1,5 | 1,8 | 1,2 | 6,3  | 3,2 | 0,7 | 1,6 | 1,4 | 0,7 |
| Mol | 0,2 | 0,1 | 0,1 | 0,2 | 0,7 | 0,2 | 0,4 | 0,4 | 0,5 | 0,4 | 0,4 | 1,1  | 4,8  | 3,2 | 0,7 | 0,7 | 0,4 | 0,3 |
| Cam | 0,3 | 0,3 | 0,5 | 0,6 | 0,2 | 0,5 | 0,4 | 0,6 | 0,9 | 1,7 | 0,7 | 1,7  | 1,7  | 3,6 | 3,5 | 1,9 | 2,8 | 3,1 |
| Pug | 0,3 | 0,3 | 0,4 | 0,6 | 0,4 | 0,6 | 0,5 | 0,8 | 0,6 | 1,5 | 1,1 | 1,3  | 1,9  | 3,2 | 0,8 | 4,7 | 5,4 | 2,4 |
| Bas | 0,3 | 0,2 | 0,3 | 0,6 | 0,2 | 0,4 | 0,4 | 0,8 | 0,6 | 1,1 | 0,7 | 2,2  | 1,2  | 1,6 | 3   | 2,1 | 9,6 | 2,7 |
| Cal | 0,3 | 0,3 | 0,4 | 0,7 | 0,4 | 0,4 | 0,4 | 0,6 | 0,7 | 1,1 | 0,5 | 1,8  | 0,5  | 0,8 | 1,9 | 1,8 | 2   | 8,5 |
| Sic | 0,3 | 0,3 | 0,3 | 0,6 | 0,2 | 0,5 | 0,4 | 0,5 | 0,7 | 0,3 | 1,3  | 0,3  | 0,4  | 0,5 | 1   | 0,7 | 2,6 | 9,6 |
| Sar | 0,4 | 0,5 | 0,4 | 0,8 | 0,4 | 0,6 | 0,5 | 0,5 | 0,6 | 0,7 | 0,3 | 1,4  | 0,3  | 0,2  | 0,3 | 0,4 | 0,2 | 0,4 |

The empirical findings highlighted by the descriptive official statistics highlight the
individual relations between each region and the other 19 regions, instead the nature of
the similarity/dissimilarity between all of the Italian regions was investigated by the
MDS. In order to analyse the competitive positioning of the Italian regions the average for
the period from 2008 to 2015 is taken as the study value.

Table 3 provides goodness-of-fit statistics for a two-dimensional solution. Stress-I
is the most common measure found in the literature (Kruskal, 1964):

\[ \sigma_1 = \frac{\sum(d_{ij} - \delta_{ij})^2}{\sum d_{ij}^2} \]  \hspace{1cm} (2)

where \( \delta_{ij} \) is the tourism flow between two points, and \( d_{ij} \) is the corresponding
distance in the resulting MDS space. Changing the denominator of (2) to \( \sum \delta_{ij}^2 \) gives the
normalized raw stress (Borg and Groenen, 1997), and changing it to \( \sum(d_{ij} - \bar{d})^2 \) gives

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Stress-II, where \( \bar{d} \) is the average distance in MDS space (Kruskal, 1964). With no denominator, (2) corresponds to the raw stress.

**Table 2. Stress and Fit Measures**

<table>
<thead>
<tr>
<th>Metric</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normalized Raw Stress</td>
<td>0.0213</td>
</tr>
<tr>
<td>Stress-I</td>
<td>1.460</td>
</tr>
<tr>
<td>Stress-II</td>
<td>2.699</td>
</tr>
<tr>
<td>S-Stress</td>
<td>0.0435</td>
</tr>
<tr>
<td>Dispersion Accounted For (D.A.F.)</td>
<td>0.9786</td>
</tr>
<tr>
<td>Tucker’s Coefficient of Congruence</td>
<td>0.9892</td>
</tr>
</tbody>
</table>

