

Measuring hierarchy in elite networks of tourist destinations - A look beyond the measures of power and centrality

Pietro Beritelli PhD

Institute for Systemic Management and Public Governance, Research Centre for Tourism and Transport, University of St. Gallen

Follow this and additional works at: <https://scholarworks.umass.edu/ttra>

Beritelli, Pietro PhD, "Measuring hierarchy in elite networks of tourist destinations - A look beyond the measures of power and centrality" (2016). *Travel and Tourism Research Association: Advancing Tourism Research Globally*. 58.

<https://scholarworks.umass.edu/ttra/2011/Oral/58>

This is brought to you for free and open access by ScholarWorks@UMass Amherst. It has been accepted for inclusion in Travel and Tourism Research Association: Advancing Tourism Research Globally by an authorized administrator of ScholarWorks@UMass Amherst. For more information, please contact scholarworks@library.umass.edu.

Measuring hierarchy in elite networks of tourist destinations - A look beyond the measures of power and centrality

Prof. Dr. Pietro Beritelli, Assistant Professor
Institute for Systemic Management and Public Governance (IMP-HSG), Research Centre for
Tourism and Transport, University of St. Gallen
Dufourstrasse 40a
CH-9000 St. Gallen

Phone: +41 (0)71 224-2525

Fax: +41 (0)71 224-2536

Mail: pietro.beritelli@unisg.ch

URL: http://www.alexandria.unisg.ch/Personen/Person/B/Pietro_Beritelli,
<http://www.imp.unisg.ch>

Category of paper:	Full paper
Theme:	Tourism planning and development
Methodological approach:	Measuring hierarchy in social networks

Abstract

Tourist destination communities are often assumed as being represented by a loose and random combination of elites of individuals. So far, no research on the hierarchy of the informal organization of destination elites has been carried out. This paper challenges the common assumption that elites of community structured destinations are an unstructured group of individuals. The research analyzes six reputational elite networks in tourist destination communities in Europe. The application of the four graph theoretical dimensions (GTD), developed by Krackhardt (1994) indicates that there are strong hierarchical patterns. As a consequence, the identification of hierarchies, chiefs and lines of command increases effective destination management and development.

Key words:

tourist destination community
elite research
social network analysis
hierarchy
graph theoretical dimensions

Measuring hierarchy in elite networks of tourist destinations - A look beyond the measures of power and centrality

INTRODUCTION

Problem: In previous research, it has been suggested that in tourist destination communities, 'strategic leadership ... is anchored in a stakeholder oriented management' (Flagestad & Hope, 2001, 452). While it is true, that tourist destination communities consist of various stakeholders with different interests, there are indications for interdependencies and different endowments of resources (Beritelli, Bieger, & Laesser, 2007; Ryan, 2002; Sheehan & Ritchie, 2005). Hence, it can never be assumed a perfect balance of power, neither among the tourist enterprises nor among the stakeholder groups and their representatives (Reed, 1997; Ryan, 2002; Timothy, 1998). This paper advances the research in the field of destination governance and management by analyzing the structure of elite networks in six tourist destinations in Europe: Toggenburg, Lenzerheide, Appenzell and Saas-Fee, located in Switzerland, Montafon, located in Austria, and the city of Lucca, in Italy. The aim of research is to measure the degree of hierarchy inside these networks and, by comparison of the cases, to discover reasons for differing degrees of hierarchy.

Literature and research hypothesis: Tourist destination policy, planning and development depends on various groups of stakeholders (Ritchie & Crouch, 2003). Earlier studies have emphasizes the importance of identifying the different groups of stakeholders (Getz & Jamal, 1994; Jamal & Getz, 1994) and have described mechanisms around the distribution of power (Hall, 2003; Ryan, 2002) or collaboration (Dredge, 2006; Wang & Fesenmaier, 2007) between those groups.

Recent studies have further focused the attention of research on the individual representing one or more organizations. Elites of individuals which represent the most influential elements in the tourist destination community have been analyzed, in order to describe relational structures (Bodega, Cioccarelli, & Denicolai, 2004), the policy formulation (Pforr, 2006) or the branding process of a destination (Marzano & Scott, 2009).

