Network Structure of Relationships between Support Institutions and Performance of Tourist Destinations: Analysis of Six Brazilian Leading Destinations

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Abstract
In this study, we discussed the relationship between the network structure of relationships and support institutions, and the performance of tourist destinations. We analyzed six Brazilian leading destinations that exhibited different performances and conducted 108 interviews. Data was processed using Social Network Analysis. We concluded that there is a relationship of the network structure of relationships between support institutions to the performance of tourist destinations. As a theoretical contribution, we propose that (i) destination performance and number of institutions in the group with the most central roles in the network of relationships are positively associated; (ii) destination performance and number of relationships of public and municipal institutions, and council members are positively associated; (iii) destination performance and percentage of betweenness in the key intermediaries of the relationship network are negatively associated; (iv) destination performance and number of institutions performing the role of brokers in the relationship network are positively associated; and (v) destination performance and cohesiveness of the relationship network are positively associated.

Keywords: Tourist Destinations. Social Network Analysis. Network Relationship Structure. Tourist Destination Performance. Competitiveness.

Estrutura da rede de Relacionamentos entre as Instituições de Suporte e o Desempenho de Destinos Turísticos: Análise de Seis Destinos Indutores Brasileiros

Resumo

Neste trabalho identificamos a relação entre a estrutura da rede de relacionamentos com as instituições de suporte e o desempenho de destinos turísticos. Analisamos seis destinos indutores brasileiros que apresentam diferentes desempenhos e applicators 108 entrevistas. Os dados foram tratados com a Análise de Redes Sociais. Concluímos que há relação entre a estrutura da rede de relacionamentos entre as instituições de suporte e o desempenho de destinos turísticos. Como contribuição teórica propomos que (i) desempenho do destino e a quantidade de instituições no grupo das mais centrais na rede de relacionamentos estão positivamente associados; (ii) desempenho do destino e a quantidade de relacionamentos das instituições públicas, municipais e membros do conselho estão positivamente associados; (iii) desempenho do destino e a concentração da função de intermediação nos principais intermediários da rede de relacionamentos estão negativamente associados; (iv) desempenho do destino e a quantidade de instituições desempenhando a função de intermediação na rede de relacionamentos estão positivamente associados; e (v) desempenho do destino e a coesão da rede de relacionamentos estão positivamente associados.

Palavras–chave: Destinos turísticos. Análise de Redes Sociais. Estrutura da rede de relacionamentos. Desempenho de destinos turísticos. Competitividade.

Estructura de la Red de Relaciones entre las Instituciones de Apoyo y el Rendimiento de Destinos Turísticos: Análisis de Seis Destinos Líderes Brasileños

Resumen

En este estudio, identificamos la relación entre la estructura de la red de relaciones con las instituciones de apoyo y el rendimiento de los destinos turísticos. Para ello, hemos analizadoseis destinos líderes en Brasil que presentan distintos desempeños y realizado 108 entrevistas. Los datos se han procesado utilizando el Análisis de Redes Sociales. Concluimos que existe una relación entre la estructura de la red de relaciones de las instituciones de apoyo y el rendimiento de los destinos turísticos. Como contribución teórica, proponemos que (i) el rendimiento del destino y la cantidad de instituciones en el grupo con los roles más centrales en la red de relaciones están positivamente asociados; (ii) el rendimiento del destino y la cantidad de relaciones de instituciones públicas, municipales y miembros del consejo están positivamente asociados; (iii) el rendimiento del destino y la concentración de la función de intermediación en los intermediarios claves de la red de relaciones están negativamente asociados; (iv) el rendimiento del destino y la cantidad de instituciones que desempeñan la función de intermediación en la red de relaciones están positivamente asociados; y (v) el rendimiento del destino y la cohesión de la red de relaciones están positivamente asociados.

Palabras clave: Destinos Turísticos. Análisis de Redes Sociales. Estructura de la Red de Relaciones. Rendimiento de Destinos Turísticos. Competitividad.

1 Introduction

This article connects three themes: Industrial clusters, local institutions that support industrial activity, and relationship networks. These themes are consonant with some lines of research on tourism that can be pursued, for example, tourism networks and tourism cluster (MERINERO-RODRIGUEZ; PULIDO-FERNANDEZ, 2016).

These themes may be of interest to both researchers and the stakeholders who manage tourist destinations.

The debate on territorial clusters and their competitive resources began with the work of Marshall (1890), and it was subsequently sparked off in the work carried out by Becattini (1979, 1990). According to Becattini (1990, p. 39), a cluster is a socio-territorial entity characterized by the presence of a human community and a group of companies in a natural and historically delimited area. This concept also encompasses the existence of institutions supporting industrial activity that can interfere in the ultimate performance of companies (SEDITA et al., 2021). Institutions are defined as organizations with a local orientation that offer collective services in support of local industry companies (MCEVILY; ZAHEER, 1999). Local support institutions (LSIs) help generate capacity to advance growth, innovation, and structural change (RESTREPO et al., 2021); also, they are a strong driver of tourism and destination development (DEL VECCHIO; PASSIANTE, 2017; GHALIA et al., 2019).

Support institutions can be present at different stages of the value chain and can form an organizational network. The work of Sedita et al. (2021) shows that in stages where knowledge to be shared is more common in the cluster, networks between companies and institutions are more expanded, and relationship networks involve fewer institutions when such knowledge is more strategic. In addition to the networks involving companies and institutions that were pointed out by Sedita et al. (2021), there are those formed only by companies, owing to the complementarity of the tourism product (HAUGLAND et al., 2011; SCOTT et al., 2008). Our work advances on this subject by focusing on networks of support institutions, which bridges the research gap pointed out by Alford and Duan (2018) and Kim and Shim (2018).

Previous studies advocated that institutional performance can enhance local performance (BRUSCO, 1993; SCHMITZ, 1993). However, the authors did not describe the relationship between the variables. Although Brusco (1993) and Schmitz (1993) argued that institutions located in industry clusters are important for local development, they did not measure such development. In other words, they stated that institutions provide services that interfere with their performance, but they did not demonstrate that empirically, nor did they point out in what way, to what extent, and at what level of intensity this happens. This situation is seen as a theoretical gap for their proposition.

Addressing networks of relationships with a focus on tourism, the models of Dwyer and Kim (2003) and Ritchie and Crouch (2003) postulate that destinations can be managed, and support institutions are one of the variables that interfere with destination competitiveness. Yet, the authors of these models did not perform measurements and did not indicate how institutions interact or what the network of relationships is like. And this gap persists according to the literature (BRANDÃO et al., 2019; KIM et al., 2021; MARTÍNEZ-PÉREZ et al., 2019). Our study makes a contribution by measuring how these relationships develop and by describing the network of relationships. Still, some studies advocate the need to understand how relationship network dynamics occurs within tourist destinations and how this dynamic affects destination performance (BRANDÃO et al., 2019; KOFLER et al., 2018; MARTÍNEZ-PÉREZ et al., 2019; MILWOOD and ROEHL, 2018). Our work also seeks to fill this gap.

