

TOURISM DESTINATION BROKERS: A NETWORK ANALYTIC APPROACH

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ABSTRACT

Understanding the interactions of tourist companies in different tourism sub-sectors could be relevant for advancing the destination's organisation and management. The present article employs a network analysis to examine inter-organisational interactions and the various roles that some companies assume in tourism destinations. The results reveal the existence of a network in which enterprises, identified as brokers, take on strategic roles both within and outside of their specific sub-sectors of origin. This study proposes new social network analysis indicators to identify the distinctive and prevalent position of company brokers, who manage inter-organisational relations by spontaneously assuming specific roles within the tourist destination network. Serving as coordinators, gatekeepers, consultants, liaisons and representatives, such brokers facilitate cooperative and collaborative practices among companies in different tourism sub-sectors, thus increasing actors' network cohesion across a given tourist destination.

KEYWORDS: tourist destination, network analysis, brokers, inter-organisational relations

HIGHLIGHTS

1. Cooperative behaviour between companies is strategic for tourism destinations
2. Companies assume a different role cooperating for the wealth of the tourism system
3. Coordinators, gatekeepers, consultants, liaisons, representatives are broker roles
4. The brokers facilitate cooperative or collaborative practices in the destination
5. Social network indexes facilitate to identify the destination brokers

INTRODUCTION

Tourism at the destination level requires constant interaction between private and public entities (Van der Zee & Vanneste, 2015) to offer a heterogeneous array of activities, products and services, which are then perceived as a holistic and comprehensive experiences by visitors (Buhalis, 2000; Haugland et al., 2011; Van der Zee & Go, 2013). Consequently, tourist companies are compelled by the tourism market to facilitate extensive collaboration and cooperation (Bramwell & Lane, 2000; Gunn, 1977; Jamal & Getz, 1995). Thus, an improved and expanded coordination as well as the integration of tourism supply can lead to a higher satisfaction of tourism demand, which is essential for offering a unique experience at the destination level and managing relevant development processes (Albrecht, 2013).

Several studies (Pavlovich, 2003; Pearce, 1997; Pike, 2002; Weaver, 2000) have analysed tourism destination development and company cooperation. Erkkila (2004, p. 24) noted that companies' 'network in a region constitutes the "lifeblood of the travel and tourism industry'. The function and performance of a tourist destination (Pforr, C., 2006) are also defined by inter-organisational relationships in terms of competition and collaboration (Ahuja, 2000:a).

Cooperation allows tourism companies to share knowledge and improve their activities (Halme, 2001; Sørensen, 2007). Such improvements are derived from reducing transaction costs and generating added value (Fuglsang & Eide, 2013; Tinsley & Lynch, 2001). Therefore, by organising and combining relationships between companies, participation in a tourism destination network can generate crucial competitive advantages (Saxena, 2005). Several researchers have sought to construct destination management models that can enable knowledge sharing among companies, thereby increasing cooperation (Fyall & Garrod, 2012). The knowledge transfer process for destination competition is central and critical for ensuring the diffusion of innovation in the field, particularly in contexts characterised by small and micro-sized enterprises (Raisi, Baggio et al., 2020).

In the economic literature, cooperation refers to collaboration among companies for the purpose of gaining mutual advantages through research, innovation, scientific exchange and business information sharing (Barston, 2014, p.391). Caraiani and Georgescu (2013, pp.14-15) distinguished three dimensions of cooperation: general, economic and field-specific activity. Hence, cooperation is related to particular activities in the tourism sub-sector. The cooperation among enterprises is based on their economic relationships and mutual advantages; thus, it comprises the shared, innovative and diverse tourism services that are offered to tourists (Costa & Lima, 2018). Such cooperation relies on the relationship between two or more tourism businesses to provide integrated tourism products.

The presence of successful working relationships among stakeholders in tourist destinations is a prerequisite for cooperation with respect to tourism destination development (Albrecht, 2013). Indeed, Jesus and Franco (2016, p. 66) asserted that 'very little can happen in this sub-sector without the various organisations working together to serve and satisfy the consumer'. According to Bititci, Martinez, Albores and Parung (2004, p.253), collaborative practices should be understood in the context of circumstances that are mutually beneficial; namely, 'an organisation that satisfies the expectations of its clients must create wealth for its stakeholders: creating value for both parties'. Moreover, Van der Zee and Vanneste (2015) posited the

concept of a network, wherein companies cooperate during business activities and through knowledge sharing (Inkpen & Tsang, 2005) and exchange experiences, issue-specific learning and skills (Argote & Ingram 2000; Scott et al., 2008). These business activities are activated between companies through direct and indirect relationships, such as internships (Nonaka, 1990) in the areas where the companies operate (Nonaka & Takeuchi, 1995). However, without a relatively dense and modular structure, cooperation in a destination network can be severely limited (e.g. Valeri & Baggio, 2021).

Hence, a cooperative destination management approach represents a suitable strategy for establishing and ensuring cooperation among companies (Gajdošík, 2015). Nevertheless, different relationships necessarily exist between the companies whose structures and articulations affect the management of the entire destination system (Uzzi, 1997). The results of previous research demonstrate how the nature of the relationships within a network can differ and be based on human motivations such as friendship, family, innovation and creativity as well as existing social networks (Fuchs & Baggio, 2017; Lans et al., 2015). In some remote tourist destinations, such company relationships are often informal (Skokic V, Lynch P. and Morrison A. (2019). and based on friendship, with families working side by side (Ruggieri & Iannolino, 2014). Such cooperation for mutual advantage is often strictly based on trust, and its diffusion among companies constitutes social capital.

