

HETERARCHICAL COORDINATION IN INTER-ORGANIZATIONAL NETWORKS: EVIDENCE FROM THE TOURISM INDUSTRY

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Abstract

Purpose – The aim of this paper is to report the results of a qualitative research on heterarchical coordination within an interorganizational network in the tourism sector.

Design/Methodology/Approach – The study follows the qualitative approach and case study research design. The main data collection techniques were semi-structured interviews and document analysis. Data triangulation was used to collect and analyze qualitative research data and narrative form supported the presentation of the results.

Findings – The study has shown the nature, strengths and weaknesses of heterarchical coordination within the distributed inter-firm network. Based on the study, heterarchy is an appropriate form of coordination for distributed inter-firm networks with a high proportion of SMEs operating in the tourism sector. Heterarchy supports a high level of engagement of focal firms in joint activities and emergent growth of the whole community.

Originality of the research – The study brings a new overview of coordination mechanisms in inter-firm networks and identifies the characteristics and conditions of heterarchical coordination in a distributed cooperative network. The results of the study are useful for scholars studying business networks as well as for managers and local authorities responsible for managing and supporting inter-firm networks in tourism destinations.

Keywords Interorganizational network, Heterarchy, Coordination, Inter-firm cooperation

INTRODUCTION

The growing body of research on inter-organizational networks (ION's) confirms the significance and diversity of this research field (see e.g.: Batista et al. 2011; Bergenholtz and Waldstrøm 2011; Kohtamäki et al. 2016; Parkhe et al. 2006; Zaheer et al. 2010). However, many scholars claim that research on ION's is still fragmented and incomparable what raises the need for further studies. On the basis of literature review, the following major issues in the field of inter-organizational networks have been identified: determinants and types of interfirm relationships, access to resources, trust in interfirm relationships, coopetition, knowledge management and learning, innovation management, and network adaptive capabilities (Ahuja 2000; Batista et al, 2011; Dagnino et al. 2015; Ferreira et al. 2017; Gulati et al. 2000; Najafian and Colabi 2014).

Inter-organizational networks are different in their size, density, centrality, power dispersion, and also in terms of their stability. Coordination forms and mechanisms in relatively stable networks, e.g. alliances or franchise networks, chains of shops and restaurants, extensive networks, are relatively well recognized (Aarikka-Stenroos et al. 2017; Blut et al. 2010; Davis and Love 2011; Dhanaraj and Parkhe 2006; Paquin and Howard-Grenville 2013; Provan and Kenis 2008; Reypens et al. 2019; Wong et al. 2005), and various forms of network coordination or orchestration that combine heterarchy, market, and social mechanisms in different proportions were distinguished. Simultaneously, it has been noted that little attention is paid to coordination mechanisms within unstable, low formalized, and emergent networks (Kilduff and Tsai 2003). It constitutes an interesting and important research gap since coordination is regarded as a salient factor affecting the efficiency of business activities (Hedlund 1986; Miles et al. 1992; Mintzberg 1992; Ritala et al. 2012). Specifically, there is a shortage of empirical evidence of coordination mechanisms in distributed and dynamic cooperative networks (with temporary configurations of network members, multiple and transitive role of broker) composed of small and medium enterprises. Moreover, presently the effective cooperation amongst companies in tourism sector seems to be critical especially in turbulent times (e.g. caused by COVID-19).

Grounded in the coordination mechanism stream, most researchers agree that the coordination mechanisms in inter-organizational networks differ from the hierarchical and market ones, but there is no one shared state in this matter. Some authors locate network coordination between hierarchy and market (Powell 1990; Stephenson 2009), while the others show it as a combination of hierarchical, market, and social mechanisms (Joshi and Campbell 2003). Both approaches confirm the complexity of network coordination mechanisms.

The overarching aim of the paper is to present the results of the empirical study on heterarchical coordination conducted in the inter-organizational network operating in the tourism sector. Supporting, the aim has been realized through the endeavours to answer the following research questions: RQ1. Which features should the coordination form reveal in a distributed network?, RQ2. Does the hierarchical coordination work in a distributed network with the existence of cooperative relationships?, RQ3. Which advantages and disadvantages of heterarchical coordination reveal in practice regarding respondents' opinions?