We realized that although Scott et al. (2008) discussed complementarity from a business point of view, when institutions support industrial activity, they ultimate play a role - albeit indirect - in building the tourist experience. Few studies to date have analyzed how stakeholders join efforts to provide tourists with a unique experience (GISPERT; CLAVÉ, 2020; WANG et al., 2020). In addition, previous research has emphasized the need for more studies that draw on the perspective of networks to investigate the connection between the network structure of relationships and tourist destination performance (BAGGIO; SAINAGHI, 2016; CEHAN et al., 2021; CZERNEK-MARSZAŁEK, 2020; MERINERO-RODRÍGUEZ; PULIDO-FERNÁNDEZ, 2016; RESTREPO et al., 2021).

In view of the above, complementarity can be analyzed from a business perspective; destinations can be managed, and relationships can be seen as a variable that interferes with destination performance. Moreover, the interaction between institutions forms a unique configuration of network relationships (BRUSCO, 1993; SCHMITZ, 1993; DWYER; KIM, 2003; RITCHIE; CROUCH, 2003; HOFFMANN; CAMPOS, 2013; HOFFMANN; OLIVEIRA; BROCCHI, 2016). Therefore, the objective of our work is to identify the connection between the relationship network structure of support institutions and tourist destination performance. To achieve this goal, this study evaluates six Brazilian tourist destinations. The units of analysis are the support institutions of each of the destinations.

Our choice of the six Brazilian destinations was motivated by the fact that most studies on tourism are conducted in developed regions (MULET-FORTEZA et al., 2019) and a great deal of such research is based on a single case study or a small number of cases (MERINERO-RODRIGUEZ; PULIDO-FERNANDEZ, 2016).

2 Theoretical framework

Role of Support Institutions. There is a wide range of LSIs that may exist in a destination: I) business and professional associations that provide specialized services for companies and related parties (BRANDAO et al., 2019; KOFLER et al., 2018; LEE; ALLAK, 2020; MARTINEZ-Pérez et al., 2019; RESTREPO et al., 2021;); ii) public and private funding organizations (KIMBU; NGOASONG, 2013; LEE; HALLAK, 2020; RESTREPO et al., 2021;); III) Government institutions and agencies (BRANDÃO et al., 2019; KOFLER et al., 2018; RESTREPO et al., 2021;); iv) community associations and councils (BRANDÃO et al., 2019; RESTREPO et al., 2021); v) universities and teaching, training, and capacity-building centers (BRANDÃO et al., 2019; KIM; SHIM, 2018; MARCO-LAJARA et al., 2019; MARTÍNEZ-PÉREZ et al., 2019); vi) research and technology institutions (BRANDÃO et al., 2019; KIM; SHIM, 2018; KOFLER et al., 2018; MARCO-LAJARA et al., 2019; MARTINEZ-PÉREZ et al., 2019; RESTREPO et al., 2021); and VII) . We assume that there are institutions in the destinations; however, the combination of institutions varies from one tourism cluster to another (HOFFMANN; CAMPOS, 2013).

LSIs play two roles in a tourism cluster: providing services to target stakeholders (companies and other LSIs) and fostering relationships. Services can be vocational courses and workforce training programs (MARCO-LAJARA et al., 2019; ROSELL et al., 2017; THO, 2017); technological services and dissemination of technologies (HOFFMANN; CAMPOS, 2013; JESUS; FRANCO, 2016; MARTÍNEZ-PÉREZ

et al., 2019); Initiatives that foster cooperation, resource sharing and infrastructure coordination between participants and the reduction of opportunistic behaviors (BRANDÃO et al., 2019; CZERNEK-RSZAŁEK, 2020; MARCO-LAJARA et al., 2019; JESUS; FRANCO, 2016; ROSELL et al., 2017; THO, 2017); initiatives for environmental protection, employment promotion, funding, and local entrepreneurship (BRANDÃO et al., 2019; DENG; ZHANG, 2018; JESUS; FRANCO, 2016; LI et al., 2020; MARCO-LAJARA et al., 2019). These institutions offer unique services in each tourist destination (GARCIA-VILLAVERDE et al., 2020).

The other role that LSIs can play is that of fostering relationships between stakeholders from the destination and with stakeholders outside the cluster (CZERNEK-MARSZAŁEK, 2020; KIMBU; NGOASONG, 2013, VIEIRA et al., 2021). In fact, Czernek and Czakon (2016) and Restrepo et al. (2021) advocate that this is supposed to be the main role of support institutions in the tourist cluster. Considering the two roles that entities can play – providing services and fostering relationships – and considering the objective of this study, we will focus on the performance of institutions when fostering relationships in the context of interorganizational networks.

Relationship networks. The strategy of intercooperation in business networks emerges as a growth strategy where the complementarity of networks helps them to obtain resources (DIAS; HOFFMANN; MARTÍNEZ-FERNÁNDEZ, 2019), achieve common objectives, and maintain the networks attractive to their members (WEGNER et al., 2023). In addition, in corporate cluster networks, the structural properties of social relations can influence performance (VERSCHOORE; BORTOLASO; LUZ, 2021). Moreover, social networks are a significant factor in the process of social and economic formation of the study region (MISSIO; BALBUENA; PALMA, 2021).

In a tourist destination, the stakeholders do not possess, alone, all the resources and capabilities required to develop products and services that fully meet the needs and preferences of tourists (RAZMDOOST et al., 2019). This fragility is circumvented by the network of relationships between the stakeholders from the destination (CAMBRA-FIERRO et al., 2021; LEE; HALLAK, 2020).

The literature has used the concept of relationship network to study tourist destinations (AQUINO et al., 2018; KIM; SHIM, 2018), although this application is recent (KC et al., 2019). Also, different studies have used social network analysis (SNA) to look at tourist destinations from the perspective of interorganizational networks (BAGGIO; SAINAGHI, 2016; CASANUEVA et al., 2016; GARCIA-VILLAVERDE et al., 2020; KC et al., 2019; KIMBU; NGOASONG, 2013; MARCO-LAJARA et al., 2019; RAISI et al., 2020; THERRIEN et al., 2019).

SNA enables researchers to understand the structure of the network of relationships between stakeholders to obtain mathematical properties for the relations between tourism-related stakeholders (MERINERO-RODRÍGUEZ; PULIDO-FERNÁNDEZ, 2016). The mathematical properties most used in research in management are (BRAND; VERSCHOORE, 2014): structural balance; degree centrality; betweenness centrality; closeness centrality; cliques; clusters; density; geodesic distance; structural equivalence; node degree; Bonacich power; network size; and transitivity. The overall structure of the network represents the positions that stakeholders occupy and the relations between them (Wang et al., 2020). Thus,

the structure of the network will reflect the pattern of relationships between the stakeholders from the destination and its analysis enables inferences about friendship, frequency of contact, communication, trust, flow of information etc., among the agents of a network (ZHAO, 2011). The relationship structure can be analyzed in different ways. In this work, we analyzed it based on the intensity and density of interactions within the network (NAHAPIET; GHOSHAL, 1998).

