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Destination cobranding in interorganizational networks: Assessing the role of central tourism organizations☆

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ABSTRACT

This study examines whether tourism organizations influence each other to cobrand with the destination brand as a function of the interorganizational network structure. Empirically, it combines questionnaire and interorganizational network data from a Norwegian region of winter sports destinations. By taking a dyadic level of analysis and examining 990 dyadic observations of tourism organizations, the study shows that central organizations' cobranding increases other less-central organizations' cobranding through direct or indirect collaboration. The findings further indicate that cobranding spreads (like ripples) from central to less-central organizations. Because of central organizations' strong cobranding and network proximity to other organizations, the study illuminates their importance as carriers of cobranding to other less-central organizations.

1. Introduction

Cobranding, or brand alliances, is the combining of at least two brands (Park, Jun, & Shocker, 1996). The concept has gained much attention in tourism research (Liang, 2017; Pike & Page, 2014), but previous studies have not examined whether tourism organizations cobrand as a function of *other* organizations' cobranding. By responding to this knowledge gap, the current study examines whether tourism organizations influence each other to cobrand with the destination brand as a function of the interorganizational network structure. Aarstad, Ness, and Haugland (2015; 2018) show how the network structure induces imitation and that central organizations take lead positions in cobranding, but they are silent concerning whether the network structure influences tourism organizations to adopt destination cobranding practices from one another. By drawing upon Aarstad et al. (2015), the current study takes a step further and addresses the following research question: Do tourism organizations influence each other to cobrand with the destination brand as a function of the interorganizational network structure, and do central organizations taking lead positions in destination cobranding (Aarstad et al., 2015), act as carriers of cobranding to other less-central organizations? Investigating this research question can illuminate whether cobranding spreads (like ripples) through the interorganizational network from central to less-central organizations, and the topic has not been studied before in the tourism literature.

The study responds to a call in the literature to better understand local actors' role and involvement in destination branding in general and destination cobranding in particular (Kavaratzis & Hatch, 2013; Lucarelli & Brorström, 2013; Martin & Capelli, 2017). Contextually, it researches a Norwegian region of mountain destinations where tourism is important, providing tax revenues and local employment in hotels, restaurants, museums, and in firms providing a variety of activities. Traditionally, the winter season has been the most important in the region, but to exploit resources and existing infrastructure, a focus on year-round activities has also become important. Accordingly, the region is a well-suited empirical context as destination branding has been considered an important element in the destinations' marketing communication and local identity building. Tourism organizations such as hotels, second-home (real estate) developers, activity providers, and public stakeholders have traditionally been the most central actors, and with new actors entering the growing industry (part-time farm tourism, life-style entrepreneurs, and others) it is important to understand the phenomenon of cobranding. The reason is that cobranding empowers tourism organizations to leverage a united vision with shared norms and common goals (Pike & Page, 2014), and communicate a coherent image

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to attract visitors through the integration of commonly branded products (Dioko & So, 2012; Tasci & Guillet, 2011).

Empirically, the study combines questionnaire and interorganizational network data from the region and takes a dyadic level of analysis. In total, it examines 990 dyadic observations of tourism organizations that are directly or indirectly connected through one or more intermediate interorganizational ties. The motive for taking a dyadic level of analysis is to assess how organizations throughout the network, directly and indirectly, influence each other to cobrand. In particular, the study investigates the dyadic level concepts of similarity in cobranding and total cobranding for pairs of organizations. Studying how one organization (e.g. A) influences another organization (e.g. B) to cobrand is challenging, if not impossible, in the absence of a dyadic level of analysis. However, studying similarity in cobranding, it can be assessed whether A and B influence each other to cobrand. Comparing similarity in cobranding with total cobranding, it can further be assessed whether A largely influences B to cobrand, or the other way around. Comparing the dyadic level concepts, it can finally be assessed whether central organizations taking lead positions in cobranding, act as carriers of cobranding to other less-central organizations. Later sections elaborate on the arguments raised here in detail.

By grounding the study in an interorganizational network context, it contributes to tourism cobranding research, which has largely focused on customer evaluations and marketing strategies at a destination level (Liang, 2017; Pike & Page, 2014). Interorganizational network research emphasizes how organizations access and share resources and information through network alliances and partnerships (e.g. Dyer & Singh, 1998; Gulati, 1998). By elaborating on this literature, the study investigates whether the sharing of network resources leverages cobranding among organizations operating at tourism destinations. A dyadic level goes beyond studying, for instance, how individual organizations cobrand as a function of their network position (Aarstad et al., 2015), to assess how organizations influence each other to cobrand as a function of their network position relative to one another (Aarstad, Haugland, & Greve, 2010).

Interorganizational network studies normally emphasize either a structural or relational approach (Gulati, 1998). This study takes a structural approach, which Hinde (1976, p. 8) refers to "as a patterning of relationships that is independent of the particular individuals concerned." He asserts, moreover, that a structural approach focuses "on aspects … that show regularities across individuals and across societies" (p. 8). A relational approach, emphasizing idiosyncrasies of interorganizational relationships, is normally taken in research examining a limited number of observations, and would add an overwhelmingly complexity to the current study as the network under scrutiny includes thousands of relationships.

