NETWORK DEVELOPMENT PROCESS OF INTERNATIONAL NEW VENTURES IN INTERNET-ENABLED MARKETS: SERVICE ECOSYSTEMS APPROACH

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Lieto, October 2013

Valtteri Kaartemo

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1 INTRODUCTION

This dissertation aims to increase understanding on network development process in the context of international new ventures in Internet-enabled markets.

The necessity for research on this phenomenon is based on the practical and academic needs of today. Both small and larger companies rely on networks to operate their businesses. In a globalized world, these networks are more often international by nature, and companies are increasingly required to internationalize sooner. As young companies fight for survival, ecosystems begin evolving around these international new ventures (INVs). The situation raises new questions for scholars. The applicability of old theories is questioned, and new approaches must be developed.

In the following, I explain how my own interest in the phenomenon of network development process (NDP) in this particular context was aroused. This description signifies the motivation for the study (Chapter 1.1). In Chapter 1.2, the literature concerning the phenomenon is reviewed to identify the research gap. Eventually, more elaborated research questions (Chapter 1.3) are derived from these research gaps to serve the purpose of the study.

1.1 Motivation for the study

In mid-November 2008, only a couple of months before our wedding ceremony, I received two SMS messages from our airline carrier. I read the messages aloud to my fiancée. Our honeymoon flights to Vienna and back had been cancelled. We immediately began to assess other flights. When I recognized the challenges in finding alternative destinations for the cancelled flights, I thought of a business idea. I understood the need for a customized travel review site, which would enable 'the dream location for your needs' to be found. I began to develop the concept under the codename 'Matkauni'.

As I played with the idea, the greatest obstacle appeared to be creating ways to motivate travelers to review tourism destinations on a website with limited content, while there are plenty of data available on more developed sites, albeit with different foci. I continued developing plans, but soon realized that it was not sufficient to continually rewrite business plans. I needed to find a technologically competent person to help me execute the plan. He or she

would be required to create a beta version of the concept so that idea could be tested and iterated. It was no surprise to me that there were plenty of people capable of coding such a site, but it was another matter to convince them to get involved. Potential partners want to see some feedback from the market before they are ready to participate in a project. However, it was difficult to obtain positive feedback when I had nothing more to show than loosely structured ideas on PowerPoint slides. I needed more time to promote the idea, but I also had my doctoral dissertation to write. Eventually, I decided to postpone the startup project.

In January 2010, I received an email from my lacrosse teammate Dmitry Kanevsky, who was launching Body-Network.com, an online platform for tracking fitness and nutrition. He had decided to launch the service first in Finland, and needed a local business person to assist him with marketing. I listened to him, and agreed to get involved with the business planning process. Together with Joni Salminen, another student at Turku School of Economics, we tried to think of potential ways to create the market. We discussed how the initial idea might be turned into a compelling value proposition for customers. We studied similar platforms and, to some extent, potential customers. We aimed at identifying a niche service for which users would be willing to pay. Dmitry, his wife Tetiana, and colleagues from Ukraine and Russia put much effort into designing and coding a platform in which people could fill in their daily nutrition and fitness data. As a result, we developed a service that analyzed the relationship between daily nutritional intake, degree of fitness, and target weight. Within a few weeks, we were able to gather approximately one hundred users, and received feedback on how to develop the site further. To attract more users, we contacted the owner of the leading fitness portal in Finland. However, being happy with what he had developed on his own, he was not interested in collaborating with us. Therefore, we felt forced to employ more traditional online advertising to attract users. As users would post their results in social media, such as Facebook, they could drive traffic to the platform. Eventually, this never materialized. People did not share the results, and potential users did not find the site. In the summer of 2010, Dmitry and Tetiana decide to cancel the project. I continued to write my doctoral dissertation.

While conducting my doctoral studies, I learnt that I was not alone with the abovementioned problems. Other startups similarly struggle to find co-founders, and in building their customer base. I found plenty of evidence from various sources that building an ecosystem around an online service is not an easy task:

> *"90% of the time consumer Internet companies fail for one reason: Inability to acquire and retain a substantial number of users." Internet Entrepreneur, Keith Rabois at Quora, May 9th, 2010 (Rabois 2010)*

> *"Building community is hard. We fell into the 'build it and they will come' school of thought (although even when they came, we still weren't in good shape). Users didn't review because there was no enlightened self-interest for them to do so. Nobody wanted to edit our data for the same reason." The Chubby Team, ChubbyBrain, September 15th, 2010; @ChubbyBrain.com (Chubby Team 2010)*

The deeper I went into the subject area, the more I realized that the problem not only concerns an entrepreneur's management abilities and skills, the wider environment also seems to have an influence on startup failures:

> *"Our timing was terrible. We launched the paying version of our application in the fall of 2008 about 5 minutes before the economy collapsed. Very few companies were hiring. I got feedback on sales calls like this: 'That's a great product, really love it, but we won't be hiring for another 18 months or so. You have anything to help us fire people'?" Founder of Standout Jobs, Ben Yoskovitz, @instigatorblog, October 5th, 2010 (Yoskovitz 2010).*

I realize that it is necessary to contextualize my doctoral dissertation in the spatial and temporal environment. As such, this research mostly focuses on the period between 2010–2012. While, on the one hand, political and economic uncertainty characterize these years. For example, revolutionaries forced rulers from power in Tunisia, Egypt, Libya, and Yemen, in a set of events known as the Arab Spring. On the other hand, considerable success stories in business, particularly in technology and online sectors characterize the temporal context. For instance, Facebook's $100 billion IPO (i.e., initial public offering) and Apple's surge in the tablet and smart phone markets created a positive buzz for entrepreneurial activities in the industry. Reports indicate that approximately half of some countries' populations are engaged in online social networking (Violino 2011).

Spatially, this research mostly focuses on Finland, Europe, and the United States. Although necessary to acknowledge in a study on INVs, such geographical boundaries are not entirely definitive, as explained later in this research. Apart from the 'Occupy Wall Street' movement spreading to Europe, revolutionaries are not active on the European continent. Nevertheless, governments were shaking as a result of the European debt crisis. Despite the economic downturn increasing the sense of nationalism in several countries, the world remains open to international business. Moreover, regardless of

some politicians who wish to restrain information flow within the World Wide Web, the environment is practically borderless for online startups.

In Finland, Rovio and SuperCell rose suddenly to world fame with their Angry Birds, Clash of the Clans, and Hay Day franchised games. Meanwhile, profits of the country's previous flagship company, Nokia, turned red. The company decided to close the last remaining assembly lines in Finland, and Nokia's CEO Stephen Elop, shifted the focus from technology to ecosystems:

> *"The game has changed from a battle of devices to a war of ecosystems.… The emergence of ecosystems represents the broad convergence of the mobility, computing and services industries." CEO of Nokia, Stephen Elop, January 27th, 2011 (Delaney 2011)*

Ecosystems seem to be crucial to both startups and larger multinationals. In the evolving game, Nokia was struggling in the mobile phone market, and the company needed to layoff a large number of employees in Finland. Simultaneously, the startup scene in Finland was following the global boom and many former Nokia employees in Finland began to start up their own businesses (Johnson 2012).

Although Finland is acknowledged for its technological progress, it is thought by some that the national ecosystem is insufficient to build world-class products or services. Moreover, ecosystems are not only of interest to large, established companies. As startups are part of wider networks, they also have to rely on an international approach early in their development. Thus, my focus shifted from domestic to international networks:

> *"In Finland, with the near end of existence of Nokia and its ecosystem, we are not particularly an epicenter of anything beyond the mobile gaming. The winners are typically born close to dominant ecosystems where all the action and latest knowledge is … to find a big problem and understand customers, get out of Finland." Mika Marjalaakso @toughloveangel.com (Marjalaakso 2012)*

In addition to Angry Birds and other tablet games, the hype concerning other Internet-enabled services is characteristic of the research period. Various websites including blogs, forums, and virtual communities began to gain increasing importance in people's lives and the economy. In sum, I realized that there is a practical need for understanding the formation and evolution of ecosystems in the context of Internet-enabled markets.

1.2 Identifying the research gap

In this research, the process of network development in Internet-enabled markets focuses on the particular context of INVs, which refer to new ventures

that undertake entrepreneurial activities across national boundaries (cf. Jones et al. 2011). To understand how these ventures form their networks, the contemporary literature on the relevant fields is reviewed.

The phenomenon of startups operating internationally is not new. For more than 20 years, the internationalization processes of young firms have been studied and reported within the academia and business press under various labels, such as 'international new ventures' (McDougall 1989), 'global startups' (Mamis 1989), 'infant multinationals' (Lindqvist 1991), 'high technology startups' (Jolly et al. 1992), and 'born globals' (Rennie 1993). Collectively, this research stream is known as international entrepreneurship (IE). While the IE literature pays attention to the international business activities of small and more recently established entrepreneurial companies, IE has also expanded to entrepreneurial activities of more stabilized companies (Zahra & George 2002). Common to both streams of the literature is that FDI (i.e., foreign direct investment) theories and incremental internationalization process models have been criticized, and IE has been more sympathetic to research on networks in internationalization (Oviatt & McDougall 1994; Coviello & Munro 1995).

In the following, how NDP of INVs in Internet-enabled markets has been approached in the IE literature is reviewed. The review focuses on three main domains, namely on INVs, Internet-enabled markets, and NDP. The research focuses on the intersections of these domains, as represented in Figure 1. The intersections of these fields of the literature form the so-called 'domain literature' of the study.

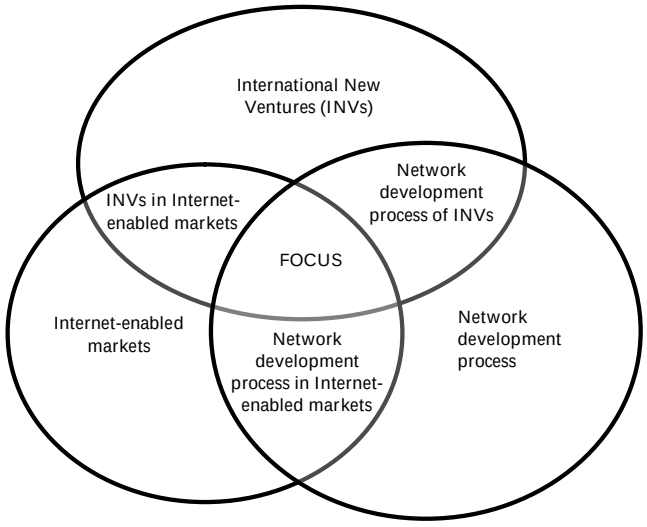

Figure 1 The literature fields under review

To identify the research gap, first I scrutinized more closely earlier categorizations in IE (Rialp et al. 2005; Jones & Nummela 2008; Coombs et al. 2009; Keupp & Gassmann 2009; Jones et al. 2011; Reuber & Fischer 2011; Peiris et al. 2012), which guided the establishment of review strategies for this study. Second, I identified the relevant IE literature on INVs, NDPs, and Internet-enabled markets. Third, I extended the literature review to more recent literature by modifying the approaches employed in previous reviews. As a result, the review provides information that is not available in earlier reviews on IE.

It was therefore possible to identify the relevant literature on 'networks & social capital' (Jones et al. 2011) and 'Internet-enabled markets' (Reuber & Fischer 2011) within IE. These reviews were also employed as the basis for developing the search methods and scope to identify the research gap. The selection of the final search methods and terms is shown in Appendix 1.