3 Method

3.1 Choice of cases

Since 2008, leading tourist destinations have been the object of study about their competitiveness, based on the application of a competitiveness model developed by the Brazilian Ministry of Tourism (MINISTÉRIO DO TURISMO, 2008; 2010). The so-called leading destinations are the ones with the ability to boost the development of tourism at a regional level (MINISTÉRIO DO TURISMO, 2008).

To choose the six leading Brazilian destinations, we adopted the following criteria: (I) to choose among the 65 Brazilian leading destinations (Brasil, 2015) (n=65); (ii) to select destinations other than state capitals – with a view to reducing possible distortions in tourist flow (n=38); III) to select destinations in two groups – Group 1 is formed by the 19 destinations with the best performance while Group 2 is formed by the 19 destinations with the worst performance (n'=19; n''=19); and (iv) to select three destinations from Group 1 and three destinations from Group 2 (n=6). Our choice considered destinations that were mentioned in another official study (BRASIL, 2019): Mateiros, São Raimundo Nonato and São Joaquim are part of the lower performance strata (strata D and C) while the destinations Caldas Novas, Paranaguá and Bento Gonçalves are part of the upper performance strata (strata B and A). The choices are shown in Table 1.

Table 1. Destinations included in the survey.

Group 1 – Low performance*		Group 2 – High performance	
Destination	**Rate**	**Destination**	**Rate**
Mateiros – TO	32.8	Caldas Novas – GO	57.1
São Raimundo Nonato – PI	40.6	Bento Gonçalves – RS	72.9
São Joaquim – SC	48.4	Foz do Iguaçu – PR	76.3

Note. Source: Adapted from Brasil (2015)
* The scale ranges from 0 – low to 100 – high. .

This is a census study with all the institutions that agreed to participate in the study.

3.2 Data collection

Data collection took place in two stages.

Documentary research - Identification of local support institutions. To identify LSIs in each of the tourist destinations, we collected information from the Department of Tourism and the member organizations of the Municipal Council of Tourism, and we read documents and websites. After this step, we contacted each agency or organization by phone. To this end, we applied the Respondent-Driven Sampling technique (SALGANIK; HECKATHORN, 2004). After that, we set up a list of LSIs and the respective contact details.

Interviews with Representatives of the Institutions. The representatives were contacted by phone and on a face-to-face approach. A total of 108 interviews were conducted for the 179 LSIs (listing available in – to be defined), with an average length of 43 minutes. The destinations were visited personally during the first months of 2019. There was a total of 78h17' of recorded interviews, in 36 days of field work.

A semi-structured interview script was used for conducting interviews with the representatives of the institutions. Each interviewee was presented with a list of all the institutions found in the destination. The interviewees were asked to rate, in a continuum of one (never) to seven (always), how much the institution was related to the other LSIs of the destination. The relationship was considered as existing when the interviewees rated the relationships using values from four to seven.

3.3 Data processing

The data were processed using two techniques, as follows.

Directional Network of Relationships. To generate the relationship network, all institutions identified in the destinations were considered. Network centrality was checked considering the relationship between a given institution and all the other institutions of the destination, taking into account the number of times that the institutions were pointed out as being related to another. The networks are characterized as directional.

Non-Directional Network of Relationships. The present study used the symmetric model, because we consider only the existence of the relationship between two institutions when both point out that this relationship exists (BRENNAN; MERKL-DAVIES, 2018). For SNA, we used the R 3.6.1 and RStudio 1.2.1335 software programs, and we found out the following properties:

I) Centrality – given by the number of links of each stakeholder (WASSERMAN; FAUST, 1994);

II) Betweenness – how many times each stakeholder is the shortest path for a connection between two other stakeholders (WASSERMAN; FAUST, 1994);

III) Transitivity – the probability that the adjacent vertices of a vertex are connected (WASSERMAN; FAUST, 1994).

IV) Density – the relationship between the number of links existing in the network and the number of possible links (WASSERMAN; FAUST, 1994), also used to assess the level of network cohesiveness (BRAND; VERSCHOORE, 2014);

V) Subgroups – cohesiveness between certain vertices of a network (WASSERMAN; FAUST, 1994);

VI) Cliques – a subgroup of stakeholders within a network, in which all relate to all others (WASSERMAN; FAUST, 1994).

4 Results and Discussion

Figure 1 shows the centrality of the Directional Network of Relationships as a function of the number of relationships between institutions in each of the destinations.

Figure 1. Centrality of the network based on the number of relationships
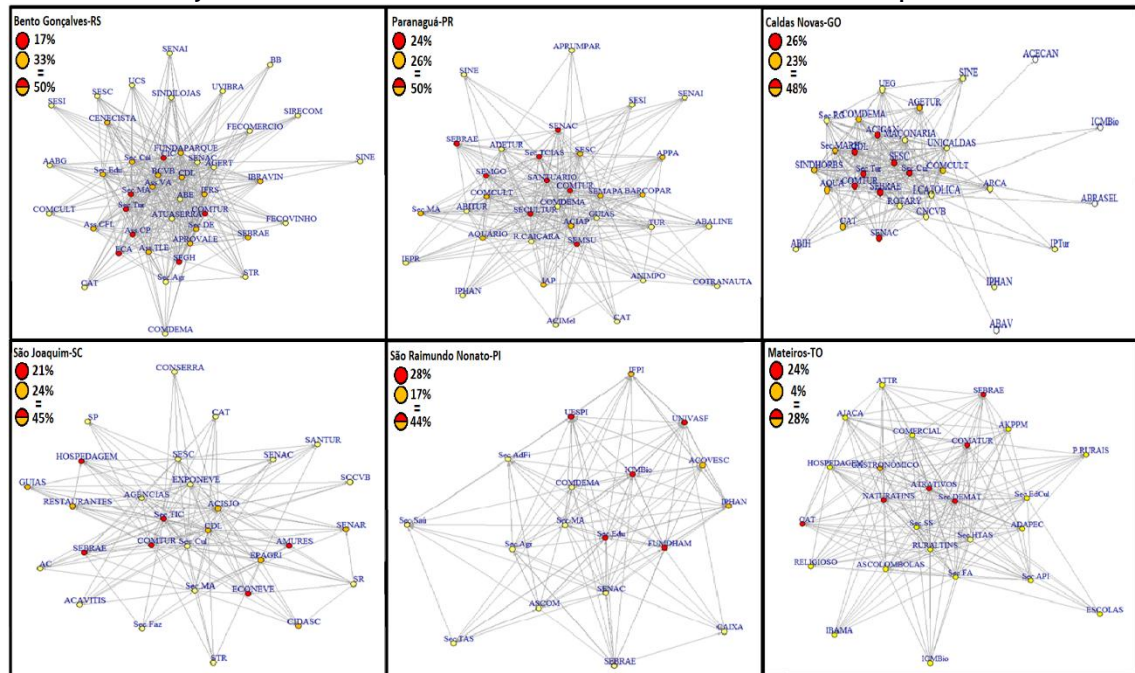
Source: the author (2021).