So far, most of the network elite studies in tourist destinations have been carried out with the help of qualitative descriptions accompanied with quantitative measures of centrality or density. While centrality measures assess how important the single nodes of the network are, density measures highlight the frequency of the connections (links) between the nodes (Wasserman & Faust, 1994). Only very recent research in tourist destination elite networks has complemented these two basic concepts of social network analysis, adding discussions related to clustering measures (Cooper, Scott, & Baggio, 2009) or to network efficiency (Baggio & Cooper, 2009).

The herein presented work brings the current research on destination elite networks forward by assuming that behind the network structure and therefore the informal organization there is a sort of hierarchy. If there is hierarchy, decisions occur neither democratically nor randomly and destination planning and development are manageable, given the hierarchical conditions.

Hence, the following null hypothesis can be formulated: Elite networks of tourist destinations present weak hierarchical structures, i.e. the influence of the actors in the elite network is equally distributed.

METHODOLOGY

Measurement construct: Based on Simon's argument that the groupings of informal organizations must be hierarchically structured and could operationally be measured (Simon, 1981), Krackhardt proposed four measures of structure, called the graph theoretical dimensions (GTD) (Krackhardt, 1994): (1) connectedness, (2) hierarchy, (3) graph efficiency, (4) least upper boundedness (LUB). Krackhardt (1994) argues that a graph has a maximal connectedness of 1.0 if each point can reach every other point in the graph. The maximal value of hierarchy, i.e. 1.0 is given, if there is a chain of command that is constituted by points at higher hierarchical levels than other points, hence where the relations are strictly ordered. A graph efficiency of 1.0 exists, if the graph is connected and contains N-1 lines, that is that the graph does not present any redundant connections. Finally, a LUB of 1.0 consists of a graph where the "actors have access to a common ...person in the organization to whom they ...can 'appeal'" (Krackhardt, 1994, 99). The LUB takes into account not only the connection between two points but also the direction. Thus, by simply changing the direction of the arrows in the graph a LUB score may change from 1.0 to 0.0 (Krackhardt, 1994, 100). The following figure illustrates the extreme cases (value 1.0 vs. 0.0) for the four GTDs.