As a result of the literature search, there were 251 potential articles (i.e., 156 articles from the INV network literature; 95 articles on Internet-enabled markets) providing information on NDP of INVs in Internet-enabled markets. Of the 21 articles on networks and social capital identified by Jones et al. (2011), nine articles (i.e., Coviello & Munro 1997; Varis et al. 2005; Coviello 2006; Coviello & Cox 2006; Han 2006; Mort & Weerawardena 2006; Ruokonen et al. 2006; Wakkee 2006; Al-Laham & Souitaris 2008) focused in particular on the phenomenon of INV network development. Of these articles, Coviello and Cox (2006), and Ruokonen et al. (2006) explicitly focus on network development in the context of Internet-enabled markets. By building on the same empirical dataset as Coviello and Cox (2006), Coviello (2006) also studied Internet-based software companies, but does not refer to the Internet's role in INV network dynamics.

In addition, a complementary review of the literature in the third stage revealed eight articles of which three overlapped with findings from Jones et al. (2011). As a result, five more articles (Harris & Wheeler 2005; Loane & Bell 2006; Thistoll & Pauleen 2010; Bjørnåli & Aspelund 2012; Sigfusson & Harris 2012) that addressed INV network development were identified. Of these articles, only Sigfusson and Harris (2012) focus on Internet-enabled markets. Also, Chandra and Coviello (2010) draw examples from Internet-enabled markets, although the article is mostly based on conceptual development without explicit empirical evidence.

Based on the literature review of Reuber and Fischer (2011), 20 articles were analyzed, of which only three (i.e., Loane et al. 2004; Arenius et al. 2006; Chandra & Coviello 2010) discuss network formation of INVs. As previously mentioned, Chandra and Coviello's (2010) article is based on conceptual work. In addition, the most recent literature on Internet-enabled

markets was reviewed. Of the 75 reviewed articles, only Gabrielsson and Gabrielsson (2011) discuss NDP in the context of INVs. Overall, the three review stages resulted in the identification of six articles at the focal point of the literature review. These studies are described in Appendix 2.

As it was possible to identify only six articles in the focal area of the research domain, it can be posited that *there is a dearth of research on INV network development in Internet-enabled markets*. Even studies that address the topic do not, in general, focus on NDP but discuss the role of the Internet in internationalization (Loane et al. 2004), network management (Ruokonen et al. 2006), resource dynamics (Coviello & Cox 2006), resource distribution (Arenius et al. 2006; Gabrielsson & Gabrielsson 2011), and dyadic relationship formation (Sigfusson & Harris 2012).

Despite some interest being paid to the internationalization of Internet-enabled entrepreneurial firms (Loane et al. 2004; Rothaermel et al. 2006, Etemad et al. 2010), typically these studies do not focus on NDP per se. Instead, IE studies on Internet-enabled markets mostly focus on employing the Internet as a tool for marketing or collecting information (e.g., Lituchy & Rail 2000; Loane 2006; Moen et al. 2008). Similarly, the review by Reuber and Fischer (2011) focuses on the Internet as a resource for IE. Although researchers have realized that the rise of social media has transformed the business environment (Cavusgil & Cavusgil 2012), discussion on the influence of the Internet as a context for internationalization remains modest (Pezderka & Sinkovics 2011). This is somewhat of a surprise considering the rapid internationalization of these companies, and the acknowledged potential role of the Internet as an origin of new resources and business models for international entrepreneurs (Anwar & Tariq 2011; Hassouneh & Brengman 2011; Reuber & Fischer 2011; Sigfusson & Chetty 2012).

Studies on the management and marketing literature alike discuss how Internet or social media can be employed as a managerial tool in various business operations, such as communications (Brown 2009; Kaplan & Haenlein 2009; Mangold & Faulds 2009; Kozinets et al. 2010; Rybalko & Seltzer 2010), social networking (Sigfusson & Chetty 2013), market research (Cooke & Buckley 2008; Casteleyn et al. 2009; Kaplan & Haenlein 2009), or human resources management (Kaplan & Haenlein 2009; Caers & Castelyns 2011). Recently, scholars have also become more interested in opportunities enabled by the Internet and social media for service development, innovation, and entrepreneurship (Füller et al. 2008; Chandra & Leenders 2012; Sigala 2012). Common to this literature is the treatment of websites as pre-existing platforms upon which managers and users act. In other words, these studies do not provide understanding on how networks form around new ventures in Internet-enabled markets. Although this might not be relevant to managers in

traditional industries, it certainly is a problem encountered by entrepreneurs in the startup phase. Important exceptions are studies on information systems that concentrate on the reasons for users to engage in virtual worlds (e.g., Mäntymäki 2011), and a study on IE by Sigfusson and Chetty (2012) that focuses on the evolution of social networks among international entrepreneurs in social media.

The literature review also indicates that *there is a shortage of research on INV NDP in general*. Although networks have been part of the INV literature practically from the inception of IE (Oviatt & McDougall 1994; Coviello & Munro 1995), we know only a little concerning how these networks are formed, how they are managed, and how they evolve. However, there is an abundance of studies that empirically test the importance of networks on the performance of INV (cf. Peiris et al. 2012). IE scholars have not taken the often repeated (Johanson & Vahlne 2003; Loane & Bell 2006; Elango & Pattnaik 2007) 'real research question' concerning networks into account: "How do small firms develop and maintain those relationships that facilitate internationalization?"

Interest in network processes has, in fact, only recently become a thematic area in the IE literature (cf. Jones et al. 2011). As a result, only one conceptual article on the field has been published (Chandra & Coviello 2010). In an interesting empirical study, NDP is described quantitatively with the help of social network analysis by Coviello (2006). As a result of her analysis, Coviello (2006) proposes that the range of INV networks increases with decreasing density over time.

Regardless of Coviello's (2006) interest and propositions on time-sensitive development of network development, *longitudinal research in INV network development research remains scarce*. While studies on the network development of INVs have collected process data[1], this does not mean that the variance-based approach is missing in IE. Instead, the majority of neglected studies in the INV network school are based on the variance approach as they employ network as an anteceding or moderating variable in measuring internationalization. These studies follow the classic IE process studies that perceive network relationships as tools for exploiting international market opportunities (Coviello & Munro 1995/1997). The category of INV network school also includes process studies that discuss the role of networks as a moderating factor for opportunity development (Chandra et al. 2012), learning (Kauppinen & Juho 2012), and internationalization process in general (Mort & Weerawardena 2006).

[1] Process data refers to a dataset that spans multiple points in time (Welch & Paavilainen-Mäntymäki 2013).

Although the authors of the selected articles have collected process data, they have mostly collected the data retrospectively. There is a clear need for longitudinal research settings and real-time data collection. An interesting exception in this respect is the study by Al-Laham and Souitaris (2008) in which historical data were collected longitudinally from yearbooks, news magazines, and patent records. In addition, Arenius et al. (2006) drew findings from a longitudinal single case study in their research on the liability of foreignness in Internet-enabled markets. Although they focus on the speed of internationalization, the case description provides interesting insight on network formation in different phases of international activities. Outside the literature review[2], one can mention the study by Mainela et al. (2011) who collected real-time data on the network process of an INV in the software industry by interviewing key informants from the network.

Despite the scholars who share an interest in INV network development having collected process data, in general, they have not utilized process data in theorization. In other words, *there is a lack of process theorization[3] in INV NDP research*. For instance, Al-Laham and Souitaris (2008) do not follow the events and Arenius et al. (2006) merely divide events into phases without further incorporating the process into their proposed model on how employing the Internet as a sales channel influences the speed of internationalization. Findings relating to the lack of process theorization are similar to those of Welch and Paavilainen-Mäntymäki (2013) who noted that studies on internationalization processes often neglect processual approaches. As an exception, Han (2006) combines variance and process theorization approaches. In contrast to most studies that address time linearly, Han (2006), employing the process approach, visualizes the importance of past ties on the new generation of ties. Loane and Bell (2006, 481) similarly take a process theoretical approach in finding out that "'Strong' ties, such as financial support from family and close friends or management team formations, are evident in the startup phase, but that 'weak' ties are more instrumental in international knowledge acquisition and development." However, more process approaches are needed as entrepreneurial internationalization relates to the time-sensitive and self-reinforcing cycle of relationships (Jones & Coviello 2005). Similarly, Sigfusson and Harris (2012, 335) suggest that analysis of evolving relationships is limited by a static approach to the data.

A striking feature of the domain literature is that *the network data are mostly collected from focal firms*. This is interesting as network development

[2] Articles published in the Journal of Small Business and Enterprise Development are not available via Business Source Complete (EBSCO).

[3] There are multiple strategies for theorizing from process data (Langley 1999).

can appear remarkably different when multiple sources of data are utilized. For instance, Thistoll and Pauleen (2010) provide thought-provoking information from actors beyond the focal firm. The data in their study indicate that other actors' perceptions on a network can differ from the focal firm's perspective. Interestingly, the bias towards focal firms had already been noted in the early years of the INV network literature: "Future research should incorporate the perspectives of multiple players in the network rather than that of a just single firm." (Coviello & Munro 1995, 59). In particular, the customer perspective on network development has been abandoned. Considering that customers might easily outnumber other partners, this is surprising (e.g., Wakkee 2006). Two recent exceptions are worth mentioning here. First, Chandra and Coviello (2010, 230) shift the focus from focal firms to 'consumers as international entrepreneurs': "individual consumers and online communities of consumers who identify, evaluate and exploit opportunities across national borders to create and distribute products for both financial and non-financial reasons." Second, Thistoll and Pauleen (2010, 47) regard customers as 'brokers of relationships and opportunities'.

In sum, the findings of this review indicate a lack of knowledge on how and why networks are formed, and how they evolve in the context of INVs in Internet-enabled markets. As such, the outcome of the review is not completely novel as similar concerns have been put forward in the IE literature in general (e.g., Coviello 2005; Loane & Bell 2006; Al-Laham & Souitaris 2008; Keupp & Gassmann 2009; McAuley 2010). As indicated by Harris and Wheeler (2005, 204), a number of process-specific questions remain unanswered: "How do the roles develop over time? What are the features of the many relationships that do not develop, and why do they not develop? What are the influences of different types of personalities in this process?" In fact, there is a proposed change from planned networking to relationship evolution strategies (Harris & Wheeler 2005). Interestingly, this suggestion is in line with Sigfusson and Harris (2012), who note that international entrepreneurs do not believe that they form networks, although some relationships are formed to help internationalization. As Coviello (2006) discusses, networks seem to be both intentionally managed and path-dependent, which means that focal firms simultaneously can be both reactive and proactive.

As a result of this discussion and the key findings of the literature review, it is proposed that *NDP of INVs in Internet-enabled markets needs to be studied as a multi-level and temporal process*. In other words, there is demand for holistic understanding on how network influences decision making of various actors, and how actions influence network formation over time. Despite examples of such approaches, researchers typically address networks as independent variables when studying how network relationships influence

internationalization patterns (e.g., Sasi & Arenius 2008) and performance (e.g., Zhou et al. 2007; Han 2008). As the majority of INV network studies address networks as independent variables (cf. Keupp & Gassmann 2009), there is no clear understanding on how networks evolve. Therefore, a need exists to combine social network studies and business network research (Holmlund & Kock 1998), which together enable research on the co-evolution (Zettinig & Benson-Rea 2008) of micro-level dyadic interactions and macro-level network structure (Slotte-Kock & Coviello 2010).