Considering the amount of information produced when attempting to understand the relationship between the institutions of the destinations, we decided to design Table 2. It contains information about the network structure of relationships between the support institutions of each of the study destinations.

Centrality . The most central institutions in the networks of relationships are Public LSIs, members of the Tourism Council and Municipal Councils (Table 2, line1). In addition, the Department of Tourism and the Municipal Tourism Council are among the most central institutions in five of the six destinations. The only destination in which these institutions were not as central was precisely the only destination in which they were disabled – São Raimundo Nonato. Therefore, it can be concluded that there is no standard – considering only the network centrality structure – that differentiates high- and low-performance targets.

The findings are in line with the work of Raisi, Baggio, Pugh, and Willson (2020), who found that the tourism network tends to be centralized around a small number of organizations and that the central points are occupied mainly by public tourism agencies and regional destination management organizations. Along the same lines, Restrepo et al. (2021) found that public institutions have a prominent role in tourist destinations and are usually densely interconnected through sectoral councils, gaining authority through their coordination. There can be two types of motivations for this. On the one hand, playing important roles in the community facilitates and influences the number of relationships (CZERNEK-MARSZAŁEK (2019)

and on the other, the authority of public institutions is a fundamental issue that creates competitive advantages (RESTREPO et al., 2021).

Table 2. Consolidated Information - Directional Network of Relationships

Lines	Structure analyzed	Bento Gonçalves		Paranaguá		Caldas Novas		São Joaquim		São Raimundo Nonato		Mateiros	
		1. Directional Network of Relationships (Considers all Institutions of the Destination)											
		a. Network Centrality											
1	Predominant profiles (Considering the 4th quartile)	Public; of the Council; Municipal		Public; of the Council; Municipal		Private; of the Council; Municipal		Private and public of the Council; Municipal		Public; of the Council; Municipal and Federal		Public; of the Council; Municipal	
2	Percentage of Relationships (51% - 100% percentiles)	0.65		0.66		0.72		0.63		0.62		0.61	
3	Number of institutions deemed as central	21 (50% of the total institutions of the destination)		17 (50% of the total institutions of the destination)		15 (48% of the total institutions of the destination)		13 (45% of the total institutions of the destination)		8 (44% of the total institutions of the destination)		7 (28% of the total institutions of the destination)	
		b. Average number of Relationships											
4	Public institutions	12.7	n=13	11.9	n=14	9.9	n=14	6.6	n=11	7.9	n=14	9.6	n=14
5	Private institutions	11.5	n=27	9.4	n=20	9.5	n=17	6.6	n=18	-**	n=3	9.7	n=11
6	Municipal Institutions	13	n=24	10.9	n=19	11.7	n=15	6.4	n=19	7.1	n=10	9.7	n=17
7	State Institutions	10.7	n=6	9.6	n=5	-**	n=3	7.2	n=5	-**	n=1	9.5	n=4
8	Federal Institutions	9.7	n=12	9.9	n=10	7.7	n=13	6.8	n=5	8.9	n=7	9.8	n=4
9	of the Member Institutions of the Tourism Council	12.7	n=27	11.6	n=21	11.9	n=14	6.6	n=18	8.3	n=14	9.2	n=20
10	of institutions that are not members of the Tourism Council	9.6	n=12	7.6	n=10	6.6	n=14	6.7	n=9	-**	n=3	10.5	n=4

Source: Research data (2021)
Note. *the tourism council is not active; ** number of institutions is too low to generate analysis.

On average, the percentage of relationships in institutions (Table 2, line 2), between the 51% and 100% percentiles, is 65%. That is, half of the institutions with the most relationships concentrate 65% of the total existing relationships at the destination. This concentration rises to 68% when considering the high-performance destinations and drops to 62% for the low-performance ones.

High-performance destinations tend to have a higher number of institutions in the most central group, both in absolute numbers and in proportion to the number of institutions at the destination (Table 2, line 3). Moreover, the proportion of central institutions versus the performance of destinations presented a relationship magnitude of 0.83. This conclusion differs from that of Bonet (2004), who argued that networks which are more centralized around a small number of stakeholders tend to improve the management of the tourist destination.

Average number of relationships. We found that in high-performance destinations: I) public institutions have more relationships than private ones (Table 2, lines 4 and 5); ii) municipal institutions have a greater number of relationships than state and federal institutions (Table 2, lines 6, 7 and 8); and III) Institutions that are members of the municipal tourism council have more relationships than those that are not part of this council (Table 2, Lines 9 and 10). We realized that there is a pattern that differentiates high- and low-performance destinations.

This finding is in line with studies which reported that the characteristics of stakeholders (for example, whether they are public or private) can stimulate or hinder their performance in tourist destinations (BERITELLI, 2011; BJÖRK; VIRTANEN, 2005; CZERNEK; CZAKON, 2016; CZERNEK, 2017; CZERNEK-MARSZAŁEK, 2019). Moreover, institutions with common goals (such as those which participate in the council) naturally tend to have more relationships with each other, as found by Cehan et al. (2021).

In turn, the analysis of the Non-Directional Network of Relationships generated a total of 52 different figures, which were designed into a summary table. Table 3 summarizes the results of the analyses for each of the destinations.

Betweenness. The findings for betweenness (Table 2, line 1; Table 3, line 2 and line 3) can be interpreted in the same way: the higher the performance of a destination, the more likely the level of betweenness is to be distributed among more stakeholders and, thus, the less dependent the network will be of the main brokers of the network. For example, in Bento Gonçalves (high-performance destination), the stakeholder with the highest rate of betweenness in the network is IFRS, with 16%. In turn, in São Joaquim (low-performance destination), the Department of Tourism is the stakeholder with the highest rate of betweenness in the network: 51%.