Consequently, the destination elicits social outcomes from such collaborative networks (Lans et al., 2015), including creativity and idea generation (Baggio 2014; Fuchs & Baggio 2017) or public good and commons orientations (Clement et al., 2018). Thus, ‘the rationale for adopting the network perspective is strong and highly relevant’ for advancing tourist company cooperation (Raisi, Baggio et al., 2020, p.2). Therefore, the first research question can be summarised as follows:

Research Question 1: Are tourist companies in a tourism destination linked and networked?

To date, previous studies have focused on cooperation among companies that belong to tourism sector without considering cross-sectoral interconnections (Baggio, 2011). This missing perspective regarding inter-organisational roles has generated a lack of knowledge regarding destination networking; therefore, the second research question seeks to demonstrate that companies assume different roles and positions within a destination’s network.

Research Question 2: Do companies have different connections in their roles as network brokers?

A cooperating destination network (Fernandez & Gould, 1989; Serrat, 2009) implies complex functions that some enterprises perform to ensure integration and cooperation. These companies, identified as brokers, are privileged players among other economic operators because of their specific knowledge and networking skills in relation to the sub-sector to which they belong. Such actors hold a strategic position based on their reputational and informational advantages (Burt, 1995;1997). Thus, some companies are privileged tourist destination

mediators, and their nature, role and operating conditions could determine and maintain cooperation and support a destination's evolution.

This is evident in the case of remote tourist destinations, which are characterised by small business owners and located in areas where tourism supply is fragmented (Scott et al., 2008). In this case, the field of interaction between various sub-sectors could be critical (Pavlovich, 2003). Hence, the network between economic subjects within the same host community becomes a strategic element for producing complementary products and services (Gulati, 1998). This increasingly leads to the co-localisation of economic subjects in direct or indirect competition, which enhances the network and skills of its members and elevates the experience of tourists (Michael, 2003). Consequently, the following Research Question aims to ascertain brokers' distinctive and prevalent roles in further depth, considering different sub-sectors.

Research Question 3: Do brokers only play a role in the same sector, or do they also operate in other tourism sub-sectors?

Identifying these brokers is essential for successful tourism destination management. Specifically, this Research Question seeks to identify the brokers in a small-sized tourist destination in Italy. Such companies manage inter-organisational relationships and play specific roles within the given network, favouring business communication and consensus-building by acting as coordinators, gatekeepers, consultants, liaisons and representatives. To verify the presence of a broker coordinator, the next research question was set as follows:

Research Question 4: Does a specific broker help establish and maintain business relationships within the tourist destination?

This research question aims to verify whether a broker plays a crucial role in supporting collaborative practices within the given destination. This company should have a critical role in cooperating within and outside of its own sub-sector, thereby becoming a reference in coordinating the network.

The subsequent section presents the methods and data used for the case study. The results are then described; the final section contains a discussion, directions for future research and possible practical applications.

1 THE ROLE OF BROKERS IN TOURISM DESTINATIONS

Cooperation, collaboration and partnerships are aspects of business and industrial interactions that are often investigated through network analyses (Bramwell & Lane 2000; Copp & Ivy 2001; Gibson, Lynch & Morrison 2005; Hall 2005; Halme 2001; Knoke & Kuklinski 1983; Saxena 2005; Selin 2000; Selin & Chavez 1995; Tinsley & Lynch 2001; Tyler & Dinan 2001). In the existing literature, this has led to the network approach being acknowledged as a valuable and relevant instrument for analysing cooperative behaviour among enterprises (Thrift, 1996; Morrison et al., 2004; Novelli et al., 2006; Provan & Kenis, 2008).

If tourist destinations are considered complex systems (Baggio, 2008), network science has proved crucial for understanding their inherent structural characteristics (Barabási, 2016; Coscia, 2021). Researchers have applied the social network analysis method (Czernek-Marszałek, K., 2018). to analyse tourism flows (Bendle, 2018; Provenzano et al., 2018), study network relationships (Gajdošík, 2015), examine destination evolution (Pavlovich, 2014), assess the role of stakeholders and sustainable tourism (Erkuş-Öztürk & Eraydın, 2010) and investigate network dynamics (Kim & Scott, 2012; Provenzano et al., 2018). To understand companies' characteristics and behaviour, it is essential to analyse their connections (Scott, 2011). Multiple connections imply that a company specifically and easily favours economic networking, thereby indicating its conformance with common values and institutional norms (Bernheim, 1994; Di Maggio & Powell, 2000; Scott & Meyer, 1992).

In addition, a further factor of tourist destination analyses is examining the network configuration to understand whether actors have equal relationships. The companies at a given tourist destination maintain and expand connections among all partners to offer customers integrated goods and services and achieve various business goals (Almeida & Kogut, 1999; Hite & Hesterly, 2001; McEvily & Zaheer, 1999; Narula, 2004). In this context, and given a limited analytical capacity, identifying competent partners becomes a complicated process for companies as it is impossible to perform an ex-ante assessment of potential partners' skills and reliability. This situation generates uncertainty (Powell, 1990) and the need to establish stable and trustworthy business relationships. Some studies have argued that actors' unbalanced roles provide evidence that a few actors are more interconnected than others (Scott, 2011). Those companies with multiple connections can be defined as brokers based on the relationships maintained with other companies in the network. Therefore, in this study, we define the role of brokers as economic agents that facilitate, mediate and help other companies determine appropriate solutions by efficiently and profitably reducing uncertainty for everyone involved (Howells, 2006).

Specifically, a broker is a company that 'mediates the flow of resources or information between two actors who are not directly connected' (Fernandez and Gould, 1989, p.90). Based on this definition, a tourist destination's network consists of intermediaries who act as mediators between other companies. The broker's role is most evident in relationships between companies operating in other tourism sub-sectors. In addition, the broker's role is decisive when the target network is characterised by small groups of highly connected companies that cooperate to improve their businesses (Coleman, 1988; Walker et al., 1997). This closed group context facilitates the value and role of brokers, which leverage the opportunities offered by the network, thus connecting and facilitating coordination between affiliated companies (Burt, 2005; Granovetter, 1992).