In table 2, each of the four stress statistics measures the misfit of the data, while the Dispersion Accounted For and Tucker’s Coefficient of Congruence measure the fit. Lower stress measures (to a minimum of 0) and higher fit measures (to a maximum of 1) indicate better solutions. Dugard, Todman and Staines (2010) suggest that Stress values below 0.15 represent a good fit and propose that Dispersion Accounted For (DAF) and Tucker’s Coefficient of Congruence should have values close to 1. In the interpretation of an MDS map, the axes themselves (Dim 1 and Dim 2) are meaningless and the orientation is completely arbitrary. That is there is no ex ante meaning of the axes in MDS diagrams, other than dimension 1 for the primary axis, and dimension 2 for the secondary axis. It is up to the researcher to give a meaning of the axes from the positioning of the objects on the map, just like factor analysis (Marcussen, 2011).

![Graphical representation of the spatial positioning of the regions](Source: Authors’ elaboration of ISTAT data)

**Figure 4.** Graphical representation of the spatial positioning of the regions

Figure 4 illustrates the broad geographical groupings of the regions and reveals different scenarios for Italian regions on the basis of tourist flows. The map reveals, on the right side of the horizontal axis, the regions with a high number of tourist arrivals. They are the Lombardia remote location and the group from Veneto, Toscana, Emilia Romagna and Trentino Alto Adige. These regions have world-renowned cultural
attractions (Toscana and Veneto) and are also attractive destinations for their natural
dowellments, including mountains (Trentino Alto Adige) and the sea (Emilia Romagna).
Basilicata, Molise, Calabria, Sicilia, Valle D’Aosta, Campania, and Abruzzo are positioned
on the opposite side. All Southern regions, which are characterized by a low income level,
are in this group and do not show high outward tourism flows.

On the vertical axis, the graph shows a contrast between the regions that attract
tourists from many other regions (Emilia Romagna, Campania, Puglia, Veneto, Trentino
Alto Adige, Lazio) and those that attract tourists from few other regions (Piemonte,
Sicilia, Sardegna, Liguria). Therefore, the factors implied by the position of the Italian
regions can be defined, first with regard to capacity and the second with regard to the
attractiveness of a region to tourists from other regions. Therefore, the quadrants can be
used to generate suggestions for managers in both public and private sectors by
differentiating between them. Quadrant I includes the regions with high tourist arrivals
from many other regions, which are at the maturity stage of their life cycle. Emilia,
Veneto, Lazio, as well as Toscana, with their enormous tourist resources and
infrastructures, can be considered as a benchmark for other Italian tourist destinations.
Trentino-Alto Adige, although having relatively limited tourist resources, has been able to
build a competitive advantage beyond the resources available.

Quadrant III contains regions with low tourist arrivals from a few regions. This
cluster includes both mountain regions and the two islands, which in addition to
infrastructure improvements, should improve the quality of the accommodation facilities.

Quadrant II includes regions with low tourist arrivals from many other regions. It
is the widest group, including regions which, despite a high tourist potential, do not have
sufficient capacity to combine these resources with an integrated offer of promotion and
tourism development policies. Some specific suggestions on feasible tourist policies that
may improve the competitiveness of these regions might be the following: Basilicata
should aim at actions targeted at niche tourism; Calabria could offer integrated packages
between seaside and parks; Molise should highlight the Molise brand in order to make
the region and its products more recognizable, through coordinated actions with
neighboring regions -for the sea component- and actions targeted at niche tourism -for
promotion of parks and indoor areas; Campania should enhance the internal areas (the
parks), shortly exploited; Puglia should modify the current model of regional tourism
development, strongly focused on summer tourism and concentrated in a few points in
the regional territory, pointing to sea-wellness or improving the tourist portuality.