Due to the relative novelty of phenomena examined and shortage of empirical studies in the field of heterarchical coordination the research is based upon a qualitative approach and the case study research design (Eisenhardt 1989; Yin 2009). This approach is especially recommended in the field of IONs due to the vital role of network uniqueness and situational context (Halinen and Törnroos 2005). Attention has been paid to the complex and dynamic nature of heterarchy, as well as strengths and weaknesses (dark sides) of this specific coordination form. The selection of the tourism sector for investigating heterarchical coordination was intentional and based on premises presented in the methodological section.

The paper is organized as follows. The next section provides the theoretical background of intra-organizational networks and the evolution of coordination mechanisms. Then the research method has been described and argued. The following section highlights the study results – specifically, the general context follows the description of coordination mechanisms and their implications. In the last section the study results have been discussed, as well as the contribution, study limitations, and future research directions have been depicted.

1. THEORETICAL BACKGROUND

1.1. Inter-organizational networks and the call for coordination

It has long been known that focusing attention on a single company does not enable to understand the business processes (Johnston 1981), especially in a complex and dynamic environment. Therefore, as a wider perspective is requested, and the inter-organizational networks (IONs) field turned to be one of the fastest-developing in management science. Remarkably, the knowledge about inter-organizational networks increased (Brass et al. 2004; Parkhe et al. 2006). An inter-organizational network is commonly comprehended as two or more organizations, legally separated and independent, connected with sustained relationships, having common goals and projects, and complementary resources (Cook 1977; Thorelli 1986). This notable definition ought to go beyond and be completed with considerations in terms of coordination at the inter-organizational level. It is also worth noticing that the nodes are autonomic and the network membership is voluntary (Håkansson and Snehota 1995; Miles et al. 1992).

Similarly to each activity that needs to be ordered and organized to a certain degree, the dispersed networks' operations require to be coordinated to achieve goals common. Some researchers (e.g. Powell 1990; Stephenson 2009; Thorelli 1986) underline that the network coordination differs from traditional mechanisms like hierarchy and market, associated with transaction costs theory. Network coordination combines both mentioned forms, however, this combination is still insufficient to explain its complex nature.

To examine and explain different coordination forms in business networks some scholars adopt social coordination mechanisms, including social norms and sanctions, shared values, exchange of information and trust (Gulati and Gargiulo 1999; Uzzi 1996). This perspective, enriched with social aspects, and based on interpersonal relationships (Emirbayer and Goodwin 1994; Granovetter 1973; Uzzi 1996) seems to be extremely helpful in understanding the complexity of inter-organizational relationships in business networks. The relational approach also demonstrates the role of “weak ties” which connect various actors and fill structural holes, which can be of key importance in many processes. It helps us to understand the development and functioning of inter-organizational networks, however, our knowledge is still limited and questioned. First, despite the fact that the similarities and analogies between social networks and inter-organizational networks are very interesting and promising, the perspective has been also criticized. The first reason is differences in terms of emotional engagement (Gulati et al. 2011) which can be questioned in B2B relationships. Second, it focuses on single dyads

(Lavie and Singh 2012; Ozcan and Eisenhardt 2009) whereas in business networks the perspective of a portfolio of independent dyads seems to be more adequate. Third, most theoretical considerations and empirical studies on coordination mechanisms in IONs focus on comparisons of two (out of three) coordination forms, e.g. market and hierarchy (Powell 1990), market and social coordination (Cannon et al. 2000), or hierarchy and social coordination (Bradach 1997). Mentioned studies focus on examining the effectiveness of particular coordination forms in different contexts. Despite the mentioned doubts and limitations the lens of social mechanisms contributed to ION literature and resulted in the triad of coordination forms: markets, bureaucracies, and clans (Ouchi 1980).

Provan and Kenis (2008) for example examined the governance forms in inter-organizational networks comparing three basic models: a) participant governance form, where the power is symmetrical and dispersed, and all members develop multidimensional ties and share governance; b) lead organization governance, where activities and decisions are coordinated by one organization (broker, leader), and the network governance becomes more centralized; and c) network administrative organization, where a separate external administrative entity is set up specifically to govern the network activities (Provan and Kenis 2008). In a similar vein, Reypens et al. (2019) examine two opposite modes of network orchestration, i.e. consensus-based versus dominating one. The first one is decentralized, emergent, and self-managed, and the members are engaged on the basis of informal relationships. It corresponds to the participant governance form. The second one is centralized and more stable in terms of actors, relationships, and roles. It is constituted and integrated on the basis of contracts, and it is close to lead organization governance.

