TOURIST MOBILITY
AND DESTINATION COMPETITIVENESS

Antonino Mario Oliveri, Anna Maria Parroco, Franco Vaccina

1. Introduction

Twenty-five centuries ago Pythagoras stated that science has to lead observed diversity to unity, and Protagoras attributed to measurement the task of qualifying all contemporary science. Hume, heir to the new science where empiricism and quantitative methods mingle, enhanced observation and measurement as the only processes able to lead diversity to unity.

Nowadays, it is commonly accepted (in Feyerabend’s terms) that, as Poincaré pointed out, science consists of the relationship between facts, and statistics is not an exception.

Statistics yet, moving from rationalism to empiricism, does not always attribute the meaning of revealed truth to its summaries; on the contrary it acknowledges they may have a conventional value and are considered able to “indicate” missing information on objects through available ones.

Indicators are consequently used in place of indicated objects, even though the “strong” cause-and-effect relationships are replaced with simple associations.

Multi-causality is at the root of the large amount of simple and composite indicators that computer technology allows to arrange and manage, so that they seem able to give proper answers to our research issues. In doing so, multi-causality is supported by the linearity principle according to which the more is the better and if linearity is lost on observations, it is retrieved by means of operational tricks or, what’s worse, it is ignored so as to generate elegant but obliterating explanatory and forecast models.

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1 Although this paper is a common responsibility of all authors, sections 2 (sub-sections 2.1 and 2.2 included) and 3 are attributable to Antonino Mario Oliveri, section 4 to Anna Maria Parroco, sections 1 and 5 to Franco Vaccina. This paper is funded by University of Palermo 2007 ex 60% grants to the research on: “Utilization of tourist natural resources: analysis of residents’ perceptions” (coordinator Anna Maria Parroco).
These solutions are not harmful for science if we are aware that, by doing so, results do not verify models but force unknown reality into models; and if we think of Leibniz’s lesson, a potentially infinite number of models might fit observations equally well.

The same applies to the search for cause-and-effect relationships within movement traces, and to options proposed in this paper in order to “read” some observable “traces” of complex phenomena like mobility and competitiveness. Even though our study on competitiveness is circumscribed to tourists intercepted in Sicily, and competitiveness is measured according to the attractiveness perceived by tourists, we are not going to trivially state that competitiveness is higher in more visited destinations; our research on mobility allows us to map tours out, cleaning data from the replications of arrivals and distinguishing travels respect to the way they have been organized, as well as to other analytical categories.

We gathered data useful to describe mobility and to understand how much and over which destinations competitiveness works in Sicily.

Tourist mobility is in general observed as a spatial phenomenon, within a time container that might be a year, a smaller time interval or even the length of a single trip, but the opposite point of view might be adopted as well; for the analysis of a time series of arrivals, the simplest hypothesis is mono-destination and a small time scale. The time container and the spatial hypothesis define mobility, so that it becomes the “trace” of a behaviour whose motivations (pointers) consist of the choice of attractive destinations. This attractiveness, which represents one of the two main elements of tourism competitiveness (the external quality perception, the internal consisting of the organization of services), connects mobility and competitiveness providing the traces of the existence of the latter.

This idea of competitiveness is the result of both the perceptions of tourists about the features of destinations and of efficiency in the management of the destination (able to generate an attracting image of it). If we consider that efficiency is expressed through the quality-price ratio and that if properly perceived this value determines the preference for a product or service, the final choices of consumers are indicators of the relationship between produced and perceived quality when two or more products are alternative.

The role of a competitiveness indicator can be attributed to these choices after the observation of the availability of different options on the tourists’ side. Choices are in fact conditional on the availability of options and we can get information on this through the way travels are organized.

With organized tours, destinations are selected by tour operators and the seller is supposed to offer clients all comparable supplies. With self-organized tours, on the contrary, information sources are wider and include also mobility towards secondary
destinations; this behaviour affects competitiveness since multi-destination choices are induced especially when small territorial areas are concerned.