2. Theory, positioning, and hypotheses

2.1. Literature review and positioning

Although tourism organizations are often specialized, they are interdependent and have to integrate products and services to serve customers at a particular destination efficiently (Matson-Barkat & Robert-Demontrond, 2018; Shaw, Bailey, & Williams, 2011). A destination as a whole competes with other destinations that provide similar products and services. In the case of a mountain destination, numerous organizations provide a variety of integrated products and services for the visitors that include transport, lodging, dining, ski rental and -instruction, and the operation of ski lifts, to mention a few examples. Encouraging tourism organizations to cobrand with the destination brand is, therefore, crucial for destination development because it hinges on their participation in communicating a coherent image to attract visitors through the integration of commonly branded products (Dioko & So, 2012; Tasci & Guillet, 2011). Cobranding, furthermore, empowers tourism organizations to leverage a united vision with shared norms and common goals (Pike & Page, 2014).

Interorganizational networks are the backbone of tourism destinations to cope with interdependency and to seamlessly market, coordinate, and provide visitors with products and services (e.g. Baggio, Scott, & Cooper, 2010; Haugland, Ness, Grønseth, & Aarstad, 2011; Tinsley & Lynch, 2001). Intuitively, it may be assumed that interorganizational network structures provide organizations with information about other organizations' cobranding practices, but surprisingly, there is limited research on the topic. Instead, studies tend to take a normative approach and focus on cobranding as a marketing strategy at the destination level (Dong & Duysters, 2015; Paraskevaidis & Weidenfeld, 2019; Ranasinghe, Thaichon, & Ranasinghe, 2017). Other studies focus on customer evaluation using experimental research designs and surveys (Choo & Park, 2018; Hsiao, 2018; Liang, 2017; Martin & Capelli, 2017; Rocha & Fink, 2017; Tasci & Guillet, 2011, 2016), but they do not emphasize the role of networks to understand organizations' cobranding practices. The use of social media in the marketing of tourism destinations is also on the rise (McCartney & Pinto, 2014), but studies addressing the topic have not explicitly examined its effect on cobranding. In a review of social media, Moro and Rita (2018, p. 343) conclude that a "large research gap was found in hospitality and tourism considering that, besides advertising, no topic was discovered related to known brand strategies such as co-branding."

Aarstad et al. (2015) find that tourism organizations in central interorganizational network positions cobrand by integrating the local destination brand in their marketing. It is the only study that explicitly examines tourism organizations' proclivity to cobrand as a function of the interorganizational network structure. Drawing upon Aarstad et al. (2015), the current study takes a step further and researches if the interorganizational concepts of network distance and closeness centrality are carriers for cobranding at a dyadic level, and it elaborates the issue in the following.

Fig. 1 displays a simplified theoretical interorganizational network that aims to underpin the arguing of hypotheses that the study develops. Organizations are marked with dots, some are named in capital letters, and the lines represent interorganizational ties. As the study in the following refers to, for instance, organization A and B, they can, in principle, represent any type of actor of the network. The network distance between A and B is one step, between A and C, two steps, etc. Concerning closeness centrality, A has five direct ties, and more importantly, A can reach each organization in fewer network steps than any other organization. It implies that A is the most (closeness) central organization (Borgatti, Everett, & Johnson, 2018; Freeman, 1979; Sabidussi, 1966; Wasserman & Faust, 1994). B is the second most central organization, and D, C, and E are in decreasing order less central (concerning closeness centrality) than B. The size of the dots reflects the organizations' closeness centrality.

Each organization partakes in more than one dyadic observation. For example, A and B in Fig. 1 is one dyadic observation (directly connected), as is A and C (indirectly connected). In the following, the study

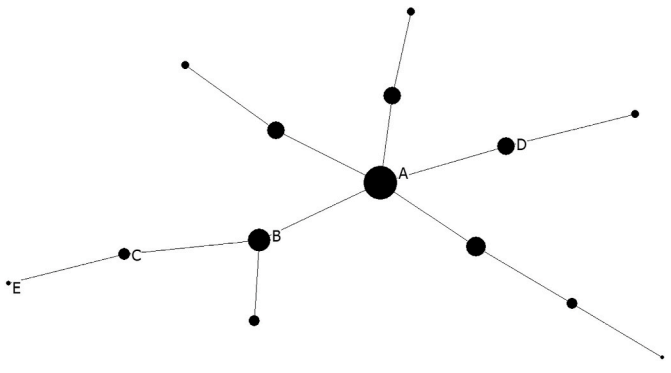

Fig. 1. Theoretical tourism interorganizational network.

postulates that A and B are, ceteris paribus, more similar in cobranding than A and C. The reason is that A exercises more influence over B than over C concerning cobranding, and vice versa, due to the direct collaboration between A and B (and the indirect collaboration between A and C).

2.2. Hypotheses

2.2.1. Network distance and similarity in cobranding

Dyer and Singh (1998, p. 665) state that "a firm's alliance [or interorganizational collaboration] partners are, in many cases, the most important source of new ideas and information that result in performance-enhancing technology and innovations." Gulati (1998, p. 296) asserts in a similar vein that interorganizational actors "develop a shared understanding of the utility of certain behavior as a result of discussing opinions in strong, socializing relations, which in turn influence their actions."

