The Company Clusters Power in Tourism Destinations:
The Network Configuration and the Business Organisation

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Better and greater coordination and integration between companies are essential for tourist destination development processes improving competitiveness. Moreover, it is difficult to imagine that all companies can cooperate. In this way, we can imagine finding a group of companies that, for several reasons, decide to cooperate, creating some clusters as small groups. Companies with stable connections with other clusters or relevant companies could be relevant and central to Tourism Destination (TD) management. In this way, the knowledge of network articulation seems to be critical for TD management business dynamics. In most cases, the relationships are hidden and not formalised, increasing the complexity in TD analysis. The presence of clusters is possibly vitrified using the Social Network Analysis (SNA) methodology. The present work could be framed in cooperative networks since it analyses the companies’ commercial networks and clusters groups. The article focuses on how groupings of small firms can govern Tourism Destinations. This paper uses network indexes and metrics to emphasise structural features regarding the density and centrality of relationships. As the main result, in the case study analysed, there is a relational framework where three clusters of companies with a high density of exchanges emerge. These groups can influence the tourism business at the destination.

Keywords: Social Network Analysis, Tourism Destination (TD), family relationships, cooperation

Introduction

Tourism Destinations (TDs) are where the tourism industry is based (Leiper, 1990; Carlsen, 1999). The tourist production needs collaboration and cooperation among companies (Gunn, 1977; Bramwell & Lane, 2000; Jamal & Getz, 1995) since tourists perceive destination as a single and comprehensive experience (Buhalis, 2000; Haugland, Ness, Grønseth, & Aarstad, 2011; Van der Zee & Go, 2013). Better and greater coordination and integration between companies (Costa, Breda, Costa, & Miguéns, 2008; Lazzeretti & Petrillo, 2006) lead to greater satisfaction of the demand, essential for tourist destination development processes and improving system competitiveness. The network between companies reduces transaction costs and generates added value for the local business (Fuglsang & Eide, 2013; Tinsley & Lynch, 2001). A better-combining relationship between stakeholders’ participation in the network can generate critical competitive advantages.
It seems clear that the increasing cooperation among local enterprises creates a solid operational network. Still, it is difficult to imagine all companies cooperating in a Tourism Destination (TD). It’s acceptable from the companies both the need to cooperate and the cost of cooperation.

In this way, we can imagine finding a group of companies that, for several reasons, decide to cooperate, creating some clusters or small groups. Due to consistent and constant relations, enterprises that work together create groups or companies’ clusters inside the destination network. Companies with stable connections with other clusters or relevant companies could be relevant and central to TD management.

In this way, the knowledge of network articulation seems to be critical for TD management business dynamics. In most cases, the relationships are hidden and not formalised, increasing the complexity in TD analysis.

The presence of clusters in the TD is possibly vitrified using the Social Network Analysis (SNA) methodology. The present work could be framed in cooperative networks since it analyses the companies’ commercial networks and clusters groups.

Theoretical Background: Destination Network

Walter Hunziker and Kurt Krapf (1942) defined tourism as: “… the sum of the phenomena and relationships arising from the travel and stay of non-residents, in so far as they do not lead to permanent residence and are not connected with any earning activity”, looking at tourism as a global, complex, and organic phenomenon. In other words, the authors represent tourism as a dynamic and relational matrix, where the relationships and the interactions among the involved subjects, the resources, and the interests are essential to explain both the origin and the development of tourist activities, as well as its rise and its decline in different sites over all the world. This implies the need to find tools and methods that can study the destination, focusing on the existing relations between the other elements of the tourist destination (Baggio, 2008).

The presence or the absence of these relationships, both formalised and not, represents the network of a tourist destination (Tinsley & Lynch, 2001; Copp & Ivy, 2001; Halme, 2001). It analyses destinations by moving from the well-known hypothesis of strictly connected elements as destination mix (Leiper, 1990; Carlsen, 1999).