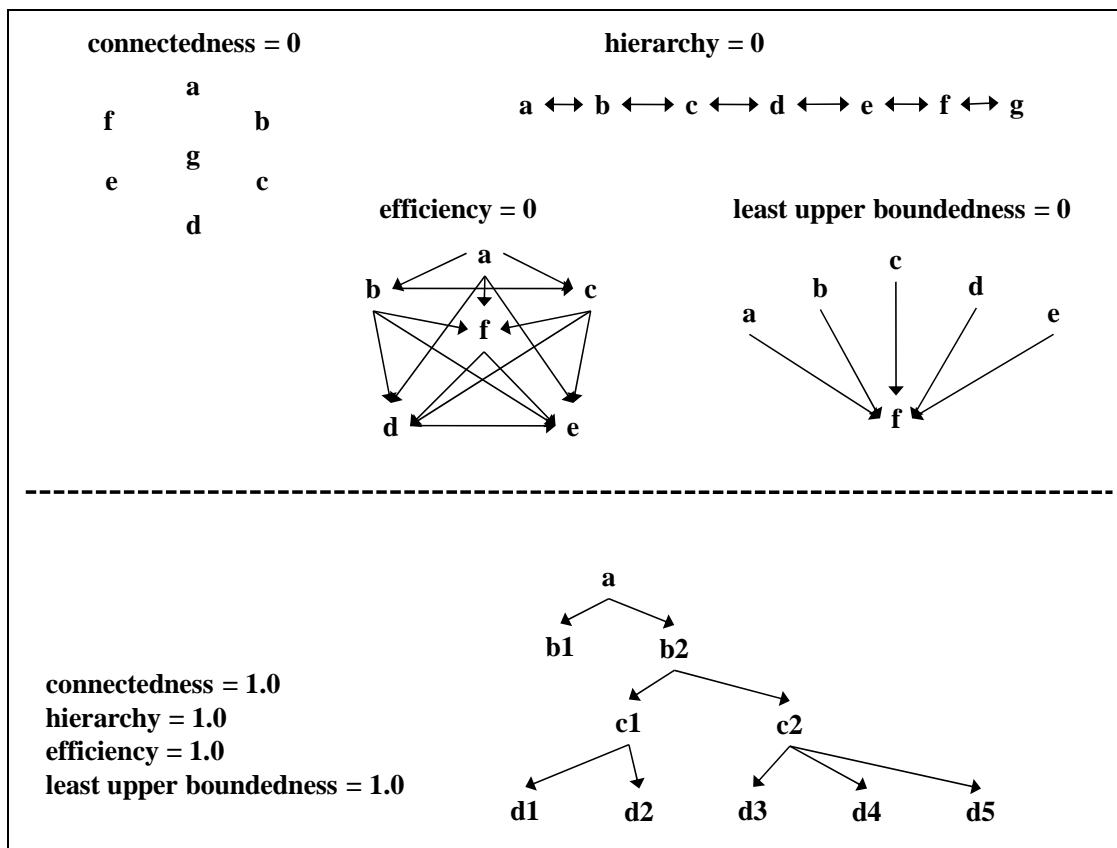


Figure 1: Visualization of extreme value cases for the four GTD. Source: (Krackhardt, 1994, 96)

The four GTD measures altogether serve as a purposeful approach to assess the organizational and particularly the hierarchical patterns of a network. As a matter of fact, while connectedness simply answers the question whether all the actors belong to a sort of common system,

hierarchy measures the extent to which we can speak of an organizational cascade (high hierarchy value) in contrast to an entirely flat organization (low hierarchy value). In addition, efficiency assesses the redundancies of connections inside the organization. A high efficiency value is an indication for few redundancies and hence for a certain degree of organization and hierarchy, while a low value may reflect the randomness and ineffectiveness of the connections. Finally, least upper boundedness measures the hierarchy in terms of the direction of the line-in-command and therefore with regard to the focus of attention towards individuals at higher ranks.

Research sites: A multiple case research approach has been chosen, in order to identify differences and commonalities between the cases. Additionally, tourist destinations which are fully depending on tourism (the cases of Saas-Fee, Toggenburg and Lenzerheide in Switzerland and the Montafon valley in Austria) are compared with tourist destinations with a diversified economy, such as the canton of Appenzell in Switzerland and the city of Lucca in Italy. The map in figure 2 localizes the six research sites.