Drawing upon their arguing, it can be assumed in reference to Fig. 1 that the cobranding of A (e.g. a hotel) influences the cobranding of B (e.g. a ski-lift operator), and vice versa. The organizations exchange, often on an ongoing basis, relevant information through direct collaboration. Even if the relationship does not explicitly concern cobranding, the organizations' interaction may implicitly entail content that taps into the matter, e.g. through the discussion of marketing and management issues, or dialogue concerning destination development beyond their direct collaboration. Therefore, it may be assumed that the dyad of A and B, through their direct interorganizational collaboration, ceteris paribus is more similar in cobranding than, for instance, the dyad of A and C (e.g. an event provider), which is not directly connected. However, an indirect influence between A and C, albeit to a lower extent than between A and B, should not be disregarded. Indirect interorganizational collaboration can influence organization characteristics and work practices beyond the effect of direct partnerships (Schilling & Phelps, 2007). In the current case, B can, for instance, be a transmitter or referral partner to C about A's cobranding. It can furthermore be assumed that there is even some influence between C and D (e.g. a restaurant), but as the network distance increases with another intermediate link, the influence will be lower than between A and C. In other words, as a dyad's network distance increases, the similarity in cobranding decreases, and as the network distance decreases, the similarity in cobranding increases.

H1. Decreasing interorganizational network distance increases a dyad's similarity in cobranding.

2.2.2. Closeness centrality as a mediating variable

Fig. 1 shows that the network distance between A and B and between C and E (e.g. a snowmobile rental firm), is equally short (i.e. one step). Ceteris paribus, it can therefore be assumed that the dyad of A and B and the dyad of C and E are equally similar in cobranding (cf. H1). However, A in particular, and also B, are in more central network positions than C and E, which can indicate that A and B are relatively professional actors having more access to network resources than C and E (Gulati, 1999).

Professionalism, combined with network resources may, in turn, have a positive impact on A and B's absorptive capacity "to recognize the value of new, external information [of, for instance, cobranding], assimilate it, and apply it to commercial ends" (Cohen & Levinthal, 1990, p. 128). Absorptive capacity empowers "the acquisition of novel and valuable knowledge from external networks" (Parra-Requena, Ruiz-Ortega, & Garcia-Villaverde, 2013, p. 157) and "helps in learning external sources of knowledge" (Yang & Lin, 2012, p. 333). Closeness centrality can, therefore, be positively associated with an individual organization's proclivity to cobrand (Aarstad et al., 2015).

Furthermore, A and B's central positions can empower them to absorb knowledge from each other concerning cobranding to a larger extent than the more peripheral organizations C and E. It can therefore be argued that the combined closeness centrality of a dyad mediates the association between decreasing network distance and increasing similarity in cobranding. In other words, the combined closeness centrality explains the association between decreasing network distance and similarity in cobranding (cf. Baron & Kenny, 1986). This mediation effect is expected because the combined closeness centrality enables, for instance, A and B to develop and apply better knowledge about other organizations' cobranding practices than less central organizations, e.g. C and E.

H2. A dyad's combined closeness centrality mediates the association between decreasing interorganizational network distance and similarity in cobranding.

2.2.3. Total cobranding

Sections 2.2.1 and 2.2.2 have argued how interorganizational network structures can induce similarity in cobranding, but without emphasizing the effect it has on each organization's magnitude of cobranding in a dyad. Fig. 2 illustrates arrows as potential drivers causing similarity in cobranding for A and B, but with different effects on each organization. In the left part of the figure, the identical arrows with opposite directions illustrate how A decreases its cobranding, while B increases its cobranding to a similar extent. In the middle of the figure, the dotted arrow illustrates how A′ marginally decreases its cobranding, while the bold arrow illustrates how B′ strongly increases its cobranding. In the right part of the figure, the bold arrow illustrates how A″ strongly decreases its cobranding, while the dotted arrow illustrates how B″ marginally increases its cobranding.

All three illustrations portray increasing similarity in cobranding, but the total cobranding for the dyads is different. For A and B, the total cobranding is unaltered, for A′ and B′, it is increased, and for A″ and B″, it is decreased. The study will argue that the outcome of A′ and B′ in the middle of the figure is the most likely one; that is, an organization with strong cobranding at the outset is likely to influence an organization with weak cobranding at the outset to increase its cobranding.

The previous section proposed that A and B's combined closeness centrality, by leveraging their aggregated absorptive capacity, leads to similarity in cobranding (cf. H2). However, the combined closeness centrality probably increases B's cobranding more than it decreases A's cobranding (cf. the middle of Fig. 2). Organization A is likely to have strong cobranding at the outset as a function of its central network position (Aarstad et al., 2015). It acts as a role model for B due to its strong emphasis on cobranding combined with a central network position. Consequently, B may adopt a similar strong cobranding strategy as A. Therefore, as the organizations become more similar in cobranding, the dyad's total cobranding increases.

H3. Increasing similarity in cobranding increases a dyad's total cobranding.