The PRIN 2007-09 researches, together with the former 2003-05 ones, offer, respect to Sicily, information on incoming organized or self-organized tourism ( pointers) and on multi-destinations detected by single trip (traces).

Motivational and behavioural elements are available to match tourists’ experiences and resulting satisfaction.

2. Competitiveness: a conceptual framework

The concept of competitiveness has developed in different directions which have led to theoretical and operational definitions only in part overlapping while generating different measurement options. Before presenting a proposal of ours for the measurement of competitiveness, we will try to synthesize the essential terms of the on-going debate, within which our contribution is positioned.

The concept of competitiveness has been adapted from economics and the production world, where it was originally referred to the Nations (macro lens) or businesses (micro perspective). The transition from a company’s competitiveness to the competitiveness of a destination was however relatively simple, though requiring appropriate adjustment related to the fact that the subject is not a single economic actor but a complex firm institutional actor, the Destination Management Organization (DMO) (Porter, 1990; Flagestad & Hope, 2001; Ryan, 2002).

Competitiveness has enriched its contents over time starting from an original focus on the price component, up to the product uniqueness and to the production cycle capacities to incorporate elements of innovation.

It was later added also the arrangement of primary (like physical capital) and secondary (human or organizational capital) resources to produce useful products/services not readily available elsewhere nor reproduced/imitated (Barney 1991). These elements apply to tourist products as well.

The control of scarce and defendable resources has to be combined with the ability to manage them in such a way as to satisfy customers/tourists (Peteraf, 1993; Enright & Newton, 2005).

The categories of comparative and competitive advantage (Porter 1980; 1985; 1990), introduced to analyze the overall competitiveness, were finally transposed from economics to tourism (Crouch & Ritchie, 1999). Comparative advantage refers primarily to the allocation of resources, which in the tourism sector can be usefully differentiated into attractions and facilities (Candela & Figini, 2003); the competitive advantage refers to the managerial capacity to use resources in order to achieve long-term benefits and sustainability perspective. Sustainability seems to
be one of the central elements of the debate on tourism competitiveness (Ritchie & Crouch 1999; 2000; 2003; Hassan 2000). Destinations are not really competitive if they fail to make tourism resources available to residents and lasting for the future. The use of resources by tourists should not wipe them out (Urry 1995; 2003; Rakic & Chambers, in press) to the extent that the appeal of the destination is reduced or even undermined at the potential new consumers. Tourist consumption should not lower the residents’ quality of life below the level where the perceived negative impacts of tourism overcome the positive ones thus making tourism policies no more supported by residents.

Though this is not a comprehensive review on competitiveness, the debate on the subject follows the proposed guidelines.

Among other elements of the tourist market, the mobility of visitors (both physical and virtual), has a special importance, along with the destination ability to attract visitors, increase their spending and meet their expectations. All these are valid indicators of competitiveness (Ritchie & Crouch 2000; 2003).

At this point, tourist attraction and more general competitiveness seem to overlap (as well as competitiveness and the "quality" of a tourist destination). In fact, attractiveness constitutes one of the most valid indicators of competitiveness, largely covering the semantic content of the latter.

Anyway, if a non-attractive destination cannot be deemed “competitive”, the fact of being attractive does not necessarily make a destination competitive. The concept of competitiveness is in fact beyond that of attractiveness, and incorporates also dimensions related to the tourist policies and to destination management (Go & Govers, 2000), elements not frequently enhanced by studies on attractiveness. All the above considerations on competitiveness cannot be made, irrespective of comparisons with competitor destinations (that is not strictly necessary for measuring attractiveness) (Pearce, 1997).