Table 3. Consolidated Information - Non-Directional Network of Relationships

Lines	Structure analyzed	Bento Gonçalves	Paranaguá	Caldas Novas	São Joaquim	São Raimundo Nonato	Mateiros
	2. Non-Directional Network of Relationships (considers only the interviewed institutions)						
	a. Betweenness						
1	Percentage of betweenness in the main broker of the network	16%	28%	27%	51%	30%	32%
2	Percentage of betweenness in the main brokers of the network (upper percentile 76% - 100%)	57%	62%	76%	82%	74%	79%
3	Proportion of stakeholders that act as brokers (i.e., the betweenness function is distributed to many stakeholders	60%	55%	38%	21%	44%	41%

	in the network – in percentage terms?)						
	b. Transitivity						
4	Transitivity	0.68	0.57	0.52	0.49	0.46	0.50
	C. Density						
5	Overall Network Density	0.55	0.42	0.41	0.33	0.36	0.39
6	Density only among public institutions	0.71	0.75	0.42	0.60	0.37	0.47
7	Density only among private institutions	0.58	0.30	0.45	0.39	-*	0.25
8	Density only among municipal institutions	0.62	0.51	0.41	0.36	0.44	0.36
9	Density only among federal institutions	-*	-*	-*	-*	-*	-*
10	Density only among state institutions	-*	-*	-*	-*	-*	-*
11	Density only among the institutions of the council	0.54	0.49	0.42	0.38	0.39	-**
12	Density only among institutions that are not members of the council	-*	-*	-*	-*	-*	-*
	d. Subgroups						
13	Number of subgroups with 2 or more members (1step)	2	3	3	2	3	3
14	Percentage of institutions in the largest subgroup	75%	70%	62%	64%	50%	47%
15	Percentage of institutions in the second largest subgroup	25%	10%	29%	36%	38%	29%
16	Proportion of isolated institutions	0%	20%	9%	0%	12%	24%
	E. Larger cliques						
17	Format of the largest clique	9	7	6	5	4	5
18	Proportion of institutions that form the highest clique	45%	35%	29%	36%	25%	29%

Source: Research data (2021)

Note. * Low number of institutions to generate analysis; ** All institutions interviewed at this destination are from the Tourism Council

Some studies show that the existence of highly central stakeholders in the network (both because of the number of relationships and the role of betweenness) can bring benefits to the network, such as accelerating the transfer of knowledge within the network (QIAO et al., 2019; RAISI et al., 2020). However, this situation can be risky for the network, as the loss of these stakeholders or their lack of functionality can affect the performance of the entire network. The distribution of the betweenness function makes the network more robust, because the removal of a high degree node will not affect the network dramatically, since hubs can back each other up (RAISI et al.,2020). Baggio (2020) reported the same situation after analyzing seven studies (BAGGIO; SCOTT; COOPER, 2010; DEL CHIAPPA; PRESENZA, 2013; GRAMA; BAGGIO, 2014; RAISI et al., 2020; SAINAGHI; BAGGIO, 2014; SCOTT; COOPER; BAGGIO, 2008). According to the author, the networks of tourist destinations are complex systems, with good self-organization capabilities, but also

with substantial fragility if the main hubs (nodes with the highest degrees) are affected.

Studies have shown that support institutions foster relationships between different stakeholders at the destination (CZERNEK; CZAKON, 2016; CZERNEK-MARSZAŁEK, 2020; KIMBU; NGOASONG, 2013; RESTREPO et al., 2021). Our result shows that this does not happen in a homogeneous way, and that performance affects the development of relationships. Thus, our result is not counterintuitive, but rather accounts for how betweenness occurs in different performance contexts. The relationships between the stakeholders from a destination tend to become more intense as a result of the action of support institutions, since support institutions tend to reduce barriers (such as distrust) among the stakeholders from a destination, as reported in the literature (INCLUDE REFERENCES). Our work shows that should this happen, it is likely to occur over time, since the cross-sectional approach that we adopted did not capture this effect. Thus, high-performance destinations have more stakeholders playing the role of brokers; thus, information tends to spread more quickly across the network (CZERNEK-RSZAŁEK, 2019).

The existence of several institutions playing the role of brokers does not mean that only some institutions can coordinate the interaction between the stakeholders. It is not so much about which ones have more power, but about the level of interest of institutions directly or indirectly involved in participating in the tourism activity at the regional level (RESTREPO et al. 2021; VALENTE; DREDGE; LOHMANN, 2015).

Transitivity. Our results (Table 3, Line 4) show that the lower the performance of the destinations, the more it is dependent on the performance of the intermediary stakeholders. For example, transitivity in São Raimundo Nonato is 0.46; thus, in this scenario, 54% of the stakeholders connected to the same vertex are not connected to each other. The role of betweenness in the performance of institutions is especially important in networks that present low transitivity (WASSERMAN; FAUST, 1994). And this effect seems to complement that of betweenness.

Density . There is a high positive correlation between "overall network density" (Table 3, line 5) and "destination performance", namely 0.73 (Hair Junior et al., (2003). This result indicates that the higher the performance of the tourist destination, the greater the cohesiveness between its stakeholders. This result seems particularly interesting, because it shows the idea of a common goal in providing the tourist experience, as pointed out by Scott et al. (2008). Such goal is common between companies and may also be extrapolated to institutions. Also, public LSIs, municipal institutions, and councils tend to have higher levels of density when compared to the others (Table 3, Lines 6 to 12). Dwyer and Kim (2003) had already argued that destination management is one of the sources of competitiveness. What we realize is that, even if there is no DMO (destination management organization), there are institutions that naturally act like DMOs, and they have common characteristics. We also noticed that most of the possible relationships - in five of the six destinations - were not established, but these relationships may develop, as also pointed by Raisi et al. (2020). According to cohesiveness theory (COLEMAN, 1988), dense networks help build trust and improve cooperation. Our study provides more evidence that low density seems to be a characteristic of tourism networks, as reported in previous research (BAGGIO, 2007; DEL CHIAPPA; BAGGIO, 2015; GRAMA; BAGGIO, 2014; RAISI et al., 2020; SCOTT; COOPER; BAGGIO, 2008). We show that

although the network is connected, density can be low, and thus, it does not seem to be easy to develop more relationships, which is in line with the literature on the subject (BAGGIO, 2020). They also found that the density of the relationship network in tourist destinations tends to be small. According to the author, density tends to be higher among stakeholders of the same group, but that decreases when comparing different groups of tourist stakeholders.

Subgroups . The data (Table 3, Line 14) shows that the higher the performance of the tourist destination, the higher the concentration of institutions in the largest subgroup of the network. Also, the destinations that present the highest performance also present a more cohesive network – corroborating the network density analysis. In addition, the subgroup analysis allowed to identify the institutions considered as isolated, that is, those that are not part of any subgroup (Table 3, Line 16). When considering proportion, we found that high-performance destinations have fewer isolated institutions than low-performance destinations. However, there are very small differences between the two types of destinations.

Czernek-Marszałek (2019) and Czernek & Czakon (2016) stressed that some stakeholders have difficulty in entering the network of relationships at the destination, and there need to be institutions or mechanisms that foster social insertion. Czernek-Marszałek (2019) points out that destinations with fewer isolated institutions also have more municipal councils. Thus, the council can foster the insertion of institutions and increase their diversification. Therefore, the local network can have access to knowledge, potentiate regional innovation, and increase destination competitiveness (BRANDÃO; BREDA; COSTA, 2019; JESUS; FRANCO, 2016). To reduce the isolation of institutions, formal spaces enable certain institutions to acquire greater power in the institutional network of the destination (RESTREPO et al., 2021). This type of result is particularly useful in a sector such as tourism, which is highly fragmented (HAZRA et al., 2017).