It is worth noting that the coordination mechanisms within an inter-organizational network depend on the existence of coopetitive relationships (Dagnino et al. 2012; Luo et al. 2006). Research on coopetitive logic embraces as the primary object of studying the competitive and cooperative actions of firms, especially those operating within the dynamics of inter-organizational relationships (see Chen and Miller 2012). The competition development within the network liberates the coordination forces since on the one hand, competition generates tensions, on the other one, the system strives for balance (Bengtsson and Kock 2014; Dagnino and Padula 2002; Dagnino et al. 2012; Luo et al. 2006). That requires a different coordination type since the internal competition might induce the network disintegration.

Summarizing, most authors examine coordination within inter-organizational networks focusing on more stable networks, and the power symmetry and centralization seems to be the main distinctive criteria. Distinguished governance forms combine hierarchy (commands, control systems, etc.) with market mechanisms (price, contracts, etc.) and social coordination (norms, trust, etc.) in different proportions what results in different effectiveness, depending on the adjustment to a contextual situation, i.e. number of network members, network centrality degree, power asymmetry, and dispersion, the existence of internal coopetitive relationships, etc. As many studies focus on relatively stable inter-organizational networks, the network dynamics as a factor influencing coordination needs seem to be underestimated. Frequent changes in temporary configurations of network members and changes of their status and roles, certainly

trigger the need for more complex and flexible coordination mechanisms than fixed combination of market, hierarchical, and social mechanisms. In such dynamic conditions a heterarchy may be an answer.

1.2. From hierarchy to heterarchy

For decades the hierarchy has been the dominating coordination form of business activities, both on intra- and also inter-organizational level (along with market mechanisms). Although hierarchies are often criticized and numerous scholars suggest replacing them with more fluid forms (see e.g. Handy 1994; Peters 1989; Toffler 1970), hierarchies still seem to be strong (Leavitt 2005). At the same time, the high-velocity environment requires more decentralized and fluid forms of coordination on both levels. Some researchers suggest that traditional hierarchy is being replaced by networks and heterarchies slowly and gradually (Kellogg et al. 2006; Wang 2010). Moreover, the more visible changes of coordination mechanisms are observed at the inter-organizational (in business networks) than intra-organizational level.

The first research on heterarchy in management science, beginning from McCulloch's concept (1945), refers to multinational corporations (MNC), and the studies concern complex relationships and power distribution among divisions (Birkinshaw and Morrison 1995; Hedlund 1986; Winter 2010). The latter studies on the heterarchy apply to knowledge management (Hedlund 1994), strategy formulation (Chakravarthy and Henderson 2007), the creativity of interdisciplinary teams (Aime et al. 2014), or individuals' coordination within project-based organizations (Lichtarski 2018). Presently, the concept of heterarchical coordination can be incorporated at inter, meso, as well as intra-organizational level, changing the basic rules and images of contemporary organizations.

Hedlund (1986) defines heterarchy as a multiplicity and transitivity of power. The multiplicity of power results from many authority centres existing at the same time, of which no one is dominating. On the other hand, the transitivity of power means instability of authority centres and frequent power shifts. In a similar vein, Fairtlough (2007) describes heterarchy as a multiple and balanced power and he distinguishes it strongly from the singular and stable hierarchy. The author explains the balance in executing power in heterarchical systems using analogy to the paper, scissors, and stone game, where none of the elements is dominant from nature.

In turn, Stephenson (2009, 6) stresses that "heterarchy consists of at least three (or more) separate hierarchies, each with their own *raison d'être*, but which, in turn, must collaborate with each other to accomplish a collective good more complex than anyone hierarchy can manage on its own." It should not be perceived as the contradiction of hierarchy but rather as its multifaceted equivalent. Moreover, heterarchy is gradable and can be revealed in different forms, depending on the number of active power centres and the frequency of power shifts (Lichtarski 2018).