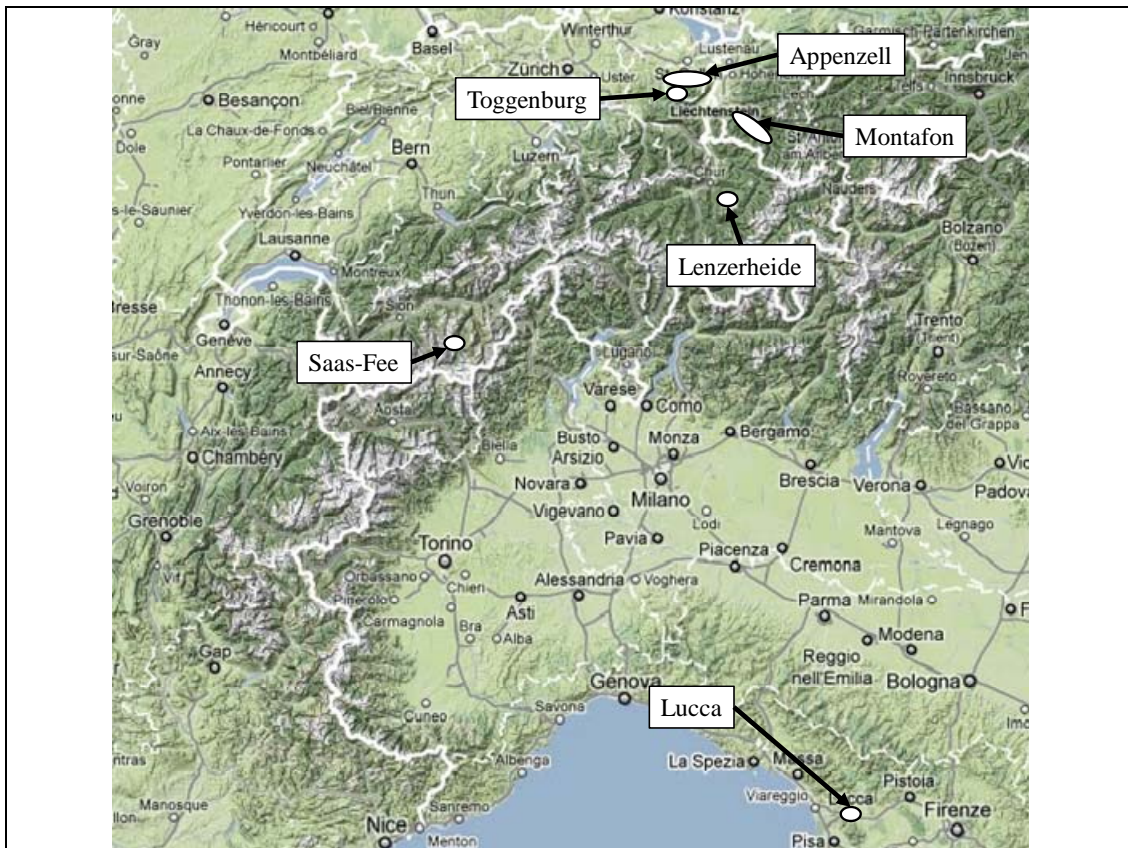


Figure 2: Localizing the six research sites

The case study selection follows the principle of polar examples (Pettigrew, 1990), where small communities (e.g. Toggenburg, Lenzerheide) are distinguished from large communities (e.g. Appenzell and Montafon), or where alpine towns are confronted with an urban reality (city of Lucca). Additionally, in order to take account of the dynamics of change in different

environments (Pettigrew, 1990), a comparison between relatively stable (e.g. Appenzell, Saas-Fee) and relatively dynamic (e.g. Toggenburg, Montafon) destinations is presented.

Figure 1 displays a schematic differentiation of the cases. Tourism dependency, development stage, and the concentration of resources as well as the dominance of the institutions were derived from the local master plans and strategies (ATMAG, 2009; Bolt, 2010; Bumann, 2007; Fricke, 2009; Häusermann, Blaesi, Furger, & Blaesi, 2007; Petrucci, 2009) as well as from in-depth interviews with the individuals in the elite networks.

destination	Saas-Fee (CH)	Toggenburg (upper valley) (CH)	Lenzerheide (CH)	Appenzell (CH)	Lucca (city) (I)	Montafon (A)
tourism dependency	>80%	>80%	>80%	<50%	<50%	>80%
development stage	maturity	decline	maturity	growth	late growth	growth
concentration of resources/ dominance of institutions	strong ski area company, diversified accommodation sector, strong DMO, peculiarly many interlocking directorates, dominance of three family clans	small ski area companies, many holiday and second homes, initiative DMO and cantonal administration, community with strong identity but dependence on external support	strong ski area company, strong public sector (municipality, parish), DMO in coordinating role, diversified accommodation sector with numerous second homes, stalemate between stakeholder groups, decision backlog	numerous very small tourist enterprises, autarchic policy and economy, strong local identity, two contrasting DMOs	numerous very small tourist enterprises, strong public sector (municipality, province)	two strong ski area companies, diversified accommodation sector, coordinated and strong public sector through municipal corporation

Table 1: Comparing the destination profiles

Data Collection: In virtue of the tradition of policy network research (Laumann, Marsden, & Galaskiewicz, 1977), an elite of actors in the six tourist destinations was identified with the help of a reputational snowball sampling technique (Scott, 2000). The sampling technique started with a list of persons who had participated in the current/ most recent policy or strategy planning process of the destination. In the course of an in-depth interview, the respondents were asked to name a maximum of five other individuals they reckoned to be important for the future development of the destination. The sample was completed when the last interviewed person named other individuals who had already been interviewed.