Networks in the tourism sector can be considered from different theoretical perspectives. The TD network could be viewed as a set of knots, individuals, and organisations (companies, institutions, third sector organisations, etc.) linked through specific social relationships (friendship, affairs, family, affinity, etc.). From this point of view, each tourist destination is a network of relationships between subjects belonging to the destination and representing, in the end, the local tourist system. So, the proliferation of studies focused on social networks in tourism is no surprise (Camprubí, Guia, & Comas, 2009; Bhat & Milne, 2008; Dregde, 2006; Novelli, Schmitz, & Spencer, 2006; Shih, 2006).

Hence, from a social network point of view, coordination, cooperation, and interaction between tourist operators are essential for genuine tourism development (and consolidation) at the destination. Local operators must work together in an integrated way because the competitiveness, based on an integrated supply of goods and services able to meet the demand, derives from this approach (Comas, 2005; Tinsley & Linch, 2001); this is the way to guarantee the proper functioning of the destination (Torraleja & Martos, 2003).
In the Tourism Destinations, it is expected that local opportunities are managed by and for local enterprises which are well acquainted with the existing local tourist resources (Torraleja & Martos, 2003). They are usually a local group of companies in a TD, representing a single network inside the destination (Ryan & Mottiar, 2007; Torrajea & Martos, 2003; Getz & Carlsen, 2005; Getz, Carlsen, & Morrison, 2005; Jaafar, Maideen, & Sukarno, 2010; Hallak, Assaker, & O’Connor, 2014; Zapalska & Brozik, 2014). Then, a cluster of business companies manage the business scene and influence the destination network. Perhaps, it depends on the prevalence of micro-enterprises and the peculiarity of their management.

This economic interaction is composed of individuals who, like the nodes of a relational grid, are responsible for establishing or maintaining the set of formal, informal, economic, and social ties underlying the operation of the entire tourist destination. Small tourist destinations are mainly characterised by a widespread presence of micro-businesses who need to cooperate. Then, cooperation is often a necessity and is encouraged by tourism policies aimed at growth and development (Carrà, Mariani, Radić, & Peri, 2016). However, it encounters resistance or driving forces in the relational configuration and relationships between companies.

Likewise, the operational limits of cluster management (Shaw & Allan, 1998; Shaw, 2014) can influence the destination management and the business dynamics inside a sector.

**Methodology**

The Social Network Analysis (SNA) is an interdisciplinary methodology developed in sociology suitable to represent relational networks in the economic field. The milestone works of Jamal and Getz (1995), Tremblay (1998), and Hall (1999) in the configuration of the network’s theoretical corpus seem to be applicable in the tourism field (Baggio, Scott, & Cooper, 2013).

The application of this technique makes it possible to understand how a network is articulated through the study of the attributes of the players and the composition of the network (Afuah, 2013). The analysis of the differences in how players are connected is used to understand the characteristics of the players and their behaviour (Scott, 2017). Multiple ties imply that people can more easily share the rules that favour economic networking until conformity with values and institutional practices is achieved (Powell, DiMaggio, & Chiesara, 2001; Meyer & Scott, 1992).

The multidisciplinary origin of the SNA has led to the creation of a wide range of quantitative measurements which allow the identification of the main features of the network (Scott, 2000).

The indexes used are:

<table>
<thead>
<tr>
<th>Table 1</th>
<th>The Social Network Analysis Indexes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Index</strong></td>
<td><strong>Formula</strong></td>
</tr>
<tr>
<td>Density</td>
<td>$\frac{A}{b(b-1)} \cdot \frac{1}{2}$</td>
</tr>
<tr>
<td>Clustering coefficient</td>
<td>$C_i = \frac{2l_i}{k_i(k_i-1)}$</td>
</tr>
<tr>
<td>Structural holes</td>
<td>$Constraint = \frac{x_{ij}}{\sum x_{iq} + x_{iq}q \neq i,j}$</td>
</tr>
</tbody>
</table>
Table 1 to be continued