Being a broker not only means being highly connected but also entails the ability to build bridges and remain highly involved in cooperative activities (Obstfeld, 2005). The role of the brokerage within a network can involve diverse duties and activities; therefore, these various roles and activities must be specified. Depending on the brokerage being exercised, the brokerage roles performed can be categorised as follows (Fernandez & Gould 1989): coordinator, consultant, gatekeeper, representative or liaison. The different connections, activities and relationships that a tourist company has at the destination level define its various

roles. These roles are analysed by considering the specific sub-sector to which companies belong. Thus, the hospitality, restaurant and service sub-sectors at a tourist destination have diverse relationships and needs. The broker, as a coordinator, consultant, guardian, representative or liaison, as described in Table 1, supports other companies in the network.

Table 1: Broker definitions in a tourism destination network

<i>Broker company role</i>	<i>Description function</i>
<i>Coordinator</i>	<i>A coordinator coordinates other companies in the same field of activities (e.g. restaurants, hospitality, tourism services, transport and attractions).</i>
<i>Consultant</i>	<i>A consultant is a company in a specific sub-sector of activity (e.g. hospitality) that helps and supports other groups of companies (e.g. restaurant or tourist services) in offering a particular product or service or changing or integrating activities according to the possible requests or needs of tourists.</i>
<i>Gatekeeper</i>	<i>A gatekeeper is a company that cooperates with a company in another sub-sector, connecting the company with those belonging to a different sub-sector of activity.</i>
<i>Representative</i>	<i>A representative is a company that represents their colleagues to companies in a different sub-sector of activity.</i>
<i>Liaison</i>	<i>A liaison is a company that links companies that belong to two different groups.</i>

The present article does not focus on the role of the public sector. Although we are aware of the existing interactions, influence and power between private companies and the public sector, the nature of broker analyses in the literature (Lans et al., 2015) is related to the dynamics and interactions between private enterprises. The rationale behind this exclusion lies in the objective of the current analysis: to identify companies engaged in mediating the flow of relations with other—not interconnected—companies (Fernandez and Gould, 1989). Although the public sector maintains links with almost all tourist companies, the nature of those relationships is different.

This article aims to describe brokers as spontaneous agents who, owing to personal ties and trust, facilitate and help colleagues in the same industry or sub-sector to find solutions through new business connections, efficiently reducing uncertainty for all agents involved (Howells, 2006). This approach identifies the companies that are relevant to tourist destination management, steering them on a development path. Specifically, we employ a case study approach to explain this methodology and demonstrate how it can be applied to a tourist company network analysis.

2 DISCUSSION, MATERIALS AND METHODS

2.1 Discussion on the nature of cooperative networks

The number and nature of network bonds are essential for understanding actors' interactions (Rowley, 1997). Some scholars have agreed that 'market economies are complex network systems of interacting agents, individuals, organisations' (Fuchs, M. & Baggio, R 2017, p.1).

Therefore, the tourism network approach (Cehan, et al., 2021) is still complex, based on human nature and pervaded by socio-ethical principles. Several researchers have studied the motivations behind cooperation among companies in tourism and other sub-sectors (Uzzi, 1997; Ingram & Roberts, 2000; Argote & Ingram, 2000; Inkpen & Tsang, 2005; Scott et al., 2008; Gajdošík, 2015; Van der Zee & Vanneste 2015; Lans et al., 2015; Fuchs & Baggio 2017; Valeri & Baggio, 2021).

The literature review illustrates how the links within a network are built on human relationships based on friendship, family, innovation, creativity and social relationships. The scholars who focused on friendship networks (Fuchs & Baggio 2017; Lans et al., 2015) demonstrated that company performance strengthens when managers maintain friendships with colleagues; therefore, informal and interpersonal connections support economic interactions within organisations, establishing a ‘striking balance between competition and collaboration’ (Ingram & Roberts 2000, p. 388). Indeed, friendly relationships are an important aspect of competitive behaviour (Ingram & Roberts 2000). This ‘ability of actors to benefit from their social structures, networks and belonging’ is called social capital (Davidsson and Honig 2003, p.305). The structural dimension of social capital refers to the network of an individual or a company (Burt 1997), in which trust and reciprocity serve as the pillars (Coleman 1988; Granovetter 1983). Participation in these networks allows members greater communication and creativity to benefit the companies’ sector (Brodbeck 2002, 2008; Huggins and Thompson 2015; Fuchs & Baggio 2017; Fuchs et al., 2021).

Other studies address family networks in small and remote tourist destinations, specifically in the case of small communities such as island destinations (Ruggieri & Iannolino, 2012). It has been previously demonstrated that family ties support the networks in tourist destinations, improving network cohesion and establishing a system of trust between actors, which increases their interactions and cooperation (Ruggieri & Iannolino, 2014).

Researchers focused on commercial networks have observed that participating companies share knowledge and improve their commercial activities (Halme, 2001; Sørensen, 2007). This improvement is based on reduced transaction costs and the generation of added value (Fuglsang & Eide, 2013; Tinsley & Lynch, 2001). Network actors have a competitive advantage in disseminating information, sharing solutions to problems and overcoming free-rider issues that can inhibit numerous cooperative efforts (Uzzi, 1996). Knowledge transfer is crucial for ensuring innovation diffusion, particularly in contexts characterised by medium-sized enterprises (Raisi, Baggio et al., 2020).

Ingram & Roberts (2000, p. 418) noted that ‘those interactions in the economic sphere are seeds for relationships in the social sphere’. The aforementioned authors began their analysis from an observable phenomenon (the commercial relations between hotels in a tourist destination).

