

**UNIVERSITY OF VAASA**  
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**INTER-FIRM COOPERATION IN ENTREPRENEURIAL NETWORKS**

Case Likiliike

Master's Thesis in  
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<b>TABLE OF CONTENTS</b>	<b>page</b>
<b>LIST OF FIGURES AND TABLES</b>	<b>5</b>
<b>ABSTRACT</b>	<b>7</b>
<b>1. INTRODUCTION</b>	<b>9</b>
1.1. Background of the study	9
1.2. Research gap	11
1.3. Empirical context	11
1.4. Aim, objectives, and research questions	12
1.5. Structure of the thesis	13
<b>2. ENTREPRENEURIAL NETWORKS</b>	<b>14</b>
2.1. Cooperation in entrepreneurial networks	17
2.1.1. Opportunities, barriers, and risks for developing cooperation in entrepreneurial networks	21
2.2. Network capabilities for developing cooperation in entrepreneurial networks	22
2.2.1. Network capability in the context of micro- and small-sized enterprises	25
2.2.2. Social capital and information exchange capability	28
2.2.3. Factors affecting information exchange capability	30
2.2.4. The effect of competition and cooperation on information exchange	32
2.2.5. Summary of information exchange capability	33
2.2.6. Summary of network capability in entrepreneurial networks	34
2.3. Theoretical framework	36
<b>3. METHODOLOGY</b>	<b>39</b>
3.1. Research methodology	39
3.2. Research method	40
3.3. Data collection and analysis	40
3.4. Validity and reliability	43
<b>4. CASE NETWORK OF THE STUDY</b>	<b>45</b>
4.1. Empirical context	45
4.2. Defining Likiliike from the network perspective	46
4.3. Development of Likiliike	48



<b>5. EMPIRICAL FINDINGS</b>	<b>51</b>
5.1. Opportunities, barriers, and risks for development of inter-firm cooperation in an entrepreneurial network	52
5.2. Network configuration	56
5.3. Network capability	60
5.3.1. Cooperation-orientation	60
5.3.2. Social competence	61
5.3.3. Capability to initiate relationships	62
5.3.4. Information exchange capability	63
5.3.5. Visioning capability	65
5.3.6. Coordination capability	67
5.3.7. Summary of network capability in an entrepreneurial network	68
<b>6. CONCLUSIONS</b>	<b>70</b>
6.1. Theoretical implications	73
6.2. Managerial implications	73
6.3. Limitations and future research	74
<b>REFERENCES</b>	<b>76</b>
<b>APPENDICES</b>	
APPENDIX 1.	86
APPENDIX 2.	87



<b>LIST OF FIGURES AND TABLES</b>	<b>page</b>
Figure 1. Likelihood of cooperation and conflicts	21
Figure 2. Elements of network competence	24
Figure 3. Sparse and dense networks	31
Figure 4. The degree of competition and cooperation and the existence of heterogeneous and homogeneous information in networks	33
Figure 5. Information exchange capability in entrepreneurial networks	34
Figure 6. Network capabilities needed for developing cooperation in entrepreneurial networks	35
Figure 7. Development of inter-firm cooperation in entrepreneurial networks	37
Figure 8. Main development steps of Likiliike	50
Figure 9. A semi-sparse network with different degrees of embeddedness	57
Figure 10. Network capabilities in an entrepreneurial network	69
Table 1. Opportunities, risks, and barriers for developing cooperation in entrepreneurial networks	22
Table 2. Summary of interviews	42





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**Pages: 87****ABSTRACT**

Recently, the research field in entrepreneurship has experienced an increase in studies concentrating on networks. Networks are crucial for entrepreneurs, since they provide access to important tangible and intangible resources. Entrepreneurs' capability to establish and maintain cooperative relationships is critical for entrepreneurial success.

The existing literature on how, when, and why ties change and become cooperative is scarce, and more evidence is needed on network capabilities in the context of micro- and small-sized enterprises. This research studies development of inter-firm cooperation in entrepreneurial networks and aims to fulfill the gap in the existing literature. This research examines the barriers, risks, and opportunities for developing inter-firm cooperation in entrepreneurial networks and suggests what network capabilities are needed to enable development of inter-firm cooperation.

The research was conducted as a single case study using a qualitative method. The case of the study is a large and multisectoral entrepreneurship society operating in the Finnish Lapland in the city of Rovaniemi. The empirical data was collected in seven semi-structured interviews and from other secondary sources.

The findings indicate that development of inter-firm cooperation in a large and heterogeneous network is unlikely. There should be enough similarities between actors so that development of cooperation is possible, but also differences so that heterogeneous resources exist in the network. Furthermore, inter-firm cooperation does not develop on its own; network manager should provide conditions in order to enable development of inter-firm cooperation. Main barriers for development of cooperation were lack of interest, scarce resources, and skepticism towards cooperation. However, inter-firm cooperation can lead to multiple opportunities, such as joint problem-solving arrangements, complex information exchange, and competitive advantage. Most important network capabilities needed to develop inter-firm cooperation for network members were cooperation-orientation, social competence, capability to initiate relationships, and information exchange capability. Network members also need visioning and coordination capability, but these capabilities are especially important for network manager.

Future research possibilities could be conducting a longitudinal study in order to provide insight on how entrepreneurial networks develop over time. Also, conducting more research on information exchange capability could be useful, since the existing literature on the capability is limited.

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**KEYWORDS:** entrepreneurial network, cooperation, network capability, social capital.



## 1. INTRODUCTION

In order to survive in today's competitive business world, businesses need to find more flexible and innovative solutions (Huang & Wilkinson 2013). Local micro-, small- and medium-sized enterprises are faced with a challenge of competing with e-commerce and multinationals. Change in the competitive environment requires sustainable development to make local goods and services appealing. Networks might be able to fulfill the demanding needs of today's business world: they not only provide flexibility and capacity but also facilitate acquiring such resources, information, and skills that vertically integrated companies might not gain access to (Child, Faulkner & Tallman 2005: 147-148).

### 1.1. Background of the study

Recently, the research field in entrepreneurship has experienced an increase in studies concentrating on networks, as it has been recognized that networks are essential for entrepreneurship (Neergaard, Shaw & Carter 2005; Jack 2010; Slotte-Kock & Coviello 2010). Companies are altering their insights towards their business environment and issues they are facing by relying on networks (Håkansson & Ford 2002: 133). As Håkansson and Snehota stated in 2006, no business is an island. Entrepreneurs are no longer seen as isolated individuals (Larson & Starr 1993: 6); on the contrary, entrepreneurs are embedded in social relationships, and these networks of relationships either facilitate or constrain entrepreneurial activities (Aldrich & Zimmer 1986).

The network approach is suitable for understanding the field of entrepreneurship, since social relations are crucial for entrepreneurs in terms of gaining access to tangible and intangible resources (Johannisson & Mønsted 1997; Greve & Salaff 2003). The research stream on entrepreneurial networks has been mainly influenced by business network and social network research streams (Slotte-Kock & Coviello 2010). The social network research stream on has been strongly influenced by Granovetter's (1973; 1985) findings on embeddedness. According to Granovetter (1973: 482) economic exchange is embedded in social relationships, and networks of social relationships either constrain or facilitate entrepreneurial activities. Through interaction in social networks, entrepreneurs exchange tangible resources (Aldrich & Zimmer 1986; Larson & Starr 1993) but also

accumulate social capital, which facilitates acquisition of intangible resources, such as social support and advice (Coleman 1990: 304; Burt 1992: 8-10; Renzulli & Aldrich 2005). Social network research stream has also devoted much attention to the strength of ties and how they affect network structure (Slotte-Kock & Coviello 2010: 49). Especially Granovetter's (1973) paper on the strength of weak ties and how their significance should not be neglected in network studies has influenced the field of social network research.

The European Industrial Marketing and Purchasing Group (IMP-Group) on the other hand has contributed significantly to the business network research field (Halinen & Törnroos 1998: 187). Research of the IMP-Group suggests that through interaction and exchange of resources between actors, relationships evolve and link different actor's activities and resources together. Interdependencies gradually evolve, and relationships become stronger between actors. Actors are trying to get a favorable position within the network by maintaining, establishing, and developing relationships. Hence, organizations are embedded in a web of relationships, which constrains the behavior of organizations. Interaction between organizations and development of relationships will affect all the connected actors in the network. Sometimes the effect can be minimal; nevertheless, change in a relationship will always have an effect on all the connected relationships. Therefore, business networks are dynamic and constantly changing. Thus, business networks can hardly be managed. (Håkansson & Snehota 1995; Håkansson & Ford 2002: 134; Ford, Gadde, Håkansson & Snehota 2003: 18; Håkansson & Snehota 2006: 260.)

Network capability, capability of a firm to establish and maintain cooperative relationships with other firms, has also been researched by the IMP scholars (Äyväri & Möller 2008: 1). Entrepreneurial network approach considers entrepreneurship to be a process of organizing relationships, and it suggests that entrepreneurs manage their business through networking. Entrepreneurship is all about establishing new contacts and relationships and maintaining and exploiting these ties (Johannisson 1987; Greve & Salaff 2003; Johannisson 2011). Entrepreneurial success is dependent on networks and on entrepreneurs' capability to develop and maintain them (Johannisson 1988).

## 1.2. Research gap

The body of network research is multifaceted, and it has its foundations in several research streams. Thus, the research field has still not reached a consensus on a core theory (Hoang & Antonic 2003:172). According to Slotte-Kock and Coviello (2010: 49) integration of both business and social network research could be beneficial in entrepreneurial network approach. Therefore, this study aims to combine the two research streams by introducing theories from both business network and social network studies and thus, get a more holistic approach to studying entrepreneurial networks. This study incorporates the viewpoint of business network studies by evaluating network capabilities in the context of micro- and small-sized enterprises, since the previous research on network capabilities has mainly concentrated on large companies (Äyväri & Jyrämä 2007: 3). In addition, according to Slotte-Kock and Coviello (2010) there has been little research on how, when, and why ties evolve. Therefore, this thesis also includes the viewpoint of social network studies by assessing the effect of social capital on how ties evolve and become cooperative.

Even though there has been an increase in studies concerning networks and entrepreneurship in the past few decades (Hoang & Antonic 2003: 165), more qualitative research on the topic is needed (Hoang & Antonic 2003; Jack 2010). Therefore, this thesis contributes to the scarce body of research of qualitative entrepreneurial network studies.

Hence, this thesis contributes to the existing body of research on entrepreneurial networks in four different ways: integrating social and business network studies, providing insight on network capabilities in the context of micro- and small-sized enterprises, suggests why and how ties become cooperative in an entrepreneurial network, and uses qualitative research method.

## 1.3. Empirical context

This thesis concentrates on an entrepreneurship society called Likiliike, which is located in the Finnish Lapland in the city of Rovaniemi. This study was initiated due to Likiliike's need for activating its network of entrepreneurs into a more frequent cooperation. Likiliike is a non-profit organization owned by the Rovaniemi Entrepreneurs So-

ciety. It is a large, multisectoral network consisting of over 200 Rovaniemi-based enterprises. Likiliike was established, since local entrepreneurs were worried about the global competition and the ability of local micro- and small-sized companies to survive in the changing business environment. Hence, Likiliike was founded in 2015 out of need to activate and enrich the local business environment.

Likiliike aims to boost the economy in the Rovaniemi region by encouraging consumers to purchase locally produced products and services. Likiliike also aims to raise the awareness of local products and services among the growing number of visitors. Thus, Likiliike intends to maintain and improve the success and continuation of local businesses and vitality of Rovaniemi.

Likiliike members do not actively cooperate at the moment, and Likiliike is used mainly for promotional purposes. Nevertheless, Likiliike could have the potential to serve a higher purpose: new business ideas could be developed, and partnerships could evolve through active networking and cooperation between members. This could help Likiliike to fulfill its aspirations: enhancing the vitality of local businesses and have a positive effect on the economy in the Rovaniemi region.

#### 1.4. Aim, objectives, and research questions

The aim of this study is to assess how inter-firm cooperation is established in an entrepreneurial network and to provide insight on how cooperation could be developed. Two different research streams are used to fulfill the aim of the study. The objectives of the study are to evaluate which factors affect the development of inter-firm cooperation and make recommendations how inter-firm cooperation could be developed in an entrepreneurial network. The purpose of this study is not to give a holistic understanding of how entrepreneurial networks and inter-firm cooperation in them develops over time. Instead, the study tries to provide insight on how entrepreneurial processes and network capabilities affect development of inter-firm cooperation.

The research question is as follows:

How could inter-firm cooperation be developed in entrepreneurial networks?

The research question is examined from two different viewpoints: content of entrepreneurial networks and structure of entrepreneurial networks. The content of entrepreneurial networks includes the ties that are used to access resources and the network capabilities needed to establish and maintain these ties. The structure of entrepreneurial networks evaluates how the ties are interconnected and how it affects the flow of resources in an entrepreneurial network. Questions that help answering the research question are as follows:

What are the risks, opportunities, and barriers in developing inter-firm cooperation in entrepreneurial networks?

What are the network capabilities needed for developing inter-firm cooperation in entrepreneurial networks?

Primarily, this study provides recommendations for Likiliike in order to activate its member base. The study is useful for other large and heterogeneous networks having difficulties with activating network members into a more frequent cooperation.

### 1.5. Structure of the thesis

After the introduction, entrepreneurial networks are defined, and it is introduced how the research streams of social and business networks have influenced on entrepreneurial network approach. In the next section, opportunities, barriers, and risks for establishment and development of cooperative relationships in entrepreneurial networks are explored, followed by an introduction of network capabilities. Based on the reviewed literature, a theoretical framework is constructed.

In section three, the methodological decisions regarding the data collection and analysis are introduced, and the validity and reliability of the study are evaluated. Fourth section describes the empirical context of the study. Section five analyzes the empirical findings and aims to match the reality to the theoretical framework. Final section of the thesis provides insight on the research questions based on the empirical findings and introduces managerial and theoretical implications, limitations of the study, and suggests future research possibilities.

## 2. ENTREPRENEURIAL NETWORKS

In this section, entrepreneurial networks will be defined and the previous research on entrepreneurial networks will be discussed. As already established, research on entrepreneurial networks has been mainly influenced by business network and social network research streams. Social network research stream in entrepreneurial context tends to concentrate on individuals, the entrepreneurs, and their personal network of relationships, which are used to support entrepreneurial activities. Business network research stream on the other hand considers entrepreneurial networks as networks of small entrepreneurial firms and aims to understand the reasons for changes in a relationship between actors, which is not common for social network studies (Slotte-Kock & Coviello 2010; Galkina 2013: 10.)

Drakopoulou Dodd and Patra (2002: 117) define entrepreneurial networks as:

*“The sum total of relationships in which an entrepreneur participates, and which provide an important resource for his, or her, activities.”*

According to Galkina (2013: 10) Drakopoulou Dodd’s and Patra’s definition can be seen as a hybrid of both social and business network research streams, since the “definition accepts that entrepreneurial relations can be viewed from both inter-personal and inter-organizational perspectives and can include both individuals and firms”.

Social network research stream in entrepreneurial context aims to understand how networks affect entrepreneurial processes and outcomes (Hoang & Antonic 2003: 172) and considers networks as entities with “clear membership boundaries” (Slotte-Kock & Coviello 2010: 45). The concept of embeddedness introduced by Granovetter (1973, 1985) has had a prominent effect on social network research. According to Granovetter (1973: 482) economic exchange is embedded in social relationships, and “within these complex networks of relationships, entrepreneurship is facilitated or constrained” (Aldrich & Zimmer 1986: 8). In addition to embeddedness, social network research emphasizes how tie strength affects network structure and consequently entrepreneurial processes and outcomes (Slotte-Kock & Coviello 2010: 49).

Business network research stream in entrepreneurial context on the other hand seeks to understand how and why change occurs in relationships (Slotte-Kock & Coviello 2010:



44) and considers networks to be dynamic, constantly changing, and borderless entities (Håkansson & Ford 2002). Business network research stream in entrepreneurial context has also offered insight on how entrepreneurial processes and outcomes affect network development (Hoang & Antonic 2003: 172), even though the research is still limited (Jack 2010). According to Larson and Starr (1993) entrepreneurial networks develop in three different stages, first consisting of close personal contacts in the establishment phase of a firm. As the firm matures, some ties are terminated and some developed; trust evolves in dyads, and time and money is invested in the relationship. Eventually actors become interdependent as cooperation and coordination increases. Thus, entrepreneurial networks become more complex over time as the dyadic relationships evolve. Similarly, Hite and Hesterly (2001) have suggested that entrepreneurial networks begin as “identity-based”, consisting mainly of entrepreneurs’ social network, for instance family members. Over the course of time as firms seek new resources, network ties are more calculative as new, weak ties arise. Networks become more diverse in terms of ties strength, and as a result, contrary to Larson’s and Starr’s (1993) findings, networks become easier to manage.