For instance, Sigfusson and Harris (2012) discuss different paths in relationship formation. They study relationship formation of international entrepreneurs over time during their initial steps towards internationalization. Their research findings emphasize that many international entrepreneurs employ online networks to build and maintain relationships with partners who are embedded in important networks, with the hope of building, over time, closer relationship with these contacts.

Methodologically, criticism focuses on the *lack of dynamic, multi-level studies on network development*. One needs to observe how a startup "relates to, interacts with, and adapts to other businesses with which the new venture becomes involved." (Ciabuschi et al. 2012, 227). Partners are required to co-act, adapt, and make resources available. This can also shed new understanding on the extent to which actors can control NDP, and what motivates actors to participate in the process. The focus shifts from an INV to the network, and multiple actors in the network.

It remains unclear whether an entrepreneur can control the network process or whether other actors drive the changes, to what extent are partners selected, and to what extent partners join the network regardless of the focal company's decisions. Research on the selected domain has, in general, treated NDP as something managed alongside a company's linear and predictable internationalization process or, alternatively, as an entirely separate process, independent of international activities.

IE researchers typically consider network development can be intentionally managed by focal companies (Hite & Hesterly 2001; Coviello 2006), as they explore, evaluate, and select business partners (Larson & Starr 1993; Varis et al. 2005). For instance, Ruokonen et al. (2006) note that networking is not concerned with selecting a partner but with finding one within a reasonable time frame. Entrepreneurs aim at guiding their partners to make decisions that are beneficial to the entrepreneurs (Ruokonen et al. 2006). However, control over a network varies, with entrepreneurs being involved in managing a network rather than management of a network (Ritter et al. 2004). By considering that networks cannot be managed, Slotte-Kock and Coviello (2010) neglect the idea that companies have ultimate control of network formation. In

particular, the research findings of Chandra and Coviello (2010) suggest that consumers can play an important role in NDP, as they perform their own entrepreneurial activities in the context of Internet-enabled markets. In addition, the institutional environment constrains the resource pool of international entrepreneurs. Although the context might thus limit an INV's control over network development, the entrepreneurs might also change social structures through their activities (Desa 2012).

Although entrepreneurs do not have control over network formation, this does not mean that network formation is necessarily a random process. Rather, there might be predictable exchange patterns that stem from a company's need for action in its context (Larson 1991). Larson's (1991) approach highlights that networks are not pre-existing but created as a result of interactions (Coviello 2006; Loane & Bell 2006) between actors collaborating to access resources (Chetty & Wilson 2003), or when actors anticipate that their situations will improve as a result of interaction (Casson 1997). Although pioneering work on network dynamics has been conducted, *there is no clear understanding on what motivates actors to form and join networks*.

To date, some IE studies have focused on economic ties in explaining the motives for network formation, whereas others have indicated the importance of social ties. Economic ties refer to business relationships between a focal company and its partners. For instance, Ruokonen et al. (2006) suggest that to attract actors into a network, a focal company needs a revenue logic that is rewarding from the perspective of potential partners. Social ties are typically divided between strong and weak ties (Granovetter 1973). For instance, Presutti et al. (2007) and Kiss and Danis (2010) theorize that weak international ties are beneficial in the internationalization process. The presence of weak ties suggests that there are more than one network of importance to internationalizing new ventures; as such, INVs are linked to multiple networks. These networks are not merely formed over the internationalization process as they can also exist prior to the birth of a new venture (Evers & O'Gorman 2011). In sum, studies in the domain literature do not thoroughly discuss the issue of networking motives. Typically, reviewed articles focus on the consequences of networking on the internationalization process from the perspective of the focal firm (e.g., Coviello & Munro 1997; Al-Laham & Souitaris 2008). However, over the years, it has become clearer that networks relate to both economic and social ties, motives for joining a network might be either utilitarian or altruistic, and that networking can be driven by both a focal entrepreneur and its partners (Chandra & Coviello 2010). Moreover, it has been acknowledged that the role of an actor in the network can influence its motives for networking (Thistoll & Pauleen 2010). In addition to variance based on roles, it has been acknowledged that there can be a temporal

dimension in the motives for networking (Coviello 2006; Karra et al. 2006). Altogether, these research findings suggest a multi-level and temporal approach to theorization on networking motives.

1.3 Research questions and structure of the study

In Chapters 1.1 and 1.2, the need for better understanding on NDP of INVs in Internet-enabled markets is justified by both practical and theoretical arguments. It is emphasized that whereas establishing a new venture in Internet-enabled markets is relatively easy, in practice, entrepreneurs face challenges in developing and maintaining suitable networks: finding cofounders, building the customer base, and establishing other partnerships. First, this requires better understanding on the formation and evolution of INV networks in the context of Internet-enabled markets. Second, the situation raises questions concerning motives for joining networks and on the possibility of having control over NDP. However, the extant literature on INVs in Internet-enabled markets poorly answers these questions. To fill this gap, this dissertation aims at increasing understanding on NDP in the context of INVs in Internet-enabled markets. Consequently, the following research question is formulated:

- *RQ1: How and why does the network of an international new venture develop in the context of Internet-enabled markets?*

The main research question is expected to inform on the mechanism of NDP, and close the identified knowledge gap in the domain literature. Here, process is perceived as a progression 1) between and across multiple levels (Ford & Sullivan 2008) and 2) over time (Van de Ven 1992). Regarding the first research question (RQ1), the study identifies the multi-level forces influencing NDP across a network. Multi-level forces refer to both individual actions and higher level social context, namely the startup scene, Internet-enabled markets, and the international business system. The study identifies multiple roles enacted by various actors in these social structures and within the network.

As such, the research findings provide a better understanding on the importance of the wider social context in shaping the behaviors of actors and a network. Moreover, the study extends our knowledge on network development as a temporal process by revealing mechanisms influencing network development over time. To be more precise, the research findings reveal the relationship between multi-level network development, embedded social roles, and temporal dimensions. The study discusses the influence of role-enacting actors in shaping NDP. In addition to linking the enactment of social roles to particular stages of a new venture life cycle, process theoretical lenses employed in

the analysis reveal other forces that influence NDP. In this sense, the study provides a novel perspective on NDP in IE. These findings are synthesized in a framework for studying NDP in the context of Internet-enabled markets. The study emphasizes the role of the startup scene, Internet-enabled markets, and the international business system. On the basis of the developed framework, the study extensively discusses the research implications. For instance, the study informs on NDP from multiple process theoretical perspectives, and discusses the applicability of process theories in studying NDP of INVs. Altogether, the research is expected to contribute to the INV network formation literature by providing contextual information on NDP in Internet-enabled markets, by conceptualizing NDP as a co-creation of value and multiple role constellations, and by modeling co-evolving NDP with related research implications.

Whereas the model on the influence of forces on NDP mostly addresses the 'how' question, the empirical data also reveal insight on the 'why' question by discussing motives for joining a network (RQ2), and issues regarding network management (RQ3):

- *RQ2: How and why do motives for engaging in network development process change across a network and over time?*
- *RQ3: How and why does control over network development process change across a network and over time?*

Here, the questions on motives and control are approached in terms of both temporal changes and across multiple levels. As such, the research questions are formulated to provide a unique approach to these important aspects of NDP. Although the two sub-questions are important, the study puts more emphasis on the first research question.

The literature on the selected research domain rarely focuses on wider networks. Even studies that focus on networks address a network either as a dependent or an independent variable. Therefore, although the research is positioned in the network formation literature on IE, this does not mean that the study follows the theoretical framework developed in the domain literature. Instead, the so-called service ecosystems approach is developed to examine the development of an INV network as both multi-level and temporal process in the context of Internet-enabled markets. The service ecosystems approach combines insight from service-dominant (S-D) logic and its various intellectual roots (Chapter 2.1), and from process theoretical approaches (Chapter 2.2).

S-D logic (Vargo & Lusch 2004; 2008a; 2011) provides a theoretical lens through which network formation can be studied in a manner that solves many identified problems in the selected domain literature. It is acknowledged here that the idea of employing S-D logic as a theoretical frame is not completely

novel to IE (e.g., Chandra & Coviello 2010; Slotte-Kock & Coviello 2010). Nevertheless, S-D logic has not been previously utilized in understanding INVs' NDP. However, it is considered that the service ecosystems approach has potential to contribute to the domain literature by shifting the focus from a single firm and its own resource base to a wider, loosely structured network of actors. Actors joining the network are not simply chosen by the focal firm but are motivated by service exchange and value co-creation, as explained in the theoretical part of the study. In this sense, the service ecosystems approach neither theorizes directly on the motives of engaging in NDP nor control-related questions. Nonetheless, S-D logic helps in questioning previous assumptions on control and motive in NDP. First, S-D logic provides the necessary concepts to understand multi-level NDP, namely the concepts of service exchange (2.1.2), resource integration (2.1.3), and value co-creation (2.1.4). The importance of these concepts is linked to NDP (Chapter 2.1.5), as discussed in Chapter 2.1.6. Moreover, as later shown, by synthesizing S-D logic with process theoretical approaches (Chapter 2.3), it is possible to study NDP not only across multiple levels but over time, which is unique to the domain literature. Thereafter, it is possible to make theoretical propositions that potentially guide future research efforts in the domain literature.

It is acknowledged that alternative theoretical approaches might have similarly been employed. For instance, business network and social network approaches have provided fascinating discussions on network evolution. However, previous attempts to employ the business network approach in IE have resulted in studies with a lack of interest in the social context, and studies building on social network analysis have been criticized for not capturing underlying mechanisms of network change (cf. Slotte-Kock & Coviello 2010). In turn, S-D logic enables combining business network and social network approaches.

Here, S-D logic is built on the key concepts of service exchange, resource integration, value co-creation, and NDP. The operationalization table (Table 1) indicates how the theoretical framework building blocks are suitable for overcoming limitations of the domain literature.

In Chapter 3, the ontological, epistemological, and methodological underpinnings of the dissertation are discussed. I combine the philosophical background to the purpose of the study and back to the theoretical framework of the study. Moreover, the most applicable research methods for the selected philosophical background are described. In other words, I explain why qualitative, longitudinal case research is the best method to study the phenomenon at hand. I justify the choice from the basis of research purpose, and theoretical and philosophical backgrounds. In particular, I describe how the research process progresses in practice as data are collected and analyzed. I explain the

decisions made over the research process, and discuss how different methods were employed during different phases of empirical data collection and analysis. These choices are then discussed in terms of trustworthiness.

Table 1 Operationalization table

	Service ecosystems approach	**Process theoretical approaches**	**Empirical data**	**Research implications**
Process (RQ1)	NDP is a multi-level process that emerges from micro-level service exchange between resource-integrating actors which co-create value.	Process can be analyzed over time and across levels; various process theoretical approaches have different perspectives on network development.	Data are collected and analyzed over time and across levels from multiple informants.	NDP follows a morphogenetic cycle that is influenced by both micro-level interactions and higher-level structures over time.
Motives (RQ2)	An actor engages in service exchange process to improve his/her/its viability in an environment.	Different motives cause tensions in NDP.	Narrative approach to motives for service exchange, resource integration, and value co-creation to understand the influence of the wider context.	Identifying motives for engaging in NDP requires understanding on both micro-level interaction and the wider context.
Control (RQ3)	Firms are only able to integrate resources and to propose value, whereas value and networks alike are always co-created in a wider social context.	Various process theoretical approaches perceive differently questions on control.	Data collected on anticipated changes to analyze changes occurring in the network.	NDP can be simultaneously perceived as a result of both planned networking and an emergent form of unplanned evolution.