Given the discussion in the literature, this study aims to analyse the commercial network in a specific tourist destination and to identify the enterprises that favour the integration and coordination of relevant activities. However, all companies must develop social skills, and the ability to interact with others (Warnes et al., 2005). The companies that are identified as brokers act in an entirely spontaneous manner and without any contractual obligation to carry out this role, thus becoming privileged actors among other agents and leveraging specific knowledge and skills. This element prompted our analysis of the commercial network as it lends itself to

identifying aspects of competence without excluding other human relationships, such as friendship/kinship ties between the members of the same network.

Thus, network concepts (Galaskiewicz & Wasserman, 1994; Wasserman & Faust, 1994) are central to our research design, methods and data analysis. First, our approach is justified by the increasing focus on network analyses as a general research approach (Inkpen & Tsang, 2005; Nahapiet & Ghoshal, 1998) and by the identification of different actors in a network. Second, this approach adds the roles of company brokers to the increasing emphasis placed on tourist destination analyses (Baggio et al., 2010; Del Chiappa & Baggio, 2015; Van der Zee & Vanneste, 2015). Notably, the approach taken herein is topological, meaning that regardless of the nature of the relationships, we consider only the structural features. Such an in-network analytic investigation allows for, as the literature shows (see, e.g. Baggio, 2022; Cimini et al., 2019; Coscia, 2021), an examination of the groups of networks that may belong to several domains. This approach highlights the possible existence of general features that can enable an understanding of specific systems or phenomena using analogical considerations.

2.2 Metrics and representations

There is a solid theoretical background in statistical physics (Castellano et al., 2009; Landau & Lifshitz, 1980; Stauffer, 2004) from which network science derives numerous techniques and methodological approaches. Here, various metrics were used from multiple perspectives to analyse the network in pursuit of an overarching understanding of its structure. Table 2 presents and defines the network metrics.

Table 2: Definition of network terms and metrics

<i>Network indices</i>	<i>Description</i>	
<i>Order</i>	N	<i>Total number of nodes</i>
<i>Size</i>	$q = \sum_i \sum_j X_{ij}$	<i>Total number of links</i>
<i>Density</i>	$\frac{A}{\frac{b(b-1)}{2}}$	<i>The number of ties present in the maximum possible number of lines, where A is the number of links and B is the number of actors in the network. This index is normalised (from 0 to 1)..</i>
<i>Path</i>	$(D): APL = \frac{1}{n(n-1)} \sum_{i \neq j} D_{ij}$	<i>A series of consecutive links connecting any two actors in the network. The average path length (APL) in the network is the arithmetical average of all distances.</i>
<i>Geodesic distance</i>	$g_{ij}(t)$	<i>The length in terms of the number of links of the shortest path connecting two actors</i>
<i>Average distance</i>	$\frac{g_{ij}(t)}{n}$	<i>The average geodesic distance</i>
<i>Distance-based cohesion</i>	$\frac{\sum_{i \neq j} \frac{1}{g_{ij}(t)}}{n(n-1)}$	<i>An index based on the distance between two actors. It varies between 0 and 1, where larger values indicate greater cohesiveness; $1/g_{ij}(t)$ is set to 0 when no path exists between the two nodes considered.</i>

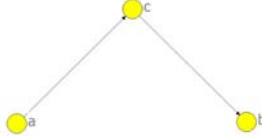
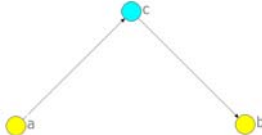
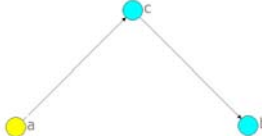
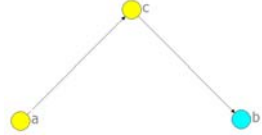
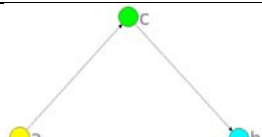
In addition, we formalised the five roles according to the minimum flow of transactions. If this flow was greater than the flow directly from incoming neighbours to outgoing neighbours, the

node was identified as a broker between a focal node and one of the two neighbours. Further, a node was recognised as a broker based on the flow between actor ‘a’ and actor ‘b’ if

$$\min (Z_{ac}, Z_{cb}) > Z_{ab}.$$

The type of brokerage role was determined by the group memberships of all three actors, which are detailed in Table 3.

Table 3: Definition of broker roles and metrics

Broker role	Description	Broker representation	Measurement
COORDINATOR	A broker (c) is a coordinator between two actors, (a) and (b), if all three belong to the same sub-sector of activity (for example, ‘i’).		$\min (Z_{ac}^{ii}, Z_{cb}^{ii}) > Z_{ab}^{ii}$
CONSULTANT	A broker (c) is a consultant between two actors, (a) and (b), that belong to the same sub-sector of activity (for example, ‘i’) while (c) belongs to another sub-sector (for example, ‘j’).		$\min (Z_{ac}^{ij}, Z_{cb}^{ji}) > Z_{ab}^{ii}$
GATEKEEPER	A broker (c) is a gatekeeper between two actors, (a) and (b), if the broker (c) and the company (b) belong to the same sub-sector of activity (for example, ‘j’) and (a) belongs to another sub-sector (for example, ‘i’).		$\min (Z_{ac}^{ij}, Z_{cb}^{jj}) > Z_{ab}^{ij}$
REPRESENTATIVE	A broker (c) is a representative of two actors, (a) and (b), if the broker (c) and the company (a) belong to the same sub-sector of activity (for example, ‘i’) and (b) belongs to another sub-sector (for example, ‘j’).		$\min (Z_{ac}^{ii}, Z_{cb}^{ij}) > Z_{ab}^{ij}$
LIAISON	A broker (c) is a liaison between two actors, (a) and (b), if the three companies belong to different sub-sectors (for example, (a) belongs to sub-sector ‘i’, (b) belongs to sector ‘j’ and (c) belongs to sub-sector ‘k’).		$\min (Z_{ac}^{ij}, Z_{cb}^{jk}) > Z_{ab}^{ik}$