Jack, Moulton, Anderson and Drakopoulou Dodd (2010) claim that research on entrepreneurial networks has seen entrepreneurial networks mainly as a mean to access resources. However, the authors argue that entrepreneurial networks are not all about resource acquisition but also about: “socialized issues, such as social learning and confidence building through interdependence and the sharing of experience” (Jack et al. 2010: 316). Similarly, Renzulli and Aldrich (2005) point out that in addition to resources, entrepreneurial networks provide emotional and social support. Also, Johannisson and Mønsted (1997: 112-13) suggest that entrepreneurial networks facilitate “organizing resources according to opportunities”. Entrepreneurial networks are not merely a mean to access resources. Entrepreneurs interact with other actors in exchange of mutual benefit, and as a result they build trust between each other. Trust is personal and affiliated to the individuals, the entrepreneurs. Entrepreneurs act as complete human beings while networking. Therefore, entrepreneurs and entrepreneurial firms cannot be understood as separate units. Hence, entrepreneurial networks are indeed personal (Johannisson & Mønsted 1997: 112-13).

Entrepreneurs’ personal network constructs of non-work contacts, such as family and friends, and work-related contacts, such as employees and former colleagues. These contacts are part of an entrepreneurial network, if they are capable of contributing to the entrepreneurial goals. Dependence on and amount of these contacts varies in different

phases of a firm. Entrepreneurship requires resources, and entrepreneurs rely on their personal networks in acquiring such resources they are not able to acquire by themselves. (Johannisson 1987; Greve & Salaff 2003; Johannisson 2011.)

Entrepreneurs are guided by a vision, and entrepreneurs need dynamic resources, such as willpower, courage, and alertness, in order to fulfill this vision. The vision is implemented by taking action in small incremental steps, and linkages to the environment are made as the entrepreneurs incorporate family and employees in their business. Finally, entrepreneurs extend their business to markets and wider society. Time is a scarce resource for entrepreneurs, and personal networks are maintained through process of trial-and-error. Network maintenance takes time, and entrepreneurs need to allocate time for the most useful relationships. (Johannisson 1987: 50-55.) Entrepreneurial opportunities are constrained always when time and energy are invested to establish contacts (Burt 1992: 55).

In the beginning of a self-employed career, owner-managers can be described as “artisans”, and their main competence are their skills. Ties are based on moral commitment, and the society conditions the rules of the game. Later, owner-managers become “entrepreneurs” as they aim to break the rules and social norms by aspiring more risky projects. In order to be able to do so, owner-managers will need advice from other entrepreneurs. Entrepreneurs will use their personal networks as a safety net, but later the networks serve another meaning, as they become a pool of resources. Ties are based on both affective and instrumental commitment. McDonald (2013: 276) describes instrumental ties as “conduits of advice, information, and resources”, which are formal in their nature, whereas affective ties are based on friendship and social support. Finally, entrepreneurs become “managers” as they aim to legitimize their position in the wider society by joining political associations, professional bodies, and social clubs. Owner-managers have set up a powerful social position, and managing the personal networks becomes a critical capability. (Johannisson 1987: 50-55.)

Hence, entrepreneurs’ capability to manage their personal networks of relationships becomes critical, since networks provide important resources and legitimize entrepreneurs’ position in the society (Johannisson 1987: 55). Even though Johannisson (1987) describes owner-managers as artisans, entrepreneurs, and managers, entrepreneur is the concept used in this thesis to describe a business owner. Since concept of entrepreneurial network has now been defined, the next section elaborates on development of cooperation in entrepreneurial networks.

## 2.1. Cooperation in entrepreneurial networks

As previously established, entrepreneurs use their personal networks to get access to tangible and intangible resources (Johannisson 1987). Nevertheless, acquisition of these resources requires cooperation. Cooperative relationships provide access to heterogeneous resources, novel information, and facilitate opportunity identification (Bengtsson, Eriksson & Kock 2005: 56). Hence, cooperative relationships can indeed be a source of competitive advantage (see for example Jarillo 1988; Uzzi 1996, 1997). However, there has been little research on how, when, and why ties evolve and become cooperative (Slotte-Kock & Coviello 2010).

MacGregor (2004: 68-69) found out in his study that firms that had been operating between 10-20 years, had less than 10 employees, and only few suppliers were more likely to engage in formal networking arrangements. However, these factors do not explain whether actors would actually cooperate in entrepreneurial networks despite being part of a formal networking arrangement. The diversity of actors has a significant effect on whether cooperation develops in a network. Development of cooperation is more likely if actors are homogeneous, have personal ties with each other, and the number of actors is small. In diverse and large networks, which consist of heterogeneous actors, risk of conflicts increases and the probability of cooperation decreases (Faerman, McCaffrey & Van Slyke 2001: 377).

Existence of a public agent in a network can facilitate cooperation, since it legitimizes network and provides a trust base. Actors are more willing to enter a network, since they believe that a public agent drives common benefits, whereas private actors are considered to pursue individual benefits. A public agent also has more credibility in the eyes of network members. If conditions for discussion are provided, such as forums or social gatherings, a public agent can strengthen and enhance cooperation and mutual trust building. However, actors need to be willing to cooperate and be committed in developing cooperation, so that evolution of mutual trust is possible. The role of a public agent is also important in coordination of cooperation. (Kylänen & Mariani 2012; Czakon & Czernek 2016.)

In addition, geographical proximity can promote cooperation between local actors. Geographical proximity between firms can generate regional clusters which are: "geographic concentrations of interconnected companies and institutions in a particular

field” (Porter 1998), and their economic weight (number of employees, sales and number of firms) is “significantly greater than the national average for these activities” (Lechner & Dowling 1999: 311). However, if trust does not exist between actors, geographical proximity does not promote regional cooperation, even though regional clusters are often supported by government and institutional incentives (Letaifa & Rabeau 2013: 2077).

Previous research has indicated that trust is vital in establishing and maintaining cooperative relationships, and it coordinates interaction in networks (Hoang & Antonic 2003: 170; Huang & Wilkinson 2013: 455; Neergaard & Ulhøi 2006). Huang and Wilkinson (2013: 455) define trust as “a willingness to rely on an exchange partner in whom one has confidence”. Trust reduces the risk of opportunism and conflicts, makes planning and coordination of activities easier, facilitates open communication, and can be used as a governance mechanism, which reduces transaction costs. (Jarillo 1988; Huang & Wilkinson 2013: 455-456.)

According to Huang and Wilkinson (2013) trust can be cognitive, based on rational assumptions of possible benefits of cooperation, and affective, based on emotional bond and beliefs that exchange partner will nurture the relationship. Initially, trust is more cognitive based on prior knowledge and experiences of parties, but as relationship evolves it becomes more affective. The nature and degree of trust evolves dynamically as a result of interaction and experience, which changes beliefs on other actors. Establishing trust is easier in dyadic relationships, since acquiring information about other actors is more time-consuming in networks and risk of opportunism higher due to larger amount of actors. (Larson 1992; Huang & Wilkinson 2013; Czakon & Czernek 2016.)

Larson (1992) has identified a three-phase pattern of how economic exchange, cooperation, and trust develop in entrepreneurial dyads. First, the likelihood of cooperation increases if there is a history or a prior relationship between the actors. If a prior relationship exists between parties, such as friendship, affective trust already exists and facilitates establishment of cooperation (Huang & Wilkinson 2013). Also, personal or firm reputation reduces uncertainty and risk and establishes expectations for relationship. Firm or personal reputation is important trust-building mechanisms, especially in the initiation phase of cooperation (Czakon & Czernek 2016). Second, the relationship incrementally develops and becomes deeper, as communication amplifies and routines and rules emerge. Initial expectations of the relationship come into effect as actors work towards mutual benefits. Overall, the interaction becomes more coordinated and stable

as trust evolves between actors. In the third phase, which is labeled as “integration and control” actors become interdependent and even strategically important partners. Complex information exchange can lead to competitive advantage or to identification of new opportunities. Absence of formal contracts is substituted with moral obligations and trust. (Larson 1992.)

Uzzi’s (1997) findings are similar compared to Larson’s. According to him, entrepreneurial networks consist of arm’s length ties and/or embedded ties. Embedded ties are cooperative and long-term, and actors have personal, friend-like relationships between each other’s. Trust is a prerequisite for embedded ties, since it enables complex information exchange and joint problem-solving arrangements. Unlike in arm’s length ties, actors tend to share information on strategy and profit margins, but also tacit information exchange happens in embedded ties. Complex information exchange also enables learning, increases capability to innovate, and stabilizes the business environment through inter-firm coordination. On the contrary to embedded ties, arm’s length ties are characterized with profit-seeking behavior, action is motivated by self-interest, and information exchange between actors is limited to codified knowledge, such as price and quantity data. In arm’s length ties, actors avoid being dependent on each other. Hence, actors tend to exit the relationship often if problems occur or in order to yield economic benefits. Nevertheless, arm’s length ties can lead to better firm performance, since actors aim to get the best bargain, and they are not entitled to stay in inefficient relationships. (Uzzi 1997.)

Uzzi (1997: 42) claims that embedded ties are more significant for a firm’s success than arm’s length ties, even though arm’s length ties might be utilized more frequently. However, high degree of embeddedness can be harmful for the network. Network can become “overembedded”, restricting novel information to flow in the network. Embedded ties can also hinder entrepreneurs’ ability to form new ties due to loyalty (Bengtsson et al. 2005: 57). Therefore, Uzzi (1997) suggests that a balanced network should consist of both embedded and arm’s-length ties. (Uzzi 1996; 1997.)

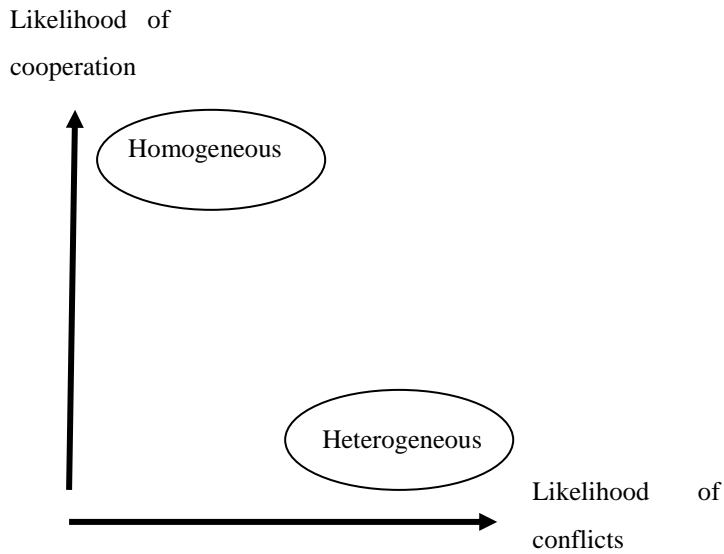
Similarly, Granovetter (1973) has claimed that strength of ties affects significantly to functionality of a network. Strong ties, which are characterized with trust and commitment and require abundant coordination and frequent cooperation between firms, have often been seen more beneficial. Strong cooperative relationships are time-consuming and long-term. Therefore, it is not possible to maintain numerous strong ties. It has been indicated that strong ties become more homogeneous over time. Hence, Granovetter

(1973) emphasizes that weak ties, characterized with limited trust, commitment, and infrequent interactions, should not be disregarded, since they are often source of new, heterogeneous resources. (Granovetter 1973.)

To summarize, numerous factors affect the development of cooperation in entrepreneurial networks. First, trust is a prerequisite for cooperation, since without it establishment and maintaining long-term cooperation is not possible (Larson 1992). Second, homogeneity of actors in a network facilitates development of cooperation (Faerman et al. 2001: 377), even though it can eventually inhibit the development of the network (Granovetter 1973; Uzzi 1997). Networks consisting mainly of homogeneous and strong ties can restrict the network by avoiding new information to flow into the network, making it path-dependent and unable to innovate. Even though strong ties foster trust, the closeness of ties and homogeneity of actors restricts network's ability to develop and change (Luigia Caglioti 2008: 14-15).

Development of cooperation in heterogeneous networks is less likely, and lack of prior relationships inhibits development of trust. Thus, risk of conflicts also increases. On the other hand, heterogeneous networks can provide more benefits due to diversity. Therefore, it could be said that constructing an effective network requires balancing between homogeneity and heterogeneity of actors. Diversity of tie strength has to be taken into account in entrepreneurial networks, since it has a significant effect on actors' ability to cooperate and generate mutual benefits. (Granovetter 1973; Larson 1992; Uzzi 1997; Faerman 2001: 377.)

The following figure illustrates the likelihood of cooperation and conflicts in heterogeneous and homogeneous networks:



**Figure 1.** Likelihood of cooperation and conflicts (adapted from Faerman et al. 2001).

### 2.1.1. Opportunities, barriers, and risks for developing cooperation in entrepreneurial networks

Cooperation in entrepreneurial networks provides multiple opportunities. However, there are some obvious risks affiliated with developing cooperative relationships. First, network can become overembedded, which restricts novel information to flow in the network and locks actors in inefficient relationships (Granovetter 1973; Uzzi 1997; Håkansson & Ford 2002). Second, sharing intellectual information is a risk, if violation of trust or opportunism would occur. Third, relying on a partner on some operations could also mean that in-house operations are not developed, which could harm the development of a firm (Larson 1992: 100). Hence, developing cooperative relationships in entrepreneurial networks may both stimulate and constrain entrepreneurial activities.

Development of cooperative relationships is not always possible, despite the efforts. One barrier that might hinder the ability to develop cooperative relationships is entrepreneurs' lack of interest of getting involved in cooperative relationships (Larson 1992). Social tensions between entrepreneurs or skepticism towards cooperation might also hinder the ability to develop cooperation in entrepreneurial networks (Boesen, Sundbo & Sundbo 2017: 86). In addition, cooperative ties require openness, and some firm's culture might limit the ability to engage in such relationship (Larson 1992). Also, local cultural perceptions might hinder cooperation between entrepreneurs, if entrepreneur-

ship is seen as individual rather than as network-oriented process (Letaifa & Goglio-Primard 2016).

Drawing from the literature, opportunities, risks, and barriers in developing cooperative relationships in entrepreneurial networks are summarized in the table below.

**Table 1.** Opportunities, risks, and barriers for developing cooperation in entrepreneurial networks.

Opportunities	Complex information exchange (Uzzi 1997; Larson 1992)
	Joint problem-solving arrangements (Uzzi 1997)
	Opportunity identification (Larson 1992)
	Learning, innovation, and risk-sharing (Uzzi 1997)
	Trust as governance mechanism reduces costs (Uzzi 1997; Larson 1992)
Risks	Overembeddedness (Uzzi 1997)
	Opportunism (Larson 1992)
	Undeveloped in-house operations (Larson 1992)
Barriers	Lack of interest (Larson 1992)
	Firm's culture limiting openness (Larson 1992)
	Social tensions and skepticism (Boesen et al. 2017)
	Individualistic approach to entrepreneurship (Letaifa & Goglio-Primard 2016)

## 2.2. Network capabilities for developing cooperation in entrepreneurial networks

It has now been established why cooperative relationships should be developed, but what are the capabilities needed in order to be able to do so requires exploration. Networking capability is one of the critical competences entrepreneurs should have (Johannisson 1987: 55), but still only a few studies have concentrated on the concept (Äyväri & Jyrämä 2007: 1). Network capability or network competence, “a firm’s abilities to develop and utilize inter-organizational relationships to gain access to various



resources held by other actors” (Walter, Auer & Ritter 2006: 542), is a concept influenced by the IMP scholars. Similar concepts that aim to explain the same phenomenon are relational capability and alliance capability. (Äyväri & Möller 2008: 1, 6.) In this thesis, network capability, network competence, and network abilities are considered as same concepts, even though some differences exist in the literature (Äyväri & Jyrämä 2007: 2). In this section, a theoretical framework of network capabilities needed to develop cooperation in entrepreneurial networks is formulated based on the network capability literature.