Stark (2009) describes heterarchy as an organizational form with "distributed intelligence" with units laterally accountable according to diverse principles of evaluation and no control systems. Heterarchy favours multiplicity, difference, and

autonomy of members. The heterarchy-based network is more open, dynamic, and emergent. From the structural perspective, it is more fluid and flexible (Taylor et al. 2019), and temporarily engaged actors perform various roles in particular activities. In terms of the decision-making process in heterarchical layouts, managers are more likely to emergently customize strategies to fit their unique resources, other members' strategies, and environmental needs (Wan and Hillman 2006). The leading role in the network is dispersed and transitive, due to the variety and temporary nature of projects and activities. As many different activities may be undertaken simultaneously, the power is dispersed and many decision centres exist at the same time. As the consequence, frequent powers shifts are observed which align the positions of participants and decrease opportunism. In the consequence there is a need for coordination at two levels – the level of each activity (project-level), and amongst them (network-level).

Some scholars locate heterarchy between hierarchy and market (Powell 1990; Stephenson 2009) or treat it as a mixture of hierarchical, market, and social mechanisms (e.g. Jap and Ganesan 2000; Joshi and Campbell 2003). In this meaning heterarchical coordination combines hierarchy (commands, control systems, etc.) with market mechanisms (price, contracts, etc.) and social coordination (norms, trust, etc.) in different and unstable proportions. Its distinguishing features are: (1) the variety and multiplicity of coordination mechanisms used at the same time (different projects and activities can be coordinated by different actors on the basis of different mechanisms at the same time); (2) its unstable and temporary nature, as proportions of coordinating mechanisms may change along with undertaking subsequent activities (initiated by other actors) and in accordance with relationship development (Jap and Ganesan 2000). The coexisting mechanisms may change in their presence, as there are no dominant and stable elements within heterarchical coordination. Some authors (e.g. Provan and Kenis 2008) underline the role of particular actors in the implementation and development of coordination mechanisms, although the leading role is transitive and temporary within heterarchy-based cooperative networks.

2. RESEARCH METHODOLOGY

2.1. Research design

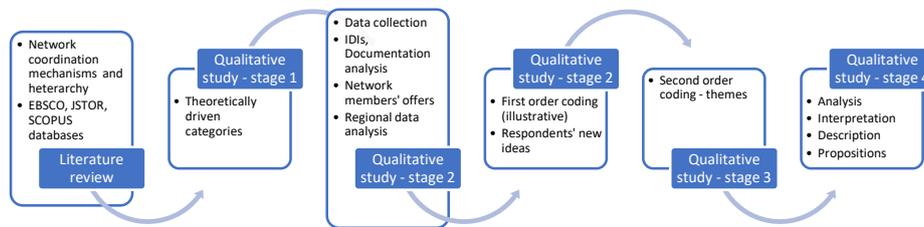
The qualitative approach was used due to the exploratory nature of the study and insufficient empirical background in the field, with the case study as the main research method. Significantly, Bergenholtz and Waldstrøm (2011) identified that a qualitative approach is dominating in studies on inter-organizational networks. Consequently, the study follows the research design suggested for explorative studies in management sciences (Eisenhardt 1989; Flyvberg 2006; Yin 2009), where the case study constitutes a valuable research method. According to Halinen and Törnroos (2005), the case study research in network studies is not only possible one, yet the highly recommended method due to the vital role of the context and uniqueness of particular networks. The network in a given study was selected intentionally as a typical one for many tourism destinations. The network selected reveals the following hallmarks: a) it is distributed, b) it is composed of differentiated but co-localized nodes with relatively equal status, and c) it encompasses mostly independent SME's. In turn, the investigated nodes were selected

with a purposive sampling technique in compliance with the guidelines for case selection (Gerring 2007) and preceded with the short preliminary screening interview (CATI) [1]. The total number of examined companies (n=8) represents about 20% of all organizations cooperating within the studied network.

As well as this, the tourism sector selection was purposive and based on the following premises: (1) the tourism sector is recommended to conduct research on interfirm cooperation and networks due to high decomposition of the value chain and multidirectional ties (Czernek and Czakon 2016; Wang and Krakover 2008), (2) a tourism destination is a unit of analysis with a shared goal, co-location, cultural proximity, and interconnection (Kylänen and Mariani 2012); (3) the tourism sector is not concentrated therefore various types of dispersed networks of SME's dominate; (4) tourism sector plays a vital role for many countries' economies in terms of GDP share, employment, taxes, etc.