A separate analysis is to be made for the Lombardia, which has the highest number
of tourist arrivals but a low tourist attraction index. The centralization of some
international events, the facilitated access to mass tourism and the presence of a
significant natural and artistic heritage, as well as business and health tourism, give
Lombardia different tourist vocations. This requires a strong commitment to reduce the
impacts deriving from the sector, such as transport modes increasingly oriented towards
cars and airs, but also the use of water and electricity, waste generation and land
occupation. This evidence suggests that some characteristics of demand, and thus of the
origin, like socio-economic characteristics of the population, clearly affect the general
propensity of outbound tourism flows (as previously reported by Massida and Etzo, 2012).
At the same time, other supply factors, like cultural, historical and natural amenities, are
relevant to influencing tourism inflows. The economic and infrastructural disparities
between the north and south of Italy have a direct impact on the ability to exploit existing
tourism growth potential. The lower level of development in the south represents both a
weakness (e.g., in terms of transport infrastructure) and an opportunity (e.g., unique
natural and cultural resources) for tourism (OECD, 2011). For example, the unspoilt and
unique natural and cultural resources represent important opportunity to tourism development in many regions of the Mezzogiorno. The Mezzogiorno is progressively catching up in the field of tourism, and some regions are actively developing tourism strategies. The development of a supportive framework for the tourism industry in Southern Italy should be of high priority for public authorities in the overall strategic framework.

CONCLUSIONS

In Italy, the majority of the tourism industry, in terms of consumption, value added and employment, is due to domestic tourism activities. Domestic tourism is important for the Italian economy because it can produce a number of benefits for the destination: increased employment, improved standards of living of the host community, particularly in remote and less-developed areas, and development of attractions. Italy offers a diversity of tourist attractions, and it continues to be one of the top cultural destinations in the world. The intense global competition in the tourism industry forces destinations to develop strong, unique, and competitive destination brands by spending large amounts of money to “sell” the destination around the world to promote blue skies, golden sands, and snow-capped mountains. To maintain the competitiveness of the Italian tourism industry, the challenge for Italy as a tourist destination is to strategically manage its diversity of offerings. Italian tourism faces many problems, including areas of management (specifically marketing and promotion), policy and regulation, infrastructure, and quality of accommodation facilities. Its success depends not only on the so-called push factor (market demand forces) but also on pull factors (supply-side factors), which have a major impact on the branding success of a particular destination (Hassan et al., 2010). In particular, organizations engaged in regional destination management face challenges to improving the performance of their destinations. As competition increases and tourism activity intensifies, tourism policy focuses on improving competitiveness by creating a statutory framework to monitor, control and enhance the quality and efficiency of the industry and to protect resources (Goeldner et al., 2000). Tourists perceive a destination as a brand that comprises a collection of suppliers, and during their holiday, they “consume” destinations as a comprehensive experience without realizing that each element of the product is produced by several local service providers (Buhalis, 2000).

However, the destination tourist product is the result of the contributions of many firms, which collaborate to access greater value and capability otherwise not accessible. Consequently, the success and attractiveness of a tourism destination depend on a set of variables that accounts for various characteristics of both the origin and destination areas in terms of economic, natural, cultural and territorial features.

The considerations, in the light of our results, are threefold and are in line with those of previously reviewed literature:

- the most popular regions are those with strong attractions
- economically weaker regions have few departures
- there are important flows between neighbouring regions

Overall, our empirical evidence highlights the roles played by the demand and supply characteristics and their spatial interaction to provide a better understanding of domestic tourist flows in Italy. This has important implications for both tourist operators and policy makers alike to promote long-term sustainable development by acquiring competitive advantages and making territories attractive to external consumers. On the one hand, it is necessary avoid congesting regions with a high number of arrivals; on the other hand, social policies to support tourism for regions with low departures are need. Finally, because an important pull factor of the Italian destination is cultural attractions, like museums, churches and other monuments, specific policies must be implemented to acquire a
competitive advantage. The different tourist-attractive features of origin and destination tourism flows call for effective coordination of managerial actions, destination marketing strategies and policies designed to promote tourism activities. Across the Italian regions, there exists limited cooperation among local stakeholders. So, a further policy suggestion is the development of inter-regional networks between decision makers, economic operators and policy authorities of the neighbouring regions in order to provide integrated services and create real tourism partners that may improve tourism performance.

REFERENCES


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