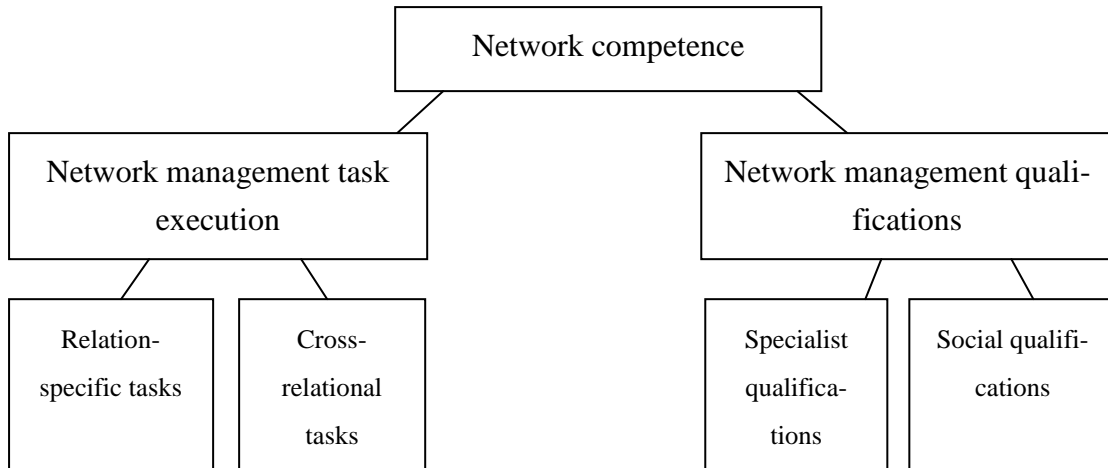
Ritter and Gemünden (2003: 745) claim that network competence requires both firm-level skills but also individual-level qualifications as they describe network competence as:

*“a two-dimensional construct that can be defined as (a) the degree of network management task execution and (b) the extent of network management qualifications possessed by the people handling a company’s relationships” (Ritter & Gemünden 2003: 748).*

Network management tasks can be divided into “relation-specific tasks”, which are required to establish and maintain a single relationship, and into “cross-relational tasks”, which are required to manage multiple relationships. The relation-specific tasks include initiation of relationships (meeting new people in conventions etc. or initiating an old relationship), exchange (for example resources, services, or information), and coordination (required to align activities in a network and to make interactions mutually beneficial). Cross-relational tasks are firm-level skills, and they include activities such as planning, organizing, staffing, and controlling. (Ritter & Gemünden 2003: 747-748.)

Individual-level network management qualifications needed to manage relationships can be divided into specialist qualifications and social qualifications/relational skills. Specialist qualifications include technical and economic skills, understanding of legal matters, experimental knowledge, and partner knowledge about other actors in the network. Partner knowledge is a precondition for coordination, since information about other actors, such as suppliers, customers, and competitors, can facilitate coordination and management of inter-firm relationships. Social qualifications or relational skills on the other hand are needed to be able to “adapt to a variety of social situations” (Walter et al. 2006: 547), and they include for example communication skills, extraversion, conflict management skills, sense of justice, and cooperativeness. By possessing these firm-level skills and individual-level qualifications, firms are able to effectively establish, develop,

and exploit inter-firm relationships. (Ritter & Gemünden 2003: 747-748; Walter et al. 2006: 547-548.)



**Figure 2.** Elements of network competence (Ritter & Gemünden 2003: 748).

Similarly, Möller and Halinen (1999), who have also been pioneers in conceptualizing network capability in addition to Ritter (Äyväri & Möller 2008: 5), have distinguished capabilities needed to manage a single relationship and a portfolio of relationships. In order to be able to manage multiple relationships, analytical and organizational skills are needed. The skills help to identify the value potential of a relationship and to understand how to exploit own and other actors resources in the most efficient way. Managing a single relationship requires commitment and trust between the actors in addition to analytical and organizational skills. Other capabilities needed are “visioning capability” (capability to learn and utilize new information to develop the network) and “net management capability” (ability to coordinate activities within the network). (Möller & Halinen 1999: 417-420.)

Supporting the findings of Möller and Halinen (1999) on importance of trust, Sivadas and Dwyer (2000) have introduced the concept of “cooperative competency” in the context of new product development success. The authors claim that trust, communication (information exchange), and coordination are a prerequisite for establishing and maintaining cooperative relationships. Information exchange “enables goal adjustment, task coordination and interfirm learning” (Sivadas & Dwyer 2000: 32). However, if trust does not exist between actors, information exchange is not possible. Lack of trust results as an inability to create new knowledge and often leads to dissolution of a relationship.

Coordination on the other hand is needed to align activities and to co-develop and combine resources and activities between actors. The existence of the three constructs enables mutual adjustment of firms in a network. (Sivadas & Dwyer 2000: 32-33.)

In the similar vein, Niemelä (2003) has studied the co-operation capability of family businesses. She suggests that there are three different capabilities, which have an effect on family businesses ability to cooperate: social networking capability, management capability, and learning capability. Social networking capability refers to the “openness” of a firm, and “that the owner-managers have a mutual understanding of the networking and a positive attitude towards co-operation and networking process” (Niemelä 2003: 157). Management capability means that firms have the “willingness to manage the interactions” (Niemelä 2003: 157), and it requires trust between partners and ability to organize resources according to opportunities. Learning capability refers to learning from the environment but also acquiring such cognitive skills, which are needed for co-operative activities, such as leadership, strategic skills, and negotiation skills. (Niemelä 2003.)

#### 2.2.1. Network capability in the context of micro- and small-sized enterprises

The above mentioned network capability frameworks do not explore network capability in the context of micro- or small-sized enterprises and cannot necessarily be applied to the scope of this thesis directly. Unfortunately, research on network capability has mainly concentrated on large companies, and little evidence exists on network capability of SME's (Äyväri & Jyrämä 2007: 3). However, Äyväri and Jyrämä (2007) aim to fulfill this gap by exploring networking abilities of craft entrepreneurs. The author have distinguished six different abilities for micro- and small-sized craft firms, which are required to maintain and establish cooperative relationships in networks. These abilities are **cooperation-orientation, social skills, ability to identify potential partners, visioning ability, coordination ability, and learning ability**. (Äyväri & Jyrämä 2007: 5.) Next, these abilities are introduced in detail and compared to the other network capability frameworks.

Äyväri and Jyrämä (2007: 7) claim that **cooperation-orientation**, having “confidence in networks as a system”, is the most important capability for entrepreneurs to be able to establish cooperative relationships. Actors need to be able to trust that cooperation is beneficial and will bring something of value (Äyväri & Jyrämä 2007: 7). The social networking capability introduced by Niemelä (2003) has similar aspects as cooperation-

orientation, since both capabilities include having a positive perception towards cooperation (Niemelä 2003: 142) or “confidence in networks as a system” (Äyväri & Jyrämä 2007: 7). Sivadas and Dwyer (2000: 32-33) also stress the importance of “cooperative competency” in establishing and maintaining cooperative relationships, and Ritter & Gemünden (2003: 748) mention that cooperativeness is an important qualification in managing relationships.

**Social skills** refer to an ability to be flexible and to get along with different people. Social skills are vital in entrepreneurial networks, since entrepreneurs need to be able to adapt in different social situations. (Äyväri & Jyrämä 2007: 10). Social competence was highlighted in many of the studies, even though some variations in the definitions exist as they are defined as relational skills (Walter et al. 2006) and social qualifications (Ritter & Gemünden 2003). Networks are in fact a set of relationships (Anderson & Jack 2002: 196), and social competence is crucial in managing these relationships. It is needed to socially connect with other actors in a network (Hsu, Tan, Laosirihongthong, Leong 2011: 6636). Furthermore, social competence is related to an ability to share information (Hsu et al. 2011: 6636), and it also affects ability to receive information from other actors and knowing how to use it (Äyväri & Jyrämä 2007).

Confidence in networks as a system is also needed in order visioning ability and ability to identify potential partners to come into effect. Äyväri and Jyrämä (2007: 8) describe **visioning ability** as: “an ability to outline possibilities for future cooperation”, which is slightly different definition of visioning capability as defined by Möller and Halinen (1999). Äyväri and Jyrämä (2007: 8) claim that visioning ability is crucial for craft entrepreneurs to be able to act in networks, base future plans on cooperation, to understand how cooperation can be developed, and to realize what kind of opportunities the network provides (Äyväri & Jyrämä 2007: 8).

**Ability to identify potential partners** requires willingness to initiate new relationship but also an ability to utilize partner’s contacts to initiate new relationships. Capability to identify potential partners also includes capability to be found, for instance participating in activities where new relationships could be established. Capability to initiate relationships was also mentioned by Ritter and Gemünden (2003). This capability is important in entrepreneurial networks, since inability or lack of willingness to initiate relationships could mean that entrepreneurs would not gain access to information, which would be needed to develop the entrepreneurial firms. (Äyväri & Jyrämä 2007: 8-9.)

**Coordination ability** also proved to be important for craft entrepreneurs, since the entrepreneurs' ability to manage time and allocate enough resources for developing relationships was considered crucial (Äyväri & Jyrämä 2007: 9). Coordination capability was manifested also in other network capability frameworks (Ritter & Gemünden 2003; Walter et al. 2006; Sivadas & Dwyer 2000; Niemelä 2003). Also, Möller and Halinen (1999) stress the importance of coordination capability in managing portfolio of relationships. However, the authors call this "net management capability" in the context of intentionally formed strategic nets (Möller & Halinen 1999). Coordination capability is considered to be critical in entrepreneurial networks, since entrepreneurs have access to limited amount of resources. Through coordination, entrepreneurs are able to co-develop resources and align activities, which can lead to synergies and cost-efficiency. Thus, coordination capability is important in circumstances where resources are scarce; entrepreneurs need to be able to optimize the usage of resources, align activities with other actors, and allocate enough time for networking (Walter et al. 2006: 548; Äyväri & Jyrämä 2007: 9).

Also, **learning ability**, ability to share, receive, and utilize knowledge gained from other actors found to be important in the case of craft entrepreneurs (Äyväri & Jyrämä 2007: 10). Learning capability was also mentioned by Niemelä (2003) in the context of family businesses. Nevertheless, as pointed out by Sivadas and Dwyer (2000: 32), inter-firm learning is not possible without information exchange, which suggests that information exchange capability could be a separate capability, which could be used to enable learning between firms. Information exchange capability was not explicitly promoted in any of the reviewed studies, even though Walter et al. (2006), Ritter & Gemünden (2003), and Sivadas & Dwyer (2000) touch on the topic in their network capability frameworks. Despite the fact that information exchange is poorly covered in the reviewed literature, it is still important capability to have, since it is inter-connected with many other capabilities. For instance, information about other actors in networks supports coordination and vice versa (Walter et al. 2006: 547), and social competence facilitates information exchange (Walter et al. 2006: 547; Hsu, Tan, Laosirihongthong, Leong 2011: 6636-6637). Since information exchange capability was undiscovered in the reviewed literature, the next section aims to clarify what is meant with information exchange capability and which factors affect the capability.

### 2.2.2. Social capital and information exchange capability

Social capital theory is used to formulate an understanding of information exchange capability. Since social capital has mainly been studied in the context of social networks and network capability in the context of business networks, this may impose some limitations on the study. However, since the entrepreneurial network research stream has been influenced by social and business network research streams (Slotte-Kock & Coviello 2010), introducing theories concentrating on both social and business network research stream can be justified. Even though social capital in entrepreneurial context has not been widely explored, social capital theory fits well in the context of entrepreneurial networks (Anderson & Jack 2002). Entrepreneurship is constrained by circumstances and limited resources, but existence of social capital may facilitate entrepreneurial activities by gaining access to information outside the entrepreneurial firms (Anderson & Jack 2002: 195). Hence, using social capital theory to understand what is meant with information exchange capability in the context of entrepreneurial networks can be justified.

According to Burt (1992: 8-10) an organization has three kinds of capital: financial, human, and social. Social capital, relationships between friends, colleagues, or contacts is different compared to the other two: it is mutually possessed by the parties involved. The ownership of social capital is lost, if one of the parties decides to withdraw from the relationship. Social capital enables exploiting opportunities provided by financial and human capital. It is crucial for firms' success, since financial and human capital can be homogeneous between competing firms, social capital on the other hand not. (Burt 1992: 8-10.)

Similarly, Coleman (1990: 304) has divided capital into three different ones: physical, human, and social. Physical capital is tangible whereas human capital is less tangible: it includes the skills and knowledge people have acquired. Social capital on the other hand is intangible; it is resources **embedded in the relationships** between people. (Coleman 1990: 304.)

Nahapiet and Goshal (1998: 243) define social capital as:

*“the sum of the actual and potential resources embedded within, available through, and derived from the network of relationships possessed by an individual or social unit”*

The authors have further elaborated social capital theory by distinguishing three different dimensions of it: structural, cognitive, and relational capital. The former concentrates on network ties; how ties are linked together and how they affect interaction. The latter two on the other hand consider how social aspects of relationships affect social exchange. (Nahapiet & Goshal 1998.) The next chapter briefly introduces the three dimensions.

Nahapiet and Goshal (1998: 250) suggest that: “social capital facilitates the development of intellectual capital by providing conditions for exchange and combination”. Intellectual capital refers to new knowledge, combination refers to new knowledge creation through progressive development of existing knowledge or radical creation of new knowledge through innovation, and exchange refers to exchanging information between actors. Structural dimension of social capital mainly affects exchange in networks, and it includes “network ties” and “network configuration”. Ties provide access to information and resources, and network configuration affects how information and resources flow within the network. Second, cognitive dimension of social capital mainly affects combination in networks, and it includes “shared language and codes” and “shared narratives”. Shared language makes it easier to access new people and information and thus, facilitates creation of new knowledge. Shared narratives, such as stories or metaphors, facilitate creation of improved practices. Last, relational dimension of social capital affects both combination and exchange in networks, and it includes “trust”, “norms”, “obligations and expectations”, and “identification”. Trust breeds social exchange, which leads to more abundant cooperation. Norms may affect actors to feel compelled to act in the favor of common good instead of self-interest. Obligations and expectations refer to doing favors for others, and it is based on trustworthiness, since actors expect that the obligation will be repaid later. Identification, sense of belonging into a group, may increase cooperation and facilitate information exchange and learning. (Coleman 1990: 306-311; Nahapiet & Goshal 1998: 251-256.)

Since the structural dimension of social capital mainly influences exchange in network ties and networks, the scope of social capital in this literature review is mainly limited to structural social capital, as it better suits the needs of the thesis. Trust, dimension of relational capital, has already been explored earlier in this literature review. However, it has to be taken into consideration that in practice, these three dimensions co-exist and co-evolve and thus, the exploration of social capital in this literature review is limited. (Nahapiet & Goshal 1998: 251-252.) Next section aims to create an understanding what is meant with information exchange capability in entrepreneurial networks and which

factors affect information exchange capability. Thus, understanding factors affecting information exchange capability and how structural social capital influences on it will be evaluated.

### 2.2.3. Factors affecting information exchange capability

Three preconditions enhance information exchange in networks. First, access to information has to be provided, **meeting places**, where information can be exchanged between actors. Random contacts and face-to-face interactions are needed to exchange information. New network ties emerge at meetings, either in coincidental ones or in institutional settings (Johannisson 1987: 53-54). Therefore, meeting places are vital for information exchange. Second, actors need to be motivated to exchange information and sense that exchange between actors will create something of value. This includes being transparent and willing to exchange information between actors, which is referred as **communicative capacity**. Communicative capacity is also needed to be able to establish new ties. Prior interaction, trust, and commitment help to develop communicative capacity and improve the effectiveness of information exchange. Third, when accessing information, actors need to be able to filter the important pieces of information, understand its importance, and utilize it, which is referred as **absorptive capacity**. (Nahapiet & Goshal 1998: 252; Bengtsson et al. 2005: 53.)

**Network ties** and **network configuration** are dimensions of structural social capital, and they affect whether the preconditions for information exchange are fulfilled. Network ties are arenas for information exchange, and they provide three kinds of information benefits: **accessibility**, **timing**, and **referrals**. First, network ties provide *access* to information, in the sense that “who you know affects what you know” (Nahapiet & Goshal 1998: 252), since network ties enable distribution, exchange, and development of information. Second, network ties may have the ability to provide information *earlier* compared to other actors without such contacts. Third, network ties may provide *referrals*, information about opportunities. Thus, anticipated value of information exchange increases due to the three information benefits, accessibility, timing, and referrals, and increase actors’ motivation to establish relationships and participate in information exchange activities. (Nahapiet & Goshal 1998: 252.)

The second dimension, network configuration, refers to the network’s structure. Network configuration affects accessibility to other actors in a network and it thus, impacts on the ease of information exchange (Nahapiet & Goshal 1998: 252-253). Network

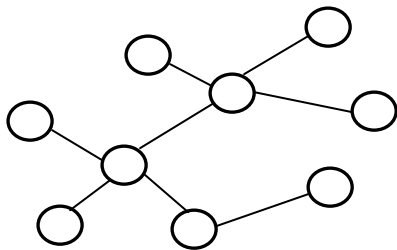


structure “is defined as the pattern of direct and indirect ties between actors” (Hoang & Antonic 2003: 170). Typically, network structures have been studied in terms of network size, centrality, and density and how structure affects actor’s positioning in a network either by facilitating or constraining accessibility to resources and information (Hoang & Antonic 2003: 171).