The research procedure was mainly based on the confirmative approach. Hence, we started with theory-driven categories (e.g. centralized or dispersed network, stable or changeable integration, cooperative projects, trust, formality, commitment). Then we used two order codes (first-order – illustrative and second-order – themes). Finally, following a specific level of focus, we formulated propositions to be explored in further research. However, we also partially used the data-driven approach, namely, we added the informants' new ideas to our first-order codes (Fig. 1). Hence, we implemented a mixed approach (e.g. Alvesson and Kärreman 2007; Graebner et al. 2012).

Figure 1: Research design and procedure



Source: own study.

2.2. Data collection

The empirical data gathering process was based on data triangulation and included the following techniques to enhance internal validity: (1) semi-structured individual interviews (n = 8); (2) documentary analysis, (3) comparative analysis of network members' offers (websites, reservation portals), and (4) analysis of statistical data of the region, articles from local press, local authorities' websites (Table 1, Table 2). While analyzing interview data, we referred the informants' data to the information in

secondary data sources to confirm and check primary data validity (Eriksson and Kovalainen, 2016).

In total eight interviews were performed with respondents selected on the basis of purposive sampling. The main inclusion criteria were as following: (a) owner or main manager (top-level) (b) having at least 5 years of experience in the position, (c) responsibility for network cooperation, and developing interfirm relationships. The interview scenario included open-ended questions, close-ended multi-choice questions with the 7-point Likert scale (to investigate the intensity of selected phenomena occurrence). Importantly, although we used there reliable and validated scales (adopted from: Jap and Ganesan 2000; Lee and Johnsen, 2012), we treated them as a supportive technique to get more detailed answers, e.g. about the intensity of relationship features like trust, commitment, or formalization; or to identify dynamics of the environment in case the answers for open questions were too general or insufficient. At the respondents' behest, the names of companies and the region were not disclosed.

Each interview consists of two parts. In the first one, the respondents were asked about general issues related to examined network, projects conducted, and interfirm cooperation. In the second part, they were asked to describe network activities in common projects: negotiating the terms, distribution of tasks, power issues, communication, and decision making. The interviews based on the PAPI technique of collecting data and documentary analyses were conducted in 2017-2019.

Table 1: Interview data

Company (case)	Number of employees	Interviewee position	No. of interviews	Length of interview (mins)
1	10	Owner	1	85
2	15	Owner	1	75
3	50	Top manager	1	80
4	9	Top manager	1	75
5	20	Top manager	1	90
6	25	Top manager	1	90
7	40	Owner	1	105
8	30	Owner	1	85

Source: own study.

Table 2: Data from other sources

Data source	Content in use
Documents	organisational structure scheme, organisational strategy (if written), the cooperation agreement pattern, WBS and task distribution, timelines and Gantt diagrams of common projects
Network members' offers	websites, booking portals
Regional data	statistical data of the region, articles from local press, local authorities' websites

Source: own study.

2.3. Data analysis

Taking into consideration the aim of the study and its exploratory nature the narrative form was used to present the results in a synthetic way. Data from various sources and respondents were analyzed, compared (cross-analysis), and summarized to obtain a multi-dimensional and coherent description of examined network and coordination form. The selected research design and method (extensive case study) seem to be appropriate despite the awareness of possible weaknesses and limitations concerning external validity, case selection problems, or researcher's subjectivity (see e.g.: Bennett and Elman 2006; Gerring 2007; Yin 2009).

Specifically, the process of data analysis was based on a multi-stage procedure including preparation of data, data review, coding, preparation of descriptions and thematic scopes, unit analysis, and cross-analysis, and interpretation (Creswell and Zhang 2009). The coding stage was based on two order coding. The pre-defined list of codes (first-order codes, illustrative ones) was prepared on the basis of literature study, and during the study, the list was enriched by phrases raised by respondents, and not defined before. Then the coded data were grouped into main themes (second-order coding). To obtain honest accounts from informants as well as to reduce biases, the data collected from respondents were compared both to the other data from the same case and to the data gathered from other participants of the study. Finally, on the basis of organized and interpreted data, the synthetic descriptions and insights to theory development were made and the propositions were developed.

3. RESULTS

3.1. General Description of the Studied Network

The study of heterarchical coordination has been preceded by the network genesis, its short history, and the description of undertaken network activities, to bring the context. The investigated network is a regional cooperative community operating in Lower Silesia (Poland). According to respondents, the first common network activities started about 2008, and since the year 2010 continuous and dynamic development of the network cooperation has been observed. The network is rather small and regional including around forty co-localized small and medium enterprises representing the tourism sector, i.e.: hotels, apartments, restaurants and catering companies, museums, tourist attractions (castles, national parks, old mines), ski and sports centres, aquapark, transport companies, the old brewery, music bands, and others. Most focal companies are localized in one town or nearby, and some are localized abroad (Czech Republic).