Empirical findings are presented in Chapter 4, which I begin with a narrative description of the case network. Subsequently, network development is analyzed as a multi-level and temporal process. Then, the research findings are reflected against research questions, and propositions are made for further theoretical development.

First, references are made to context-specific mechanisms on how and why the case network develops in the manner described in the narrative. The study emphasizes the importance of selected structures; namely, the startup scene, Internet-enabled markets, and the international business system. Moreover, the research findings indicate endogenous roles enacted in the case network. The identification of role enactment is employed to describe and explain structures that constrain and enable service exchange between resource-integrating actors. The network process is reflected from the perspective of various process theoretical approaches. Then, these process theoretical approaches are reflected against a suggested morphogenetic model of NDP.

Second, I focus on research question RQ2 regarding motives for forming and joining networks. The discussion on motives is approached from both multi-level and temporal perspectives. I then provide theoretical propositions on understanding how motives can vary when the focus is oscillated between levels and over time.

Third, I elaborate the research findings from the perspective of research question RQ3, and discuss how control can be perceived based on empirical evidence. By building on relevant theoretical discussion, I present theoretical propositions on how control of NDP can be perceived differently from various multi-level and temporal dimensions.

As a result, the study is expected to contribute to the domain literature by showing how a co-evolving network is influenced by both micro-level interactions and higher-level structures. The research shows how NDP can be perceived as a result of both planned networking and an emergent form of unplanned evolution. Propositions are put forward for motives and control in terms of multiple levels and temporal dimensions.

The research findings are concluded in Chapter 5. I discuss how the research findings can contribute to the domain literature, what kinds of practical implication these results might have, and limitations of the study. Here, I emphasize that the presented theoretical ideas do not aim to be predictive. Rather, I show how to describe and explain NDP in a particular context.

2 THEORETICAL FRAMEWORK FOR STUDYING THE PROCESS OF NETWORK DEVELOPMENT

2.1 Service-dominant logic's approach to network development process

Service-dominant (S-D) logic combines insight from not only the business network approach but services marketing, resource-advantage theory, and fields such as systems thinking, which together provide a wider scope for understanding network development process (NDP). In the following, I examine more closely S-D logic's conceptualization of service exchange, resource integration, and value co-creation, as these key concepts are the basis of understanding network development from the service ecosystems approach. In brief, service exchange describes the interaction between two actors. Resource integration refers to a wider perspective on service exchange. Lastly, value co-creation refers to contextual creation and determination of value. Networks as service (eco)systems are conceptualized as emergent forms of service exchange, resource integration, and value co-creation. These concepts also refer to motives, as actors seek viability in the environment. However, all required resources for viability are not necessarily in the hands of an actor, and a focal company might not always control NDP. In this sense, the following chapters on the service ecosystems approach to NDP provide a novel perspective on the research questions of this study.

2.1.1 Introduction to service-dominant logic

S-D logic first appeared in the field of marketing, when Vargo and Lusch (2004) published a seminal article in the Journal of Marketing that challenged the contemporary paradigmatic perspective of marketing on transactions, tangible resources, and embedded value. Vargo and Lusch (2004, 2) referred to this perspective as 'goods-dominant'. As an alternative to the goods-dominant perspective, they built on the insight developed in various schools of marketing such as market orientation, services marketing, relationship marketing, quality management, supply chain management, resource management, and network analysis. Individually, these schools had challenged some of the prevailing features of the goods-dominant perspective. Vargo and Lusch

(2004) unified insight from this diverse body of literature in building the foundational premises of S-D logic. Later, the foundational premises were slightly modified and two further premises added (Vargo & Lusch 2006/2008a). The current set of ten foundational premises is shown in Table 2.

Table 2 Foundational premises of service-dominant logic (Vargo & Lusch 2008a, 7)

No.	Premise
FP1	Service is the fundamental basis of exchange.
FP2	Indirect exchange masks the fundamental basis of exchange.
FP3	Goods are a distribution mechanism for service provision.
FP4	Operant resources are the fundamental source of competitive advantage.
FP5	All economies are service economies.
FP6	The customer is always a co-creator of value.
FP7	An enterprise cannot deliver value, but only offer value propositions.
FP8	A service-centered perspective is inherently customer oriented and relational.
FP9	All social and economic actors are resource integrators.
FP10	Value is always uniquely and phenomenologically determined by the beneficiary.

Over the past decade, ideas of S-D logic have been cited by hundreds of scholars who have further contributed to the evolution of the research stream. This also encouraged Vargo and Lusch to re-examine their original ideas. Although the set of foundational premises have been slightly modified over time, the fundamental criticism against goods-dominant logic has remained unchanged. However, over the past decade, the alternative approach has become more focused on the nature of exchange, resource integration, and value co-creation.

Based on the co-citation analysis[4] of S-D logic, it is possible to identify the most prolific authors who form the intellectual roots of S-D logic, which has evolved since Vargo and Lusch's seminal article of 2004. Figure 2 shows the historical roots of the S-D logic literature published between 2004–2012.

[4] Co-citation analysis is based on the references from 169 scientific articles published on S-D logic in 2004–2012. The articles were found from the ISI World of Science database and analyzed by employing CiteSpace. More detailed description of the co-citation analysis is provided in Appendix 3.

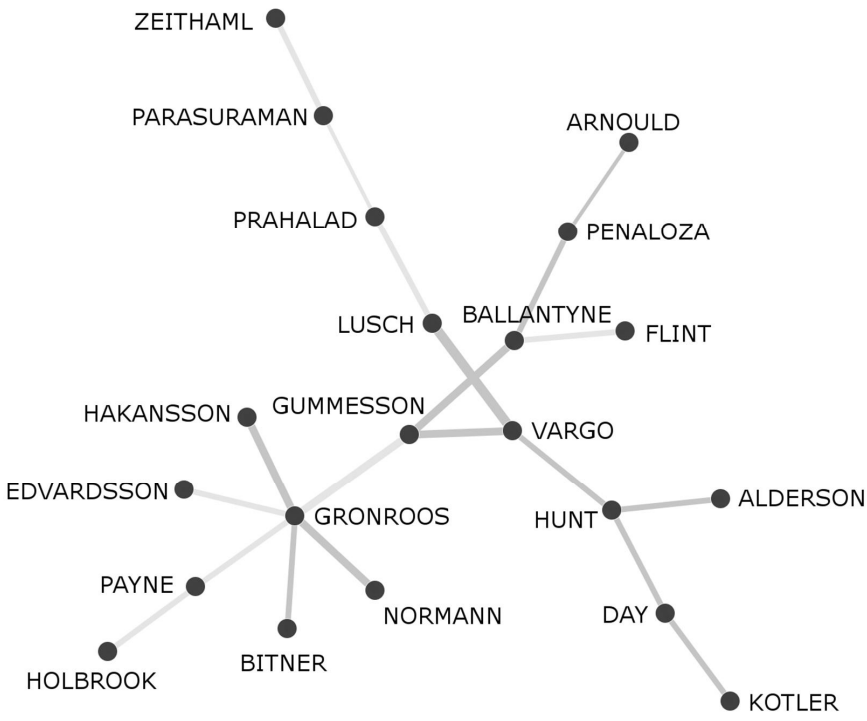

Figure 2 Intellectual roots of service-dominant logic by most cited authors between 2004–2012

First, S-D logic builds on services marketing, which challenged marketing management's focus on goods. Scholars such as Zeithaml and Parasuraman (e.g., Parasuraman et al. 1985; Zeithaml et al. 1985) introduced, among other services' marketing scholars in the 1970s and 1980s, so-called IHIP characteristics of services to distinguish them from goods. As such, services were conceptualized as intangible, heterogeneous, inseparable from service delivery, and perishable. As a result, previous models of marketing were considered unsuitable to the context of services. The special perspective on services shifted the attention from a mere transaction of goods to use situations, emphasizing the surrounding servicescape in the perception on service quality (Bitner 1992; Edvardsson 1992). This helped scholars, such as Kotler (e.g., Achrol & Kotler 1999), to pay attention to interaction and networks in value creation (cf. Vargo & Lusch 2006). In this respect, the contribution by the Nordic school of services (i.e., relationship) marketing (e.g., Grönroos 1990; Gummesson 1994) has been of particular importance (cf. Lusch & Vargo 2006) to the development of S-D logic. In comparison to other services' marketing scholars, the Nordic school highlights the importance of interaction,

relationships, and networks surrounding service exchange. More particularly, they focus on the active role of the customer in production of value in interaction with the service provider.

Second, S-D logic has moved further away from the dichotomy between goods and services to the perspective that does not distinguish services from goods but instead focuses on the nature of value creation. Thus, they build more on the insight by Prahalad (e.g., Prahalad & Ramaswamy 2004) and Normann (e.g., Normann & Ramirez 1993). The importance of Normann has been particularly emphasized in shifting the conceptualization of value from an offering to process, and in shifting the focus from the firm to the customer as a co-creator of value (cf. Michel et al. 2008). Similarly, Holbrook (1994) has been influential in terms of shifting the conceptualization of value to the customer perspective (cf. Lusch & Vargo 2006).

Third, in contrast to traditional services marketing, S-D logic focuses more on resources. Scholars, such as Day (1994) and Hunt (e.g., Hunt & Morgan 1996), who paid attention to competences and capabilities as resources in marketing, have been of crucial importance to S-D logic. Arnould (2008) has in turn been influential in raising awareness that all economic and social entities are resource integrators. This eventually led to the addition of the ninth fundamental premise (FP9) of S-D logic (Vargo & Lusch 2006). In addition, Peñaloza's (e.g., Peñaloza & Venkatesh 2006) insight helped to modify the tenth fundamental premise (FP10) emphasizing the phenomenological and contextual nature of value (Vargo & Lusch 2008a). Similarly, the references to Ballantyne (e.g., Ballantyne & Varey 2006), Flint (e.g., Flint 2006) and Payne (e.g., Payne et al. 2008) indicate that S-D logic is sympathetic to the perspective that networks develop as a result of communication between all network participants over time.

In sum, the perspective on the importance of interaction, relations, resource integration, and value co-creation has brought S-D logic closer to the network approach. The network approach or 'many-to-many marketing' is characteristic of Gummesson's (2006a) perspective on services marketing. Also, the importance of the business network approach by Håkansson (e.g., Håkansson & Ford 2002) and the IMP Group has been influential to the development of S-D logic (cf. Vargo & Lusch 2011). This is understandable, as the IMP Group's focus on actors, resources, and activities shares a number of fundamental aspects with resource-advantage theory (Hunt 2013), an intellectual root of S-D logic. As noted by Hunt (2013), the convergence of the IMP Group's approach and resource-advantage theory resembles the approach in Aldersonian marketing. This is yet another interesting link showing convergence of the diverse set of the S-D logic literature streams, which has been accused of merely 're-inventing Wroe' (Wooliscroft 2008), referring to the

close connection between S-D logic's foundational premises and Alderson's key concepts. Interestingly, Ford (2011, 231–232) also has studied the origins of S-D logic and the IMP Group, and emphasized the connection with Alderson (e.g., Alderson 1965).