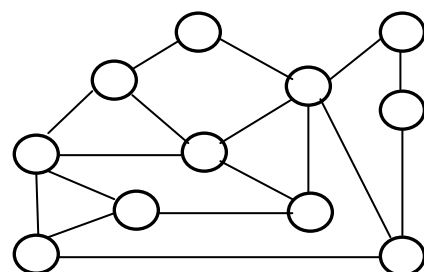
In a dense network, ties are interconnected (Aldrich & Zimmer 1986: 13). Hence, flow of novel information is not common, since information is circulated between actors, and everyone is likely to receive the same information at some point. Nevertheless, information exchange is abundant in dense networks, which requires coordination between actors. Coordination promotes cooperation, which further enhances information exchange (Andersson, Blankenburg Holm & Johanson 2005: 33-36). However, dense networks do not provide information benefits, since all the actors in the network get access to the same information at the same time, and consequently they are aware of the same opportunities (Burt 1992: 17).

Centrality of a network measures how many actors a focal actor can reach (Aldrich & Zimmer 1986: 14). Focal actors can gain a more favorable position within the network by controlling the flow of information and restricting other actors’ access to information (Hoang & Antonic 1998: 171). Burt (1992: 17) claims that sparse networks, with nonredundant contacts, are more beneficial in terms of information exchange and provide more information benefits. Focal actor can access heterogeneous information, because actors connected with the focal actor do not have relationship with each other (Burt 1992: 17).

Sparse network



Dense network



**Figure 3.** Sparse and dense networks (Andersson et al. 2005: 34).

#### 2.2.4. The effect of competition and cooperation on information exchange

The degree of competition and cooperation in network ties also affects information exchange. Competing firms can also cooperate, they are not exclusive phenomena. However, the amount of competition and cooperation in a network affects the homogeneity and heterogeneity of accessible information. As mentioned before, three preconditions enhance information exchange: meeting places, absorptive capacity, and communicative capacity. Based on the degree of cooperation and competition, networks can be divided into four different categories: latent, evolutionary, active, and viable networks. (Bengtsson et al. 2005: 57.)

Networks where both competition and cooperation are weak are called **latent networks**. Low cooperation indicates existence of heterogeneous information, but due to minimal interaction, firms are not aware of the potential. Therefore, absorptive capacity of the firms is low, since firms do not have experience of each other. Hence, gathering and filtering important information is not possible. Consequently, also communicative capacity is low, since firms lack experience of opening up and communicating about their business to other actors. Information exchange in latent networks could be increased through establishment of meeting places. As a result, interaction between actors could increase, which would as well improve absorptive and communicative capacity. (Bengtsson et al. 2005: 58.)

Networks characterized with strong cooperation and weak competition are called **evolutionary networks**. Actors in these kinds of networks are willing to develop the relationship, since they have established an environment of trust and commitment through strong cooperation. Meeting places have been established, and as a result communicative and absorptive capacity are high. However, due to strong cooperation, the network lacks heterogeneous information and is not able to provide novel information. Therefore, actors in an evolutionary network should seek new ties in order to get access to new, heterogeneous information. (Bengtsson et al. 2005: 58-59.)

Networks with strong cooperation and competition are labeled **active networks**. Actors gather a vast amount of information of each other. Thus, the absorptive capacity of the network is high. However, due to strong competition, actors do not fully trust each other, which results as reduced communicative capacity. Even though meeting places are established for interaction, lack of trust hinders information exchange. In addition, strong cooperation inclines existence of homogeneous information and competitive

pressures forces firms to seek novel information outside the established relationships. (Bengtsson et al. 2005: 59-60.)

Networks in a situation of strong competition and weak cooperation are called **viable networks**. Weak cooperation between actors inclines existence of heterogeneous information. However, strong competitive pressure restricts the flow of information. Hence, firms in viable networks have low commutative capacity. (Bengtsson et al. 2005: 60-61.)

cooperation	competition		
	strong	weak	
weak	<b>viable</b>	<b>latent</b>	→ Heterogeneous information
strong	<b>active</b>	<b>evolutionary</b>	→ Homogeneous information

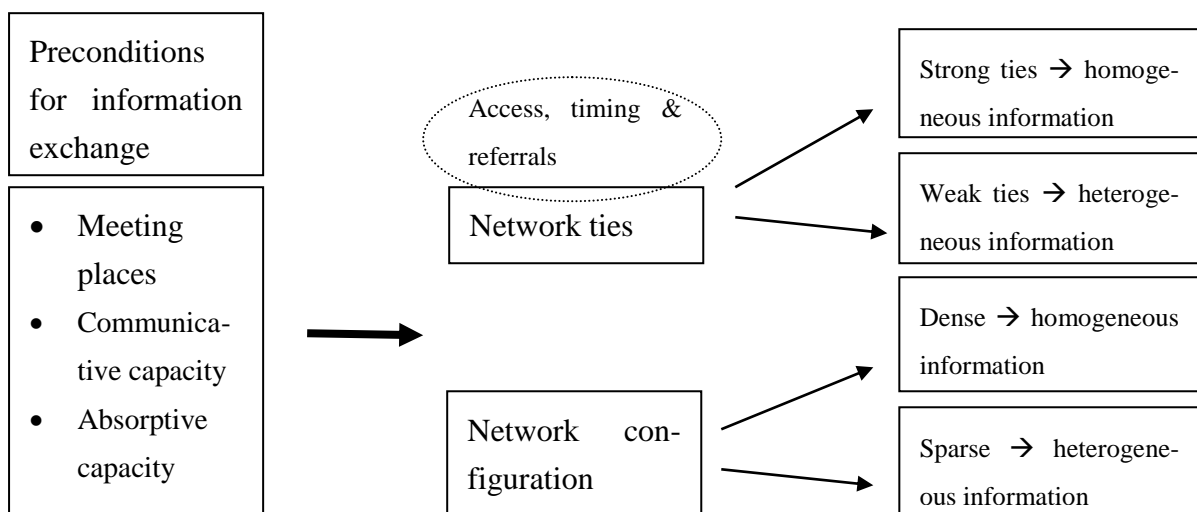
**Figure 4.** The degree of competition and cooperation and the existence of heterogeneous and homogeneous information in networks (adapted from Bengtsson et al. 2005: 57-61).

#### 2.2.5. Summary of information exchange capability

To summarize, three preconditions enhance information exchange in networks: meeting places, communicative capacity, and absorptive capacity (Bengtsson et al. 2005: 53-54). The amount of cooperation and competition affects the three preconditions but also on the diversity of accessible information (Bengtsson et al. 2005: 57-61). Network ties on the other hand provide three information benefits: “access”, “timing”, and “referrals”. If network ties are able to distribute information efficiently, provide information faster, and facilitate opportunity identification, the anticipated value of information exchange increases and makes information exchange more likely (Nahapiet & Goshal 1998: 252). The strength of ties affect the diversity of information actors can receive. Networks consisting mainly of strong ties will eventually become vulnerable due to their inability to provide novel information, despite abundant information exchange (Andersson et al.

2005). Network structure on the other hand impacts on the amount of information actors can receive (Hoang & Antonic 2003: 171).

Hence, structural social capital facilitates information exchange by making information accessible through network ties. Network configuration on the other hand can either constrain or facilitate information exchange in networks ties. The following figure aims to clarify the factors affecting information exchange capability.



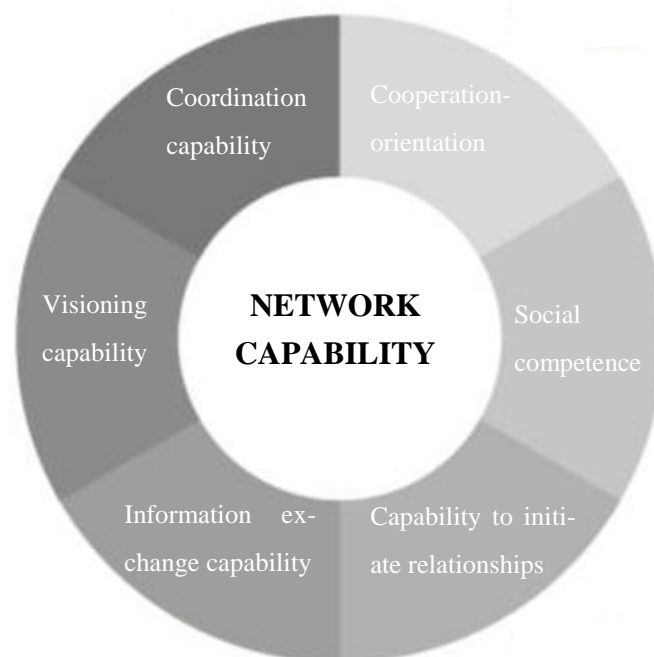
**Figure 5.** Information exchange capability in entrepreneurial networks (adapted from Burt 1992; Aldrich & Zimmer 1986; Nahapiet & Goshal 1998; Hoang & Antonic 2003; Bengtsson et al. 2005; Andersson et al. 2005).

Formation of social capital is a dynamic process: “process of creating condition for effective exchange of information and resources” (Anderson & Jack 2002: 207). Social capital in entrepreneurial networks is both “a glue” and “a lubricant”. It is a glue in a way how it bonds actors together in a network structure after establishment of a tie, but it is also a lubricant in a way how it facilitates interactions within the network structure. Social capital can be adjusted in different circumstances, and the strength of the relationship/glue can change over time. However, if the relationship is not maintained and nurtured, abundant information exchange is no longer possible. (Anderson & Jack 2002: 207.)

#### 2.2.6. Summary of network capability in entrepreneurial networks

Based on the reviewed literature, a theoretical framework of capabilities needed to develop cooperation in entrepreneurial networks is constructed. To summarize, all in all six important capabilities arose from the literature: cooperation-orientation, social competence, capability to initiate relationships, information exchange capability, visioning capability, and coordination capability. These six capabilities are needed for establishing and maintaining cooperative relationships in entrepreneurial networks. Capabilities such as staffing and controlling are excluded from this framework, since Äyväre and Jyrämä (2007: 4) mention that these capabilities are vital in large firms but not so crucial in small entrepreneurial firms.

The framework mainly follows the framework introduced by Äyväre & Jyrämä (2007). However, learning capability is substituted with information exchange capability and ability to identify potential partners is substituted with capability to initiate relationships as suggested by Ritter & Gemünden (2003). The figure below illustrates network capability framework for establishing and maintaining cooperation in entrepreneurial networks.



**Figure 6.** Network capabilities needed for developing cooperation in entrepreneurial networks (adapted from Möller & Halinen 1999; Sivadas & Dwyer 2000; Niemelä 2003; Ritter & Gemünden 2003; Hsu et al. 2003; Walter et al. 2006; Äyväre & Jyrämä 2007).

### 2.3. Theoretical framework

Based on the reviewed literature and on the concepts which arose from the empirical findings, a theoretical framework is constructed. Theoretical framework aims to help exploration of the research question: “How could inter-firm cooperation be developed in entrepreneurial networks?”. Theoretical framework concentrates on two phenomena: developing inter-firm cooperation in entrepreneurial networks and network capabilities needed to develop inter-firm cooperation in entrepreneurial networks.

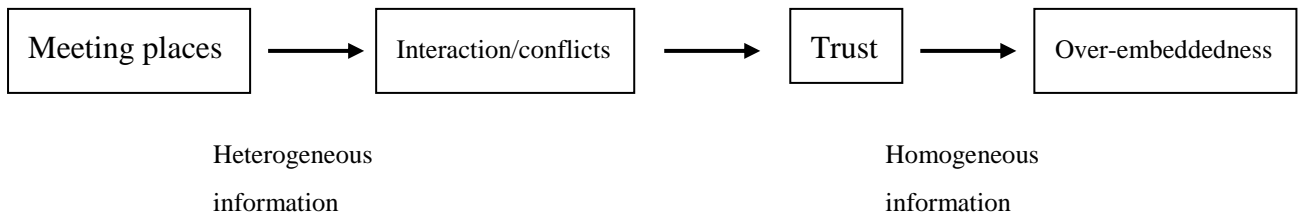
Entrepreneurship is all about networking: establishing new ties and re-activating former ones. In order to be able to do so, meeting places are needed. Establishment of ties happens in meeting places, either in coincidental meetings or in institutional settings. Face-to-face interaction is needed to establish ties. Cooperation is initiated at meeting places, and therefore they are vital for entrepreneurial networks. (Johannisson 1987.)

Initiating cooperation is easier if the actors are similar. Cooperation is less likely if actors are heterogeneous as risk of conflicts increases. Through interaction and experiences, actors develop trust. Development of trust is a dynamic process, and trust has both affective and cognitive aspects. Trust is vital in cooperative relationships. Pre-existing trust facilitates establishment of cooperative relationships. If there are no prior relationships between actors, personal or firm reputation can increase the probability of cooperation and consequently the development of trust. (Larson 1992; Faerman et al. 2001: 377; Huang & Wilkinson 2013; Letaifa & Rabeau 2013: 2077.)

After establishment of trust, interaction becomes more coordinated and stable. Ties become stronger, and complex information exchange can take place, which can lead to opportunity identification, complex information exchange, joint problem-solving arrangements, and even to competitive advantage. However, as a result of cooperation, the actors become more similar, and the network might no longer be able to provide heterogeneous information. A network can become “over-embedded” restricting novel information to flow in ties and inhibiting actor’s ability to establish new ties due to loyalty. Despite loyalty, actors should seek new, weak ties in order to get access to heterogeneous information. (Uzzi 1997; Larson 1992.)

Hence, the development of inter-firm cooperation in entrepreneurial networks could be described to be a sequential process. New ties are established in meeting places, and

eventually trust evolves due to frequent interaction. Initially, actors can access heterogeneous information through network ties, but as interaction amplifies, actors become similar. Consequently, the network might not be able to provide heterogeneous information. In a case of “over-embedded” network, actors should seek new, weak ties in order to access new information. (Larson 1992; Uzzi 1997.) The following figure aims to clarify the development of inter-firm cooperation in entrepreneurial networks.



**Figure 7.** Development of inter-firm cooperation in entrepreneurial networks (adapted from Johannisson 1987; Larson 1992; Uzzi 1997; Faerman et al. 2001; Huang & Wilkinson 2013; Letaifa & Rabeau 2013).

This thesis also aims to explore, what network capabilities are needed to develop cooperation in entrepreneurial networks. Based on the literature, a network capability framework was constructed. The framework consists of six capabilities: cooperation-orientation, social competence, capability to initiate relationships, information exchange capability, visioning capability, and coordination capability. In the empirical section of this thesis, it will be evaluated whether these six capabilities are indeed needed in order to be able to develop cooperation in entrepreneurial networks.

In order to be able to base future plans for cooperation, entrepreneurs need to be cooperation-orientated (Äyväri & Jyrämä 2007). Cooperation-orientation can be intrinsic, based on personal experience that cooperation is beneficial, or exogenous, based on institutionalized practices and self-interest that through cooperation reputational rewards can be earned (Faerman et al. 2001: 376). Also, local cultural perceptions affect cooperation-orientation, whether entrepreneurship is seen as individual or as network-oriented process (Letaifa & Goglio-Primard 2016).

Social competence is needed to be able to be open and willingness to discuss with unfamiliar people and to be able to adapt in different social situations. It is also needed to

initiate new relationships with unfamiliar people. Long-term cooperative ties become more homogeneous over time. Therefore, capability to initiate new relationships is also crucial in entrepreneurial networks. New relationships can be a source of new, unique resources. (Uzzi 1997; Ritter & Gemünden 2003: 747-748; Walter et al. 2006: 547-548; Äyväri & Jyrämä 2007: 10.)

Through frequent interaction, trust is established and complex information exchange can take place in ties. The diversity of exchanged information depends on the strength of a tie, whereas the amount of exchanged information depends on network structure. Strong ties and dense networks provide homogeneous information and are less likely to provide information benefits. Weak ties and sparse networks provide heterogeneous information and therefore provide more information benefits. However, information exchange is less abundant in these kinds of networks. (Burt 1992; Hoang & Antonic 2003; Anderson et al. 2005).

Visioning capability is needed to be able to understand how cooperation can be developed and what kind of opportunities the network provides (Äyväri & Jyrämä 2007: 8). Coordination capability on the other hand is needed in order to be able to allocate enough time for networking and to align activities. Coordination capability is crucial in situations where resources are scarce (Sivadas & Dwyer 2000: 32-33; Ritter & Gemünden 2003: 747-748; Walter et al. 2006: 548).

The network capability framework is tested against the empirical findings to see if the theory matches reality. The following section introduces and justifies the methodological decisions made to conduct the study.



### 3. METHODOLOGY

In this section, the choices regarding methodology of this study are presented and justified. First, the research strategy is introduced, followed by an introduction of the selected research method for data collection. Finally, the research approach for data analysis is justified, followed by a discussion of validity and reliability of the study.