Although the issue of competitiveness has been addressed from different perspectives (macro-micro-economic, political-economical, managerial), in recent years a market-oriented approach has put a special emphasis on tourism demand. In fact, we can speak of competitiveness and attractiveness in terms of endowment (and consequently from the viewpoint of supply) but without tourists there is no tourism (Kotler et al., 2003). In this context, the issue of tourist’s satisfaction has a special relevance, as well as the analysis of motivations and the construction and dissemination of the destination image. It is true that the competitiveness of a destination resides (also) in its amenities, but it is the interest shown by visitors towards these endowments that activates resources giving them value.

Those that are frequently considered relevant (potential) tourism resources: a beautiful lake, the ruins of an ancient town, etc., are lakes and ruins but not tourist attractions if they don't arouse tourist mobility; on the contrary even the symbols of
horror like the Nazi concentration camps, the area of Ground Zero or the Chernobyl power plant are transformed into tourist attractions when they become destinations for non-negligible streams of visitors.

Consistent with the above outlined picture are the measurement tools for tourism competitiveness. In a recent review, some researchers from our group in Palermo (Burgio, Contu, Mendola, 2012) showed that “objectively measured variables such as visitor numbers, market share, tourist expenditure, employment, value added by the tourism industry... (have to be taken into account) ... as well as subjectively measured variables such as “richness of culture and heritage”, “quality of the tourism experience”, etc.” (Heath, 2003). Such review distinguishes between supply and demand-based measurement tools.

2.1. Supply-based indices

One of the most known indexes is the Travel & Tourism Competitiveness Index (TTCI) (Blanke & Chiesa, 2009) and it points out the supply point of view (or ex ante: Barbosa et al., 2010). Competitiveness is decomposed into three macro dimensions (T&T regulatory framework, T&T business environment and infrastructure, T&T human, cultural and nature resources), fourteen sub-dimensions and seventy-five simple indicators. TTCI is currently used to measure the competitiveness degree of 130 States; data are collected from various sources (for example the World Economic Forum’s annual Executive Opinion Survey, which provides “subjective” data). The overall index is obtained through aggregation by the arithmetic mean.

Another example of a supply-side index is the Competitiveness Monitor (Trisnawati et al., 2008), made of eight composed indicators (Human Tourism Indicator (HTI); Competitiveness of Price Indicator (PCI); Infrastructural Development Indicator (IDI); Environmental Indicator (EI); Technological Advancement Indicator (TAI); Human Resources Indicator (HRI); Opening Indicator (OI); Social Development Indicator (SDI)).

For the construction of their Index of Competitively Destination, Torres Valdez et al. (2010) added to the already reported dimensions: the promotion activities, the financing from the State to the touristic development and the economic development of the country.

2.2. Demand-based indices

Some other contributions can be classified as belonging to the demand-side measurement approach (Dwyer and Kim, 2003). In their Competitive Ranking of destinations Torres Valdez et al. (2010) measure competitiveness as tourist arrivals
"ex-post" perspective, see also Johns and Mattsson 2005) through the following four indicators (then aggregated by mean): Change in the Relative Participation (CRP), Change in the Absolute Participation (CPA), Absolute Change (CA), Change in the tourist base (CBT). Although this index directs measurement towards the actual behaviour of tourists, it is certainly open to criticism since the complex concept of competitiveness is flattened on the detection of arrivals.

We have shown in the past (Parroco and Vaccina, 2005; Vaccina and Parroco, 2006) that the number of arrivals does not coincide with that of tourists, representing a biased defective estimate in territories where the so-called "non-observed" tourism is high (in its double meaning of "ignored" and "hidden" tourism), and a biased rife estimate due to multiple arrivals ("replications") of tourists moving (and spending nights) throughout the territory. Biases on estimates are non-negligible both at the national and at the local territorial levels.

Garau Taberner’s contribution seems kind of a forward escape (2007). The author proposes to adopt the (subjective) viewpoint of tourists in the formulation of the Demand Competitiveness Index. His solution is to ask tourists what factors are important in choosing a destination, and then to compare them with experiences. This seems however to address towards the analysis of motivations and tourist satisfaction rather than to destination competitiveness.