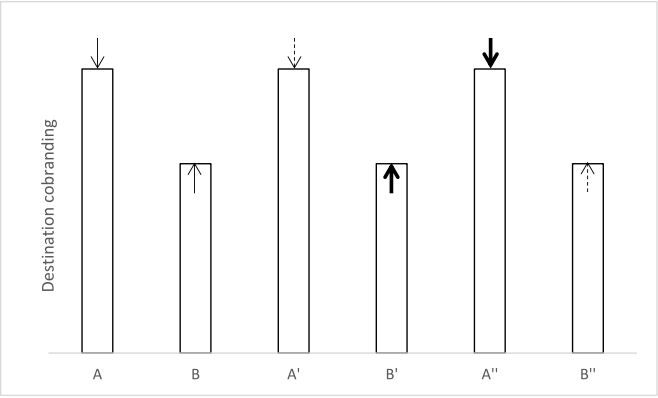

Fig. 2. Different illustrations of similarity in destination cobranding.

3. Methods

3.1. Research context

The study chose a region of nine South-Eastern Norwegian mountain destinations as the empirical context. The context is suitable because cobranding is crucial for the destination development in the region (cf. Dioko & So, 2012; Tasci & Guillet, 2011), and the individual organizations operating there are embedded in an interorganizational network structure.

Traditionally, the destinations have been considered as typical winter sports destinations, but since the turn of the millennium, they have increasingly aimed at attracting visitors on a full-year basis. In terms of size, between 23 and 103 tourism organizations operate at each destination. The destinations differ as to how they are organized locally, from a high level of organizational autonomy to a hierarchically and vertically integrated structure (cf. Haugland et al., 2011). Despite an emphasis on attracting visitors on a full-year basis, the destinations still have a major focus on skiing activities in the winter season, both downhill and cross-country skiing, along with winter-wildlife and other winter nature-based experiences. The destinations have nonetheless developed different profiles concerning the segment of tourists they target; some are family-oriented while others target young adults. Some destinations largely attract national visitors, while others also have an international focus attracting visitors from, chiefly Northern Europe. Some also have other unique features such as a focus on the local historical industrial heritage, Nordic walking, ice climbing, fishing and hunting, venues for conferences, and wellness and spa opportunities. Finally, many families have their second homes located at or near some of the destinations.

Each destination has a common brand, logo, webpage, and a destination management organization (DMO). The DMOs have typically had a major role in branding each destination, and they further engage individual local tourism organizations to support this endeavor by cobranding (their own brand) with the destination brand. For instance, one DMO engaged local organizations to participate in an open process to develop and implement a common destination logo as a template for cobranding the destination across otherwise more or less interdependent individual actors. However, despite such common efforts, individual organizations' cobranding endeavors vary within and across destinations (Aarstad et al., 2015).

Altogether, the context represents a rich heterogeneity concerning organizational structure, size, content, and branding approach, both for individual organizations and each destination. The heterogeneity increases the external validity, and the study later explains how to account for and control out potential differences not accounted for by the network concepts of focus. For instance, it includes a dummy variable controlling out the potential effect of tourism organizations being located at different destinations (as different destinations have unique features and vary as to how they are organized locally, from a high level of organizational autonomy to a hierarchically and vertically integrated structure).

3.2. Data approach

Through an official register database, local websites, and communication with stakeholders, 568 organizations were identified at the destinations representing a variety of actors. The data were collected in two stages. First, interorganizational network data were collected, both within and across the destinations. About a year later, survey data were collected through an electronic questionnaire to measure the organizations' cobranding. Thereafter, the two datasets were matched and merged. The motive for collecting data in separate stages is twofold. First, the time asymmetry of about one year between collecting the network and the survey data increases the internal validity when testing H1 and H2. Second, combining and matching datasets gathered independently decreases challenges concerning common method bias (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003; Spector, 2006).

As the study takes a dyadic level of analysis, network and survey data must be aggregated at a similar level. The next sections explain in more detail how the data were collected, and the steps taken to model dyadic level data.

3.3. Interorganizational network

Interorganizational network data were gathered by phoning the general managers of the 568 identified organizations. In total, 202 phone interviews were performed, representing 35.6% of the potential respondents. The respondents were presented with a list of other organizations at the destination and asked with whom they were or had been cooperating. It was important to model potential terminated ties because they can have an enduring influence on network members (Agrawal, Cockburn, & McHale, 2006). In addition, the managers were requested to report cooperation with organizations at other destinations and cooperation with actors not located at a particular destination, such as ferry liners and consulting firms. A tie was modeled between two organizations if one or both report cooperation. The network has 550 organizations with 2686 interorganizational ties. Figs. 3 and 4 illustrate the network graphically.

3.4. Questionnaire survey and the combining and matching of the two datasets

A year after gathering the network data, survey data were collected by approaching the same 568 organizations through an online questionnaire. In total, 72 valid responses were received. By having the organizations' names in both datasets, 45 organizations, being respondents when collecting both network and survey data, were combined and matched into a single dataset (for an extensive explication, see the first paragraph of Appendix A).