#### 3.1. Research methodology

Qualitative research was the chosen methodology for this study, since it can be used to understand isolated cases or phenomena. Qualitative studies emphasize participants' subjective insights and experiences. Researcher's influence on the data is kept to a minimum. Researcher is rather an observer, aiming to interpret the meanings and insights participants intend to provide. Hypotheses are not formulated based on theory unlike in quantitative research. Instead, in qualitative research hypotheses are constructed incrementally, during data gathering and analysis (Koskinen, Alasuutari & Peltonen 2005: 30-32.) Furthermore, qualitative research methods can be more productive in network research, especially when trying to understand interaction in a network (Jack 2010: 128). Since this study aims to discover how inter-firm cooperation can be developed in entrepreneurial networks, using qualitative methodology can be justified.

Ontology refers to how people understand reality. Understanding of reality varies between individuals and is always context-dependent. There cannot be unitary reality, since understanding of reality depends on our individual perceptions (Klenke 2016: 15). In this study, the adopted ontological approach is that people are embedded in social relationships. Through interaction with others, people gain experiences which eventually change their perceptions. Epistemology on the other hand addresses the question "How do we know what we know?" (Klenke 2016: 15). In this study, the interviewees are seen as sources of knowledge, and the knowledge they provide is interpreted by the researcher. Thus, in this study knowledge is seen as subjective and interpretative.

### 3.2. Research method

The chosen research method for this study was a single case study. Case study can be used to investigate contemporary phenomena in real-life context (Yin 2014: 2). Case studies have had an important role in the history of business studies, and they are still the most used qualitative research method in the field of business. They can be used to test and question established theories or to formulate new hypotheses. In addition, case studies provide an opportunity to understand specific and complex issues and provide holistic and realistic understanding of businesses in a specific context. (Koskinen et al. 2005: 154-156.)

Case study can consist of multiple cases or a single case, nevertheless the sampling is small. The case usually concentrates on an organization or a particular function of an organization. Data is usually collected from multiple sources, but interviews and documents are most common sources of data in qualitative case studies. Other possible sources can be for example archival records and observation. Multiple sources of information should be used in case studies. This enables triangulation, which means that if evidence for the results of the study can be found in multiple sources, the triangulation has succeeded. Successful triangulation also increases the validity of a study. (Koskinen et al. 2005: 157; Yin 2014: 121.)

In this study, single-case study was selected, since it can be used to investigate unusual cases. Case of the study is unusual in terms of its large size, diversified member base, and due to its concentration to a limited geographical area.

### 3.3. Data collection and analysis

This thesis concentrates on an entrepreneurship society called Likiliike, which is located in the Finnish Lapland in the city of Rovaniemi. Likiliike is a non-profit organization owned by the Rovaniemi Entrepreneurs Society. It is a large, multisectoral network consisting of over 200 Rovaniemi-based enterprises. The empirical context of the study will be introduced more in detail in the fourth section.

Data was collected from documentation provided by the Likiliike manager, websites, scraps, and semi-structured interviews with Likiliike members. All the secondary sources are specified in appendix 1. In addition, data was also collected from Likiliike manager in two phone calls in May 2018 and November 2018 and by e-mail correspondence between May 2018 and November 2018. Phone calls and e-mail correspondence regarded matters such as development of Likiliike, Likiliike operations, administration of Likiliike, and issues with Likiliike network management. These conversations and the e-mail correspondence helped the researcher to formulate a pre-understanding of the network before the interviews, and they provided important information on Likiliike.

The conducted interviews were semi-structured. List of interview questions are mentioned in appendix 2. Semi-structured interviews are the most used qualitative data collection method in business and social sciences (Koskinen et al. 2005: 105). The semi-structured interviews fit well in the case study research, since they concentrate on the interviewees' subjective insights (Hirsjärvi & Hurme 1982). The criteria for selecting the interviewees was that they all were Likiliike members and were operating in different industries. Initially, the idea was to interview representatives from same industry, but as the member base of Likiliike is highly diversified, and there are not many representatives from the same industry, it could have harmed the anonymity of the interviewees. In addition, interviewing members from various industries was expected to give a more realistic understanding of cooperation in Likiliike, since the network itself is versatile and multidisciplinary.

Nine people were asked to take part in the interviews, but seven people agreed to participate. Altogether seven interviews were executed in the end of November and the beginning of December 2018. Five of the interviews were conducted face-to-face and two of the interviews were phone interviews. Three of the interviewees were owner-managers of B-to-B companies, three owner-managers of B-to-C companies, and one interviewee was an executive manager of an association. The interviews were semi-structured and varied from 18 minutes to 43 minutes. Some of the interviewees were recommended by Likiliike, but the author selected the interviewees by herself. Participants of the study were not disclosed to Likiliike or anyone else. Before the interviews the researcher familiarized herself with the interviewees' companies' websites. The interviews were recorded, and permission for recording was asked from each interviewee. The recordings were then transcribed from word-to-word on a Word-file.

**Table 2.** Summary of interviews.

	Length of inter- view	Number of employ- ees	Member in Likiliike since
Interviewee 1	29 minutes	2	2018
Interviewee 2	30 minutes	10	2015
Interviewee 3	24 minutes	1	2015
Interviewee 4	18 minutes	20	2017
Interviewee 5	32 minutes	10	2015
Interviewee 6	28 minutes	5	2016
Interviewee 7	43 minutes	1	2017

Most of the qualitative researches adopt an inductive approach to data analysis (Koskinen et al. 2005: 32). Inductive approach differs from deductive approach in the sense that in inductive approach, conclusions are drawn from the data whereas in deductive approach data is tested against theory or pre-set hypotheses (Salkind 2010: 594-595). Abductive approach is in the borderland of the two approaches, which was the chosen approach for data analysis in this study. In abductive approach, deduction is not solely based on the data like in inductive approach, even though units of analysis are drawn from the data. Prior knowledge has an effect on the analysis, and data is more or less linked to the theory (Tuomi & Sarajärvi 2002: 98-99). Hence, theory has an effect on the analysis, but the data is not tested against theory per se, rather the analysis aims to match reality and theory (Dubois & Gadde 2002: 556). Data and prior knowledge are overlapping during the analysis, and the researcher aims to combine the two in some way (Tuomi & Sarajärvi 2002: 98-99).

To analyze the content, the interviews were first transcribed from word to word to a Word-file. Second, the transcribed texts were read in detail and the researcher acquainted herself with the content. Themes discussed in the theoretical framework were identified and underlined in the data. Themes that arose from the data were collected on a list and differences and similarities were identified between them. Also, important quotations were collected. Compatible themes were then unified and divided to different subclasses. These subclasses were then compared to the theoretical framework.

### 3.4. Validity and reliability

Validity and reliability are used to assess the quality of a study. Validity of a study refers to assessment of how well a certain claim, interpretation or result indicates the unit of analysis it aims to assess. Validity can be divided into internal and external validity. Internal validity refers to consistency and logic of a study. In case study research, conclusions made by the researcher can be a threat to internal validity. It is not certain, whether the researcher can consider all the factors affecting a certain result or interpretation. The researcher needs to make inferences of events that cannot be observed, and necessarily the conclusions drawn are not correct. Assessing quality of qualitative research with reliability and validity has been criticized, since they have initially been used to assess the quality of quantitative research and are hard to implement in qualitative studies. Especially definition of internal validity is vague, since it is hard to grasp what is meant by the requirement of being consistent and logical. (Koskinen et al. 2005: 254-255; Yin 2014: 47.)

External validity refers to how well the results of a study can be generalized. External validity is problematic in single case studies, since case studies aim to generate information on a specific unit of analysis, and the results are thus hard to generalize. (Koskinen et al 2005: 167, 254.)

Reliability refers to how well the operations of the study have been demonstrated, and if the same study would be repeated, would the same results occur. Reliability can be considered to be good, if same results and conclusions arise if the same case study would be repeated. Reliability test aims to reduce any biases or errors in a study. In order the reliability of the study to be successful, procedures of the study have to be well documented. Also, the researcher should be able to justify how and why inferences have been constructed. (Yin 2014: 48-49.) The reliability of this study is increased by presenting as many operational steps of the study as possible. Also, the case description is presented in detail, and multiple sources of evidence have been used to construct it. In addition, a lot of quotes were presented in order to justify the drawn inferences.

The validity of this study is increased with triangulation of data and theory (Tuomi & Sarajärvi 2002: 142). Data was collected from multiple sources i.e. documentation provided by Likiliike manager, websites, scraps, and interviews (specified in appendix 1). The selected interviewees were all from different industries, and the time being a mem-

ber of Likiliike varied. By selecting versatile interviewees, the researcher aimed to get a more holistic and realistic understanding of cooperation in Likiliike. Tringulation of theory was enabled by introducing theories from both social and business network research streams. The selected references were mainly from scientific journals. The researcher aimed to select scientific papers from authors whose papers had been cited by various others and who were experts in the field. The selected papers aim to address networks in contemporary context. However, some papers were published already decades ago, but they were included in the thesis, since the papers had been significant in the field of network research and cited by other authors numerous of times.

In order to increase the validity of the study, the researcher has clarified how and why she has reached certain conclusions. Also, the empirical data has been processed objectively. Factors that might hinder the validity of the study were the rather small number interviewees and ability to get an understanding of the complex phenomenon through semi-structured interviews. However, as the researcher justifies the logic of conclusions and clearly presents each step of the study, the study can be considered to be internally valid. On the other hand, external validity is restricted. The results of this study can be poorly generalized to entrepreneurial networks in general as the study explores cooperation in a specific and local entrepreneurial network. However, this study can be useful to other large and heterogeneous networks similar to Likiliike.

#### 4. CASE NETWORK OF THE STUDY

The empirical data of this study was collected from members of Likiliike network. Likiliike consists of over 200 Rovaniemi-based enterprises, and it aims to enrich the business environment in the Rovaniemi area and promote vitality of the city of Rovaniemi. Before the interviews the researcher familiarized herself with Likiliike websites and other materials of Likiliike, such as scraps, promotional material etc., which was provided by the Likiliike manager. Unfortunately Likiliike does not have records of general meetings, so additional information was asked via e-mail and phone from Likiliike manager. Two phone conversations in May 2018 and November 2018 and e-mail correspondence between May 2018 and November 2018 with the Likiliike manager helped the researcher to formulate a pre-understanding of the network. Sources used to construct the following case description are specified in the first appendix. The next section aims to explain the empirical context of this study.

##### 4.1. Empirical context

Likiliike is a non-profit organization owned by the Rovaniemi Entrepreneurs Society. It is a network consisting of over 200 Rovaniemi-based enterprises. Likiliike was established, since local entrepreneurs were worried about the global competition and the ability of local micro- and small-sized companies to survive in the changing business environment. Hence, Likiliike was founded in 2015 out of need to activate and enrich local business environment.

Likiliike aims to boost the economy in the Rovaniemi region by encouraging consumers to purchase locally produced products and services. Likiliike also aims to raise the awareness of local products and services among the growing number of visitors. Thus, Likiliike intends to maintain and improve the success and continuation of local businesses and vitality of Rovaniemi. Future plans include improving the quality of service of Likiliike businesses and marketing Likiliike businesses in Lapland and in the Arctic area of the Nordic Countries.

Likiliike represent firms from a vast amount of industries, such as accounting, marketing, legal services, funeral services, tourism, hospitality, health services etc. Most of

Likiliike members are micro- and small-sized firms owned and managed by the entrepreneurs. Likiliike also has some institutions as members, such as Rovaniemi Development Ltd, which offers business development services and is partially owned by the city of Rovaniemi and Arktikum, which is the provincial museum of Lapland and an affiliated company of the city of Rovaniemi.

Firms are eligible to join Likiliike, if a minimum of 50 percentage of the company is locally owned, the company has operated at least one fiscal year and other legal obligations have been taken care of. Eligible enterprises get a certification and are entitled to use Likiliike logo in their marketing. In addition, Likiliike arranges several promotional events per year where the Likiliike members are able to participate in. Members also get Social Media and print coverage. Furthermore, Likiliike members have the ability to network with other Rovaniemi-based entrepreneurs.

Likiliike is financed by Likiliike member fees, which is 175 Euros per year for members of the Rovaniemi Entrepreneurs Society and 275 Euros per year for non-members. Likiliike also has “Väärti”-members, who pay a higher member fee and get more coverage in Likiliike channels.. Väärti-members do not fulfill Likiliike criteria, as they are not locally owned enterprises. However, they profess locality in their company values. For instance Pohjolan osuuspankki, member bank of OP financial group, is one of Likiliike Väärti-members. In addition, the city of Rovaniemi finances Likiliike with 40 000 Euros per year.

#### 4.2. Defining Likiliike from the network perspective

This thesis concentrates on entrepreneurial networks, but Likiliike has elements of other types of networks as well. Some might characterize it as a regional network, a strategic network, or a social network. Regional networks are not guided by a focal firm, and they are often concentrations of small firms in a limited area (Lechner & Dowling 1999: 311-312), which is also the case for Likiliike. However, regional networks arise from regional clusters, which are “geographic concentrations of interconnected companies and institutions in a particular field” (Porter 1998), and their economic weight (number of employees, sales, and number of firms) is “significantly greater than the national average for these activities” (Lechner & Dowling 1999: 311). Likiliike is not a result of



regional cluster, since members of Likiliike operate in various industries. Therefore, Likiliike cannot be characterized as a regional network.

According to Lechner and Dowling (1999: 312) all networks arise from social networks, which is a structure of persons connected through social relationships, such as friendship or kinship. In addition, social networks have clear membership boundaries (Slotte-Kock & Coviello 2010: 45) as also Likiliike does. However, relationships that entrepreneurs have are always characterized with business and social aspects (Johannisson & Mønsted 1997). Entrepreneurs' relationships are not evaluated only based on their social settings as also economic value affect dyadic relationships in entrepreneurial networks (Larson & Starr 1993). Relationships in entrepreneurial networks are always socio-economic (Larson & Starr 1993) and not purely social like in social networks. Hence, Likiliike cannot be characterized as social network either, since entrepreneur's personal network has aspects of both business and social concerns (Johannisson & Mønsted 1997).

Likiliike also has elements of strategic network. Jarillo (1988: 32) defines strategic networks as: "long-term, purposeful arrangements among distinct but related for-profit organizations that allow those firms in them to gain or sustain competitive advantage vis-à-vis their competitors outside the network". Strategic network is intentionally initiated by a focal firm, which proactively takes action in the network in order to maintain and nurture it (Möller & Rajala 2007: 895). Relationships in the strategic network are significant in terms of gaining and maintaining existing competitive position, but firms are still independent and not depending only on the network (Jarillo 1998: 32). Hence, Likiliike has indeed many similarities with strategic networks. Most Likiliike members are related in terms that they are all Rovaniemi-based, micro- or small-sized firms but still distinct, since they operating in different industries. Like strategic networks, Likiliike has been intentionally created. However, the activities are not organized by a focal firm, since a focal actor, Likiliike manager, manages the network. Furthermore, Likiliike aims to increase the attractiveness of local products and services and thus, create a competitive advantage for local entrepreneurs. However, as established before, Likiliike is currently used mainly for promotional purposes, so it is unlikely that any of the Likiliike members has gained competitive advantage by being part of the network. Therefore, Likiliike cannot be characterized as a strategic network.

To summarize, entrepreneurial network describes Likiliike the best, since Likiliike members are mostly entrepreneurs that are embedded in their social relations, and these

relations provide resources for entrepreneurial activities (Aldrich & Zimmer 1986). Even though not all Likiliike members are entrepreneurs, it does not prevent calling Likiliike entrepreneurial network (Boesen et al. 2017: 78). Furthermore, social interaction in entrepreneurial networks is not based on homogeneous culture like in regional networks, and they are not as tight as social networks due to the socioeconomic exchange in ties (Larson & Starr 1993; Normann Eriksen & Sundbo 2016: 753). This is presumed to be the case for Likiliike as well. However, Likiliike could be labeled as a local entrepreneurial network (Normann Eriksen & Sundbo 2016: 753) due to its concentration to a small geographical area.

#### 4.3. Development of Likiliike

After its foundation in 2015, Likiliike has gone through many changes. The idea of Likiliike was initiated in spring 2015 by a few active individuals who wanted to activate the local business environment. With the help and expertise of local business organizations Rovaniemi Development Ltd., the Rovaniemi Entrepreneur Society, and the Society of Female Entrepreneurs of Rovaniemi, Likiliike was founded on 1<sup>st</sup> of April 2015. Foundation of Likiliike was supported by public incentives as its start-up costs were publicly funded by the city of Rovaniemi. In addition, Rovaniemi Development Ltd., which is partly owned by the city of Rovaniemi, was responsible for coordinating the start-up phase of Likiliike together with the Rovaniemi Entrepreneur Society and the Society of Female Entrepreneurs of Rovaniemi. The first 25 enterprises received their certifications in June 2015, 34 enterprises followed in August 2015, and its 100<sup>th</sup> member was certified already in October 2015. Likiliike still receives an average of two to four applications weekly, but not all applications are accepted due to criteria. Nowadays Likiliike certifies new Likiliike members four times a year, and the 226<sup>th</sup> Likiliike member was certified in September 2018.