3. Tourist mobility and competitiveness

The travel experience is born from tourist mobility (either physical or virtual, as we are going to discuss). If tourism depends on mobility, the latter is an essential element for measuring also the attractiveness and competitiveness of destinations.

Mobility is related to tourism, especially in terms of the carriage of goods and persons (Henderson, 2009; Sheller, 2009; Albalate, Bel, 2010; Rosselló, Saenz de Miera, 2011). From this point of view, it has been noted that the strengthening of the transport network directly increases competitiveness, since it improves tourist destinations performances (Ahnlund, 2010). Tsamboulas et al. (2010) recently proposed a scientific contribution titled “Decision Support Tool (DST) for the identification of transport solutions to remove barriers to the competitiveness of the tourism sector”: no further comments are due.

In recent years another strand of research has grown exponentially thanks to geographers and computer scientists and depending on the spread of tracking systems, which make it possible to study the large-scale mobility within space-time coordinates (trajectories). Data are collected through cheap devices, data loggers; relevant information is extracted through data mining techniques (Pfoser & Theodoridis, 2003; Lau & McKercher, 2007; Spaccapietra et al., 2008; Dodge et
al., 2009; Isaacson, 2009; Ostermann, 2010; Petterson & Zillinger, 2011; Orellana et al., 2012; Mauro et al., in press). Among other ICT devices the Bluetooth is also used (Versichele et al., 2012).

These instruments provide highly reliable data and are rapidly making obsolete the traditional instruments such as the logbook or the interviews at the conclusion of the holiday (more suffering from non-sampling errors). Among the techniques for the analysis of trajectories we can include stochastic models like Markov (or semi-Markov) processes (yet requiring that the sequences of visited attractions are known) (Xia et al., 2009; Xia et al., 2010).

In recent years the social network Foursquare has caught on based on using smartphones to indicate to other network users the presence of the user at a specific destination (https://it.foursquare.com/about/new). This data source has not yet been much employed for research in tourism so it represents, at the moment, a new frontier of knowledge.

A recent, rich, literature discusses the characteristics of tourist virtual mobility, which is growing side by side with physical mobility. Virtual mobility means that subjects move through new media, including the Internet (about which, and not coincidentally, we say “navigation”). New media are (also) information tools able to support the organisation of journeys toward physical destinations (let’s think of the phenomenon of online reservations) (Vaccina, 2010; Polizzi, 2010; Buhalis, 1998; Buhalis & Law, 2008). The travel experience can be consumed to or within Web sites that:

1) are corporate or institutional;
2) constitute meeting places for travellers within appropriate digital environments (social networks like travel online forums or blogs, commonly referred to as User Generated Contents);
3) might even represent virtual tourist destinations in themselves, so as to enable cyber-tourism flows (Cheong, 1995; Prideaux, 2002, 2005; Guttentag, 2010).

In the first two cases the Internet is a medium whose aim is still to support the journey toward physical destinations; in the case of the cyber-tourism, the virtual destination can even replace the physical one. Let’s think of no longer accessible destinations like Ancient Egypt, or contemporary natural or archaeological sites that are not physically accessible because of the objects of special protection or sources of danger for the physical visitors (for example, the Amazon rainforest).

The rise of virtual mobility is very important for the analysis of competitiveness of tourist destinations because it strongly contributes to the construction of the destination image (let us think of online word-of-mouth) or prepares and constitutes the entire touristic experience (cybertourism).

A special chapter in the literature on tourist mobility has to be reserved to the mobility of disabled persons, though it is in particular centered on the analysis of
motivations and expectations rather than on the characteristics of the movement (Yau et al., 2004; Darcy & Pegg, 2011; Blichfeldt & Nicolaidsen, 2011; Shi et al., 2012; Lee et al., 2012; Kim & Lehto, 2012; but, contra, see Kim et al., 2008). Disabled persons represent the largest minority population and are increasingly interested in the tourist experience; this niche segment is consequently receiving more and more attention by the tourism operators. For obvious reasons, people with disabilities can also strongly influence the development of virtual mobility (Ford, 2001; Goodall et al., 2004).