3.5. Measures at the organizational level

3.5.1. Cobranding

The questionnaire included three items indicating destination cobranding: 'the destination's reputation is important for the marketing and sale of the organization's product and services,' 'the destination as a brand is important for the marketing and sale of the organization's products and services,' and 'we actively use the destination's brand in marketing and selling our products and services.' The items were developed by Aarstad et al. (2015). Seven-point Likert-type scales varying between 'strongly disagree' (1) and 'strongly agree' (7) were used. For the 45 respondents, the three items loaded strongly on one single factor, and a Cronbach's (1951) alpha score of 0.932 reveals robust reliability. To construct a measure of cobranding at the

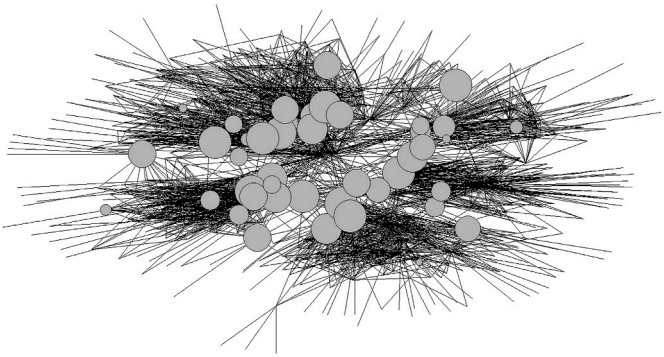

Fig. 3. Interorganizational tourism network of 550 organizations highlighting cobranding of 45 organizations (marked with gray circles/dots).

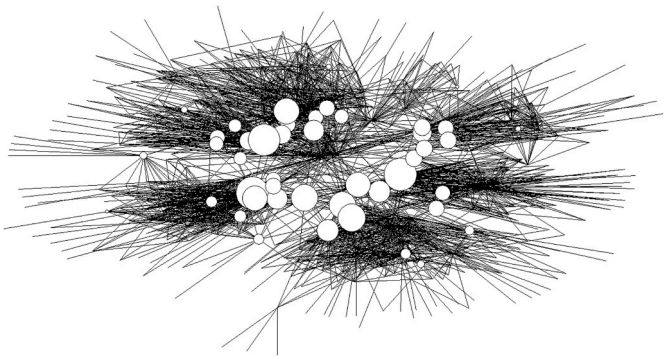

Fig. 4. Interorganizational tourism network of 550 organizations highlighting closeness centrality of 45 organizations (marked with white circles/dots).

organizational level, the average score for the three items was applied (minimum value 1, maximum value 7, mean value 5.24, and standard deviation 1.69). Fig. 3 illustrates the 45 organizations' cobranding, reflected by the size of the gray circles/dots.

3.5.2. Closeness centrality

Closeness centrality at the organizational level was measured as the inverse of the sum of the network distances from the focal organization to all other organizations in the network (Freeman, 1979). Fig. 4 illustrates the 45 organizations' closeness centrality, reflected by the size of the white circles/dots. Ucinet 6.644 (Borgatti, Everett, & Freeman, 2002) was used to measure the concept.

3.6. Dependent, independent, and mediating variables at the dyadic level

By relying on the 45 organizations for which there are complete network and survey data, the study analyzed 990 dyads or pairs of organizations directly or indirectly connected through one or more intermediate interorganizational ties: $(45^2–45)/2 = 990$. That is, following the previous argument, each organization partakes in more than one dyadic observation. The dyadic estimation approach is robust and conservative: it estimates the genuine association between two organizations in the network, directly or indirectly connected through one or more intermediate interorganizational ties while controlling out the effect of all other linkages the two organizations have with other organizations (Dekker, Krackhardt, & Snijders, 2007; Krackhardt, 1988). For a further assessment of the methodological robustness, see the second paragraph of Appendix A. Ucinet (Borgatti et al., 2002) was used to measure all dyadic level concepts.

3.6.1. Similarity in cobranding

Similarity in cobranding was modeled by calculating the absolute value of A's cobranding minus B's cobranding, and then reversed to increase readability (A and B can be any of the 990 dyads generated by the 45 organizations). Two organizations that are completely similar in cobranding receive the value of six, and two organizations with a maximum dissimilarity in cobranding receive the value of 0 (if reversed measures were not applied, complete similarity would be 0 and maximum dissimilarity would be 6).

3.6.2. Total cobranding

Total cobranding was modeled as the sum of A and B's cobranding.

3.6.3. Network distance

Ucinet counts the network distance, that is, the number of network steps, between the dyad of two organizations (Borgatti et al., 2002). The maximum network distance is four, and the minimum is one. Because the phrase, 'decreasing' interorganizational network distance is used, and to enhance readability, the measure was reversed. The value four denotes the shortest possible network distance (i.e. a direct tie and a network distance of one), and the value of one denotes the longest possible network distance (i.e. a network distance of four). In other words, a decreasing network distance increases the value of the variable.

3.6.4. Combined closeness centrality

Combined closeness centrality was modeled as the sum of A and B's closeness centrality.

3.6.5. Control variables

The study includes the following control variables: network distance as a second-degree polynomial, difference in closeness centrality, the interaction of the difference in closeness centrality and total closeness centrality, structural equivalence, same destination dummy, and similarity in cobranding as a second-degree polynomial. Appendix B explains the control variables in detail.

4. Results

At the organizational level, cobranding correlates strongly with closeness centrality (0.513, $p < .05$, a conservative two-tailed test of significance, $N = 45$). The study also checked if organization size (number of employees) affected cobranding at the organizational level, but the effect is non-significant.