First Likiliike was operated on a voluntary basis by the founder members, who were entrepreneurs themselves as well. Since the number of members grew rapidly, there was a need to hire an employee who would be responsible for developing and managing Likiliike. Hence, Likiliike manager was hired in the beginning of 2018. Her responsibilities include developing quality of the Likiliike network, event management, development of the Likiliike product family, external and internal communications, and marketing the Likiliike members in Lapland and in the Arctic area of the Nordic countries.

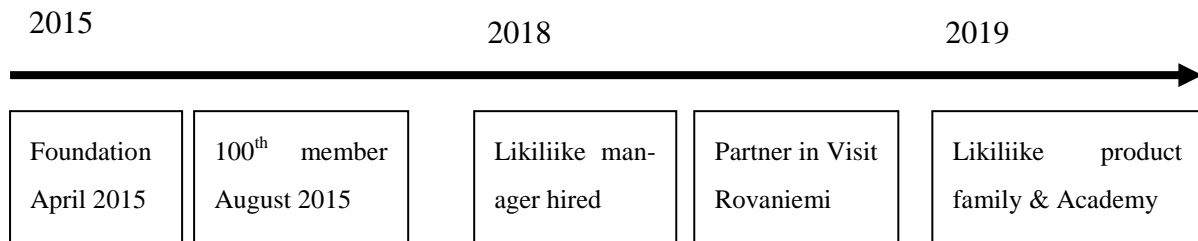
Likiliike arranges or hosts approximately six to eight events per year. Main promotional events for Rovaniemi residents are RolloVappu (1<sup>st</sup> of May celebration) and Liki-markkinat (a fair on the Rovaniemi central square). In these events, Likiliike members can buy a slot and sell and market their products or services or participate as voluntary worker in organizing the events. If members wish not to buy a slot in the event, they can come to Likiliike's stand and market their products and services for free. Also, Likiliike provides networking events for its members, such as annual general meetings, certification events of new Likiliike members, and other social gatherings. Likiliike also has a board which consists of the Likiliike manager, Likiliike members, Rovaniemi Development Ltd. representatives, and the Society of Female Entrepreneurs of Rovaniemi representatives. The board has 12 members, and it is responsible for supervision and planning of Likiliike operations. Likiliike has three Facebook-groups; one for public, where mainly Likiliike manager shares information about Likiliike, one closed Facebook-group for Likiliike members, where Likiliike members can share information about their products and services for other Likiliike members, and one Facebook-group open only for Likiliike board members.

In February 2019, Likiliike published a Likiliike product family, which includes 13 different products from 7 different Likiliike members. The product family includes various products, such as food products, jewelry, and interior design. At least 60 % of the product has to be local in terms of production and materials (Hakola 2019). Also, Likiliike Academy will launch in the beginning of 2019, which is a training provided for Likiliike members. The training aims to develop the quality of service of Likiliike businesses and help the participants to improve their businesses customer experience and retention. Cost of the training is around 400 Euros for the members, and it provides an opportunity to participate in a high-quality training locally at an affordable price. At the same time entrepreneurs are able to network with each other. Likiliike Academy participants will meet six times during the training in small groups. Likiliike also launched Likiliike gift card in the end of 2018, which can be purchased from Likiliike website, and it can be used in any of the Likiliike businesses.

In the end of 2018, Likiliike also became a shareholder in Visit Rovaniemi. 51 % of Visit Rovaniemi is owned by the city of Rovaniemi and the municipality of Ranua, and 49 % is owned by the partner companies in Visit Rovaniemi. In 2017, Visit Rovaniemi had over 200 partner companies. The partner companies in Visit Rovaniemi pay an annual joint marketing fee, which provides the partners print and online visibility. (Visit

Rovaniemi 2018.) By being a shareholder in Visit Rovaniemi, Likiliike wishes to increase the knowledge and visibility of local products and services among visitors.

Hence, Likiliike has developed quite rapidly since its inception in 2015. The following figure aims to clarify the main development steps.



**Figure 8.** Main development steps of Likiliike.

## 5. EMPIRICAL FINDINGS

In this section, it will be described how the empirical findings relate to the theoretical framework. The section follows the structure of theoretical framework and analyzes development of inter-firm cooperation, suggests the barriers, risks, and opportunities for developing cooperation and evaluates network capability in an entrepreneurial network based on the empirical findings. The findings are analyzed in order to be able to create insight for the research questions. The quotes are based on the conducted semi-structured interviews executed in November-December 2018.

For six out of seven respondents, Likiliike's aim to push locality in the Rovaniemi region was one of the reasons to join Likiliike. Four respondents mentioned that locality was the main reason to join Likiliike, and the decision to join Likiliike was mainly ideological. Other reasons to join Likiliike were the ability to network with other entrepreneurs, the possibility to exploit know-how of other entrepreneurs, and to get new partners. Five of the respondents were recommended by other Likiliike members, who they already knew, to join the network. One respondent decided to join based on the Rovaniemi Entrepreneur's Society advertisement, and a member of board recommended one respondent to join the network.

“It fit well in our philosophy, because we have seen many businesses that could buy local but are not doing it. We think it's a good thing that wider audience is given, not really education, but food for thought how things should be done... So it's good that we have this kind of mass movement, which gets people to think that you should buy local.” (Respondent 2)

“It's a good thing that locality is highlighted. Because of that idea [we joined Likiliike].” (Respondent 4)

All respondents thought that recruiting Likiliike manager was a good idea, and respondents were really satisfied with her efforts. Three respondents thought that she has been able to increase Likiliike's media coverage, especially in the Social Media, and one respondent said that she has in a way put a name and a face to Likiliike. One respondent also said that the Likiliike manager has legitimized the network, and it is better that there is “a neutral” network manager who is driving common benefits, and not someone who is entrepreneur himself/herself as well.

### 5.1. Opportunities, barriers, and risks for development of inter-firm cooperation in an entrepreneurial network

As already established, new ties are initiated in meeting places, either in coincidental ones or in institutional settings (Johannisson 1987). Eventually, trust evolves due to frequent interaction. Initially, actors can access heterogeneous resources through network ties, but as interaction amplifies, actors become more similar. Consequently, the network might not be able to provide heterogeneous resources. In a case of “over-embedded” network, actors should seek new, weak ties in order to access new information. (Larson 1992; Uzzi 1997.)

Likiliike has well-established meeting places as there are approximately six to eight events or social gatherings per year, which are open for all Likiliike members. Additional gatherings are held for the Likiliike Academy participants and for members involved in the Likiliike product family planning division. Likiliike members meet each other mostly in Likiliike events, but coincidental meetings are also possible, since Rovaniemi is a small city, as the following quotes imply:

“We have met other Likiliike members mainly in events... It is also possible to bump into one another in the city, but that is then unplanned.” (Respondent 1)

“I have acquainted myself with several other Likiliike members... In Entrepreneur’s society of Lapland events, Likiliike events, meetings, parties, no matter the event, I have always familiarized myself with new Likiliike members, there are so many of us.” (Respondent 5)

Six of the seven respondents had familiarized themselves with new Likiliike members in Likiliike events or in coincidental meetings. However, entrepreneur’s limited time and skepticism were a barrier to participate in Likiliike events and thus, made development of cooperation less likely.

”At first I was really skeptic towards the idea, there has been those similar things as Likiliike, which have then come to nothing.” (Respondent 6)

“Due to prioritization of time, I don’t see myself participating in the events in the future either.” (Respondent 4)

“I looked into it [Likiliike Academy], but I didn’t want to participate in it in case I don’t have enough time.” (Respondent 3)

“It’s a pity that I haven’t been able to participate in some of the events... I have been too busy.” (Respondent 2)

However, events made it possible to approach new contacts, and one interviewee also mentioned getting social support from other entrepreneurs:

“It is easy for an entrepreneur to talk to other entrepreneurs at these Likiliike events, even though you wouldn’t be familiar with one another.” (Respondent 2)

“You have similar issues and similar worries, which you can talk about in these events and social gatherings, and the other entrepreneur understands you and has maybe gone through the same... You get peer support.” (Respondent 6)

Hence, entrepreneurial networks are not all about resource acquisition, since they also provide an opportunity to get social support from other entrepreneurs (Jack et al. 2010: 316). Entrepreneurs’ scarce resources were the main limitation to participate in Likiliike activities.

One respondent had not participated in any of the Likiliike events, three respondents had participated in two to three events, and three respondents had participated several or most of the events during their membership in Likiliike. Development of inter-firm cooperation is less likely in heterogeneous and large networks (Faerman et al. 2001: 377). Likiliike can be characterized as a large and heterogeneous network with over 200 members who represent a vast amount of different industries. Some mentioned that being part of Likiliike had facilitated development of cooperation with other Likiliike members:

“We just made a deal with our competitor... And it is only thanks to Likiliike because through Likiliike we met and started to talk.” (Respondent 6)

On the other hand, some respondents mentioned that cooperation with other Likiliike members had not yet evolved as the following quotes justify:

“We haven’t had the need [to cooperate with other Likiliike members]. We are operating in such a different industry compared to other Likiliike members, since we have such a specialized B-to-B-business. Perhaps cooperation with for instance a car shop or a restaurant would not be so natural for us.” (Respondent 2)

I haven’t cooperated with other Likiliike members. The primary reason for it is that I already have a wide-ranging cooperative relationship with one company... Second reason is that there hasn’t been that kind of momentum or need to start a cooperative relationship that would be economically beneficial.” (Respondent 7)

Thus, heterogeneity of actors hindered the ability to develop inter-firm cooperation, since finding partners with whom cooperation would be beneficial was challenging. Network members should be similar enough so that development of cooperation is possible, but there should also be differences so that heterogeneous resources exist between members (Granovetter 1973; Uzzi 1997; Nahapiet & Goshal 1998; Faerman et al. 2001: 377). Likiliike’s member base is multifaceted, and it includes members from various industries. Diversity of Likiliike members would indicate that heterogeneous resources exist in the network (Uzzi 1997; Luigia Caglioti 2008: 14-15). However, diversity of actors hindered the development of cooperation, since some actors did not feel that there would be need to cooperate.

Being part of Likiliike does not yet form a weak tie between its members. Ties between Likiliike members are rather absent, which Granovetter (1985: 1361) describes as “ties without substantial significance such as a “nodding” relationship between people living on the same street”. One respondent admitted that he was not really sure which firms were members in Likiliike. Another respondent said that being part of Likiliike makes starting a conversation with other Likiliike members easier, but this could be characterized more as “nodding relationship” than a weak tie. However, these kinds of encounters together with the meeting places provided for Likiliike members can lead to new contacts which can result as development of weak or strong ties.

“Well I’m not quite sure which firms are members in Likiliike and which are not.” (Respondent 4)

“I always try to visit other Likiliike member’s facilities, and it is kind of a chat-up line that oh, you are Likiliike as well.” (Respondent 2)



Heterogeneity of actors also increases the likelihood of conflicts, and conflicts indicate lack of trust (Faerman et al. 2001: 377; Huang & Wilkinson 2013: 456). Respondents mentioned that some conflicts had been witnessed in the past. Jealousy was the main reason for conflicts according to the respondents:

“Personal chemistries can cause conflicts, and if Likiliike is using services of some Likiliike members when organizing these events, some might feel bitterness towards the enterprises.” (Respondent 1)

“Especially in the beginning, when everyone didn’t understand the idea behind Likiliike. For instance when one company was being active and advertising through Likiliike and was even paying for it, their competitor didn’t understand why the other company was always visible and got more coverage, even though it was only because this other company was being active.” (Respondent 6)

“I remember in the beginning when one company had advertisements everywhere, and there was a lot of negative feedback that: “Are we paying the annual fee so that they can advertise their business in the context of Likiliike?”. But this company was just leading by example and showing how you can benefit from Likiliike... But I think gradually people understood that this is a good thing, and we can do the same as well... It was jealousy.” (Respondent 5)

Likiliike should invest in trust-building processes so that development of inter-firm cooperation could be facilitated and the probability of conflicts could be decreased (Huang & Wilkinson 2013: 456; Letaifa & Rabeau 2013: 2077). Establishment of long-term cooperative relationships requires trust (Uzzi 1997; Letaifa & Rabeau 2013: 2077). Trust can be either affective, based on emotional bond, or cognitive, based on rational assumptions. As relationship evolves, trust becomes more affective (Huang & Wilkinson 2013: 456). Formal agreements have proved to be inefficient in trust-building. Instead, informal coordination mechanisms, such as social ties, and formal coordination mechanisms, such as rules and plans, have been more efficient in coordinating cooperation and in trust-building (Mariani 2016: 119). According to Czakon and Czernek (2016: 72) public sector legitimization is an effective trust-building mechanism. Likiliike cannot be characterized as public agent, but since it became a partner in Visit Rovaniemi last year, Likiliike could benefit the semi-public partnership in trust-building. Likiliike and Visit Rovaniemi together could increase the credibility of the network in the eyes of its pre-

sent and aspiring members, provide a trust-base, and assure members that they are driving common benefits (Czakoń & Czernek 2016: 72). Firm reputation and prior experience also help to build inter-firm trust and cooperation (Larson 1992). Therefore, it needs to be kept in mind that Likiliike has not existed for a long period of time, and Likiliike members lack experience of each other. Through experiences of working together, trust will accumulate and lead to retention of relationships (Mariani 2016: 120).

The respondents believed that Likiliike had improved their businesses media coverage and had provided positive publicity. Three respondents claimed that Likiliike had facilitated customer acquisition and had a positive impact on their revenue. Other respondents said that Likiliike had little or no impact at all on their revenue. However, all respondents mentioned that they were satisfied of being part of Likiliike.

Hence, barriers that hindered the development of cooperation were skepticism towards cooperation, lack of interest, and scarce resources, which reduced the ability to invest time in networking activities. Also, the heterogeneity of actors made development of cooperation less likely, since cooperation with heterogeneous actors was not seen beneficial. Likiliike members lack experience of each other, and therefore trust has not yet accumulated, which is a barrier for development of cooperation. Opportunities that Likiliike had provided for its members were impact on some respondent's revenue, facilitation of customer acquisition, and increased media coverage. One respondent also mentioned getting social support from other Likiliike members. However, due to lack of trust and heterogeneity of actors, risk of conflicts exists in the network.

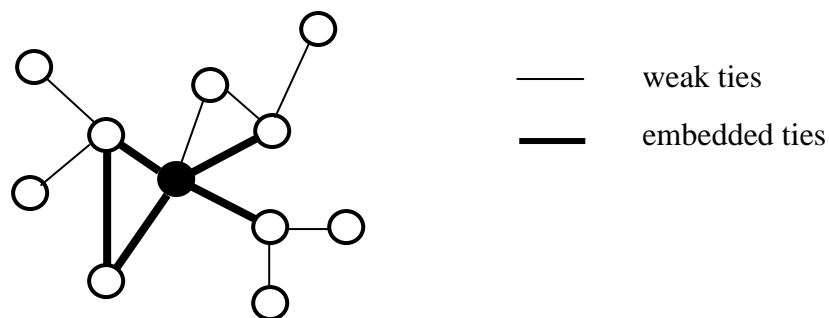
## 5.2. Network configuration

At the moment, Likiliike consists of multiple nonredundant contacts, since most of the actors are not inter-connected. Therefore, Likiliike should be able to provide more information benefits than a dense network (Burt 1992). However, Likiliike has characteristics of a dense network as well. Embeddedness exists in some ties, since one respondent confessed that information exchange happens with actors he trusts, and embeddedness exists between actors involved in Likiliike product planning division. Also, Likiliike is an association, and according to Likiliike manager, it aims to be as transparent as possible in its communication. Thus, every Likiliike member has the opportunity to get access to the same information and opportunities Likiliike organization

provides at the same time in the meeting places (Facebook-page, social gatherings etc.), with the exception that Likiliike board members get access to information regarding future Likiliike activities before other Likiliike members. However, this is about to change later this year, since minutes or summaries of board meeting will be published on Likiliike website in order to increase transparency according to the Likiliike manager.

Hence, Likiliike has characteristics of both dense networks (actors get access to the same information, some degree of embeddedness exists) and sparse networks (actors are not interconnected). Therefore, Likiliike could be described to be a semi-sparse network with different degrees of embeddedness, even though little embeddedness exists in the network at the moment. In reality, no network is totally sparse or dense, and degree of embeddedness varies. Ideally, network should be semi-sparse/dense, and the depth and the intensity of relationships should vary. (Uzzi 1997; Andersson et al. 2005: 44-45.)

The following figure demonstrates the structure of semi-sparse network.