Mobility as a conceptual category for the analysis of competitiveness is so classically considered from the point of view of the transport system (as to virtual mobility we should talk of communications). This is certainly a consistent interpretation, as transports are fundamental infrastructural elements of the destination attractiveness (on the side of "facilities"). On the other hand, this approach emphasizes the importance of real mobility of tourists which constitutes the prerequisite and also a point of arrival for our proposal, which will follow in the next paragraph (Zillinger, 2007; Verbeek & Mommaas, 2008).

This approach is however strongly centered on the supply, while on the demand side the connection between real mobility, defined as a behaviour of tourists, and the competitiveness of the destination has not been given proper light (Verbeek & Mommaas, 2008). It is true that Torres Valdez et al. (2010) use arrivals to build their Competitive ranking of destinations, but their proposal is controversial because, as already discussed, the number of arrivals does not coincide with the number of tourists.

4. The researches to estimate the “real” dimension of tourist demand

During the last decade, together with some of our Italian colleagues, we have started up a research activity that was directed to investigate some aspects of tourism that, according to us, had not been studied enough, from both the theoretical perspective and the empirical one.

The two research projects co-funded by the Italian Ministry of the University and Scientific Research, dated 2003-2005 and 2007-2009 and directed by Prof. Franco Vaccina, aimed at estimating the “real” dimension of tourism demand. Some results from the first of these researches have been published in the Studi Statistici per il turismo book series (Padua Cleup Publisher); others in the new book series on Tourism Sciences (McGraw Hill-Italia Publisher), others in international journals.

Parroco and Vaccina (2005) highlighted the un-matching between data on guests arrivals at accommodation establishments and the number of tourists in the
same region (demand dimension). The main reasons are related to: 1) the use of un-official establishments (e.g. relatives’ or friends’ houses, unregistered rented houses and boats, etc.) for tourists purposes, which determines the so-called un-observed tourism (Vaccina et al., 2011), since information on these flows are not included in official statistics on arrivals; 2) the lack of information regarding guests’ motivations, so that it is not possible to distinguish between tourists and other travellers; 3) the “double counting effect” of arrivals which occurs every time that a tourist changes his accommodation establishment during a single travel, being registered every time he makes a change.

In order to verify some hypotheses deriving from the previous remarks, three different surveys were planned and realized. The first two had the Aeolian Islands and the town of Cefalù as destination targets. The main purposes of these researches were: 1) to highlight the un-observed tourism component, that was supposed to have a great impact in Sicily, and 2) to provide a preliminary estimation of the double-counting effect on arrivals. Making use of the collected information, we were finally able to estimate the dimension of tourism demand, taking into account all its components.

The third survey, planned for the whole Sicily and Sardinia, aimed at analysing tourist mobility and at quantifying its impact on official tourism statistics. In this case, the two islands were considered as destinations lato sensu, for at least two reasons: 1) each of them benefits from unique tourist image; 2) being islands, they have a favourable geo-morphological structure with countable entrance/exit points. Of course, internal heterogeneousness has to be considered as well.

Tourists that had chosen Sicily or Sardinia as their holiday destination were considered the target population; intra-regional tourist mobility was studied recurring to the categories of multi-destination tourism travels.