2.3 Case study: San Vito Lo Capo (Sicily)

Data were collected from the companies involved in the tourist destination of San Vito Lo Capo in Sicily, Italy. In north-western Sicily, San Vito Lo Capo is isolated from urban areas, surrounded by a group of mountains and geographically accessible by only one road. To reach San Vito Lo Capo, one has to travel through the small village of Purgatorio. Many mountains

overlook the fascinating and crystal-clear waters along the coast of San Vito. The village has primarily adopted the characteristics of a seaside tourist destination and has evolved in terms of tourism supply and demand. One peculiarity of this destination is the presence of an international food event: the Cous Cous Fest. Beginning in 1998, San Vito Lo Capo founded this new trend for tourism, attracting new demand even during the low season. The Cous Cous Fest increases the number of visitors and has a significant impact in terms of destination communication and promotion, thus reinforcing the destination brand. In addition, another important contributor to the development of the destination is the activation of new low-cost flights at the nearby Trapani Birgi airport. The daily connections increase the international visibility of the destination and expand the positive appeal for international tourists. Moreover, a substantial number of resident-owned second homes are offered for rental to tourists with an excellent price/quality ratio. Tourism to this remote destination grew significantly in the 1990s, and the number of overnight stays rose from 134,507 in 1996 to 1,508,659 in 2019. In parallel, this substantial increase matched the supply of private apartments for rent. This upward growth trend has been spontaneous and continuous owing to the on-going actions of groups of small businesses and micro-enterprises that have played an essential role in the development of the destination during both the initial and consolidation phases.

2.4 Measurements

The company managers in San Vito Lo Capo were asked to complete a questionnaire in the presence of an analyst who explained and highlighted that the contacts and connections of the organisation were to be considered. From the Reference Collective, which comprises 94 companies, 71 units responded. At the same time, 15 operators expressed their desire to refrain from participation because, in their opinion, the time needed for the interview was too long. Furthermore, seven were not traced; one was not operational and for nine non-responding companies, the relational data were identified indirectly.

The questionnaire was divided into three sections. The first section, ‘company registry’, was dedicated to collecting primary company data to classify the company within a sub-sector of activity. The second section concerned business relations, aiming to detect the existence and characteristics of commercial and kinship ties between companies. The third section collected more general information regarding factors that, from the perspectives of the interviewed managers, hindered or facilitated collaboration between companies and brokers who could better coordinate the companies and initiatives in the area. This study employing a range of network metrics to analyse the network from different perspectives and levels (see Tables 2 and 3). All calculations were performed using UCINET (Borgatti et al., 2002).

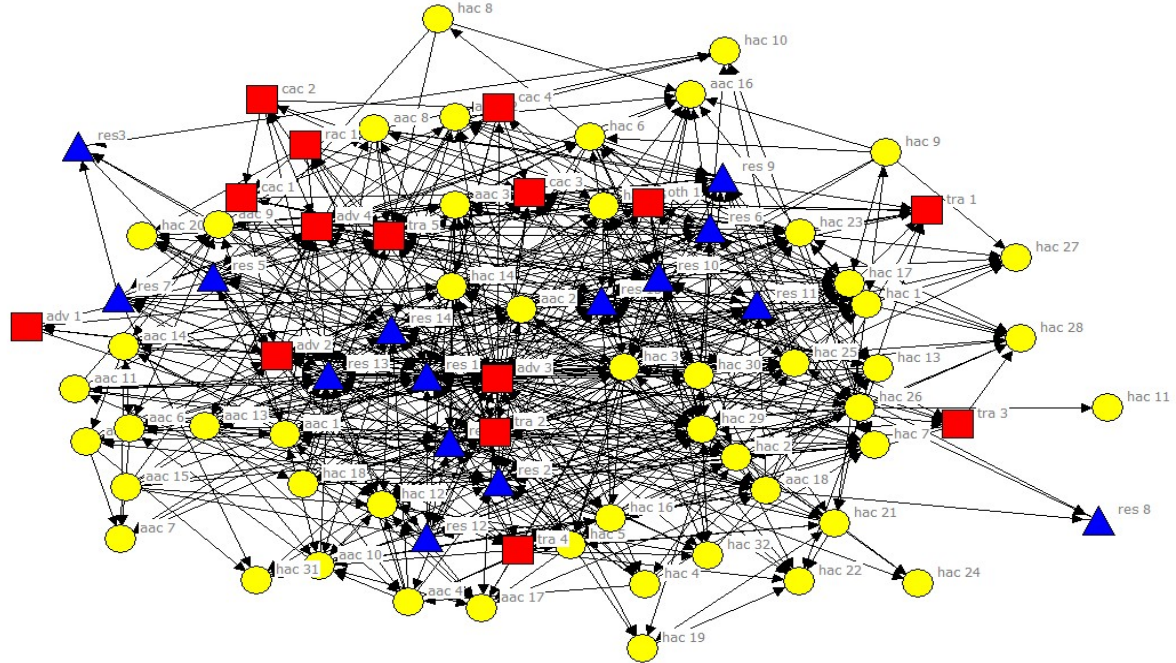
2.5 Results: Network structure and brokers

Networking graphs (Khalilzadeh, 2018) and the demonstrations of evolution over time offer an illustration (Ohtsuki, H. et al., 2006) of company connections (Rand, & Nowak, 2015). Figure 1 visualises the destination network studied, presenting the different activity sub-sectors; Table 4 details its features.