Data Treatment: The influence reputation network produced for every destination an asymmetric matrix, hence allowing the interpretation of a directed graph. In order to correctly calculate the LUB, the asymmetric data were transposed, because the respondents who named another individual are first pointing to someone whom they look up to. If we want to analyze a unity-of-command principle, the direction of the arrows must be reversed, so that the higher authority directs his view down to the lower one (see also drawing on the bottom of figure 1).

Analysis: The GTD measures were calculated with the UCINET 6 package (Borgatti, Everett, & Freeman, 2002). To catch an overall value for the hierarchy of the elite networks the resulting four GTD values were multiplied. That is, the values for connectedness, for hierarchy, for efficiency, and for least upper boundedness have been multiplied (GTD product = connectedness X hierarchy X efficiency X LUB). The product value allows a stronger differentiation between the cases because small differences gain a stronger weight. At the same time the GTD product value provides a general look to the command structure in the network at a glance.

RESULTS AND DISCUSSION

Table 1 displays information and data relating to the destinations and their elite networks as well as the results from the GTD analysis. Note first that the two less on tourism depending destinations (i.e. Appenzell and Lucca) present a much larger population size. However, the tourism elite network size does not differ significantly from the other four destinations. This circumstance is a consequence of the snowball sampling technique. For the cases of Appenzell and Lucca the first group of actors identified for the interviews were individuals of the tourism sector, just as for the individuals in the other four destinations.

A further notable result is the relatively narrow span of values resulting from the relation between the population and the elite network size for the tourist destinations depending fully on tourism: it ranges between 114 and 386 individuals. Hence, it can be assumed a rule of thumb according to which elite individuals represent 100-400 locals in tourist destinations. In contrast, elite network sizes do not differ significantly from each other, neither in tourist destinations nor in destinations which are not fully depending on tourism (for the six cases between 13 and 42).

destination	Saas-Fee (CH)	Toggenburg (upper valley) (CH)	Lenzerheide (CH)	Appenzell (CH)	Lucca (city) (I)	Montafon (A)
population (approx.)	3.600	6.000	2.500	69.000	84.600	17.000
respondents (total elite size)	13 (13)	19 (19)	21 (22)	28 (31)	38 (42)	42 (44)
pop./ elite actor	277	316	114	2.226	2.014	386
connectedness (c)	0.846	1.000	1.000	1.000	1.000	1.000
hierarchy (h)	0.556	0.371	0.284	0.138	0.761	0.825

efficiency (e)	0.546	0.621	0.737	0.769	0.890	0.867
LUB (l)	1.000	1.000	0.900	0.997	0.892	0.905
GTD product = (c) x (h) x (e) x (l)	0.257	0.230	0.188	0.106	0.604	0.647

Table 2: Destinations, elites, and GTD values

A first general result points to the fact that in terms of connectedness and LUB, the six destinations present rather high values. This is a first indication for some sort of hierarchy in the elite network. Particularly the high values for least upper boundedness indicate that there is a chief and that there are one or more lower levels of command. The two smallest networks in Saas-Fee and Toggenburg present a maximum value of 1.0. On one hand side, the probability for a high LUB increases with the decreasing size of the networks, as relationships between the actors are concentrated around few personalities. On the other hand side, it must be concluded that LUB actors indicate how differences or conflicts may be managed within the network. In networks with high LUB the chiefs have the potential position for settling or dealing with conflicts (Doreian, 1974; Krackhardt, 1994). The still relatively high LUB values for the other four destinations confirm the cascade-like order of relationships.