The link to Aldersonian marketing is also crucial in terms of the focus shifting from the network approach to systems thinking. Rather than merely following the IMP Group's conceptualization of business networks, the service ecosystems approach of S-D logic builds more closely on Holbrook's (2003) interest in complexity and emergence (cf. Wieland et al. 2012). This is evident in the definition of service ecosystem (Vargo and Akaka (2012, 7): "Service ecosystems are relatively self-contained, self-adjusting systems of resource integrating actors connected by shared institutional logics and mutual value creation through service exchange."

Based on the co-citation analysis, it is possible to trace the intellectual roots of S-D logic and the service ecosystems approach, by indicating prolific authors with various contributions to 1) service exchange, 2) resource integration, and 3) value co-creation. To a large extent, the service ecosystems approach is constructed from these building blocks. In fact, when S-D logic was introduced by Vargo and Lusch (2004), service systems were not even explicitly mentioned. Vargo and Lusch (2006) later admitted that the interactive and networked nature of value creation and exchange had remained implicit. Vargo and Lusch (2004, 9) did however cite Normann and Ramirez (1993) while articulating that a 'value-creating system' is the key to 'the only true source of competitive advantage'. In the concluding section of their seminal article, Vargo and Lusch (2004, 15) describe how they perceived the ongoing paradigmatic change in marketing: "Science has moved from a focus on mechanics to one on dynamics, evolutionary development, and the emergence of complex adaptive systems." This kind of complex adaptive behavior is characteristic of S-D logic (Vargo & Morgan 2005). However, the link between S-D logic and the emergence of complex adaptive systems is not self-evident. Therefore, service exchange, resource integration, and value co-creation are more closely examined in the following chapters.

2.1.2 Service exchange

In S-D logic, service exchange is considered to be an episode or an event in resource integration practices of actors aiming to improve their viability in an environment. This is crucial to understanding the role of service exchange as a constituent of service ecosystems. First, however, it is necessary to investigate

service and exchange from the perspective of S-D logic, and reflect these perspectives in the context of INVs in Internet-enabled markets.

S-D logic's conceptualization of service exchange can be understood by examining more closely the first three foundational premises:

- FP1: Service is the fundamental basis of exchange.
- FP2: Indirect exchange masks the fundamental basis of exchange.
- FP3: Goods are a distribution mechanism for service provision.

First, the focus of exchange shifts from goods to the application of resources, which is service. Service, in turn, is defined in S-D logic as "the application of specialized competences (i.e., operant resources − knowledge and skills), through deeds, processes, and performances for the benefit of another entity or the entity itself." (Vargo & Lusch 2008b, 26). Here, it is important to note that service is not considered a mere 'non-good', the way it is conceptualized in traditional services marketing (Baron et al. 2013). In fact, Vargo and Lusch (2008b) distinguish between service as a process of doing something beneficial and services (plural) as units of immaterial goods.

Vargo and Lusch (2008a) claim that service requires complex combinations of resources, including goods. In this sense, goods remain an important aspect of value creation process in S-D logic. However, it is highlighted that consumers and companies alike are not interested in receiving goods in exchange. In other words, goods are not valuable per se. Instead, they become part of value creation process only through the service they render (Penrose 1959/1995, 24–25).

As service is conceptualized as a process of value creation rather than as a unit of exchange, the conceptualization of value also requires a shift from value-in-exchange to value-in-use. With the conventional focus on value-in-exchange, it is considered that a seller can control the price, and buyers in the market are just price-takers. Under these assumptions, marketing managers control the market by varying price, product, promotion, and place attributes. The paradigmatic marketing management perspective thus portrays value as something created by organizations for customers regardless of their customers' activities and efforts (Peters et al. 2009). Whereas the marketing management literature or goods-dominant logic has focused on value-in-exchange, S-D logic highlights the importance of value-in-use. In other words, value is not simply created in a company and then distributed to its customer (Kotler 1972) but created in the use process of the customer (Strandvik et al. 2012). Thus, it is acknowledged that value of resources exchanged is dynamic and emerges from an actor's search for goals and means (Ciabuschi et al. 2012).

The shift from value-in-exchange to value-in-use can be regarded as part of a wider paradigmatic change in marketing from the era of utility creation and value-adding chains (i.e., 'exchange paradigm') to customer orientation and

value propositions (i.e., 'value paradigm') (Sheth & Uslay 2007; Lusch & Webster 2011). Whereas the exchange paradigm focuses on value-in-exchange (i.e., between buyers and sellers) in discrete interactions at the cost of de-emphasizing other types of value created, the value paradigm perceives value as both subjectively perceived (Vargo & Lusch 2008a) and co-created in the process of use situations by multiple stakeholders (Vargo & Lusch 2011). In this sense, S-D logic is clearly closer to the value creation paradigm. However, S-D logic shares some important aspects with the exchange school of marketing and it must be remembered that, although S-D logic emphasizes the importance of value creation, exchange is perceived as a crucial event in the process of value creation. As such, the perspective of the exchange school of marketing should not only be limited to perspectives on exchange of values (Kotler 1972). Instead, closer consideration can be given to more interesting questions raised within the exchange school of marketing, such as: "Why do parties engage in exchange?" (Shaw & Jones 2005). As a result, the exchange school of marketing has been beneficial in broadening the perspective on the unit of exchange from goods, services, and money, to other resources such as time, energy, and feelings.

Similarly, within Internet-enabled markets, exchange both relates to purchase and other required acts such as provision of personal information (Becerra & Korgaonkar 2011). The focus on exchange of resources thus shifts from tangible assets to knowledge creation (Dunning & Wymbs 2001, 280). In this sense, S-D logic's conceptualization of service exchange is particularly suitable for explaining the freemium exchange of INVs in Internet-enabled markets (Shneor 2012). In the freemium model of revenue generation, the basic version of software or access to a platform is available free of charge. Therefore, the service provider is not expecting goods, services, or money in direct return for employing its technology. Instead, users contribute in other ways; for instance, by generating content, promoting software, or localizing technology (Shneor 2012, 169). Thus, the freemium model can help in quick international expansion, when users develop and promote Internet-enabled services on a voluntary basis.

Important to international entrepreneurship (IE), S-D logic enables exchange to be regarded as the basis of foreign market entry (Ellis 2000), instead of perceiving internationalization as a solely exporter-driven process. By emphasizing the role of exchange partners, foreign market entry can be conceptualized as a bilateral or even a multilateral process between various actors. As such, foundational premises on exchange do not stand in contrast to the relationship and network literature (cf. Anderson et al. 1994; Holmlund & Törnroos 1997). As a result, S-D logic's conceptualization of service exchange

runs in parallel with perspectives on resource integration and value co-creation, which both stem from bilateral and multilateral starting points.

Therefore, the focus shifts from service exchange events as discrete economic transactions between isolated actors to the conceptualization of service exchange events as episodes in the development and nurture of social relationships (Alderson 1965; Goodman 1979; Holmlund & Törnroos 1997). This insight that builds on Alderson's conceptualization of exchange is evident in the social (i.e., generic) school of exchange (Sheth et al. 1988; Shaw & Jones 2005), which hypothesizes that exchange relationships have three broad determinants (Bagozzi 1975):

- The characteristics of social actors.
- The social influence exercised by actors.
- The situation constraining exchange.

Each of these functions can independently or jointly affect the emergence, course, and outcome of any exchange. For instance, characteristics of social actors often affect social influence that comprises both explicit and implicit acts, which are based on both conscious intentions and unconscious social prescriptions (Giddens 1984). Moreover, exchange acts are not only individually determined but constrained by situational events and structural elements such as geographic and cultural distance, physical and psychological constraints, and legal and normative context (Bagozzi 1975; Arndt 1979; Ellis 2011; Makkonen et al. 2011). In brief, service exchange is considered to be embedded in social structures (Arndt 1979; Giddens 1984; Zafirovski 2001; Araujo 2007; Layton 2011). As service exchange occurs in the network of relationships, the exchanged service can have various meanings to different actors in these networks; furthermore, it can have different meanings to the same actors in different contexts (Callon & Muniesa 2005). Thus, the meaning associated with service exchange is to a large extent constrained and enabled by individually perceived context (Figure 3).

Figure 3 Visual representation of service exchange

In sum, focusing on individual exchange episodes does not mean that it is necessary to take an economic approach to addressing exchange as a short-term discrete event, but as an event in an on-going value co-creation process

that is embedded in domesticated markets (Arndt 1979), long-term relationships (Grönroos 1990), or wider social context (Edvardsson et al. 2011). Consequently, markets are not driven by the invisible hand of economics but by the visible hand of networking, referring to acts of collaboration and competition in complex exchange relationships between networks of actors (Bagozzi 1975; Mouzas & Ford 2009; Jack 2010). These perspectives are explained in detail in the following chapters on resource integration and value co-creation.

2.1.3 Resource integration

S-D logic's approach to resource integration is particularly evident in two foundational premises; namely, FP4 and FP9:

- FP4: Operant resources are the fundamental source of competitive advantage.
- FP9: All social and economic actors are resource integrators.

First, S-D logic distinguishes between operand and operant resources (Vargo & Lusch 2004). Operand resources (e.g., goods) refer to resources on which an actor's act is performed to produce service. Operant resources (e.g., competences and organizational processes) are in turn resources, which are employed by an actor to act on operand resources. Whereas goods-dominant logic mainly focuses on the exchange of operand resources, S-D logic emphasizes the use of operant resources in driving the desired change. Importantly, in S-D logic, resources are not treated as company-specific but can be accessed via service exchange. As service is related to complex resource integration process, the parties of exchange become different from each other.

Thus, as an actor must have resources to change another actor's resources into something meaningful, the shift towards resource integration highlights not only an exchange party's needs and expectations but also its capabilities (Mele et al. 2010). Moreover, Lusch and Vargo (2006) perceive that the function of resource integration is applicable both to organizations and all individuals and households: "the context of value creation is networks of networks" (Vargo & Lusch 2008a, 7). As represented in Figure 4, external resources are not integrated solely from commercial sources but from public, semi-public, and social environments (Nummela 2004), or the mix of personal, private, market-facing, and public sources (McColl-Kennedy et al. 2012).