**Figure 9.** A semi-sparse network with different degrees of embeddedness (Andersson et al. 2005: 45).

As discussed earlier, the amount of cooperation and competition in a network affects the diversity of accessible information. Based on the amount of cooperation and competition, networks can be divided into latent, evolutionary, active, or viable networks (Bengtsson et al. 2005). Likiliike could be labeled as latent network at the moment, since competition and cooperation are both weak. Strong cooperation has not yet evolved between most of the members, but elements of strong competition are neither

present. Respondents considered competitors more as colleagues and thought that cooperation between competing firms is feasible:

“I don’t want to see them as competitors... We even arrange events together.”  
(Respondent 1)

“I would consider us more like colleagues than competitors.” (Respondent 2)

“I don’t consider us to be competitors, more like colleagues. We also cooperate, I can for instance borrow materials or recommend others to a customer if I don’t have time in my calendar.” (Respondent 3)

“You can definitely cooperate with competitors. The ambiance in Rovaniemi is such that you cooperate with anyone.” (Respondent 4)

“I never see it as competition, I see it as strength. We are on the same side of the table, and we are trying to do everything we can to make sure the customer is satisfied... For instance, just one competitor called, and we are arranging cooperation for the upcoming summer.” (Respondent 5)

“Because of tourism in Rovaniemi there is room for everyone’s products... Our closest competitors in Likiliike are more of an opportunity to us.” (Respondent 6)

“I think competitors can and should network with each other. This is a small city, and small enterprises should network, cooperation can be really beneficial and increase cash flow” (Respondent 7)

Weak cooperation and competition between network members would indicate existence of heterogeneous resources in the network (Bengtsson et al. 2005). Even though meeting places exist and Likiliike has provided forums for discussion, the communicative and absorptive capacity is low. Network members might not be aware of the potential of heterogeneous resources. It is possible that Likiliike Academy can help improving absorptive and communicative capacity, since firms will most likely get more experience of each other and will get used to opening up and communicating about their business.

Likiliike could also facilitate the development of cooperation, embeddedness, and trust by dividing the members into more homogeneous groups. One interviewee also indicated a need for such groups:

“I have wished for some kind of professional cooperative forum... For instance for representatives from the same industry... It could spawn new ideas and have a positive effect on productizations and everything else as well. For instance, if you put enterprises from the same industry in the same space for one day or a half, it could generate surprisingly many new Likiliike products... In my opinion that’s something that Likiliike should develop” (Respondent 7)

Homogeneous groups could indeed facilitate development of inter-firm cooperation in Likiliike. Small, homogeneous, and dense networks require more coordination, which would in return promote development of cooperation (Andersson et al. 2005: 35). Even though dense networks provide less information benefits, since actors tends to get access to the same knowledge, being part of the network structure creates benefits on its own (Burt 1992). New insights can be gained through joint learning and joint problem-solving. However, in dense networks, there is a risk of becoming over-embedded, and actors can get locked-in in inefficient relationships. In a situation like this, firms need to look for new ties in order to get access to heterogeneous resources. (Uzzi 1997.) There is also a risk of conflicts, if actors in these homogeneous groups are competing firms, which could also harm the communicative capacity of the network and result as lack of trust (Bengtsson et al. 2005: 59-60). Therefore, it would be important that Likiliike would act as a legitimizing actor, reassuring that common benefits are driven and providing a trust-base for the network (Czakoń & Czernek 2016).

According to Andersson et al. (2005: 43), dense networks with a high degree of embeddedness are likely to exist only a limited amount of time. In the context of Likiliike, this could mean for instance development of new Likiliike product or service family. Despite the risks of these networks becoming over-embedded and unable to provide heterogeneous resources, the homogeneity of actors could help to establish cooperative relationships. If the network was dissolved after some time, it would be easier to reactivate the established ties when needed because actors would have experience of working together. In addition, in order to decrease the risks of over-embeddedness, Likiliike could act as a connecting bridge between the dense networks, reassuring that information is circulated between these dense networks. (Larsson 1992; Uzzi 1997; Faerman et al. 2001; Andersson et al. 2005.)

### 5.3. Network capability

Network capability, ability of a firm to establish and maintain cooperative relationships with other firms, is one of the critical competences entrepreneurs should have (Johannisson 1987: 55; Äyväre & Jyrämä 2007: 1). Based on the reviewed literature, a network capability framework was constructed. The framework includes six most important capabilities needed to develop inter-firm cooperation in entrepreneurial networks: cooperation-orientation, social competence, capability initiate relationships, information exchange capability, visioning capability, and coordination capability. The following sections critically explore the constructed framework and evaluate whether the six capabilities are indeed needed to develop inter-firm cooperation in entrepreneurial networks based on the empirical findings.

#### 5.3.1. Cooperation-orientation

According to Äyväre & Jyrämä (2007) cooperation-orientation is the most crucial network capability for entrepreneurs. Network members need to sense that cooperation will bring something of value. If networking is not seen worthwhile, due to scarce resources and lack of interest, it is unlikely that entrepreneurs choose to participate in the Likiliike events as the following quote demonstrates:

“I rather spend my time developing my enterprise, it takes so much time that I don’t have time to do anything else, such as association activity... Besides, I don’t even like that kind of activity, it’s not my cup of tea... I don’t consider it to be worthwhile.” (respondent 4)

However, all the respondents thought that networking with other entrepreneurs can be beneficial, even though not all of the respondents had cooperated with other Likiliike members:

“This is a rather small economic area, and the fact is that through networking small businesses can thrive. If you don’t have a network or cooperation with other enterprises and you are trying to cope by yourself, it is definitely challenging at least in the beginning.” (respondent 7)

“Networking with other entrepreneurs is always good for your business.” (Respondent 6)

“Well networking is always beneficial, since you get new business partners.” (Respondent 4)

Network members need to trust that cooperation will be beneficial in order to be cooperation-orientated. Some of the respondents felt that Likiliike had been more beneficial for B-to-C companies, which decreased the willingness to participate in some Likiliike activities:

”We will probably never get the full benefit from Likiliike events, and it has been a conscious decision that we have not participated in these promotional events, such as the May 1<sup>st</sup> celebration event, because there you hand out balloons for kids, they are not going to purchase from us because of that.” (Respondent 2)

All in all, the respondents thought that networking is beneficial and had a positive attitude towards networking. However, the degree of cooperation-orientation varied among the respondents. One respondent did not have confidence in networks as a system, and some lacked trust that cooperation would be beneficial. Cooperation-orientation proved to be a critical capability for Likiliike members. Those respondents who trusted in networks as a system and thought that networking with other Likiliike members could be beneficial, had more cooperation with other Likiliike members compared to the respondents who were not as cooperation-oriented.

### 5.3.2. Social competence

Entrepreneurs need to have a capability to adapt in different social situations and be able to socially connect with other people (Ritter & Gemünden 2003: 747-748; Walter et al. 2006: 547-548; Äyväre & Jyrämä 2007: 10). Even though Likiliike has well-established meeting places, it would seem that social competence is crucial in being able to establish and develop cooperative relationships. It requires courage and openness to be able to start up a conversation with unfamiliar people:

“Often the quiet ones are left to play the second fiddle.” (Respondent 1)

“When these kind of social gatherings are arranged in Finland, especially in the leisure time, people hang out in small, familiar circles, so you have to be rather socially open to be able to mingle around and start a conversation.” (Respondent 7)

“If you have some familiar contacts then it is easier to play along, but if you would have to go to a gathering as a rookie among people you don’t know, it would be really challenging to network with others.” (Respondent 7)

On the other hand, meeting places provide a great opportunity to meet with other entrepreneurs if entrepreneurs are willing to be active and have the courage to start up a conversation with new people.

“It depends on your own activity. If you just go and start a conversation in the events you always find something to talk about. I always make new acquaintance even though Rovaniemi is such a small place.” (Respondent 5)

Hence, openness, courage, and willingness to be active in different social situations are important characteristics for entrepreneurs.

### 5.3.3. Capability to initiate relationships

Capability to initiate new relationships is crucial for entrepreneurs, since new relationships can provide access to resources that can be vital for business. Capability to initiate relationships includes initiating old ties but also capability to be found by others and meet new people (Äyväri & Jyrämä 2007: 8). Meeting places, either institutional or coincidental ones, are crucial in initiating relationships (Johannisson 1987). However, social competence is vital in initiating relationships, as it requires courage and openness to be able to initiate new relationships as the following quote justifies:

“I haven’t familiarized myself with new Likiliike members enough. I have talked more with people that I already know... I should be more active, but it’s easier to talk with familiar people.” (Respondent 1)

However, if entrepreneurs possess social competence, Likiliike events are a great opportunity to initiate new relationships or activate former ties. Some respondents even mentioned that meeting places (Likiliike events) facilitate customer acquisition:



“I have noticed that when you show up in any of these events, it brings a lot of new jobs.” (respondent 3)

Likiliike also increases the capability to be found, as the following quote justifies:

“We have had a lot of demand from Likiliike members... They know us, and they know that we are member of Likiliike, so probably it is easier to approach us.” (Respondent 5)

Thus, capability to initiate relationships is crucial for Likiliike members, and together with social competence and cooperation-orientation the capabilities provide multiple opportunities and can even facilitate customer acquisition.

#### 5.3.4. Information exchange capability

New relationships provide access to new information, but complex information exchange is only possible if trust exists between actors (Larson 1992; Nahapiet & Goshal 1998). Lack of trust often leads to inability to create new knowledge, and relationship can be dissolved due to its uselessness (Sivadas & Dwyer 2000: 32-33). Only one of the respondents confessed information exchange with other Likiliike members, which had also resulted as learning:

When you are working in your own enterprise, you see everything only from your own point of view. And when you have a conversation with another entrepreneur who is from a different industry, he will see the issue from a total different viewpoint, thinks differently, and will question why I am doing it like this. And then I wonder why I haven't even considered that.” (respondent 6)

Hence, heterogeneity of actors provides access to heterogeneous information and can also result as inter-firm learning (Dwyer & Sivadas 2000: 32-33). However, according to the respondent, information exchange is only possible with familiar people. Thus, information exchange requires a strong tie between actors:

“Obviously you cannot ask advice from anyone, but these entrepreneurs who I know well I can start up a conversation and ask advice.” (respondent 6)

Also, capability to initiate relationships is a prerequisite for information exchange:

“You have to be active, network with others, and participate in the events. When I am in the events, I familiarize myself with new people. I wouldn’t get these new acquaintances if I would just be at my workplace all the time.” (Respondent 6)

Complex information exchange requires trust between actors, and it is not possible to exchange information with anyone (Larson 1992; Uzzi 1997; Nahapiet & Goshal 1998; Sivadas & Dwyer 2000: 32-33). One respondent acknowledged that there is a lot of information in Likiliike, but they have not been able to exploit this information in their operations yet:

“There is so much know-how in Likiliike. We are wondering how we could exploit all this knowledge in our operations.” (Respondent 1)

At the moment, information exchange capability in Likiliike is limited. However, information exchange capability might be improved in Likiliike Academy and in Likiliike product family planning division. Likiliike product family includes 13 products from seven different firms. According to the Likiliike manager, the planning division has dealt with issues regarding for instance marketing, display, and production of the products, which has required not only complex information exchange but also joint problem-solving arrangements, risk-sharing, and trust. Hence, planning the product family has required strong cooperative relationships between the actors. Likiliike Academy also has the opportunity to create strong, cooperative ties between actors, which can lead to complex information exchange between the actors. Likiliike Academy participants will meet six times during the training in small groups. Likiliike Academy can help improving absorptive and communicative capacity and consequently information exchange capability, since firms will most likely get more experience of each other and will get used to opening up and communicating about their business.

However, most of the Likiliike members are not taking part in Likiliike product family planning division or in Likiliike Academy. How could information exchange capability be increased among the members who have not yet participated in such activities? These homogeneous groups could be used also to increase communicative and absorptive capacity and consequently information exchange capability. Dense networks require more coordination, which in turn promotes cooperation (Andersson et al. 2005: 35).

Through interaction, trust would evolve and enable complex information exchange (Larsson 1992). Even though dense networks provide less information benefits than sparse networks (Burt 1992), these networks could have an important effect on activating Likiliike members.

### 5.3.5. Visioning capability

Visioning capability is needed to be able to base future plans for cooperation and to be able to understand what kind of opportunities the network provides (Äyväri & Jyrämä 2007: 8). It seems that visioning capability exists in Likiliike. For instance, according to Likiliike manager, the idea of Likiliike product family came from Likiliike members themselves, which has required visioning capability. Two of the respondents have had changes in their business, and they believed that Likiliike could be helpful in customer acquisition. Thus, it has required visioning capability, because respondents have understood opportunities Likiliike provides:

“I joined Likiliike around the time when I decided to drop out private customers, so it seemed like a good idea. So I could exploit Likiliike and offer my services to other Likiliike members.” (Respondent 3)

However, one of the respondents claimed that many Likiliike members do not understand the possibilities Likiliike provides, and it is the biggest challenge in Likiliike at the moment:

“Many seem to think that when you pay the annual fee, you get offered something ready in return... Entrepreneurs should take advantage of Likiliike more... Especially B-to-B-enterprises. Entrepreneurs should understand that through active networking you get more customers.” (Respondent 6)

Even though members would not actively participate in Likiliike activities, it still does not mean that they would lack visioning capability. However, executing and coordinating these visions should be done by Likiliike:

“I have wished for some kind of professional cooperative forum... For instance for representatives from the same industry... It could spawn new ideas and have a positive effect on productizations and everything else as well. For instance, if you put enterprises from the same industry in the same space for one day or a

half, it could generate surprisingly many new Likiliike products... In my opinion that's something that Likiliike should develop" (Respondent 7)

"Likiliike should do the compiling effort, and Likiliike brand would be the viewpoint that things should be pondered, and the goal would be to generate Likiliike products. And the initiative should come from Likiliike because if you would try as an entrepreneur to compile other entrepreneurs, first off it would be really challenging to get in contact with somebody you don't know, and then the cooperation would not be done from Likiliike's point of view." (Respondent 7)

According to the respondents, visioning capability in Likiliike organization is rather good:

"At least the Likiliike manager is bubbling with ideas." (Respondent 7)

"There is a really good drive in Likiliike, there are these trainings and Academy is going to start soon, everything is working well and they think of something new all the time, or if there is some event that has already become a tradition, they always try to think of something new around it." (Respondent 5)

Hence, visioning capability seems to be crucial especially Likiliike organization. Likiliike needs visioning capability in order to be able to decide in which direction Likiliike activities are driven. The growing number of members, diversified member-base, and limited resources require extensive visioning capability from Likiliike organization. In addition, Likiliike being an association imposes numerous challenges. According to the Likiliike manager, Likiliike members have really diverse demands, and all the members need to be taken into account equally in Likiliike activities.

Some respondents thought that Likiliike had concentrated too much on B-to-C-companies:

"Likiliike has concentrated too much on brick & mortar stores in the city center." (Respondent 5)

"We are purely in B-to-B-business so that's the thing that probably we will never get full benefit of Likiliike events... Many of the events are purely targeted

for consumers so for instance clothing stores and cafes get more benefit from them.” (Respondent 2)

“Especially these campaigns what they’ve [Likiliike] had, these that you can sell Likiliike gift cards. So these Likiliike gift cards are only sold to private customers, consumers.” (Respondent 7)

“Likiliike has done well in getting visibility for locality... So it is possible that brick and mortar stores have benefitted from Likiliike rather well.” (Respondent 7)

However, as the annual member fee is small, concentration on B-to-C-companies and brick & mortar stores did not bother the respondents that much. Two respondents said that Likiliike product family was hard to grasp and implement in their business, and therefore they had not participated in it. Thus, Likiliike organization’s visioning capability can also have an effect on cooperation-orientation, since members will not participate in activities if they do not seem useful or implementable for their business. However, the respondents felt that the possible visibility provided by Likiliike product family is good for the cause in any case.

Hence, members need visioning capability in order to understand what possibilities network provides, but Likiliike organization needs more visioning capability than members. Likiliike organization’s visioning capability also affects members’ cooperation-orientation. If members do not feel that Likiliike activities are useful for their businesses, it will also affect members’ willingness to participate in Likiliike activities.

#### 5.3.6. Coordination capability

Entrepreneurship is restricted due to limited amount of resources, and through coordination entrepreneurs are able to co-develop these scarce resources and align activities with other firms, which can lead to synergies and cost-efficiency (Sivadas & Dwyer 2000: 32-33; Ritter & Gemünden 2003: 747-748; Walter et al. 2006: 548). Due to scarce resources, entrepreneurs also need to be able to allocate enough time for networking activities (Äyväri & Jyrämä 2007: 9).