With respect to efficiency, Krackhardt expects "a curvilinear relationship between graph efficiency and organizational effectiveness, with the optimum graph efficiency value to lie between 0 and 1" (Krackhardt, 1994, 99), hence around 0.5. Again Saas-Fee presents the optimal value with a small network of optimally interlinked actors while Lucca and Montafon lack of effectiveness because of numerous redundant linkages and possibly due to the size of their elite network.

Finally, the hierarchy values differentiate the abovementioned observation on efficiency. As a matter of fact, under the point of view of hierarchy, Lucca and Montafon display the highest values because of the importance of the public sector in the elite network, while the low value of Appenzell confirms the destination's well-known strong culture for democracy and autarchy. Particular for the case of Appenzell is the existence of two contrasting DMOs, one representing the catholic half-canton of Appenzell Innerrhoden and the other one the protestant half-canton of Appenzell Ausserrhoden. Lenzerheide, a destination which currently experiences conflicts of interest between various stakeholder groups (ski area company, municipality, hotels, second home owners, DMO) presents a rather low hierarchy value just as Toggenburg, where the elite actors are still developing a relaunch strategy.

Looking at the product value of all the four GTD measures, it is easy to recognize the two destinations with the weakest hierarchy, either because of contrasting stakeholder positions (Lenzerheide) or because of a loose network of organizations and institutions which define their identity through independence and autarky (Appenzell). The two other destinations which display an intermediate degree of hierarchy are Saas-Fee and Toggenburg; both are challenged by the further development of the destination. While Saas-Fee exhibits a small and effective network due to kinship between the actors, the elite network of Toggenburg is structured in order to reinvent the destination's products and markets. The two destinations with the highest product value of the four GTD measures are Lucca, with a strong orientation towards the public institutions and Montafon, with a strong coordination through the municipi-

pal corporation and the recognized importance of the ski area companies. Both cases prove that the degree of hierarchy does not have decrease with the size of the elite.

CONCLUSION

With the help of six reputational elite networks, this research has shown that hierarchy as defined by the GTD measures exists in tourist destinations. Hence, the following conclusions can be drawn.

First, even though we often speak of informal organizations for the case of tourist destination communities, there are counter-intuitively high degrees of hierarchy. The degrees of hierarchy vary depending on the position and the interest of the stakeholder groups, on the current issues, and on the roles of the elite actors (e.g. interlocking directorates).

Second, the different values of the GTD measures are additionally explainable through the current stage of development of the destination, cultural and administrative idiosyncrasies, and the number, role and degree of integration of the institutions and organizations.

Third, the smaller the elite network is, the higher the degree of organization and hierarchy. Even for tourist destinations which are not fully depending on tourism, tourism network elites are clearly identifiable and present similar features as their counterparts in destinations with tourist monoculture.

Fourth, identifying the degree of hierarchy in elites, the chiefs in the hierarchy and the lines of command allows a more effective destination planning and management. Issues can be raised more effectively. Given the high values of least upper boundedness, conflicts could be more easily managed and consensus could be fostered.

Fifth, a medium degree of efficiency ensures a higher organizational effectiveness. Therefore, redundancies of connections (e.g. in communication) during planning processes increase the consolidation of ideas, initiatives, and decisions. Planners are called to leverage on the advantage of redundant information.

Further research must address the identification of the role of single actors and the interpersonal interdependencies which may override institutional and stakeholder related interests. As a matter of fact, an institutional or stakeholder related balance of power cannot be assumed and hence it is advisable to look at the level of the individual, in order to understand who is the chief and why.