Table 1 reports descriptive statistics for all variables at the dyadic level. Table 2 shows the results of using a special correlation technique at the dyadic level called the quadratic assignment procedure (QAP). A special regression procedure at the dyadic level, called the Double Dekker semi-partialling QAP multiple regression, was used to test the hypotheses (Dekker et al., 2007). See Appendix C for further details on QAP correlation and regression.

4.1. Testing H1 and H2 at the dyadic level

In Model 1 in Table 3, it can be observed that decreasing interorganizational network distance increases similarity in cobranding, providing empirical support for H1. As the network distance between two organizations decreases by one step, the similarity in cobranding increases with a value of .338 (minimum value is 0, and the maximum value is six, according to Table 1). Increasing difference in closeness centrality as a control variable decreases similarity in cobranding. This is in line the arguments presented in this paper for including the control variable (see B.2 in Appendix B). The other control variables have non-significant effects.

In Model 2, combined closeness centrality is included as a mediating variable, and it can be observed that decreasing network distance now has a marginal, non-significant effect on similarity in cobranding. Concurrently, one can observe that combined closeness centrality has a significant effect on similarity in cobranding. That is, combined closeness centrality mediates the effect that decreasing network distance has on similarity in cobranding, and H2 gains empirical support. Model 2

Table 1
Descriptive statistics.

	Minimum	Maximum	Mean	SD
Similarity in cobranding (SCB)	0	6	4.13	1.48
SCB^2	.016	17.0	2.18	2.95
Total cobranding	2.67	14	10.5	2.33
Decreasing network distance (DND)	1	4	2.57	.691
DND^2	.188	2.45	.478	.635
Difference in closeness (DCL)	.021	13.2	3.87	2.84
Structural equivalence	–.146	.677	.042	.133
Same destination dummy	0	1	.138	.345
Combined closeness (CCL)	57.9	83.9	69.8	4.69
CCL × DCL	−52.1	44.6	2.05	11.0

The number of dyads is 990.

Table 2
QAP correlations.

	1	2	3	4	5	6	7	8	9
1. Similarity in cobranding (SCB)									
2. SCB^2	–.555**								
3. Total cobranding	.478**	–.207**							
4. Decreasing network distance (DND)	.140**	–.073	.316**						
5. DND^2	–.051	.066*	–.127**	–.008					
6. Difference in closeness (DCL)	–.195**	.198**	.138*	.012	–.073**				
7. Structural equivalence	.047	–.021	.056*	.620**	.250**	–.061**			
8. Same destination dummy	.001	.059**	.001	.459**	.248**	.013	.804**		
9. Combined closeness (CCL)	.195**	–.047	.519**	.566**	–.147**	.154*	.118**	.038	
10. CCL × DCL	.084*	.021	.127*	–.015	.302**	–.075	–.041	–.021	.140**

The number of dyads is 990, *p < .10, **p < .05, conservative two-tailed tests.

Table 3
Multiple QAP regressions with similarity in cobranding as the dependent variable.

	Model 1	Model 2
Intercept	4.02**	.143**
Decreasing network distance (DND)	.388 (.182)** [H1]	.027 (.013)
DND^2	–.106 (–.046)	–.065 (–.028)
Difference in closeness (DCL)	–.105 (–.202)**	–.109 (–.209)**
Structural equivalence	–.354 (–.032)	.324 (.029)
Same destination dummy	–.184 (–.043)	–.124 (–.029)
Combined closeness (CCL)		.063 (.201)** [H2]
CCL × DCL		–.014 (–.103)*
R-square	.066	.101
Adjusted R-square	.063	.098

The number of dyads is 990, *p < .10, **p < .05, conservative two-tailed tests (standardized beta values in parentheses).

also shows that the interaction term between combined closeness centrality and the difference in closeness centrality (CCL × DCL) as a control variable has a significant negative effect on similarity in cobranding. It implies that the similarity in cobranding as a function of combined closeness centrality (cf. H2) is lower, the more different (asymmetric) the dyad is in closeness centrality.

4.2. Testing H3 at the dyadic level

Table 4 shows that increasing similarity in cobranding significantly increases total cobranding, and H3 receives empirical support. As the similarity in cobranding increases by one unit, total cobranding increases by 0.828 units (i.e. almost by one unit). By relating this finding to Fig. 2, it implies that total cobranding is explained almost entirely by B increasing its cobranding and not by A decreasing its cobranding (cf. A′ and B′ in the middle of Fig. 2). The control variable similarity in cobranding modeled as a second-degree polynomial is non-significant.

5. Discussion

5.1. Discussion of the results

The results show that decreasing interorganizational network distance increases a dyad's similarity in cobranding, but the effect is mediated by the dyad's combined closeness centrality. The results, furthermore, show that increasing similarity in cobranding increases a dyad's total cobranding.

Table 4
Multiple QAP regression with total cobranding as the dependent variable.

Intercept	6.91**
Similarity in cobranding (SCB)	.828 (.524)** [H3]
SCB^2	.066 (.084)
R-square	.233
Adjusted R-square	.232

The number of dyads is 990, *p < .10, **p < .05, conservative two-tailed tests (standardized beta values in parentheses).