The importance of knowing travel itineraries has been recognized since a long time (Leiper, 1989; Dietvorst, 1995; Fennel 1996) and multi-destination travels have been studied by several authors (Leiper 1989; Lue et al., 1996; Tideswell & Faulkener, 1999; Hwang & Fesenmaier, 2003). More recently Tussyadiah et al. (2006) and De Oliveira Santos (2011) have discussed the choice models for multi-destination tourism experiences. Lew and McEricher (2006) show the typical pattern of the touristic intra-destination movement and make a recognition of the intra-destination mobility determinants; Hwang et al. (2006) study the pattern of Asiatic tourism in the USA making use of the social network analysis; the same methodology has been used by Asero et al. (2011) to analyse data from our survey. Martinez-Espineira & Amoako-Tuffour (2009) analyse the costs distribution of multi-destination travels. Koo et al. (2012), and Oliveri & Polizzi (in press) highlight what factors can influence tourist movements.
From within the perspective of multi-destination trips, our research group focused on the distribution of tourists’ movements, finally succeeding in specifying the most typical itineraries, which might help in driving marketing and managerial policies.

When a tourist moves within a territory from a place to another, he chooses, among internal destinations, the ones he considers the most competitive also respect to his/her personal socio-demographic characteristics (age, group composition, planned travelling expenses), motivations, expectations, available information about the alternatives.

From a theoretical point of view, each tourist in Sicily might visit and spend nights at each Sicilian municipality (depending also on the availability of rooms/accommodation establishments). A micro-level competition occurs among all internal potential destinations (Barbosa et al., 2010), which refers to the comparative and competitive dimensions we previously spoke about.

The point is that, from a demand side, competitiveness has to be studied starting from the analysis of tourists’ behaviours, and mobility is surely one of the most relevant. We are speaking of a real touristic mobility (no matter if it is a physical or a virtual one), which cannot be described through the number of arrivals, since this does not correspond to the number of tourists (especially where un-observed tourism exists).

Competitiveness among intra-regional destinations is based on the fact that tourists choose among different alternatives. In this sense, the distinction between independent and organized tourists is essential. For organized tourists the available set of options is limited at the start and tourists can choose only among few packages arranged by tour operators.

At a local (regional) level, destinations compete one another to be included by tour operators as nodes of the touristic itineraries, to the detriment of other destinations. According to this point of view, the first step of competition concerns the supply side. Only in a second step the included destinations compete to meet the demand (to attract tourist flows).

From the point of view of demand, the multi-destinations recorded for each single travel can be considered as clues that tourists leave in visited territorial units (destinations); these are data on real tourists and not on generic arrivals.

From now on, some results from our PRIN researches are presented, referring to Parroco et al. (2011 a, 2011b), Asero et al. (2011) and D’Agata et al. (2012).

Our research project was conducted between summer 2009 and spring 2010; in this time interval 3935 tourists were interviewed at the main Sicilian exit points before leaving the island. The sampling design belongs to the class of Time Location Sampling (De Cantis et al. 2010).
68% of the 390 Sicilian municipalities were visited at least once by intercepted tourists. The more visited town is Palermo (909 visits), followed by Catania (534 visits), Siracusa (452), Taormina (423), Agrigento (343) and Cefalù (315).

About 32% of interviewees visited more than one destination during their tour in Sicily (Table 1). The average number of visited destinations is equal to 1.65 with a standard deviation of 1.19. As previously mentioned, multi-destination travels generate a double counting effect on guests arrivals, which increases as the number of visited destinations increases.

**Table 1 – Distribution of incoming tourists interviewed, by number of destination visited in Sicily (at least one overnight, Summer-Autumn 2009; Spring 2010).**

<table>
<thead>
<tr>
<th>Number of destinations visited</th>
<th>Tourists</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2,683</td>
<td>68,18</td>
</tr>
<tr>
<td>2</td>
<td>567</td>
<td>14,41</td>
</tr>
<tr>
<td>3</td>
<td>318</td>
<td>8,08</td>
</tr>
<tr>
<td>4</td>
<td>195</td>
<td>4,96</td>
</tr>
<tr>
<td>5</td>
<td>74</td>
<td>1,88</td>
</tr>
<tr>
<td>6 or more</td>
<td>98</td>
<td>2,49</td>
</tr>
<tr>
<td>Total</td>
<td>3,935</td>
<td>100,00</td>
</tr>
</tbody>
</table>

Table 2 shows that interviewees made about 6500 touristic visits to Sicilian destinations (with at least one overnight stay). Only a part of these have been included in official tourism statistics. The sampled tourists spent in Sicily about 38,000 nights, with an average number of about 9.8 nights. About 57% of all nights were spent at unofficial establishments.