About the largest cliques. On this aspect, our study points out that the higher the performance of the tourist destination, the greater the proportion of stakeholders that form the largest clique. For example, of the 20 institutions interviewed in Bento Gonçalves, the largest clique is composed of 9 institutions (45%), which form the most cohesive group possible, because all of them have direct mutual connection. In turn, of the 16 institutions interviewed in São Raimundo Nonato, the largest clique is composed of 4 institutions (25%).

5 Conclusion

This study aimed to verify the relationship between the network structure of relationships of support institutions and tourist destination performance. To achieve this objective, six tourist destinations were evaluated: three showed high performance while three demonstrated low performance (Brasil, 2015, 2019). A total of 108 interviews were conducted in support institutions (population). The data were treated with the ARS technique.

As a theoretical contribution, this study identified patterns of relationships between support institutions in high- and low-performance destinations, thus shedding light on the dynamics of the network of relationships within tourist

destinations and on how this interferes in their performance (MARTÍNEZ-PÉREZ et al., 2019). Based on our findings, we propose:

P1: Destination performance and number of institutions in the most central group in the network of relationships are positively associated;

P2: Destination performance and number of relationships of public institutions, municipal institutions, and council members are positively associated;

P3: Destination performance and percentage of betweenness in the main intermediaries of the relationship network are negatively associated;

P4: Destination performance and number of institutions performing the role of brokers in the network of relationships are positively associated; and

P5: Destination performance and cohesiveness of the network of relationships are positively associated.

These findings may be useful for researchers in the field to properly prepare for the reality that they may face during research activity (before going to the field). For example: I) the destinations had between 18 and 42 institutions; ii) there are 22 different types of institutions that can compose a tourist destination; iii) the presence of municipal councils and departments of tourism are frequently present; iv) the municipal institutions are the most recurrent; v) the member institutions of the council are the most recurrent; vi) institutions can operate in a municipality even without having local representatives; xii) the number of relationships may vary depending on the type of institutions; xviii) the density of relationship networks and the number of intermediary stakeholders may vary depending on the groups being analyzed and destination performance; ix) there is a great margin for more relationships to develop; x) the inter-organizational networks of tourist destinations are connected and few institutions are isolated (analysis of subgroups); xi) debates on tourism does not necessarily occur exclusively through formal meetings; and xii) institutions hardly relate to those of other municipalities.

The managerial contributions of the study vary depending on the destinations. As for relationships, we recommend that institutions should: I) hold more meetings in the councils to foster relationships of the stakeholders at the destinations; ii) participate in the municipal councils (albeit informally); iii) reactivate the municipal councils and departments of tourism; iv) identify and approach the isolated institutions; e) hold more forums to involve institutions from different destinations in the region/state.

This study presents some methodological recommendations regarding the use of SNA. First, we recommend that network structures be grouped into summary tables to facilitate visualization and interpretation. In addition, some network structures of relationships hardly contribute to the debate if researchers cannot make comparisons with other realities. For example, what can be concluded by identifying that the network density of a group of institutions is equal to 0.5? Density analysis is useful when researchers can make comparisons with other destinations or,

comparisons between subgroups, for example, public institutions versus private institutions. When using SNA, researchers should choose to analyze network centrality of relationships; if this network is directional, it should be generated considering the number of times the stakeholders were said to have relationships, but without considering how many times the stakeholders said that they had relationships. This logic prevents interviewees from determining the number of relationships that they will have as the network is developed.

Limitations . In this study, data was collected from only one respondent per institution. Naturally, conducting interviews with multiple respondents per institution would allow triangulation of the answers. Another limitation of this study is the lack of interviews with members not locally present in the destinations, but which interfere with their performance – for example, state departments of tourism. Another limitation is inherent in the analysis of relationship networks by SNA. For example, graphic representations do not demonstrate how these relationships occur, whether the stakeholders have similar behaviors, whether they are close owing to competition or collaboration, whether their relationship is bureaucratic, etc.

Suggestions for future research. The method used in the present study can be replicated in other Brazilian destinations or in destinations in other countries. Still, replication may occur in other industries where stakeholders are clustered. Additionally, the same study can be carried out to analyze the same destinations after a few years. This would enable the behavior of the phenomenon to be analyzed longitudinally. Finally, this study was based on two theoretical approaches: networks and agglomerations. Although they are adequate to analyze tourist destinations, other theoretical approaches could also be used, for example, institutional theory and action theory. After it has been concluded that institutions affect destination performance and influence the action of stakeholders in a destination, some future research questions could be formulated: How are institutions formed? Why do certain destinations have more institutions than others?

REFERENCES

ALFORD, P., ; DUAN, Y. Understanding collaborative innovation from a dynamic capabilities perspective. **International Journal of Contemporary Hospitality Management**, v.30, n.6, p. 2396-2416, 2018.

ALVESSON, M.; SKÖLDBERG, K. **Reflexive methodology: New vistas for qualitative research**. Sage, 2000.

AQUINO, R. S.; LÜCK, M.; SCHÄNZEL, H. A. A conceptual framework of tourism social entrepreneurship for sustainable community development. **Journal of Hospitality and Tourism Management**, v.37, p.23-32, 2018.

BAGGIO, R. The web graph of a tourism system. **Physica A: Statistical Mechanics and its Applications**, v. 379, n.2, p. 727-734, 2007.

BAGGIO, R. Tourism destinations: a universality conjecture based on network science. **Annals of Tourism Research**, v. 82, p. 1-13, 2020.

BAGGIO, R.,; SAINAGHI, R. Mapping time series into networks as a tool to assess the complexdynamics of tourism systems. **Tourism Management**, v. 54, p. 23-33, 2016.

BAGGIO, R.; SCOTT, N.; COOPER, C.. Network science: a review focused on tourism. **Annals of Tourism Research**, v. 37, n. 3, p. 802-827, 2010.

BECATTINI, G. Dal settore industriale al distretto industriale. Alcune considerazione sull'unitá di indagine in economia industriale. **Revista di Economia e Política Industriale**, v. 1, n. 1, p. 1-8, 1979.

BECATTINI, G.. The Marshallian industrial district as a socio-economic notion. In P. F. Pyke, G. Becattini, & W. Sengenberger (Org.) **Industrial districts and inter-firm cooperation in Italy,** p. 37-51, 1990.

BERITELLI, P. Cooperation among prominent actors in a tourist destination. **Annals of Tourism Research**, v.38, n.2, p. 607-629, 2011.

BJÖRK, P.; VIRTANEN, H. What tourism project managers need to know about co-operation facilitators. **Scandinavian Journal of Hospitality and Tourism**, v.5, n.3, p. 212-230, 2005.