Nodes represent the organisations, while ties represent the commercial connections between the companies. All the organisations were assigned an attribute, a part of their sub-sector (such

as the accommodation or restaurant sub-sector), which indicates the grouping of enterprises into specific tourism services. The network has 80 nodes and 443 direct links, with a low-density value of relations at 0.1402, which is typical of such networks (see, for example, Baggio, 2020).

Figure 1: Destination company business network



Legend: **Circle:** hotels and similar structures; guesthouses for short stays, holiday homes and apartments, B&Bs, residences and accommodation connected to farm holidays; **Triangle:** restaurants; **Square:** car and bus transport and taxi services; car, scooter and bike rentals; resorts; travel agents and tour operators and other activities.

Table 4: Network characteristics

	<i>Order</i>	<i>Size</i>	<i>Density</i>	<i>Average distance</i>	<i>Distance-based</i>
<i>Companies' network</i>	80	443	0.1402	1,88	0.58

The 'distance based on cohesion' is 0.58, which is a high value, considering that it achieves a score between 0 and 1, indicating that companies have greater cohesiveness. The geodesic distance index enables an observation of the specific characteristics of these links. The average distance value is 1.88, which suggests that there is always one company that connects two other companies that are not directly connected.

To further investigate these connections between the companies, the indexes were divided based on an analysis of brokerage activity. Consequently, the companies were classified into three groups: accommodation, restaurants and services.

The value indicated for each row and position represents the number of times that a company acts as a mediator to help two other companies in establishing a relationship. The results show that some companies clearly provide mediation within the tourist destination and have a crucial role in the various sub-sectors (Tables 5, 6 and 7). The coordinators, gatekeepers and

<i>hac_30</i>	34	14	45	4	18	115
<i>aac_1</i>	48	21	26	6	6	107
<i>hac_2</i>	43	29	13	7	7	99
<i>hac_23</i>	25	24	22	13	11	95
<i>hac_25</i>	4	12	12	27	32	87
<i>hac_1</i>	40	22	10	3	1	76
<i>aac_9</i>	15	12	27	19	0	73

The two companies in the accommodation sub-sector that have the highest levels of brokerage (*hac_3* and *hac_29*; see Table 5) both have the central role of the coordinator (43.24% of mediations for *hac_3* and 39.92% for *hac_29*; see Figures 2.1 and 2.2). These companies also play the roles of the gatekeeper (20.46% of mediations for *hac_3* and 25.21% for *hac_29*) and representative (21.62% of mediations for *hac_3* and 21.43% for *hac_29*). The links that allow one sub-sector to have relationships with the other two sub-sectors are less intense, which means that the two companies are complementary in managing relationships. In particular, *hac_3* is primarily related to the restaurant sub-sector (with 64.29% and 60.38% of the representative and gatekeeper values, respectively), whereas *hac_29* manages relationships in the service sub-sector (60.78% and 73.33% of the representative and gatekeeper values). Finally, marginal roles are reserved for the consultant (8.11% of mediations for *hac_3* and 7.56% for *hac_29*) and liaison (6.56% of mediations for *hac_3* and 5.88% for *hac_29*).

Figure 2.1: *hac_3*: Coordinator

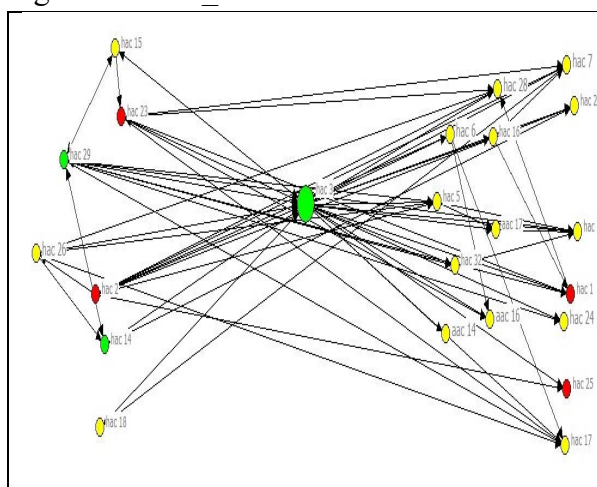
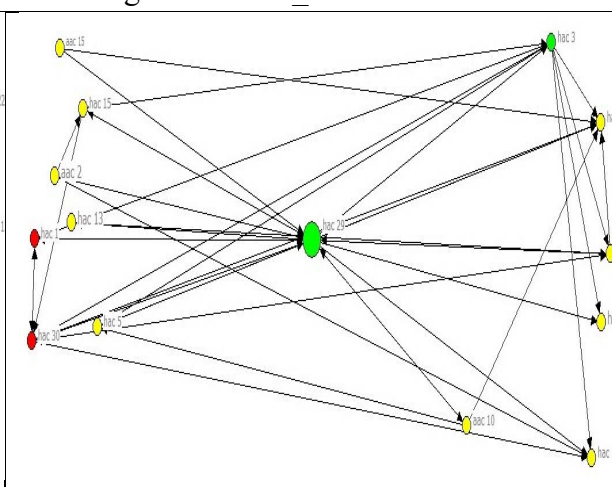