**Table 2 – Visits, overnight stays and average duration of visit by accommodation establishment category (Summer-Autumn 2009, Spring 2010).**

<table>
<thead>
<tr>
<th>Accommodation establishment category</th>
<th>Visit</th>
<th>Overnight stays</th>
<th>Average duration of a visit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Official establishments</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rural establishments</td>
<td>152</td>
<td>589</td>
<td>3.88</td>
</tr>
<tr>
<td>Holiday camps</td>
<td>24</td>
<td>200</td>
<td>8.33</td>
</tr>
<tr>
<td>Hotels</td>
<td>2,615</td>
<td>11,071</td>
<td>4.23</td>
</tr>
<tr>
<td>Camping</td>
<td>377</td>
<td>1,183</td>
<td>3.14</td>
</tr>
<tr>
<td>Bed and Breakfast</td>
<td>1,023</td>
<td>3,359</td>
<td>3.28</td>
</tr>
<tr>
<td>Youth hotels</td>
<td>46</td>
<td>129</td>
<td>2.80</td>
</tr>
<tr>
<td>Un-official establishments</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>House or room rented</td>
<td>461</td>
<td>4,607</td>
<td>9.99</td>
</tr>
<tr>
<td>Relative and friends houses</td>
<td>1,354</td>
<td>12,587</td>
<td>9.30</td>
</tr>
<tr>
<td>Owned houses</td>
<td>307</td>
<td>4,502</td>
<td>14.66</td>
</tr>
<tr>
<td>Other un-official establishment</td>
<td>126</td>
<td>4,502</td>
<td>3.31</td>
</tr>
<tr>
<td>Total</td>
<td>6,485</td>
<td>38,644</td>
<td>5.96</td>
</tr>
</tbody>
</table>
A simple descriptive analysis of the tourists paths, where the occurrences of visited destinations are counted in relation to the different number of per travel visited destinations (one, two, three or more) shows that touristic flows follow specific routes (Table 3, Figure 1).

Multi-destination travels and related mobility can be studied recurring to more sophisticated methodologies: see Asero et al. (in press) and D’Agata et al. (2012) for an example. These authors use the social network analysis to demonstrate that the whole network develops around few touristic towns, endowed with the necessary structures and infra-structures (Figure 2).

**Figure 1** – *Some of the main tourists itineraries in Sicily (Summer-Autumn 2009, Spring 2010).*

**Figure 2** – *Net graph of the most attractive areas concerning Sicilian tourism routes (Summer-Autumn 2009, Spring 2010).*
Table 3 – The main paths of incoming tourism in Sicily (Summer-Autumn 2009, Spring 2010).