| Centrality                  | \( \lambda_V = AV \) | This measure of centrality captures the critical feature that an ego’s status and power in a network function of how many alter they are tied to and how high in centrality (and consequent status and power) each of these changes is. A high value is given to an actor connected to many actors who are also well-connected, where: 
|                            |                      | \( A \) is the graph’s adjacency matrix; \( \lambda \) is a constant (the eigenvalue); \( v \) is the eigenvector. 
| Geodesic distance          | \( g_{ij}(t_k) \)   | Geodesic distance from \( i \) to \( j \) for actor \( k \). It calculates the length of the shortest path connecting two points. 
| The average distance       | \( \bar{g}_{ij}(t_k) \) | It is the average of geodesic distances. 
| Betweenness centrality     | \( BC(t_i) = \frac{1}{n} \sum_{i<j} g_{ij}(t_i)/g_{ij} \) | Views a node as being in a favoured position to the extent that the actor falls on the geodesic paths between other pairs of actors in the network. 
| Standardized betweenness centrality | \( NBC(t_i) = \frac{BC(t_i)}{BC(t_1) / [(g-1)(g-2)/2]} \) | The indicator \( BC(t_i) \) can be standardized by dividing it by the number of pairs of actors not including \( t_k \). 

Each player could facilitate or constrain business actions (Granovetter, 1973; Kogut, 2000). If the density of the relationship at a destination increases, communication becomes more efficient (Rowley, 1997), encouraging conformity and inclusion and allowing the cohesion of a goal (Pavlovich, 2003). Instead, a low-density network internally develops a few small core elites with strongly interconnected players.

**Research Hypothesis**

To explore the underlying reasons for this example of excellent tourism success, that is, San Vito Lo Capo in Italy, the essential question to be addressed by research should be: How is the structure of the network relations within the TD?

As previously highlighted, cooperative dynamics and, in general, a relational approach among the local actors lead to the development of a virtuous network aiming at the economic and professional growth of all the participants with a positive impact on the destination. This cooperation also leads to an improvement of the specialisation reducing the unprofessionalism which too often characterises this sector (Getz et al., 2005; Shaw & Allan, 1998; Shaw, 2014) and determines a low quality in the services provided.

The aim is to verify the existence of any form of cooperation among local enterprises and to identify a potential general framework that could be considered a model to apply for TD analysis. This one should be regarded as a pattern for reaching the right degree of cooperation among the local operators and supporting long term development.

The analysis moves from the two following research hypotheses:

- **H\(_1\)**: In the TD, the network among companies exists and is driven by a small number of leading enterprises.
- **H\(_2\)**: Company clusters working together exist and have a central role in the relational context of TD.

**Data Collection and Analysis**

The research analysis unit is the town of San Vito Lo Capo (\( N \)), an emerging coastal TD, where networks are particularly critical and complex due to the role of small business companies.

Tourism in this destination has grown to the point that overnight stays have risen from 134,507 in 1996 to 536,856 in 2018. A substantial increase has matched the demand for beds offered in private homes and rental
housing. The dimensions of San Vito Lo Capo houses in 2018 used to accommodate tourists are—officially—82 able to offer 952 beds. A considerable number of families inhabit this small TD.

The network actors were given a questionnaire in which they asked, among other things, to answer questions referring to the relational situation.

Table 2

<table>
<thead>
<tr>
<th>The Survey Questions</th>
<th>Network questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Company information</td>
<td></td>
</tr>
<tr>
<td>Name of owner</td>
<td>With which of the following enterprises do you have commercial relationships, during the year, to realise the tourist services provided to your customers (overnights, transfer, excursions, food and beverage, suggestion/advice for other structures, entertainment services…)?</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>With the owners of the following enterprises, do you have a strong or constant/familiar relation?</td>
</tr>
<tr>
<td>Study levels</td>
<td></td>
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<tr>
<td>Participation in trade associations</td>
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While recognising the existence of different links between the local and external enterprises, we focused only on the relationships between local enterprises. From the Reference Collective (N), consisting of 94 companies, 71 units responded, 15 operators expressed the desire not to cooperate, seven were not traced, and one company was not operational. The analysis of the relations was performed using Ucinet 6 software (Borgatti, Everett, & Freeman, 2002).