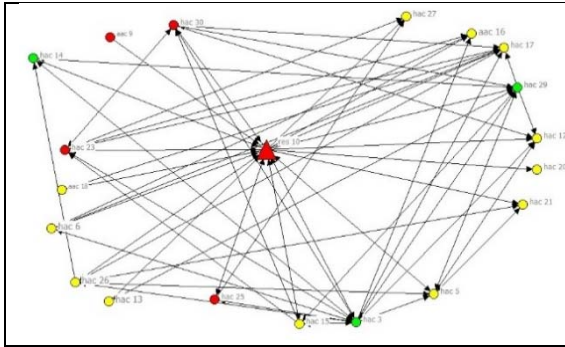
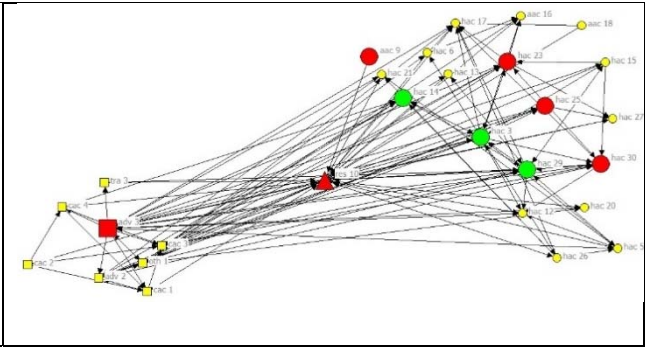
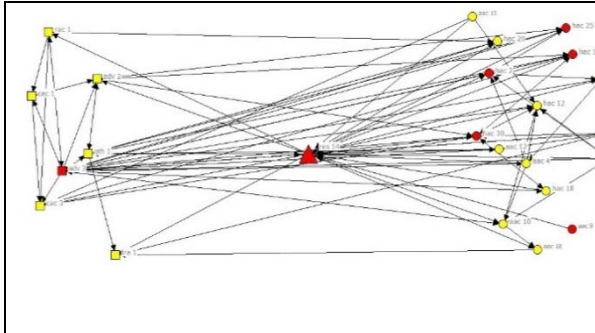
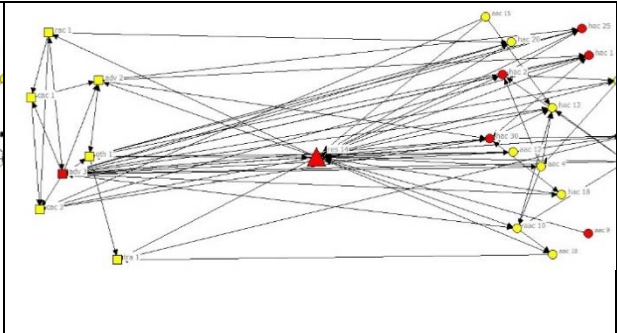
Figure 2.2: *hac_29*: Coordinator



The situation in the restaurant sub-sector differs from that of the sub-sectors (see Table 6). The first four companies are essential, covering 74.85% of the total brokerage degree. In this sector, the coordinator role is almost non-existent, while those of the gatekeeper and representative are completely marginal. Instead, the prevailing functions are those of the consultant and liaison. Regarding the consultant role (see Figures 2.3 and 2.5), the four companies that have this role are based entirely in the accommodation sub-sector. The last role (liaison) is primarily played by *res_10* and *res_14*, allowing the accommodation sub-sector to conduct other services within the tourist destination (Figures 2.4 and 2.6).

Table 6: Brokerage scores (restaurant sub-sector)

<i>Company</i>	<i>Coordinator</i>	<i>Gatekeeper</i>	<i>Representative</i>	<i>Consultant</i>	<i>Liaison</i>	<i>Brokerage degree</i>
<i>res_10</i>	2	12	12	131	102	259
<i>res_14</i>	1	28	13	117	65	224
<i>res_6</i>	0	2	0	119	25	146
<i>res_1</i>	0	0	15	109	21	145
<i>res_9</i>	0	0	10	54	3	67

Figure 2.3: *res_10*: ConsultantFigure 2.4: *res_10*: LiaisonFigure 2.5: *res_14*: ConsultantFigure 2.6: *res_14*: Liaison

Once the companies are sorted by brokerage degree in the service sub-sector (see Table 7), we can see that *adv_3* (a travel agency) has a prominent part in all the roles (Figure 2.7). In addition, a significant value is found for the consultant role, which is performed in the accommodation sub-sector (see Figure 2.8).

Table 7: Brokerage scores (service sub-sector)

<i>Company</i>	<i>Coordinator</i>	<i>Gatekeeper</i>	<i>Representative</i>	<i>Consultant</i>	<i>Liaison</i>	<i>Brokerage degree</i>
<i>adv_3</i>	11	72	75	264	79	501
<i>tra_2</i>	0	37	0	124	0	161
<i>adv_2</i>	6	39	13	34	36	128
<i>adv_4</i>	8	19	27	36	24	114
<i>oth_1</i>	4	11	18	24	10	67

Figure 2.7: *adv_3*: Brokerage degree

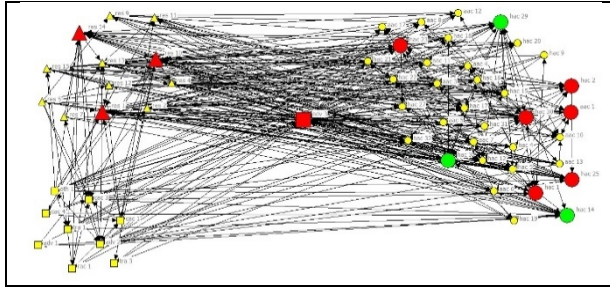
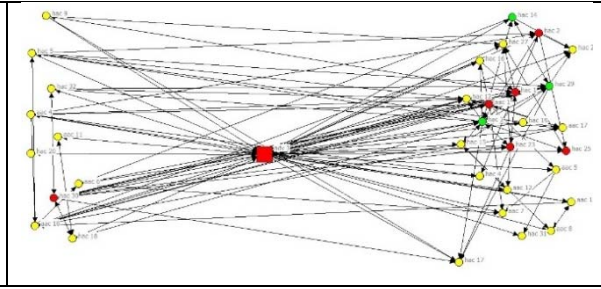


Figure 2.8: *adv_3*: Consultant



3 CONCLUSION

Using the existing literature on networks, the present study aimed to show the importance and relevance of horizontal networks in a tourist destination by defining the different roles that companies spontaneously assume to manage relationships with other network actors.