<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Palermo Agrigento</td>
<td>95</td>
<td>Palermo Agrigento Siracusa</td>
<td>32</td>
<td>Agrigento Siracusa Taormina</td>
<td>12</td>
</tr>
<tr>
<td>Palermo Cefalu</td>
<td>80</td>
<td>Taormina Catania Siracusa</td>
<td>23</td>
<td>Palermo Catania Lipari Lipari</td>
<td>3</td>
</tr>
<tr>
<td>Catania Siracusa</td>
<td>77</td>
<td>Agrigento Siracusa Taormina</td>
<td>20</td>
<td>Catania Siracusa Agrigento</td>
<td>3</td>
</tr>
<tr>
<td>Taormina Siracusa</td>
<td>69</td>
<td>Palermo Agrigento Catania</td>
<td>19</td>
<td>Palermo Agrigento Lipari</td>
<td>3</td>
</tr>
<tr>
<td>Siracusa Agrigento</td>
<td>68</td>
<td>Lipari Lipari</td>
<td>17</td>
<td>Lipari Taormina Agrigento</td>
<td>3</td>
</tr>
<tr>
<td>Taormina Catania</td>
<td>57</td>
<td>Catania Siracusa Agrigento</td>
<td>14</td>
<td>Palermo Noto Siracusa</td>
<td>2</td>
</tr>
<tr>
<td>Catania Palermo</td>
<td>50</td>
<td>Palermo Taormina Siracusa</td>
<td>12</td>
<td>Catania Porto Empedocle Palermo</td>
<td>2</td>
</tr>
<tr>
<td>Palermo Taormina</td>
<td>49</td>
<td>Palermo Catania Siracusa</td>
<td>11</td>
<td>Catania Siracusa Agrigento</td>
<td>2</td>
</tr>
<tr>
<td>Palermo Siracusa</td>
<td>46</td>
<td>Palermo Cefalu Agrigento</td>
<td>9</td>
<td>S. Vito Lo Capo Catania Siracusa</td>
<td>2</td>
</tr>
<tr>
<td>Aeolian Islands (2 destinations)</td>
<td>37</td>
<td>Cefalu Palermo Taormina</td>
<td>9</td>
<td>Messina Palermo Cefalu Agrigento</td>
<td>2</td>
</tr>
</tbody>
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5. Conclusions

From our first-stage considerations based on premises, theories, methodological and epistemological issues, existing information and the first results of a 2010 very specific survey on the mobility of incoming tourists in Sicily, it is difficult to draw conclusions on competitiveness. We might at most indicate the inevitable limits that a simplification of the phenomenon brings when it is read based on qualitative determinations.

Indeed, a correct decision process requires choosing among several alternatives once you have got full awareness of them. This is the condition under which we can speak of the competitiveness of areas identified within the tourist routes.

The distinction between organized and unorganized trips seems fundamental: in the first case compared to the second, alternatives are certainly limited, but traceable among tour operators packages. No idea we have about available information at the level of single tourists. In this last case information gaps cannot be easily filled, and it is consequently hard work to assess how much competitive each destination is.

These issues could be fixed by means of more targeted surveys identifying the mobility of tourists and excursionists as the trace of competitiveness within large tourist destinations. This is, at the moment, our goal and this is also the exploratory meaning that we should attribute to our results. The existence of a relationship between mobility and competitiveness gives "value" to the tourists' paths as "indicators" of destination competitiveness.
References


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SUMMARY

Tourist mobility and destination competitiveness

The concept of tourism competitiveness has developed over the years in different directions. Nowadays definitions overlap only in part. The concept of competitiveness, formerly introduced in economics and in the world of production, was easily translated into the tourism field as destination competitiveness, though in tourism the subject charged of the implementation of competitive strategies is a complex institutional actor (Destination Management Organization).

Competitiveness can be defined from both the supply (endowments) and the demand side (tourists’ behaviour, satisfaction, ...).

The analysis of mobility is essential for the measurement of destination attractiveness and competitiveness; mobility can be observed in all kinds of movement (physical and virtual).

Through some PRIN researches we analysed the mobility of incoming tourists in Sicily and Sardinia from the demand side, in terms of actual tourist behaviours.

The observed phenomenon of multi-destinations suggests that mobility might be considered as an indicator of competitiveness. In fact, competition between alternative destinations appears at the intra-regional level. Such a competition is conditional on the
correct knowledge of available alternatives, and is influenced by being independent or organized tourists.

From the demand side destination competitiveness can be investigated through the analysis of real tourist flows (something different from generic arrivals) and in this sense multi-destinations detected in single travels represent tracks that tourists leave in the territory.

In the paper some results from PRIN researches, aiming at estimating the “real” dimension of tourist demand, are presented.

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