Table 3

<table>
<thead>
<tr>
<th>The Survey Company</th>
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<tbody>
<tr>
<td>Code</td>
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<tr>
<td>--------</td>
</tr>
<tr>
<td>TRA</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>HAC</td>
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<tr>
<td>RIS</td>
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<td></td>
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<tr>
<td>AAC</td>
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<tr>
<td>RES</td>
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<td>ADV</td>
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<td>OTH</td>
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Calculating the SNA index, the density of the commercial network among the enterprises gives a value of 0.1403 in a range between 0 and 1, indicating that the commercial bond is weak. In other words, it can be said that it comprises 14.03% of all possible commercial ties. There is a non-cooperative environment; it is more likely that some enterprises will have opportunistic behaviours.

Results show that 66.25% of companies have some individual and familiar links. Each company has about two links, and at least one is a node of relationships. To verify the existence of a group of companies, the application of the structural holes index\(^1\) analyses this network’s characteristics. The network branches originate from some clusters presenting much denser relationships between some companies (see Figure 1). We can highlight three company clusters that are variously composed according to the activity carried out. In this

\(^1\) Six, three couples of companies are disconnected from the family relational network, and four companies are independent family units.
way, we identified three clusters showing a high-density value equal to 0.50 (Company Cluster 1), 0.57 (Company Cluster 2), and 0.6 (Company Cluster 3).

As can be seen from Figure 2, Company Cluster 1 is the largest, is made up of eight members (six of them carry out an activity that is part of the category “Hotels and similar establishments”; 1 of them carries out a
move that is part of “Restaurants with service”; 1 member carries out an activity that is part of “Camping grounds and areas for campers and trailers”).

Company Cluster 2 is made up of seven members (three of them carry out an activity that is part of the category “Hotels and similar establishments”; three of them carry out a move that is part of “Room rentals for short stays, vacation homes and apartments, B&B, apartments, housing connected to farms”; one member carries out an activity that is part of “Restaurants with service”).

Finally, the Company Cluster 3 is made up of five members (three of them carry out an activity that is part of “Room rentals for short stays, vacation homes and apartments, B&B, apartments, housing connected to farms”; one member carries out an activity that is part of “Restaurants with service”; one of them carries out a move that is part of the category “Hotels and similar establishments”).

The analysis of the subgroups of the commercial network allows us to discover that three clusters with a high internal density exist (equal to 0.80). Calculating the 1st-order neighbourhood for the three company clusters, we noted that these could affect 92.5% of the existing enterprises at the Tourist Destination. If we consider that the density of the commercial network is equal to 0.1403, we realise that the three company clusters can be relevant to managing and influencing the TD network.

Using the Bonacich (1972) centrality index, it is evident that the first two clusters have a considerable status and power within the TD network. This high value is given by an actor connected to many actors who are also well-connected.

Table 4

<table>
<thead>
<tr>
<th>Companies’ clusters</th>
<th>Bonacich centrality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Company Cluster 1</td>
<td>45.000</td>
</tr>
<tr>
<td>Company Cluster 2</td>
<td>41.000</td>
</tr>
<tr>
<td>Company Cluster 3</td>
<td>25.000</td>
</tr>
</tbody>
</table>

Source: Extracted from the centrality result in the appendix.

The data on the three company clusters are interesting compared to the other Social Network Analysis indicators. This index allows us to understand how a cluster company plays an essential role in commercial relations and how to manage it.

We can analyse this by calculating the betweenness centrality. The first two clusters use their power and status within the commercial network, placing themselves as vertices of relationships. Indeed, the high values recorded for the first two clusters indicate that they influence the network.