Likiliike manager and Likiliike board are responsible for coordinating Likiliike events, even though Likiliike members occasionally participate in planning the events. Likiliike

also coordinates Likiliike product family and Likiliike Academy planning and launching. Likiliike members work as voluntary workers at the events, which is coordinated by Likiliike. However, Likiliike is not responsible for coordinating cooperation between Likiliike members. Based on the interviews, there has not been cooperation between members that would require vast coordination. Instead, Likiliike members expect Likiliike to coordinate such activities that would be useful for their businesses. Likiliike product family planning and execution has required coordination capability from Likiliike organization and Likiliike product family planning division members. Therefore, coordination capability is especially critical for Likiliike organization.

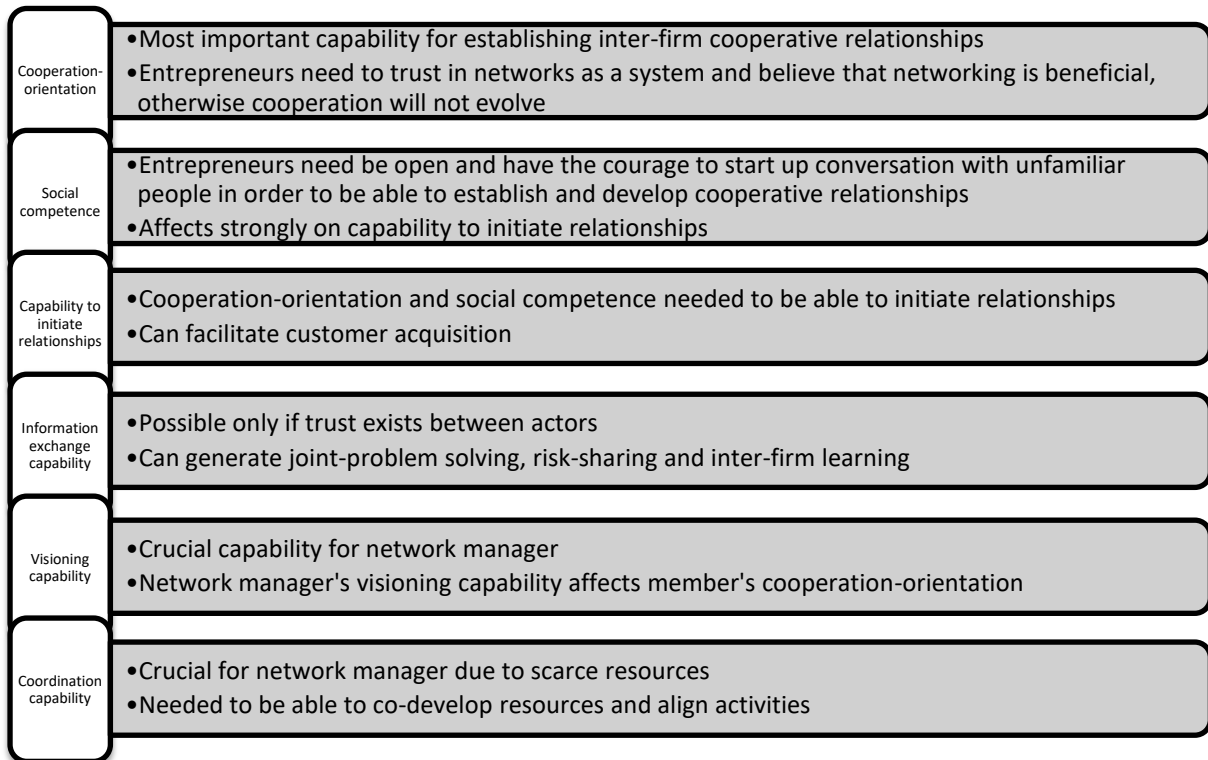
Likiliike product family and Likiliike Academy has required extensive visioning and coordination capability from Likiliike organization, and Likiliike has been able to capitalize these capabilities. In the future, coordination of these homogeneous groups could also be Likiliike organization's task. Coordination capability is critical for Likiliike organization due to scarce resources. Likiliike organization needs to be able to co-develop resources and align activities with Likiliike members in order to get the most value for Likiliike network. Likiliike organization will need a vast amount of visioning and coordination capability, and time will tell to which direction Likiliike will develop. Likiliike has the potential to become a significant player in the Rovaniemi region if network capability will be developed. Entrepreneurial networks provide important resources, social support, and can even be a source of competitive advantage. However, at the moment Likiliike is not as significant for its members as it has the potential to be. The following quote summarizes one respondent's thoughts on Likiliike and its significance at the moment:

“In everyday life, Likiliike is in a way invisible, it is somewhere in the background and months can go by without discussing about it... Sometimes I just check on Social Media what's going on and happening... It's just nice to have and being able to network a couple of times a year.” (Respondent 7)

### 5.3.7. Summary of network capability in an entrepreneurial network

The significance of Likiliike varies between actors, and the more active members also get more benefit out of Likiliike. Through development of network capabilities, Likiliike could capitalize its potential, activate its entire member base, and fulfill its initial goal: maintaining and improving the success and continuation of local businesses

and vitality of Rovaniemi. The following figure summarizes the findings on network capability in an entrepreneurial network.



**Figure 10.** Network capabilities in an entrepreneurial network.

To summarize, cooperation-orientation, social competence and capability to initiate relationships were all crucial capabilities for entrepreneurs, especially for establishing cooperative relationships. Information exchange capability is also crucial, especially in maintaining cooperative relationships. However, as the capability requires trust between actors, it is not possible to exchange information with anyone. Entrepreneurs also need visioning capability in order to be able to understand possibilities the network provides and coordination capability so that enough time is allocated for networking activities. However, visioning and coordination capability are especially important for network manager, and network manager's visioning capability also affects network members' cooperation-orientation.

## 6. CONCLUSIONS

The aim of this thesis was to understand how inter-firm cooperation in entrepreneurial networks could be developed. The next section aims to answer the research questions of the study.

*What are the barriers, opportunities, and risks for developing inter-firm cooperation in entrepreneurial networks?*

Based on the interviews, lack of interest, skepticism, and scarce resources were the main barriers to develop inter-firm cooperation. If entrepreneurs are not interested in developing inter-firm cooperation, they will not be found by other entrepreneurs. Entrepreneurship is constrained by scarce resources, and time needs to be allocated to the most useful activities. Due to lack of time, developing inter-firm cooperation and participating in association activities might not be the first priority. The heterogeneity of actors hindered the development of cooperation, since finding partners with whom cooperation would be beneficial was challenging. If inter-firm cooperation does not seem beneficial, cooperation will not evolve. In addition, it has to be taken into consideration that Likiliike has existed only a short period of time. Members still lack experience of each other, which hinders the development of cooperation. Through interaction, trust will evolve and facilitate development of cooperation.

Likiliike had improved the respondents' media coverage and visibility. Some respondents also mentioned that Likiliike had facilitated customer acquisition and increased revenue. Getting social support from other Likiliike members was also mentioned by one respondent. Hence, Likiliike has provided concrete benefits for the respondents. If actors are able to develop trust, complex information exchange can take place in the network. Consequently, it could lead to learning, innovation or even competitive advantage. Likiliike product family planning division has displayed joint problem-solving, risk sharing, and complex information exchange. Being part of Likiliike provides many opportunities, but being able to exploit them requires activity and willingness to cooperate.

Lack of trust and heterogeneity of actors increases risk of conflicts (Faerman et al. 2001: 377; Huang & Wilkinson 2013: 456). Likiliike should invest in trust-building processes, so that probability of conflicts could be decreased. If Likiliike decides to di-



vide the network into homogeneous groups, there is a risk of over-embeddeness. However, if Likiliike activities are continued as before, the risk of over-embeddeness is low due to its heterogeneous actors and large size.

*What are the network capabilities needed for developing inter-firm cooperation in entrepreneurial networks?*

Cooperation-orientation was the most crucial capability based on the empirical findings. If entrepreneurs lack cooperation-orientation, time will not be invested in Likiliike activities. Social competence proved to be a crucial capability as well. Entrepreneurs need to be socially active and have the courage to start up a conversation with unfamiliar people. Cooperation-orientation and social competence are connected to capability to initiate new relationships. If entrepreneurs lack cooperation-orientation they will less likely participate in the events. Thus, the likelihood of being found by other entrepreneurs is reduced, which hinders the development of inter-firm cooperation.

Information exchange capability is also crucial in entrepreneurial networks, but complex information exchange is possible only if trust exists between actors (Nahapiet & Goshal 1998; Larson 1992). At the moment, information exchange capability is limited in Likiliike. However, information exchange capability is crucial in entrepreneurial networks, since if relationships are unable to provide novel information, relationship might be dissolved due to their uselessness (Sivadas & Dwyer 2000: 32-33). Therefore, Likiliike should invest in increasing the information exchange capability among its members by facilitating the formation of social capital.

Formation of structural social capital facilitates information exchange between network members (Nahapiet & Goshal 1998). Some of the respondents have not seen participation in Likiliike activities worthwhile because they seemed irrelevant to their business or they lacked interest. Entrepreneurship is restrained because of scarce resources. Time is limited, and entrepreneurs need to allocate their time to most valuable operations (Johannisson 1987). If networking and inter-firm cooperation is not seen beneficial, it is unlikely that Likiliike members will participate in Likiliike events, which will restrict the formation of structural social capital. Therefore, preconditions for information exchange: meeting places, absorptive capacity, and communicative capacity should be improved.

Even though Likiliike has well-established meeting places, the communicative and absorptive capacity is still low. The network poorly provides any information benefits: access, timing, and referrals. Likiliike is a semi-sparse network as it consists of mainly weak or absent ties. This indicates that heterogeneous information exists in the network. First step to improve preconditions for information exchange could be establishment of more targeted meeting places. Likiliike is a multisectoral network, and the diversity of the network hinders establishment of cooperation. Meeting places could be provided for actors operating in the same or similar industries, for instance for actors i.e. in hospitality, consultancy, or IT sector. Providing meeting places and forums for discussions for similar actors could provide access to more valuable information, which would increase motivation for information exchange. This could increase interaction, ease the development of commitment and trust, and facilitate development of inter-firm cooperation.

In addition, Likiliike could act as a trust-building facilitator, reassuring that common benefits are driven and provide a trust-base for the network. Trust would help be more transparent and increase willingness to exchange information, and consequently it would increase communicative capacity. Likiliike can also increase the communicative capacity by being transparent about Likiliike organization's operations. However, if meeting places are provided for homogeneous actors, the actors might be competing firms. Even though this could mean increased absorptive capacity because actors would be willing to gain and filter important information of their competitors, it could also have a negative effect on communicative capacity due to lack of trust. Therefore, enough time should be allocated to trust building. These homogeneous groups might not be able to provide as much information benefits due to their density (Burt 1992), but Likiliike organization could act as a connecting bridge, circulating the information between the dense groups. (Bengtsson et al. 2005.)

Visioning capability is important for network members in order to be able to understand what kind of opportunities the network provides. However, the capability is especially crucial for network manager. Network manager needs extensive visioning capability in order to be able to understand the opportunities the network provides and being able to develop the network's activities into a desired direction. Visioning capability is also crucial for opportunity identification, so that valuable activities for network members can be provided. Network manager's visioning capability affects member's cooperation-orientation and is therefore crucial for network manager. Coordination capability is important due to entrepreneurs' scarce resources, but the study indicated that the capability is especially important for the network manager.

### 6.1. Theoretical implications

This thesis contributes to the body of research on entrepreneurial networks in three ways. First, this thesis has successfully combined body of research from both social network and business network research streams, as suggested by Slotte-Kock and Coviello (2010). The thesis has justified that an integration of both business and social network research streams is needed in order to get a more holistic understanding of cooperation in an entrepreneurial network. When evaluating network capabilities, applying social capital theory in the analysis can be useful, since social capital is such an integral facilitator of cooperation in an entrepreneurial network.

Second, this thesis has contributed to the network capability literature by identifying information exchange capability to be a crucial capability in an entrepreneurial network. Information exchange capability was explored by using social capital theory. This thesis has thoroughly explored what is meant with information exchange capability and which factors affect the capability.

Third, qualitative research on entrepreneurial networks has been scarce (Hoang & Antonic 2003; Jack 2010). This study has contributed to the qualitative entrepreneurial network research and provided insight on how inter-firm cooperation develops in an entrepreneurial network.

### 6.2. Managerial implications

Concerning the managerial implications, three kinds of insights are provided. First, development of inter-firm cooperation is unlikely in a large and heterogeneous network. Network manager needs to pay attention to the diversity of network members. Actors in a network should be similar enough so that development of cooperation is possible, but there should also be differences between actors so that heterogeneous resources exist in the network.

Second, network manager needs extensive visioning and coordination capability, whereas cooperation-orientation, social competence, capability to initiate relationships, and information exchange capability are crucial especially for the network members.

Network manager's visioning capability also has an effect on network members' cooperation-orientation.

Third, cooperation in a diverse and large network does not develop on its own. Network manager needs to take initiative to create conditions where development of inter-firm cooperation is likely. This means providing face-to-face meeting places for network members and increasing the communicative capacity by being open and transparent about the network's operations. Also, network manager should act as a facilitator of trust, guaranteeing that mutual benefits are driven in the network. However, it can be argued how relevant it is to have such a large and diverse network as Likiliike. At the moment, members are not that interested in investing resources in networking or exchanging information between other actors. Motivation for development of inter-firm cooperation could be increased in smaller, more homogeneous networks, since development of cooperation would be easier and actors could get access to more useful information.

### 6.3. Limitations and future research

According to Hoang & Antonic (2003) entrepreneurial studies should be longitudinal. Due to limited resources, conducting a longitudinal study was not possible. Therefore, this study has not been able to provide insight on how an entrepreneurial network develops over time. However, if this study would be repeated in a few years, it could contribute to the scarce body of research on how entrepreneurial networks change and develop over time to suit the needs of a changing business world (Jack 2010: 133).

Furthermore, the nature of Likiliike imposes some challenges for the study. As previously established, Likiliike is hard to define from the network perspective. It has to be taken into account that entrepreneurs' personal networks consist of family, friends, colleagues, and everyone who is capable of contributing to the entrepreneurs' entrepreneurial goals (Johannisson 1987). Therefore, Likiliike members are only one part of the interviewees' personal network, and studying cooperation only in the context of Likiliike does not provide a holistic understanding of the interviewees' personal network as a whole. Thus, the external validity of this study is limited, since the case of the study is unique, and the results cannot be generalized to all entrepreneurial networks. However,

this study can be useful to other large and heterogeneous networks, such as other associations.

Another future research possibility would be to study information exchange more in detail in the context of entrepreneurial networks. A study concentrating solely on information exchange capability could be useful in order to be able to understand more thoroughly the dynamics of this complex network capability.

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## APPENDIX 1. Secondary sources

**Websites and Social Media:**

Likiliike website: [www.likiliike.fi](http://www.likiliike.fi)

Visit Rovaniemi website: [www.visitrovaniemi.fi](http://www.visitrovaniemi.fi)

Likiliike Facebook-page: <https://web.facebook.com/Likiliike/>

**Other documentation:**

PowerPoint-presentation: Local business community Likiliike (5/2018)

Likiliike flyer for local enterprises

Likiliike flyer: Hiltunen, Eveliina & Jutta Kämä (2017). Likiliikkeen tunnettuuden kar-toittaminen osana YAMK--restonomi opinnäytetyötä.

Decision of imposition of Likiliike manager

Lapin Kansa (2017). Likiliike on tunnettu palvelumerkki ja ilmiö [online]. Available from the Internet: <<https://www.lapinkansa.fi/kaupallinen-yhteistyö/likiliike-on-tunnettupalvelumerkki-ja-ilmio-nsedi0016366/>>.

**Other sources:**

Phone conversations with Likiliike manager in May 2018 and November 2018

E-mail correspondence with Likiliike manager between May 2018 and November 2018



## APPENDIX 2. List of interview questions

1. Number of employees?
2. How long has the company been a member in Likiliike?
3. When was the company founded?
4. Why did you decide to join Likiliike?
5. Did someone recommend Likiliike to you?
6. Have you familiarized yourself with new entrepreneurs through Likiliike?
7. Where have you met other Likiliike members?
8. Have participated in activities provided by Likiliike? Why/Why not?
9. Have you taken part in Likiliike Academy or in Likiliike product family planning division? Why/Why not?
10. Have you considered activities provided by Likiliike to be useful for your business?
11. Have you cooperated with other Likiliike members? Why/Why not?
12. Would you consider cooperation with other Likiliike members to be worthwhile for your business? Why/Why not?
13. Have you cooperated with your competitors in Likiliike?
14. Have you had any conflicts with Likiliike or with other Likiliike members?
15. Has Likiliike or other Likiliike members been useful for your business?
16. Has Likiliike affected your company's revenue?
17. Do you have some aspirations on how Likiliike should be developed?
18. Have you been satisfied with being a member in Likiliike?
19. Have you been satisfied with Likiliike manager?