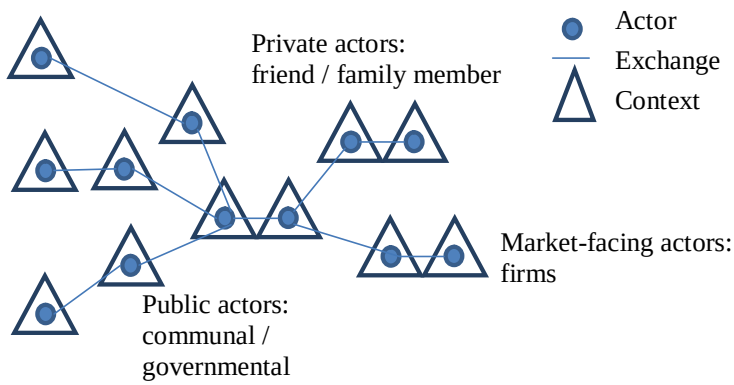

Figure 4 Visual representation of resource integration

In terms of resource integration, S-D logic synthesizes ideas presented in other resource-centered theories, such as the resource-based view of a firm (Barney 1986), resource-advantage theory (Hunt & Morgan 1996), or resource-dependence theory (Pfeffer & Salancik 1978/2003). However, compared to other resource-centered theories, the approach to resource integration is slightly different in S-D logic, in which actors first are perceived as both economic and social actors (FP9). This extends the interest from purely economic resources to social resources and from economic transactions to social interaction. Second, the focus of resource integration in S-D logic extends from the focal firm to the resource integration activities of customers (Heinonen et al. 2013) and other stakeholders (McColl-Kennedy et al. 2012). As a result, the focus shifts from the networks of the service provider to the networks of a customer. In other words, customers actively participate in their resource integration process as 'competent customers', 'prosumers', 'produsers', 'protagonists', 'post-consumers', 'consum-actors', 'reactive customers', or 'working customers' (Akaka & Chandler 2011; Cova et al. 2011). It is no longer sufficient for enterprises to control their own resource integration processes, they need to design a system of activities "within which customers can create their own value" (Wikström 1996, 738). The task of an enterprise is to provide dynamic platforms for consumer practice. An individual service provider can play only a minor role in these customer-built service delivery networks (Tax et al. 2013).

These particular aspects of resource integration process highlight the importance of social roles. In fact, social roles have recently been conceptualized as resources that actors can integrate into the process of value co-creation (Akaka & Chandler 2011). Social roles are resources as they guide expectations for service exchange that, in turn, lead to the creation of unique social

positions or "links through which a particular actor is connected to other actors in value networks" (Akaka & Chandler 2011, 251). In other words, the roles acted upon in a situation are considered to influence the motivation of the exchange parties to engage in resource integration processes (Schau et al. 2009; Åkesson 2011). Thus, meaning is associated with roles and positions within a social system (Edvardsson et al. 2011). Importantly, this 'role as resource' perspective on value networks addresses how embeddedness of social roles influences value co-creation beyond the dyadic exchange that is typically emphasized in the marketing literature, and in the co-production processes of the services marketing school (Grönroos & Ravald 2011). Instead, S-D logic's emphasis on social roles focuses on the interplay between production, resource, and social network layers (Holmlund & Törnroos 1997, 308).

Thus, it is considered that resource integration process is mediated by roles that affect how resources can be integrated. From the perspective of network research, the position of an actor enables access to other actor's resources (Chetty & Blankenburg Holm 2000). S-D logic's approach to resource integration extends the discussion on social roles from dyadic interactions and expectation structures between a customer and a company to interaction between human and non-human elements (Korkman 2006), and further to customer-to-customer relationships (McGrath & Otnes 1995; Parker & Ward 2000; Libai et al. 2010; Truong et al. 2012). Related studies reveal various roles of employees and customers, which are actively or passively enacted in interactive situations (Åkesson 2011; Moeller et al. 2013). The key point here is that a person can enact different roles in different situations based on his/her motivation.

In the context of Internet-enabled markets, actors can enact various roles in resource integration processes. For instance, Pongsakornrungsilp and Schroeder (2011) discuss two key roles that consumers can adopt; namely, providers and beneficiaries. They have also focused on whether the role is reactively or proactively enacted. In particular, the active role of users is motivated by the gain of social identity (Pongsakornrungsilp & Schroeder 2011).

In general, S-D logic's approach to resource integration is in line with the development in international business over recent decades (Dunning 2001; Johanson & Vahlne 2009). Similarly, the importance of external resources in SME internationalization has been taken into account for a long time (Christensen 1991; Bonaccorsi 1992). However, it has traditionally been considered that an INV must own or control some assets that it can exchange (Oviatt & McDougall 1994), and thus employ in its international activities. This might appear straightforward and unproblematic in the context of manufacturing companies; however, it is easier to question what is owned and controlled by Internet service companies. For instance, Dunning (2001;

Dunning & Wymbs 2001) has discussed how the rise of Internet-enabled markets shifted the focus on competitive advantage further towards relational assets created by informal business relationships rather than ownership.

This is a riveting shift as the resources exchanged by a company are no longer considered something it owns or are otherwise under its control. With complex exchange relationships, it is understood that all users for which the company provides access are potential sources of resources. This also makes new ventures far more resource-rich than traditionally assumed. As a new venture can integrate resources which it does not necessarily own or control, it has more opportunities to compete against large, established companies.

2.1.4 Value co-creation

S-D logic focuses strongly on value co-creation. This is already evident regarding the motives for service exchange and resource integration, which both refer to value co-creation. In principle, S-D logic's approach to value co-creation is described in four foundational premises:

- FP6: The customer is always a co-creator of value.
- FP7: The enterprise cannot deliver value, but only offer value propositions.
- FP8: A service-centered perspective is inherently customer oriented and relational.
- FP10: Value is always uniquely and phenomenologically determined by the beneficiary.

As discussed in the previous chapters, a customer is considered to be an important actor in value co-creation. The active role of a customer opposes the perspective that value can be embedded in goods delivered to customers who consume or destroy the value. As customers integrate the exchanged resources with other resources, and define the motivation for the use of goods or services, companies cannot simply provide value to the customer. However, companies can propose value, which means that they can communicate with customers to suggest ways of employing resources. In addition, companies can associate particular meanings to the use of goods or services.

Most importantly, according to S-D logic it is always the customer who eventually determines the benefit. Therefore, value co-creation is always customer-oriented. The determination of value is always context-specific, and therefore 'unique' and 'phenomenological'. No single-use situations are the same and, therefore, value is not simply determined 'in-use' but 'in-use-in-context'. (Vargo et al. 2008). In other words, value is not only determined by individual perceptions of value-in-use but also by wider social perceptions

(Edvardsson et al. 2011). As the context varies between the parties of exchange, Edvardsson et al. (2005) argue that services should include both a company and customer-specific portrait with emphasis on the particular purpose, such as value-in-use for both parties. As Alderson (1965) had earlier noted, both parties of exchange need to expect to gain from a transaction. Exchange episodes thus do not occur randomly but in situations in which actors perceive the greatest 'potency' (Alderson & Martin 1965) as evaluated by the system's control mechanism.

In S-D logic, value-in-context is defined from the perspective of the service system: "Value is improvement in a system, as judged by the system or by the system's ability to fit an environment." (Spohrer et al. 2008, 7). This definition of value is in line with Aldersonian marketing by highlighting the systemic nature of actors and the importance of their survivability and relation to the environment. In comparison to Aldersonian marketing, S-D logic's approach emphasizes that value is co-created in both a multiple dyadic relationship and wider service systems by and for the actors involved (Vargo & Lusch 2008b). As a result, it has become widely accepted (e.g., Frow & Payne 2011; Voima et al. 2011; Lindgreen et al. 2012; Truong et al. 2012) that value needs to be understood in the network context or, more precisely, customer's 'contextual communities' that are part of wider service systems (Merz et al. 2009, 330). In these contextual communities, social, ecological, and environmental surroundings become endogenous to value co-creation process (Vargo et al. 2008).

Thus, value-in-context takes into account both utilitarian benefits and person-specific social context, which mediates the creation and determination of value (Sheth et al. 1991; Sánchez-Fernández & Iniesta-Bonillo 2007; Boksberger & Melsen 2011; Helkkula et al. 2012). As a result, S-D logic highlights the importance of social relationships while acknowledging that there can be other forces mediating the willingness to engage in service exchange and wider service systems.

As various actors play roles in the process of value co-creation (Lusch & Webster 2011), it has been suggested that value creation needs to be understood from a broader value-creating system perspective (Kowalkowski 2011). Environmental factors have to be taken into account, as they can have significant, direct or indirect, although uncontrollable influence on the service system. Therefore, S-D logic's approach to value co-creation is more closely building ideas from systems thinking (Ng et al. 2009; Barile & Polese 2010; Tronvoll et al. 2011; Vargo & Lusch 2011). In S-D logic, service is perceived as an emergent property of interaction (Ng et al. 2009). Consequently, the service system is perceived as a complex adaptive system, affected by negative and positive feedback loops, and best understood through complex

systems thinking rather than by deterministic models of closed systems striving towards equilibrium.

By referring to systems thinking, S-D logic has taken an important step in conceptualizing value co-creation as a wider systems integration process between various actors not always present in time or space, rather than as an interaction between service provider and customer. Next, this step away from the services marketing definition of value co-production is explained.

Services marketing scholars consider that there is a human element in service from both producers and consumers, which co-produce service in interaction (Lovelock & Gummesson 2004). In particular, the Grönroosian approach to value creation (Grönroos 2008; Grönroos 2011; Grönroos & Ravald 2011; Grönroos & Voima 2013) perceives that if there is no interaction, the customer remains the sole creator of value (Heinonen et al. 2013). This slightly contradicts the message from Vargo and Lusch (2004) who consider that value is always co-created. As previously mentioned, S-D logic shares the idea that customers play a remarkable role in service process. In their original article, Vargo and Lusch (2004, 3) claim that "customer is always a co-producer". Later, Lusch and Vargo (2006) noted that service can also be co-produced but is not always necessary. Vargo and Lusch are thus, more or less, in line with Grönroos.

Nevertheless, there is a significant difference between the Grönroosian approach and S-D logic, as co-production of service is conceptually different from co-creation of value (Lusch et al. 2006; Fisher & Smith 2011). Co-production refers to participation (i.e., interaction) in the creation of the core product, such as generation of content by social media users. In turn, by co-creation, Vargo and Lusch (2006/2008a) emphasize that value is not only produced during face-to-face (or even virtual) interaction between a buyer and seller in service provision process, but co-created in all activities from the development of potential value to the determination of value. Value co-creation is "a multiparty all-encompassing process including the focal firm, and potentially other market-facing and public sources, private sources, as well as customer activities (personal sources)." (McColl-Kennedy et al. 2012, 375). By building on structuration theory (Giddens 1979/1984), S-D logic portrays value as created not only in relationships of co-presence (i.e., social integration) but in relationships which are connected by structures (i.e., systems integration). This wider perspective emphasizes both dyads and other actors and institutions that are part of value co-creation (Vargo & Lusch 2012). As a result, value can be co-created in both direct and indirect interactions between various stakeholders (Vargo & Akaka 2012). Although the distinction between value co-production and value co-creation might as appear to be mere semantics, it has important implications for the analysis of resource

integration processes and network development as emergence of service ecosystems. As Akaka and Chandler (2011) point out, the subset of co-production focuses on the integration and application of resources that are needed for the production of potential and exchangeable resources. In the co-creation process, customers in turn enact different social roles in the creation and determination of phenomenological value.

In S-D logic, value is co-created in social practices (Bourdieu 1977; Giddens 1984; Schatzki 2001; Reckwitz 2002). Exchange occurs in complex exchange relationships between actors which are embedded in simultaneously reproduced social context. In general, enactment of social roles as practices refers to common and shared practices based on which actions are understandable, and social order is constituted in expectational structures. In this sense, practice is a kind of coping strategy with which to survive in the environment (Chia 2004), both enabling and constraining an individual's actions. Therefore, to understand how value is co-created (i.e., how viability is improved in the environment), the focus needs to shift from actions at the micro-level to an understanding on activities embedded in social systems. For instance, users in online communities contribute to shared practices, generate new practices, increase the vitality of community, and thus eventually co-create value for both individual users and to the wider service ecosystem (Schau et al. 2009). As such, context is both individual and partly shared between resource-integrating actors engaging in service exchange (Figure 5).