The analytical visualisation and identification of company relationships highlighted the network's structure (Research Question 1). Broker companies that mediate the relationship process within the network (Research Question 2) were identified, maintaining continuous connections with other companies inside and outside the specific tourism sub-sector (Baggio, 2011; Canina, 2005). The visualisations of the brokers' relationships and their positions are relevant for destination managers to understand existing roles, influences and relationships (Iannolino & Ruggieri, 2017). The brokers' roles depend on specific brokerage activity, whether it involves the roles of a coordinator, consultant, gatekeeper, representative or liaison (Research Question 3). Here, we considered these roles in three tourism sub-sectors: hospitality, restaurants and services that entail specific activities and different skills.

Notably, the results show that brokers' different roles can change depending on the tourism sub-sector to which companies belong. Specifically, coordinators, gatekeepers and representatives are primarily involved in the hospitality sub-sector, whereas consultants and liaisons stand out in the restaurant and service sub-sectors. Therefore, it can be argued that the hotel industry is central to the tourist destination and would benefit from a greater coordination and management of internal relations with the other sub-sectors. However, the restaurant and service sub-sectors support the actors in the accommodation sub-sector; thus, the roles of consultant and liaison are also fundamental. Consequently, the study demonstrates an inter-sectoral relationship in which brokers interact between the tourism sub-sector and others (Research Question 3). Furthermore, the findings reveal the relevant role of the local travel agent in connection management (Research Question 4). This company is central to establishing connections for tourism services and presenting an integrated destination product. This result is coherent with the functional role of travel agents in tourist destination networks.

The results herein show how brokers mediate the relationships according to their informal relationships and spontaneously assumed roles. These brokers act 'as the main interfaces between members of their network community (network neighbours) and members of other communities' (Clement J. et al., 2018, p.251), facilitating cross-community activities. Specifically, brokers mobilise strongly rooted intangible resources (skills, relationships and trust) and guide integrated and balanced development. The strategic role of a broker is to

disseminate reliable information based on the skills and knowledge of the different cooperating operators, even when these operators belong to different sub-sectors. These relationships with other sub-sectors can advance the circulation of institutional rules that emerge from continuous internal exchange among various members of economic sub-sectors (Huggins, R., Thompson, P. 2015).

In exploring the nature of the collaboration between companies and brokers in the case herein, it has been demonstrated that business relationships are also related to family relationships (Ruggieri & Iannolino, 2012; 2014). This occurs particularly in small or micro-destinations, where year-round residents know each other and are often relatives or friends. This evidence confirms that the nature of business collaboration is supported by other networks built on trust, friendship and social and ethical principles, as addressed in previous research (Fuchs & Baggio 2017). For this reason, broker activity in tourist destinations is activated spontaneously to support other businesses rather than to merely obtain an immediate economic benefit. Therefore, brokers' activities, even for a tourist destination, can be considered 'a public externalities' (Clement J. et al., 2018 p.281).

Even if interactions remain informal and spontaneous, these interactions support the network by helping solve mutual problems and offering assistance and connections. Consequently, the sharing of information, experience and advice is provided by specific mediators or corporate entities that voluntarily assume the role of helping others and connecting individual members with others, not to manage power but to maintain and increase relational connectivity (Pradeep Racherla, & Clark Hu, 2010). Further studies show how the broker's role is fundamental for improving connections, particularly when there is a low relationship density and a lack of links between companies, contributing to a reduction in the structural network holes (Ahuja 2000 b; Burt 2004,2009,2015; Goyal & Vega-Redondo, 2007; Zaheer & Soda 2009). Therefore, brokers are crucial for maintaining and increasing a destination's social capital and preserving the trust and authentic ties between actors. In addition, actors that take responsibility for mediation and raising awareness in the tourism sub-sector must take ethical actions between companies and local actors and broaden participation and inclusion (Tomassini, L. & Baggio, R. 2021). This study revealed the existence of company brokers that can spontaneously improve connectivity and facilitate transformation in local communities (Gretzel, U., et al. 2020). Therefore, compared to others, some brokers can manage transformative tourism in a destination with equity, plurality, transparency, reflexivity and respect for local history and social capital (Gretzel, U. et al., 2020).

Policymakers involved in the process of destination development must not neglect the role of mediators and intermediary activities. The identification of brokers can inform policies to reinforce such linkages and encourage knowledge improvement and information transfer. Policymakers should also identify local challenges as destination network configuration is a frequent consequence of existing human relationships (Lans et al., 2015). Each tourist destination differs because of existing differences in human relationships, knowledge, skills and opportunities (Beritelli, Buffa & Martini, 2015). Project proposals with new goals for a destination must be shared, accepted and supported by the local tourist companies and identified brokers to follow a community-based tourism model (Everingham, P. & Chassagne, N. 2020). This study has some limitations. The results could have been oriented towards the idiosyncratic

behaviour of individuals in local or regional cultures to differentiate them from those derived from other contexts. In considering networks as dynamic entities, future research could further investigate how partnership relationships evolve and link them to a destination's evolution, following the 2030 UN-SGD agenda (Boluk, K., Knight, C., & Higgins-Desbiolles, F. 2019). In addition, longitudinal data in this field could be used to examine changes in dimensions such as trust, friendship and economic relations over time to elucidate the mechanisms that favour or hinder cooperative behaviour. This research did not consider the power relations between the companies examined. More social network analysis indicators, such as ego networks or centrality, could be integrated to determine whether some companies operate in a monopoly relational market or have a prominent influence on the decisions and business of the tourism destination network.

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