The intra-organizational network aforementioned can be classified as: (1) informal and based on social ties (Provan et al. 2007; Ring and Van de Ven 1994) since few formal rules and contracts exist and owners have known each other for years; (2) symmetric and distributed (Ahuja 2000; Burt 1992) due to the equal status of nodes and no dominant brokers; (3) conglomerate or multidimensional (Möller et al. 2005) since it includes both vertical and horizontal relationships in the value chain; as well as (4) dynamic one (Miles et al. 1992) due to high instability of relationships and nodes' roles.

The exemplary common projects and activities conducted by the depicted network are: (1) annual music festival; (2) annual classical music concert; (3) big conferences, congresses and symposia for institutional clients^[2]; (4) common marketing activities *via* the internet (advertisement, SEO, etc.); (5) cooperation with travel agencies and portals; (6) negotiations with local authorities concerning the development of the region; (7) other events and actions organized *ad hoc*, e.g. environmental activities, charity events, etc. In the foreseeable future, it is also planned to undertake joint activities in cooperation with the regional high schools in order to prepare professional staff for hotels and gastronomy in the region. This idea was incubated at the last meeting of network members' representatives as the response to a lack of qualified staff in the region.

There is no common network strategy or long-term plans, however, every node is interested in increasing the attractiveness of destination and stable incomes for the nearest 3-5 years, as well as in making the environment more predictable. The network operates like a project-based organization conducting 15 to 25 common events each year. Generally, all the events are organized and completed by different configurations of enterprises. Nonetheless, the longitudinal and deepened analysis shows some patterns and coalitions that confirms Gulati and Garigulo's observation (1999) that new network configurations tend to grow on the basis of previous ones.

Although there is no formal integration, all partners declare to have a sense of common goals, and the commitment of all partners is very high. No opportunistic behaviour is observed in contrary centralized and dominated networks (see: Gulati et al. 2000; Gulati and Singh 1998). The presented case of the inter-firm network seems to be interesting since it reveals that the current network, which is dispersed, informal, and reflecting heterarchical coordination, works well in contrary to the formal network having been composed before with almost the same nodes but with stable and hierarchical coordination^[3].

3.2. Coordination by heterarchy: actors, relationships, and mechanisms

There is not a dominating broker or orchestrator in the studied network. All network actors have the same status regardless of their size, owned resources, or history. The network is distributed and emergent, interfirm relationships are activated temporarily when common projects or activities are undertaken. After completing joint tasks the relationships remain inactive in terms of the exchange of goods and money. Nevertheless, the relationships are maintained thanks to the social ties between companies owners and co-localization. The role of potential and latent ties studied by Mariotti and Delbridge (2012) is crucial in a given case.

According to interviewees, the "*equality of nodes and partnership builds the success, durability, and retention*" of the studied network. A majority of network members rely on other partners' resources to the same extent as on their own. The level of trust is high, and according to Akrouit and Diallo's (2017) distinction, it can be named as the affective one as companies' owners have known each other for years. Written contracts are used rarely and for the external purpose, i.e. to assure that the other partners' resources are available.

After completing the event temporary configurations disintegrate and all nodes return to their own autonomic activities or engage in other projects within the network. At the same time, few different projects can be conducted, and often are, as long as there are spare resources in the network. Multiple projects and events conducted simultaneously result in the multiplicity of power centres, namely there are few leaders and few temporary configurations at the same time.

One of the key issues of interfirm network functioning is communication (Eisenberg 1985; Shumate and Contractor 2013; Shumate et al. 2016). In the studied network, the multiple communication channels are used. Managers and owners prefer face-to-face meetings and telephone talks. ICT-based technologies, like internet communicators, e-mails, and social media, seen by some researchers as the source of effective interfirm communication (Kim et al. 2007; Milis and Mercken 2003) are used quite rarely by top-level managers. The opposite situation is observed at operational levels, where collaborating employees representing different companies very often use e-mail, internet communicators, and social media.