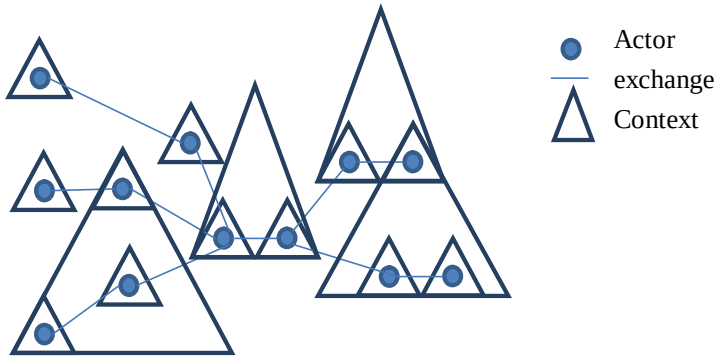

Figure 5 Service exchange and resource integration between actors in partly shared contexts

These social practices can be perceived as social resources or as resource integrating practices at the core of value co-creation (Vargo & Akaka 2012). Importantly, the emphasis of S-D logic is both on individual (inter)actions as exchange practices and on the existence of a wider service system and under-

standing on the relation between actions and structures (Kjellberg & Helgesson 2007). In sum, the practice theoretical approach in S-D logic conceptualizes practices as constellations of activities, roles, and interactions (McColl-Kennedy et al. 2012; Vargo & Akaka 2012) that underlie the co-creation of value. Activities are defined as 'performing' or 'doing' (i.e., cognitive and behavioral). Interactions are "the ways individuals engage with others in their service network to integrate resources" (McColl-Kennedy et al. 2012, 375). Thus, resource integration practice shifts the focus from interaction with the service provider (e.g., co-production, social integration) to interaction with multiple parties in the service system (e.g., co-creation, systems integration). The enactment of roles in value co-production varies depending on the context of service, such as online communities (Schau et al. 2009), e-government (Åkesson 2011), public transportation (Echeverri & Skålén 2011; Pareigis 2012), and health care (McColl-Kennedy et al. 2012). As people engage in various social practices and perceive social context phenomenologically, actors co-create value differently. Actors draw on the elements of practices, which can be congruent with a wider system in the case of value co-creation or incongruent in the case of value co-destruction (Echeverri & Skålén 2011).

2.1.5 Network development process

Although previous chapters link service exchange, resource integration, and value co-creation tightly to the network approach, the foundational premises of S-D logic do not focus on NDP per se. Therefore, S-D logic's approach to network development needs further analysis of the literature.

In fact, S-D logic's approach to networks is slightly controversial. While S-D logic builds heavily on the IMP Group's conceptualization of business networks, it has tried to move away from the network literature by building on systems thinking and business ecosystems. In S-D logic, networks are not just aggregations of relationships, they are dynamic systems (Vargo & Lusch 2011). Nevertheless, the conceptual differences between service networks, value networks, service system, and service ecosystems in S-D logic remain rather imprecise, and the terms have more or less been employed interchangeably with some variation over time (e.g., Vargo 2009; Chandler & Vargo 2011; Akaka et al. 2012).

Recently, service systems have been referred to as an outcome of resource integration and value co-creation (Vargo & Akaka 2012). Service systems are thus considered to be formed and constantly reformed as a result of resource integration and value co-creation practices. As the system changes, the context for the next service exchange, resource integration, and value co-creation

processes evolve simultaneously. Although networks as structures can be reproduced, their form is never certain (Sewell 1992), and therefore service ecosystems are constantly evolving (Vargo & Akaka 2012). Thus, the focus on dynamic properties of service system hints at complex (i.e., as defined by complexity theory) behavior of open systems: "Service systems are evolutionary, complex adaptive systems with emergent properties (e.g., value creation)." (Spohrer et al. 2008, 8; modified in Maglio et al. 2009) This highlights the importance of understanding the interaction between a system and its environment, which is characteristic of the network approach (Forsgren 2008).

Importantly, S-D logic perceives macrosystems (i.e., networks or network of networks) not to be pre-defined entities but to evolve from micro-action of actors in the system and between different levels (Layton 2011). Lusch (2006) distinguishes these two processes as the 'small' and 'long' views. A small view emphasizes resources employed for social integration and which explains the differences between each actor and the division of labor, as people have different skills and requirements. A long view, in turn, highlights that all service systems share a common base in these service exchange interactions, which form the constantly evolving complex (i.e., all entities are interconnected) adaptive (i.e., entities in a system attempt to improve its conditions) system. To understand the influence of resource integration practices beyond the dyad, one needs to understand the difference between social and system integration, which are the driving forces of social change. Whereas social integration (e.g., co-production) refers to the interaction (e.g., cooperation/conflict) at the level of social actors, system integration (e.g., co-creation) refers to the compatibility/incompatibility between social systems (Mouzelis 1974/1997). However, as emphasized above, this does not mean that these two processes are separate. Instead, social interaction can have macro-level consequences (Giddens 1984; Mouzelis 1997), which in turn feed back to the level of an actor.

The fundamental idea for NDP in S-D logic is mostly drawn from structuration theory (Giddens 1984). It is understood that resource integration practices and transformations of structures are "temporal replications of rules, or institutions, that facilitate exchange processes" (Chandler & Vargo 2011, 45). All these attributes point towards an evolving system conceptualization in which each actor constructs his/her realities and value perceptions based both on interactions with other actors and on the interdependencies between structure and agency. Building and managing networks comprises finding information on potential partners, defining the roles and relationships between various actors, and maintaining collaboration (Järvensivu 2010).

According to structuration theory (Giddens 1984), social actors are constantly recreating conditions that govern possible selections of practices

enabling social activities. Eventually, reproduction of these conditions can be observed as the interdependence between actors or collectivities, organized as regular social practices "ordered across space and time" (Giddens 1984, 2).

By building on Giddens, it can be understood that there are both intended and unintended consequences of actions. It must be stressed here that, for Giddens, intentional actions do not solely result from any 'pre-coded' personality traits but from a person's identity. Giddens (1991, 54) argues that "a person's identity is not to be found in behavior nor − important though this is − in the reactions of others, but in the capacity to keep a particular narrative going". This narrative is, to a large extent, based on an individual's perception of the 'ideal self'. This is also linked to 'ego-identity' (Giddens 1979) or 'narrative identity' (McAdams & Pals 2007; McAdams 2011), as identity creation is based on conscious actions or, at a minimum, conscious understanding on the consequences of actions, instead of mere routines or habits. This trajectory of self results from past positive and negative experiences. The perception of self evolves as the narrative in which these experiences are linked together and constantly reproduced. This reflexive achievement is of crucial importance to an individual, as it provides purpose and meaning to a person's life. As a result, every social interaction emerges from the interaction between an actor and his/her environment. As actors make sense of the environment, they select and enact the most appropriate role in situ (Allen et al. 2009).

S-D logic's perspective on actions in situ is similar to self-determination theory's assumptions on human behavior. Self-determination theory perceives that human motivation can be studied as a social psychological phenomenon by combining intrinsic and extrinsic motivation for human behavior (Deci and Ryan 1985). The theory combines tightly social conditions to self-regulation of behavior and to an actor's well-being. Intrinsic motivation highlights an actor's internal strive for learning and creativity. Deci and Ryan (1985, 32) emphasize "the innate, organismic needs for competence and self-determination". Here, actors are perceived as free to explore interesting activities within the limits of their competences. This emphasizes the importance of autonomy and feelings of competence in stimulating intrinsic motivations. These motives have to be regarded in terms of the need for relatedness; that is, "developing secure and satisfying connections with others in one's social milieu" (Deci et al. 1991, 327). This links intrinsic motivation to extrinsic motivation of human behavior. Extrinsic motivation refers to an action that strives towards an outcome, instead of merely doing something for the sake of the activity itself (Ryan & Deci 2000, 71).

As networks are perceived as emergent properties of social interaction, networking is not a separate activity. Networks emerge from social interaction when "abstract social roles are solidified into concrete social positions"

(Akaka & Chandler 2011, 247). In other words, service systems emerge as actors concretize social roles (i.e., ‘sets of practices connected to the practices of others’) into observable social positions (i.e., ‘sets of relationships connected to particular actors’). Although structures can be reproduced, as stated above, their form is never certain (Sewell 1992), and therefore service ecosystems are constantly evolving (Vargo & Akaka 2012). Moreover, as actors engage in different practices, they have different perceptions of their role as a resource integrator within the given context (Schau et al. 2009). As a result of these multiple resource integration processes, social roles constantly move from one actor to another, and the dividing line between a producer and a consumer is vanishing (Michel et al. 2008).

In fact, by conceptualizing service exchange, resource integration, and co-creation of value as social practice, it is understood that these processes occur in complex exchange relationships (Bagozzi 1975; Mouzas & Ford 2009), which cannot be understood in terms of analysis of the micro- or macro-level of a service system alone (Holmlund 2004; Schultze & Orlikowski 2004). Rather, to understand how complex networks evolve, the focus must constantly be oscillated between different levels of the system, between micro-, meso-, and macro-levels (Chandler & Vargo 2011), as represented in Figure 6.

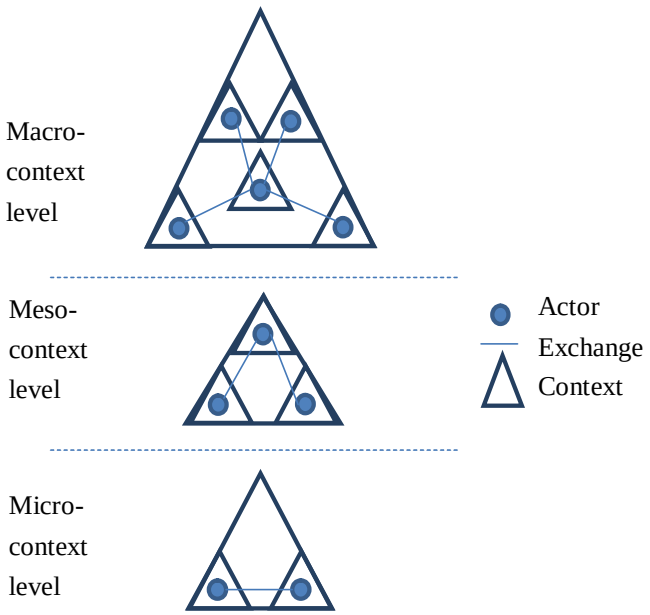

Figure 6 Levels of service system (adapted from Chandler & Vargo 2011, 43)

At the micro-level, there is dyadic service exchange between two partners. Within S-D logic, service systems are considered to comprise service exchanges. Importantly, these exchanges occur within or among actors (Chandler & Vargo 2011). At the meso-level, the focus shifts from direct exchange to indirect exchange as the perspective of a third partner is included. At the macro-level, there are several more or less loosely coupled actors exchanging service, integrating resources, and co-creating value. These resource-integrating actors form complex networks that are "the context of service-for-service exchanges at the macro context" (Chandler & Vargo 2011, 44).