Table 5

<table>
<thead>
<tr>
<th>Companies’ clusters</th>
<th>Betweenness</th>
<th>N betweenness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Company Cluster 1</td>
<td>300.770</td>
<td>18.195</td>
</tr>
<tr>
<td>Company Cluster 2</td>
<td>221.821</td>
<td>13.419</td>
</tr>
<tr>
<td>Company Cluster 3</td>
<td>48.489</td>
<td>2.933</td>
</tr>
</tbody>
</table>

Source: Extracted from the centrality result in the appendix.

The data show that this structure provides a system of mutual assistance and exchange of commercial relations extended to all the players even if these did not fall within the kinship sphere.
The existence of three central clusters at the TD able to affect almost the entire system implies that, within the network, the enterprises share rules endogenously produced. This behaviour holds out to maintain stability for a long time (Hayek, 1973). Based on the mutual trust deriving from the cluster relationships, these cultural rules bring to compliance and set the interactions between the individuals (Bernheim, 1994).

Discussion and Conclusions

Local tourism production necessarily implies cooperation among the existing operators (Czernek, 2013; Baggio, 2011; Beritelli, 2011). In this sense, a tourist destination becomes a place of relationships and interactions between firms or businesses, originating from economic, social, and production relations (Dredge, 2014).

The results imply suggestions for practice and research since they demonstrate the contribution of network analysis to understand the structure and cohesiveness of a destination (Provan & Kenis, 2008; Michael, 2007; Morrison, Lynch, & Johns, 2004; Novelli et al., 2006) as well as the role of cooperation for local development (Albrect, 2013). Indeed, as previously highlighted in the international literature review, the relational approach improves the competitiveness and the performances of each actor of the system and that of the destination overall.

As an analytical tool, the company’s network is instrumental. It considers the destination approach and the different actors operating in the area, pointing out a systemic vision of the destination. Moreover, the business network knowledge offers a good advantage for analysts because it allows highlighting the main features of the structure of the destination, capturing the potential weaknesses that can be addressed by policy and management approaches. Indeed, the visualisation of the relationships and structural positions of the local stakeholders is beneficial since the local structure of the supply can be easily interpreted by managers and shared with the destination stakeholders.

Starting from the hypothesis that the local tourism expansion derives from the cooperation between local firms, mainly small-sized family businesses, the case study investigates the existence and the intensity of such relations among local operators.

The results highlight company clusters as groups linked. The analysis of the characteristics of this network highlights that three clusters show a high-density value. Moreover, a deeper analysis of the sub-structures of the commercial network allows discovering that there are three clusters with a high internal density. Moreover, the three clusters can affect 92.5% of the existing enterprises at the tourist destination. Notably, Clusters 1 and 2 have multiple statuses and power within the commercial network.

The importance of these companies’ clusters is demonstrated by regular collaboration with the others and their central role in trade relations with all enterprises at the destination. The presence of kinship links is the basis of the commercial relations of the three high-density clusters. These relations provide a system of mutual assistance and commercial exchanges. The enterprises involved in the network share rules endogenously and spontaneously produced in the network, based on the mutual trust deriving from the family relationships, aiming to maintain stability over time (Hayek, 1973; Bernheim, 1994).

These relations, again, determine the creation of social capital through which local enterprises measure up with each other, cooperating in the development of the whole local tourism system.

This type of cooperation, repeated over time, consolidates trust among the actors. The prominent companies can work the goal and affect its performance. Communication intensity reinforced through multiple
rounds of cooperation and the effectiveness of establishing contact (in line with transaction cost economics) also fosters collaboration. Hence, planners must develop bonds of trust among actors based on intense communication to increase the cooperation or launch collective action, considered a fundamental condition in an exploratory study (Saxena, 2005).

Finally, this work can be of interest for peripheral tourist destinations in territories characterised by local development difficulties or in areas characterised by structural under development. Namely, small, and micro-businesses and their kinship networks play a relevant role in creating and configuring new or more efficient tourist destinations.

**References**