By relating the results to Fig. 1, the short network distance (one step) between C and E does not in itself induce similarity in cobranding due to the organizations' peripheral interorganizational network positions. In other words, C and E's peripheral positions do not enable them to absorb knowledge from each other in relation to cobranding. Organizations A and B, on the other hand, are both central organizations, and they absorb knowledge from each other that is relevant for cobranding. In particular, B increases its cobranding by becoming more similar to A. The negative interaction effect observed from the combined closeness centrality and the difference in closeness centrality (CCL × DCL) nonetheless indicates that B's centrality is more critical than A's. In other words, B can 'piggyback' on A's closeness centrality, but B's closeness centrality is the most important factor for increasing cobranding. It is worth noting that the results concerning H1 and H2 are conservative because the study controls for each dyad's difference in closeness centrality (DCL).

By taking a dyadic level of analysis and examining 990 dyadic observations of tourism organizations, the study shows that central organizations' cobranding increases other less-central organizations' cobranding through direct or indirect collaboration. The findings further indicate that cobranding spreads (like ripples) from central to less-central organizations. Because of central organizations' strong cobranding and network proximity to other organizations, the study illuminates their importance as carriers of cobranding to other less-central organizations. Simply put, the results show that central organizations taking lead positions in destination cobranding, increase other less-central organizations' cobranding through direct or indirect collaboration. It implies that organizations in peripheral network positions can be stimulated to cobrand through collaboration with central organizations.

5.2. Theoretical implications

To gain a better understanding of local actors' role in destination branding, previous research has examined how tourism organizations in central interorganizational network positions cobrand by integrating the local destination brand in their marketing (Aarstad et al., 2015). This study takes a step further and shows how central organizations also leverage other less-central organizations' cobranding. Because of the central organizations' overall network proximity to other organizations and strong cobranding, the finding illuminates their important lead position as carriers of cobranding to other less-central organizations.

By grounding the study in an interorganizational network context, it contributes to tourism cobranding research, which has largely focused on customer evaluations and marketing strategies at a destination level (Liang, 2017; Pike & Page, 2014). Interorganizational network research emphasizes how organizations access and share resources and information through network alliances and partnerships (e.g. Dyer & Singh,

1998; Gulati, 1998). Based on this literature, the current study assesses how the sharing of network resources leverages cobranding among organizations.

Interorganizational networks are the backbone of tourism destinations due to organizations' interdependency and need to coordinate their products and services efficiently (e.g. Baggio et al., 2010; Haugland et al., 2011; Tinsley & Lynch, 2001). Hence, the study integrates the cobranding literature with the interorganizational network literature in general, and the interorganizational network literature within the field of tourism research in particular. Building on previous tourism research, showing that cobranding is a function of interorganizational network structures (Aarstad et al., 2015), the study further illuminates how networks induce organizations to influence each other to cobrand. Other research, also taking a dyadic level of analysis, shows how organizations influence each other to develop and use social capital (Aarstad et al., 2010). The current contribution is novel in an interorganizational tourism destination context because it highlights central organizations' lead position as carriers of cobranding to other less-central organizations.

5.3. Managerial implications

Cobranding in a tourism destination context is important because it empowers otherwise independent actors to serve their visitors seamlessly through the integration of commonly branded products and services. From a managerial point of view, the findings are relevant for DMOs. One of their key objectives is to develop a unified and coherent vision of a destination as a vehicle to integrate products and services that are distributed across many individual actors. Cobranding is commonly considered as a marketing strategy at the destination level, but an implication of the current study is to encourage central organizations at a destination to acknowledge the benefits of cobranding. If central organizations actively cobrand, they will, in turn, increase the likelihood of less-central actors to do the same. Identifying and working closely with central organizations and encouraging them to cobrand can accordingly be a fruitful strategy to increase cobranding throughout a destination. As such, it is important that central organizations acknowledge their role as lead actors and to interact with peripheral organizations actively.

Another managerial implication is that organizations should be encouraged to actively apply cobranding practices throughout the destination as it likely increases the overall cobranding. DMOs should here take an active role by developing cobranding templates that can easily be adapted by the variety of organizations operating at tourism destinations. A hotel, a ski lift operator, and a ski equipment rental firm may have different views and opinions on both how to cobrand and the emphasis of cobranding. However, it is important that their emphases and practices share similarities as this, in turn, seems to increase the overall destination cobranding.

The main managerial takeaway message from the study is that a combined effort by the DMO and the central actors is crucial for developing a successful cobranding strategy. The DMO should take a proactive role in developing cobranding templates and in working closely with central organizations. Thereafter, the diffusion of cobranding throughout the destination is largely dependent on the central organizations' cobranding and their ability to interact with the less-central and peripheral organizations.

5.4. Limitations and future studies

This study relies on a structural approach, and the idiosyncrasies of interorganizational relationships have therefore not been emphasized. Future research should accordingly emphasize relational characteristics of interorganizational networks as potential carriers of cobranding. Showing that, for example, specific relational characteristics promote cobranding to a larger extent than others can broaden the understanding of how tourism destinations increase cobranding as a function of interorganizational relationships. A qualitative case study focusing on a limited number of observations can be a useful methodological approach for such an endeavor.

The study shows that interorganizational network structures play an important role for organizations to cobrand the destination brand with the organization brand. However, there are organizations in the sample reporting that cobranding is of marginal importance. The study has not been able to identify their reasons for downplaying the importance of cobranding, and an important area for future research is to increase the knowledge of why some organizations cobrand while others do not. Such knowledge can be helpful for tourism destinations to develop workable cobranding practices that will be adopted by a large number of organizations operating there.