Coopetitive relationships between partners are the natural part of the network as many members are competitors linked with horizontal cooperative ties. It is an example of complex network coopetition since it involves numerous partners, different areas, and several levels of the value chain (Dagnino and Padula 2002). The coopetition in this case seems to be rather an emergent strategy, in contradiction to deliberate processes in tourism destinations identified by Wang and Krakover (2008). Analyzing competition strategies among network nodes it is worth highlighting that network partners do not use cost leadership strategy and do not compete by means of prices without special agreements or collusions. Arguing the choice of strategy, respondents underline that *“everybody knows that this type of competition may lead to the decrease of profitability in a long time perspective”*.

The relationships between nodes in the studied network are dynamic. Observing them over time in a one-year cycle we can see changes in the intensity of cooperative and competitive relationships. In the high seasons (summer and winter) competitive relationships seem to be dominant as all network members are competing for tourists' budgets and every company is working on its own. Common projects and actions are not too frequent in those times. According to interviewed managers, *“the profitability of joint activities is lower than individual projects”*, however, respondents declare that this opinion is based rather on intuition than calculations. In the low seasons (spring and autumn), when partners have some free “production capacity” and unengaged resources, the situation is opposite and the tendency to cooperate grows. As a result, cooperative relationships seem to be dominant in low seasons.

3.3. Strengths and dark sides of heterarchical coordination

The exemplification of heterarchical coordination presented in the previous section reveals some advantages and disadvantages of investigated coordination form. The most of the features identified are not easy to observe, however, due to multiple sources of data some interesting strengths and weaknesses have been recognized.

First, most visible advantage indicated by respondents is the “*free and omnidirectional exchange of information and knowledge*”. In contrary to centralized and hierarchically coordinated networks, in which the flow of information is controlled, or even blocked, in distributed networks with heterarchical coordination the diffusion of ideas, and knowledge is free, which brings benefits to all networked actors. Second, there is a mechanism of positive selection within the network. The actors who contribute at most to the projects develop more and more dyadic relationships, and as a result, they are more frequently asked to participate in further configurations. The positive selection mechanism protects from opportunism until all network members are aware of that. According to respondents, the presented mechanism favours the high level of actors’ commitment and guarantees the high level of offered services’ quality. Thus, heterarchical coordination seems to involve low costs. For instance, the transaction costs are low within the network as network actors know and trust each other, and there is no need to develop expensive hierarchical coordination. Hence, taking into consideration the size and economic situation of investigated companies, the cost issue is a very reasonable argument.

There are also some weaknesses or dark sides of heterarchical coordination, more or less noticed by investigated respondents, but salient for network operating and development. First, the lack of standards in communication and cooperation lowers the effectiveness and can be a potential source of tensions and conflicts. Moreover, some arrangements are written down in contracts, while others have only a verbal form. For some projects, a separate bank account has been created, while in the other settlements are done on “leader’s” account, or in cash only. Not only does the lack of standards and routines rise uncertainty, yet according to Jap and Ganesan (2000) it may also increase costs of internal transactions. A majority of interviewees are aware of the mentioned negative side and perceive it as the most visible barrier for further development of the network. Second, the presented heterarchical coordination leads to a unification of offers and loss of enterprises’ identity. Comparing offers over time we can observe that the standard of services are relatively equal and all members include exactly the same attractions (the same events, the same trips, etc.). The companies owners are aware that year after year it is harder to differentiate the offer on the local market. Nonetheless, in comparison with similar regions, they observe the increase of the whole destination attractiveness. The presented strengths and weaknesses of heterarchical coordination do not exhaust the phenomenon. However, their short summary highlights that the described form of coordination can be perceived and judged differently in many respects.

4. DISCUSSION AND CONCLUDING REMARKS

4.1. Underpinnings of heterarchical coordination in inter-organizational networks

The field study yields a more precise and deeper understanding of heterarchical coordination in inter-organizational networks. The findings of the study indicate the role and mechanisms of balanced and transitive power in network nodes’ coordination processes as well as different facets of SME’s operating in the distributed network in the tourism sector. There are not many studies on heterarchical coordination in inter-organizational networks what makes it difficult to be compared^[4]. The reference to

previous studies is hard for at least four reasons. First, the heterarchy phenomenon is blurry and multifaceted what results in its different conceptualizations and research perspectives. Second, most scholars who investigate coordination in inter-organizational networks compare market (contracts) with hierarchy (commands), and the descriptions concerning heterarchy-based coordination, if are present at all, are secondary and curt, or hidden in the background (see e.g.: Das and Teng 1998; Cannon et al. 2000). Third, researchers studying networks implement various research designs and methods that makes the studies hardly comparable and non-replicable. Thus, investigated networks and nodes are strongly embedded in their environment that is influenced by various economic, geographical, social, and political factors that makes comparisons more difficult or unfounded.