BONET, L. La estrategia de turisme de Barcelona, un consorcio público-privado de éxito. In J. Sentias (Org.) **Casos de Turismo cultural: De la planificación estratégica a la gestión del produto,** p.235-260, 2004

BRAND, F. C.; VERSCHOORE, J. R. A utilização de medidas de análise de redes sociais nas pesquisas em administração. **Revista Economia & Gestão**, v. 14, n.35, p. 212-237, 2014.

BRANDÃO, F.; BREDA, Z.; COSTA, C. Innovation and internationalization as development strategies for coastal tourism destinations: The role of organizational networks. **Journal of Hospitality and Tourism Management**, v.41, p. 219-230, 2019.

BRASIL, Ministério do Turismo. Índice de competitividade do turismo Nacional. Disponível em: http://dados.turismo.gov.br/indice-de-competitividade, 2015. Acesso em: 21 de jan. de 2020.

BRASIL, Ministério do Turismo. Categorização dos municípios das regiões turísticas do mapa do turismo brasileiro. Disponível em: http://dados.turismo.gov.br/categorizacao, 2019. Acesso em: 21 de jan. de 2020.

BRENNAN, N. M.; MERKL-DAVIES, D. M. Do firms effectively communicate with financial stakeholders? A conceptual model of corporate communication in a capital market context. **Accounting and Business Research**, v.48, n.5, p. 553-577, 2018.

CAMBRA-FIERRO, J.; GAO, L. X.; MELERO-POLO, IGUÁCEL.The power of social influence and customer–firm interactions in predicting non-transactional behaviors, immediate customer profitability, and long-term customer value. **Journal of Business Research,** v. 125, p. 103-119, 2021.

CASANUEVA, C.; GALLEGO, A.; GARCÍA-SÁNCHEZ, M. R. Social network analysis in tourism. **Current Issues in Tourism,** v.19, n.12, p. 1190-1209, 2016.

CEHAN, A.; EVA, M.; IAȚU, C. A multilayer network approach to tourism collaboration. **Journal of Hospitality and Tourism Management,** n.46, p. 316-326, 2021.

COLEMAN, J. S. Social capital in the creation of human capital. **American Journal of Sociology,** n.94, p. 95-120, 1988.

CZERNEK, K. Tourism features as determinants of knowledge transfer in the process of tourist cooperation. **Current Issues in Tourism,** v.20, n.2, p. 204-220, 2017.

CZERNEK, K.; CZAKON, W. Trust-building processes in tourist coopetition: The case of a Polish region. **Tourism Management,** v.52, n.1, p. 380-394, 2016.

CZERNEK-MARSZAŁEK, K. Applying mixed methods in social network research: the case of cooperation in a Polish tourist destination. **Journal of Destination Marketing & Management,** v. 11, p. 40-52, 2019.

CZERNEK-MARSZAŁEK, K. Social embeddedness and its benefits for cooperation in a tourism destination. **Journal of Destination Marketing & Management,** v. 15, p. 1-17, 2020.

DEL CHIAPPA, G.; BAGGIO, R. Knowledge transfer in smart tourism destinations: analyzing the effects of a network structure. **Journal of Destination Marketing & Management,** v.4, n.3, p. 145-150, 2015.

DEL CHIAPPA, G.; PRESENZA, A. The use of network analysis to assess relationships among stakeholders within a tourism destination: an empirical investigation on Costa Smeralda-Gallura, Italy. **Tourism Analysis,** v.18, n.1, p. 1-13, 2013.

DEL VECCHIO, P.; PASSIANTE, G. Is tourism a driver for smart specialization? Evidence from Puglia, an Italian region with a tourism vocation. **Journal of Destination Marketing and Management,** v.6, n.3, p. 163-165, 2017.

DENG, P.; ZHANG, S. Institutional quality and internationalization of emerging market firms: Focusing on Chinese SMEs. **Journal of Business Research,** v. 92, p. 279-289, 2018.

DWYER, L.; KIM, C. Destination competitiveness: Determinants and indicators. **Current Issues in Tourism,** v. 6, n.5, p. 369-414, 2003.

EICHELBERGER, S.; PETERS, M.; PIKKEMAAT, B.; CHANB, C.-S. Entrepreneurial ecosystems in smart cities for tourism development: From stakeholder perceptions to regional tourism policy implications. **Journal of Hospitality and Tourism Management,** v.45, p. 319-329, 2020.

GARCÍA-VILLAVERDE, P. M.; ELCHE, D.; MARTÍNEZ-PÉREZ, A. Understanding pioneering orientation in tourism clusters: Market dynamism and social capital. **Tourism Management,** v.76, p. 1-15, 2020.

GHALIA, T.; FIDRMUC, J.; SAMARGANDI, N.; SOHAG, K. Institutional quality, political risk and tourism. **Tourism Management Perspectives**, v. 32, p. 1-10, 2019.

GISPERT, O. B.; CLAVÉ, S. A. Dimensions and models of tourism governance in a tourism system: The experience of Catalonia. **Journal of Destination Marketing & Management,** v.17, p. 1-13, 2020.

GRAMA, C.-N.; BAGGIO, R. A network analysis of Sibiu County, Romania. **Annals of Tourism Research,** v.47, n.1, p.89-93, 2014.

HAIR JUNIOR, J.; BABIN, B.; MONEY, A.; SAMOUEL, P. **Business Research Methods**. Leyh Publishing, 2003.

HAUGLAND, S. A.; GRØNSETH, H. N. B. O.; AARSTAD, J. Development of tourism destinations: An integrated multilevel perspective. **Annals of Tourism Research,** v.38, n.1, p.268-290, 2011.

HAZRA, S.; FLETCHER, J.; WILKES, K. An evaluation of power relationships among stakeholders in the tourism industry networks of Agra, India. **Current Issues in Tourism,** v.20, n.3, p. 278-294, 2017.

HOFFMANN, V. E.; CAMPOS, L. M. DE S. Instituições de suporte, serviços e desempenho: Um estudo em aglomerações turísticas de Santa Catarina. **Revista de Administração Contemporânea,** v.17, n.1, p. 18-41, 2013.

JESUS, C.; FRANCO, M. Cooperation networks in tourism: A study of hotels and rural tourism establishments in an inland region of Portugal. **Journal of Hospitality and Tourism Management**, v. 29, p. 165-175, 2016.

KC, B.; MORAIS, D. B.; SMITH, J. W.; PETERSON, M. N.; SEEKAMP, E. Using social network analysis to understand trust, reciprocity, and togetherness in wildlife tourism microentrepreneurship. **Journal of Hospitality & Tourism Research**, v. 43, n.8, p. 1176-1198, 2019.

KIM, N.; SHIM, C. Social capital, knowledge sharing and innovation of small- and medium-sized enterprises in a tourism cluster. **International Journal of Contemporary Hospitality Management,** v.30, n.6, p. 2417-2437, 2018.

KIM, Y. R.; WILLIAMS, A. M.; PARK, S.; CHEN, J. L. Spatial spillovers of agglomeration economies and productivity in the tourism industry: The case of the UK. **Tourism Management,** v.82, p. 1-13, 2021.