Despite the time asymmetry of about one year between measuring the independent variables and the dependent variable concerning H1 and H2, future studies are encouraged to examine the research question by applying a longitudinal research design. Concerning H2, the mediation effect should ideally have been estimated by the procedure suggested by Preacher and Hayes (2008), but their algorithm is not implemented in Ucinet or other software analyzing dyadic level data. Moreover, the explained variance when testing H1 and H2 is low compared with, for instance, ordinary least square regressions at an organizational level. However, due to the nature of dyadic level data, the explained variance tends to be low (Mizruchi, 1993). Future studies should nonetheless examine other dyadic level network data that can increase explained variance and provide new knowledge of other potential drivers of tourism organizations' destination cobranding.

Author statement

Jarle Aarstad participated in developing the methodology, he analyzed the data and wrote the major part of the paper. Håvard Ness participated in developing the methodology, he participated in gathering the data, and wrote and edited parts of the paper. Sven A. Haugland participated in developing the methodology and wrote and edited parts of the paper.

Appendix A

At the outset, there was a match of 63 organizations. However, because it is important for the validity of the study to have data on genuine direct and indirect ties, organizations participating in the questionnaire, but without participating in the network data directly, were excluded. For example, if B and C in Fig. 1 are not respondents in the network data, it is not possible to identify a direct tie between them. The study, therefore, excluded 18 organizations participating in the questionnaire, but only referred to by other respondents in the network data. Hence, the study includes 45 organizations participating as direct respondents in both the network and questionnaire data.

Although the study primarily analyzes 45 organizations, it includes their participation in the extended network of 550 organizations when modeling different network concepts. If it is assumed that organizations with no notation in Fig. 1 did not participate in the questionnaire, their network positions nonetheless influence the network positions of A, B, C, D, and E, and the study's estimation approach takes this into account.

Appendix B

Here, the control variables are described. All second-degree polynomials and interaction terms are mean-centered (cf. Cronbach, 1987).

B.1 Network distance as a second-degree polynomial. When testing H1 and H2, the study controls for network distance as a second-degree polynomial. Because of decay in information, it cannot be known whether the potential association between network distance and similarity in cobranding is linear or not.

B.2 Difference in closeness centrality. When testing H1 and H2, the study controls for the difference in closeness centrality. The concept is modeled the absolute value of A's closeness centrality minus B's closeness centrality. Closeness centrality is positively associated with cobranding at the organization level (Aarstad et al., 2015). At a dyadic level, it is therefore likely that the difference in closeness centrality is inversely associated with similarity in cobranding. That is, the more dissimilar a dyad is in closeness centrality, the less similar (and the more dissimilar) the dyad is in cobranding.

B.3 Interaction of the difference in closeness centrality and combined closeness centrality. When testing H2, the study controls for the interaction between the difference in closeness centrality and combined closeness centrality. The reason is to check if the potential association between a dyad's combined closeness centrality and similarity in cobranding is affected by the dyad's similarity or dissimilarity in closeness centrality.

B.4 Structural equivalence. When testing H1 and H2, the study controls for structural equivalence. Structural equivalence implies that organizations are in similar network positions (Lorrain & White, 1971). That is, if two organizations are collaborating with the same organizations, they are structurally equivalent (even if they are not collaborating directly), and structural equivalence induces similarity in behavior (Galaskiewicz & Burt, 1991; Mizruchi, 1993; Moody & White, 2003). The correlation of the interorganizational network structure for each dyad measures the concept (Breiger, Boorman, & Arabie, 1975).

B.5 Same destination dummy. When testing H1 and H2, the study controls for whether two organizations are located at the same destination because it may have a genuine effect on their propensity to cobrand. The concept is modeled as a dummy variable where a dyad of organizations located at the same destination is coded as 1 and 0 otherwise.

B.6 Similarity in cobranding as a second-degree polynomial. When testing H3, the study controls for the similarity in cobranding as a second-degree polynomial. The motive is to take account of a potential nonlinear relation between similarity in cobranding and total cobranding.

Appendix C

QAP correlation and QAP multiple regression generate identical estimates as Pearson correlation and ordinary least squares regression, respectively, but significance testing is different because dyadic level observations are not independent of each other (e.g. the network structure between A and B is not independent of the network structure between A and C). In other words, QAP correlation and QAP multiple regression are conservative methods because they estimate the genuine effect of, e.g. the interorganizational tie between A and B, while taking account of all the other direct or indirect ties that A and B have with other organizations.

The QAP correlation procedure calculates the significance level by randomly permuting dyadic variables stored as rows and columns (synchronously) of one matrix (i.e. one dyadic variable) 5000 times. Next, it correlates each of the 5000 permuted matrices with another matrix (i.e. another dyadic variable). If the probability is less than 5% of generating an equally good or better correlation between the permuted matrices and the other matrix, as compared with the genuine correlation between the non-permutated matrix and the other matrix, then $p < .05$ (Krackhardt, 1987). The Double Dekker semi-partialling QAP multiple regression procedure, used to test the hypotheses in a similar vein, applies 5000 random permutations (Dekker et al., 2007).

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