4.2. Contribution

The presented study makes contributions both to theory and practice. Firstly, due to the diffusion of intra- and inter-organizational levels of analysis, the study findings indicate the need for integration strategic management field in terms of inter-firm cooperation theories with organization and management theory regarding the theories and models of organizational structures and coordination. Secondly, the in-depth case study of dynamic inter-organizational network shows the complexity and methodological challenges that indeed calls for further studies. Thirdly, the studied case provides useful guidelines for company owners and managers concerning network relationship development and power dispersion. Specifically, the study identifies and discusses not only strengths of network cooperation what is a dominating stream in the management science literature, but also weaknesses and threats of heterarchical coordination.

4.3. Conclusions and future research directions

Taking into account the RQ1, it might be concluded that heterarchical coordination is suggested to be identified or applied to develop cooperative networks in many tourism destinations. Referring to the RQ2 as well as taking into account the specificity and differences in network architecture, the mechanism of coordination seems to be universal. Wherever distributed networks of SME's with equal status are involved, a heterarchy can be implemented as the main mechanism of integrating and coordinating activities. Depending on the number, variety, and the scope of commonly conducted projects and activities, a heterarchy may reveal its different faces, however, many similarities may be observed, e.g. informal communication, trust, dispersed power, and transitive leadership. Mentioned features differentiate heterarchy from hierarchical or market coordination. Finally, the discussion on the advantages and disadvantages of the heterarchical coordination on the basis of the case study (RQ3) approved that not only does it show positive sides of heterarchical coordination, but also possible weaknesses and threats. This research logic seems to be appealing since most researchers focus mainly on positive facets of networking, while the dark sides of network cooperation are not a common research stream.

The study also raises a number of questions for future research, as well as the following propositions have been formulated:

Proposition 1. *Heterarchical coordination increases the effectiveness of projects and activities undertaken by the network (in terms of time, scope, and cost).* The proposition is general and involves the goals of network cooperation (in tourism destinations) but the attention is additionally proposed to be paid on comparing the networks with heterarchical and hierarchical coordination (Wang and Krakover 2008).

Proposition 2. *The transitivity of power fosters network nodes' commitment and decreases opportunistic behaviour.* One of the compelling weaknesses of business networks with both stable power centre and asymmetry of power is actors' opportunism (Gulati and Singh 1998). Transitive and multiple power leads to the development of symmetry between nodes and reduces opportunism.

Proposition 3. *The more dispersed network and more equal partners the better functioning of heterarchical coordination.* The network architecture, including network centrality, density, cohesion, and formalization, is proposed to be one of the conditions of network operating (see Ahuja et al. 2012; Burt 1992; Williams 2005). Consequently, it is hypothesized that the network architecture is also an important factor influencing heterarchical coordination. The propositions do not exhaust this complex field, however, in accordance with the respondents' opinions, they address common and interesting issues.

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^[1] Inclusion/exclusion criteria for the studied nodes: at least 5 years operating on the market; at least 3 years membership in the network; private ownership; independence (no financial dependencies, franchise localization of headquarter in the region, etc.).

^[2] Most hotels in the region have a bedding base for 60 or fewer people. Organizing large events like conferences, symposia, or congresses (with additional attractions and trips for participants) for 200 or more people, that is frequent in the region, requires efficient cooperation and coordination amongst numerous network participants, i.e. hotels, restaurants, museums, transport companies, etc.

^[3] The formal and centralized network had been developed after joining EU by one of the largest enterprise in the region with the strong support of local authorities. The general goal was to create good image and increase the attractiveness of the destination, but despite having numerous partners and financial support (UE funds) the network did not take many activities and formal inter-firm relationships were inactive.

^[4] The conclusion is based on the literature review. The search for “heterarchy” limited to articles; English language; subject areas related to business, management, organizational behaviour and economics; and databases: EBSCO, WoS, and Scopus, gives only 42 articles in total (14 with empirical studies; no articles concern business networks, and 12 concern MNCs and organizational structures what gives a very limited possibility for comparisons).