REFERENCES

- ATMAG. (2009). Appenzellerland. Geschäftsbericht 2008. Appenzell: Appenzellerland Tourismus Marketing AG.
- Baggio, R., & Cooper, C. (2009). Knowledge transfer in a tourism destination: the effects of a network structure. *Arxiv preprint arXiv:0905.2734*.
- Beritelli, P., Bieger, T., & Laesser, C. (2007). Destination governance: using corporate governance theories as a foundation for effective destination management. *Journal of Travel Research, 46*(1), 96-107.
- Bodega, D., Cioccarelli, G., & Denicolai, S. (2004). New inter-organizational forms: Evolution of relationship structures in mountain tourism. *Tourism Review, 59*(3), 13-19.
- Bolt, C. (2010). *Toggenburg Tourismus*. Wildhaus: Toggenburg Tourismus.
- Borgatti, S. P., Everett, M. G., & Freeman, L. C. (2002). Ucinet for windows: Software for social network analysis. *Harvard: Analytic Technologies*.
- Bumann, F. (2007). *Saas-Fee/ Saastal Tourismus*. Saas-Fee: Saas-Fee/ Saastal Tourismus.
- Cooper, C., Scott, N., & Baggio, R. (2009). Network Position and Perceptions of Destination Stakeholder Importance. *Network, 20*(1), 33-45.
- Doreian, P. (1974). On the connectivity of social networks. *Journal of Mathematical Sociology, 3*(245-258).
- Dredge, D. (2006). Policy networks and the local organisation of tourism. *Tourism Management, 27*(2), 269-280.
- Flagestad, A., & Hope, C. A. (2001). Strategic success in winter sports destinations: a sustainable value creation perspective. *Tourism Management, 22*(5), 445-461.
- Fricke, A. (2009). *Businessplan Montafon Tourismus GmbH*. Schruns.
- Getz, D., & Jamal, T. B. (1994). The environment-community symbiosis: A case for collaborative tourism planning. *Journal of Sustainable Tourism, 2*(3), 152-173.

- Hall, C. M. (2003). Politics and place: An analysis of power in tourism communities. In S. Singh, D. J. Timothy & R. K. Dawling (Eds.), *Tourism in destination communities* (pp. 99-114). Wallingford, UK: CABI.
- Häusermann, U., Blaesi, V., Furger, P., & Blaesi, G. (2007). *Business Plan* (1st ed.). Lenzerheide: Municipality of Lenzerheide.
- Jamal, T. B., & Getz, D. (1994). Collaboration theory and community tourism planning. *Annals of Tourism Research*, 22(1), 186-204.
- Krackhardt, D. (1994). Graph theoretical dimensions of informal organizations. *Computational organization theory*, 89-111.
- Laumann, E. O., Marsden, P. V., & Galaskiewicz, J. (1977). Community-elite influence structures: Extension of a network approach. *American journal of sociology*, 83(3), 594-631.
- Marzano, G., & Scott, N. (2009). Power in destination branding. *Annals of Tourism Research*, 36(2), 247-267.
- Petrucci, P. (2009). *Dati e tendenze del turismo nella Provincia di Lucca 2008*. Lucca: Assessorato al turismo della Provincia di Lucca.
- Pettigrew, A. M. (1990). Longitudinal field research on change: theory and practice. *Organization Science*, 1(3), 267-292.
- Pfarr, C. (2006). Tourism policy in the making an Australian network study. *Annals of Tourism Research*, 33(1), 87-108.
- Reed, M. G. (1997). Power relations and community-based tourism planning. *Annals of Tourism Research*, 24(3), 566-591.
- Ritchie, B., & Crouch, G. I. (2003). *The competitive destination: A sustainable tourism perspective*: Cabi.
- Ryan, C. (2002). Equity, management, power sharing and sustainability—issues of the ‘new tourism’. *Tourism Management*, 23(1), 17-26.

- Scott, J. (2000). *Social network analysis: A handbook*: Sage.
- Sheehan, L. R., & Ritchie, J. R. B. (2005). Destination stakeholders exploring identity and salience. *Annals of Tourism Research*, 32(3), 711-734.
- Simon, H. A. (1981). *The sciences of the artificial* (2nd ed.). Cambridge, Ma.: MIT Press.
- Timothy, D. J. (1998). Cooperative tourism planning in a developing destination. *Journal of Sustainable Tourism*, 6(1), 52-68.
- Wang, Y., & Fesenmaier, D. R. (2007). Collaborative destination marketing: a case study of Elkhart county, Indiana. *Tourism Management*, 28(3), 863-875.
- Wasserman, S., & Faust, K. (1994). *Social network analysis: Methods and applications*: Cambridge Univ Pr.