KIMBU, A.; NGOASONG, M. Z. Centralised decentralization of tourism development: A network perspective. **Annals of Tourism Research,** v.40, n.1, p. 235-239, 2013.

KOFLER, I., MARCHER, A., VOLGGER, M., & PECHLANER, H. The special characteristics of tourism innovation networks: The case of the Regional Innovation System in South Tyrol. **Journal of Hospitality and Tourism Management,** v.37, p. 68-75, 2018.

LEE, C.; HALLAK, R. Investigating the effects of offline and online social capital on tourism SME performance: A mixed-methods study of New Zealand entrepreneurs. **Tourism Management,** v.80, p. 1-14, 2020.

LEE, Y.-J. A.; JANG, S.; KIM, J. Tourism clusters and peer-to-peer accommodation. **Annals of Tourism Research,** v. 83, p. 1-19, 2020.

LI, Q.; QUAN, H.; WANG, L. Beneficiaries of free admission to scenic areas: A cost-benefit analysis of scenic areas for public welfare from the perspective of stakeholders. **Tourism Management Perspectives,** v.35, p. 1-14, 2020.

MARCO-LAJARA, B.; CLAVER-CORTÉS, E.; ÚBEDA-GARCÍA, M.; GARCÍA-LILLO, F.; ZARAGOZA-SÁEZ, P. C. The role of internal knowledge generation and external knowledge acquisition in tourist districts. **Journal of Business Research,** v.101, p. 767-776, 2019.

MARSHALL, A. **Principles of economics: An introductory** (8th ed.). MacMillan, 1989.

MARTÍNEZ-PÉREZ, Á.; ELCHE, D.; GARCÍA-VILLAVERDE, P. M.; PARRA-REQUENA, G. Cultural tourism clusters: Social capital, relations with institutions, and radical innovation. **Journal of Travel Research,** v.58, n.5, p. 793-807, 2019.
MCEVILY, B.; ZAHEER, A. Bridging ties: A source of firm heterogeneity in competitive capabilities. **Strategic Management Journal,** v. 20, n.12, p. 1133-1156, 2019.

MERINERO-RODRÍGUEZ, R.; PULIDO-FERNÁNDEZ, J. I. Analysing relationships in tourism: A review. **Tourism Management,** v.54, n.1, p. 122-135, 2016.

MILWOOD, P. A.; ROEHL, W. S. Orchestration of innovation networks in collaborative settings. **International Journal of Contemporary Hospitality Management,** v.30, n.6, p. 2562-2582, 2018.

MULET-FORTEZA, C.; GENOVART-BALAGUER, J.; MAULEON-MENDEZ, E.; MERIGÓ, J. M. A bibliometric research in the tourism, leisure and hospitality fields. **Journal of Business Research,** v.101, p. 819-827, 2019.

NAHAPIET, J.; GHOSHAL, S. Social capital, intellectual capital, and the organizational advantage. **Academy of Management Review**, v.23, n.2, p. 242-266, 1998.

NOVAIS, M.; RUHANEN, L.; ARCODIA, C. Destination competitiveness: A phenomenographic study. **Tourism Management**, v.64, p. 324-334, 2018.

PARRA-LÓPEZ, E.; OREJA-RODRÍGUEZ, J. R. Evaluation of the competiveness of tourist zones of an island destination: An application of a Many-Facet Rasch Model (MFRM). **Journal of Destination Marketing & Management**, v.3, n.2, p. 114-121, 2014.

QIAO, T.; SHAN, W.; ZHANG, M.; LIU, C. How to facilitate knowledge diffusion in complex networks: the roles of network structure, knowledge role distribution and selection rule. **International Journal of Information Management**, v. 47, p. 152-167, 2019.

RAISI, H.; BAGGIO, R.; BARRATT-PUGH, L.; WILLSON, G. A network perspective of knowledge transfer in tourism. **Annals of Tourism Research**, v.80, p. 1-13, 2020.

RAWLEY, E.; SEAMANS, R. Internal agglomeration and productivity: Evidence from microdata. **Strategic Management Journal**, v.41, p.1770-1798, 2020.

RAZMDOOST, K.; ALINAGHIAN, L.; SMYTH, H. J. Multiplex value cocreation in unique service exchanges. **Journal of Business Research**, v.96, p. 277-286, 2019.

RESTREPO, N.; LOZANO, S.; CLAVÉ, S. A. Measuring institutional thickness in tourism: An empirical application based on social network analysis. **Tourism Management Perspectives**, v.37, p. 1-17, 2021.

RITCHIE, J. R.; CROUCH, G. I. **The competitive destination: A sustainable tourism perspective**. CABI Publishers, 2003.

ROSELL, D. T.; LAKEMOND, N.; MELANDER, L. Integrating supplier knowledge in new product development projects: Decoupled and coupled approaches. **Journal of Knowledge Management**, v.21, n.5, p. 1035-1052, 2017.

SAINAGHI, R.; BAGGIO, R. Structural social capital and hotel performance: is there a link? **International Journal of Hospitality Management**, v.37, p.99-110, 2014.

SALGANIK, M.; HECKATHORN, D. Sampling and estimation in hidden populations using respondent-driven sampling. **Sociological Methodology**, v.34, n.1, p. 193-239, 2004.

SCOTT, N; COOPER, C.; BAGGIO, R. Destination networks: Four Australian cases. **Annals of Tourism Research**, v.35, n.1, p. 169-188, 2008.

SEDITA, S. R.; HOFFMANN, V. E.; GUARNIERI, P.; CARRARO, E. T. Prosecco has another story to tell: The coexistence of multiple knowledge networks in the same

value chain. **International Journal of Wine Business Research**, Vol. ahead-of-print No. ahead-of-print. https://doi.org/10.1108/IJWBR-06-2020-0024

THERRIEN, M.-C.; JUTRAS, M.; USHER, S. Including quality in Social network analysis to foster dialogue in urban resilience and adaptation policies. **Environmental Science & Policy**, v.93, p. 1-10, 2019.

THO, N. D. Knowledge transfer from business schools to business organizations: The roles absorptive capacity, learning motivation, acquired knowledge and job autonomy. **Journal of Knowledge Management**, v.21, n.5, p. 1240-1253, 2017.

VALENTE, F.; DREDGE, D.; LOHMANN, G. Leadership and governance in regional tourism. **Journal of Destination Marketing and Management**, v.4, n.2, p. 127-136, 2015.

WANG, Z.; LIU, Q.; XU, J.; FUJIKI, Y. Evolution characteristics of the spatial network structure of tourism efficiency in China: A province-level analysis. **Journal of Destination Marketing & Management**, n.18, p. 1-9, 2020.

WASSERMAN, S.; FAUST, K. **Social network analysis: Methods and applications**. Cambridge University, 1994.

ZHAO, L. J. The basic theory of social network analysis method and its application in information science. **Research on Library Science**, v.20, p. 9-12, 2011.