In the conceptualization of Chandler and Vargo (2011), service ecosystem is employed as a term to describe the dynamic meta-layer, which enables analysis of service exchange processes within and among service systems. In fact, it is a kind of snapshot on context through which the relation between different levels of the service system can be understood. At the meta-level, there are complex networks that evolve multi-dimensionally "across levels of context over time, and through replication" (Chandler & Vargo 2011, 44). These complex networks then become known as service ecosystems, or structures of loosely coupled actors. Thus, service ecosystems are not merely a combination of actors but structures of resource-integrating actors: "Service systems emerge and are maintained through continuous efforts of individual actors to create value for themselves, and for others, and the value of each interaction is measured at an individual as well as broader (e.g., meso or macro) systems levels." (Vargo & Akaka 2012).

The 'oscillating-foci' approach (Chandler & Vargo 2011) provides insight on how interactions at the micro-level influence shared social structures at the macro-level, and how the macro-level context in turn mediates interactions at lower levels (Vargo 2011a): "The notion of a complex network is a fundamental aspect of value co-creation because of how actors, dyads, and triads create synergy among multiple simultaneous direct and indirect service-for-service exchanges." (Chandler & Vargo 2011, 44). Value co-creation (i.e., that of an actor and a complex network) process is embedded in these complex networks.

Consequently, it becomes apparent that S-D logic's perception draws insight on network development from structuration theory. In line with structuration theory (Giddens 1984), it is perceived that resource actors' integration practices interconnect structures (i.e., rules and resources) and systems (i.e., relationships). As noted by Akaka (2012, 13), focus remains on the enactment of practices that are central to the reproduction of structures and service ecosystems. These practices thus lead to the (re)contextualization or social construction of the context (Chandler & Vargo 2011; Akaka 2012).

2.1.6 Synthesis of S-D logic's approach to network development process

The conceptual development of service exchange, resource integration, and value co-creation within S-D logic provides an interesting insight on NDP. These perspectives are based on various streams of the literature and, by their combination, S-D logic refers to a unique conceptualization of network development as a multi-level process. First, S-D logic does not perceive network as a pre-defined entity that could be joined by actors. Instead, NDP is perceived as "a complex multi-dimensional evolution that occurs simultaneously in three dimensions: across levels of context, over time, and through replication" (Chandler & Vargo 2011, 44). Second, networks are created and reformed in individual but interdependent service exchange events. In fact, service systems as complex networks are formed and constantly reformed as a result of resource integration and value co-creation practices. Network development is an emergent property of these social interactions. As such, it must be understood that network development is more than mere aggregation of service exchange events or relationships. Therefore, NDP needs to be understood as a multi-level phenomenon. In other words, service system has different levels, which altogether constitute a service ecosystem, the structure of loosely coupled resource-integrating actors. Various levels of service system are socially constructed through the process of contextualization (Figure 7).

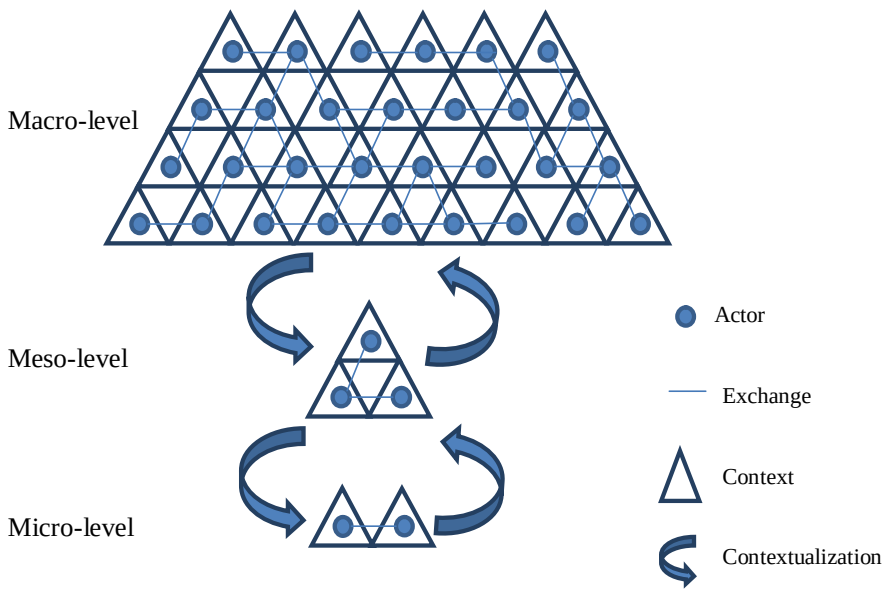

Figure 7 Network development as a multi-level process

Figure 7 synthesizes the discussion on service exchange, resource integration, value co-creation, and NDP. Service exchange is the fundamental concept at the micro-level, and is the basis for resource integration, which introduces a higher-level construct. Resource integration links various actors together. As a result of these social interactions, a network structure begins emerging at the higher level. This higher-level system in turn influences actors, and their engagement in service exchange through resource integration process. Here, it is emphasized that value co-creation does not occur at lower-level social interaction but takes into account higher-level systems. This is the core of NDP from the perspective of S-D logic.

Conceptualization of network development as a multi-dimensional phenomenon introduces duality to the process. On the one hand, lower level interaction is assumed to influence higher-level system formation. On the other hand, as actors are embedded in different social contexts, higher-level systems influence an actor's behavior at the lower level. This kind of duality in the system formation is characteristic of both complexity theory (von Bertalanffy 1972; Holbrook 2003) and practice theory (Giddens 1984; Schatzki 2001; Reckwitz 2002). Once networks are conceptualized as complex adaptive systems, network development is perceived neither as a linear nor sequential process but complex and recursive. Complexity refers to the fact that service exchange events and value creation processes cannot be understood at the micro-level alone. Recursion in turn refers to the fact that service ecosystems tend to repeat themselves in a self-similar manner (i.e., replication of rules and practices).

However, S-D logic has not developed formal models based on which process of complex network development is to be studied. Notwithstanding references to the replication of rules and practices, the mechanism of the process remains rather implicit. In addition, references to practices mostly suggest a potential connection between S-D logic's approach to network development and structuration theory, rather than explicitly explaining the linkage between the two.

As the perspective on network development is not elaborated in S-D logic, the role of individual actors in driving changes in the service network remains unclear. Nevertheless, some ideas on motives and control issues can be deduced from S-D logic. In particular, S-D logic perceives that actors are motivated to engage in service exchange, and thus NDP, as they expect value creation for themselves. In this sense, S-D logic shifts the focus from NDP to service exchange. Nevertheless, this does not mean that actors are motivated by value-in-exchange but by value-in-use or value-in-context; as such, actors search for goals and means for improving well-being. While value is subjectively perceived, this also means that there are different motives for engaging

in service exchange and NDP. Although S-D logic emphasizes the role of an individual in the phenomenological determination of value, this does not mean that value is created by the beneficiary alone; in fact, value is co-created by multiple actors. Consequently, motives are moderated by roles enacted by social actors.

These questions on motivation also refer to issues of control. As such, S-D logic does not discuss control issues explicitly. In general, S-D logic considers that an actor does not need to own or control the resources which he/she/it integrates for value co-creation. Minor references to control (Ballantyne & Varey 2006, 339; Vargo et al. 2008, 150; Heinonen et al. 2010, 538) indicate that S-D logic perceives relationship and network development as an open-ended and spontaneous process. In fact, overly strong control of service exchange can be regarded as contradictory to the notion of co-creation of value. This does not mean that the process of value creation is completely out of a service provider's control, as the venture can participate in the process by integrating its own resources and propose value. However, the control of resource integration shifts the focus mostly to resource integration processes of other actors.

These perspectives are also characteristic of complexity theory and systems thinking, which have recently been drawn to S-D logic. Consequently, a service system is perceived as an open, complex, and adaptive system that is affected by negative and positive feedback loops. Therefore, NDP is best understood through complex systems thinking rather than deterministic models of closed systems striving towards equilibrium.

2.2 Process theoretical approaches to network development

As summarized above, networks are portrayed in S-D logic as structures of dynamic, non-linear, self-adapting, complex adaptive systems resulting from resource integration practices of rule-following although independent actors. Each element of these structures offers a distinctive way to integrate process approach (Dooley 2004). Although the multi-level practice theories embedded in S-D logic imply temporal processes (Reckwitz 2002), they lack the explicit time-based approach for which there has been a call in the domain literature (e.g., Coviello 2005). Process theories, in turn, focus on sequences of change events in complex systems. In particular, triggers of change (i.e., 'change motors') are studied at a given time, and feedback loops are studied over time (Van de Ven & Poole 1995).

Here, process is conceptualized as a sequence of events, as a narrative that can be in the form of a life cycle, teleology, dialectics, or evolution. These

four ideal types of temporal process theory vary from each other with different approaches to generating a mechanism, unit of analysis, and mode of change (Van de Ven & Poole 1995).

2.2.1 Life cycle approach to network development process

Life cycle theory describes change process as a linear and prescribed sequence of events (Van de Ven 1992). According to the life cycle theory, there are activities that are rule-followingly typical of different stages in a given process. Moreover, it is considered that some of these activities are needed before others can occur. Entities change and develop through particular patterns towards the end state. In the life cycle theory, there are particular entrepreneurial activities in each stage, and the sequence of events is described as irreversible, cumulative, linear, and predictable, as if the destination of the network had been predetermined (de Rond & Bouchikhi 2004). This typically results in studies focusing on a set of starting conditions rather than the end state or process of change towards the end state (Van de Ven 1992).

Life cycle remains as a dominant process theoretical approach in IE (Schulz et al. 2009). As a result, there are examples of interesting, beautifully written life cycle studies on new ventures in Internet-enabled markets (e.g., Drori et al. 2009). These studies indicate how new ventures, their networks, and relationships within networks change in different phases of development. Most of all, the life cycle model has frequently been employed to describe the development process of individual business relationships (e.g., Archer & Yuan 2000). In these studies, individual relationships go through several stages, such as partner evaluation, establishment, maintenance, and dissolution. In addition to relationship-focused studies, there is some entrepreneurship literature that employs life cycle process theory to describe wider NDP (e.g., Butler & Hansen 1991; Steier & Greenwood 1998; Lechner & Dowling 2003).

Butler and Hansen (1991) recognize three stages of company development: the entrepreneurial phase, the business startup phase, and the ongoing business phase. They propose that, as a company matures, the network simultaneously develops from a social network (i.e., entrepreneurial phase) to a business focused network (i.e., business startup phase) to a strategic network (i.e., ongoing business phase). Also, Lechner and Dowling (2003) link network development to company development by proposing a four-stage model of entrepreneurial firm development. As companies grow from stage 1 onwards, they require different kinds of resource and therefore attract different partners, first from social relationships and then moving towards business ties.

Steier and Greenwood (1998) have proposed a four stage model in the context of angel investor network development: initial navigation/'kissing frogs', consolidation, enrichment, and reconfiguration. Their model shows how a number of contacts need to be made in stage 1 before suitable partners are identified in stage 2. In their model, ties are tightened with selected partners in stage 3 by "broadening of the transactional content". Ultimately, in stage 4, a company has to manage a wider and more complex network. As such, Steier and Greenwood's stages model is an exception in focusing on network development by describing the stages. However, they also describe activities performed in different stages from the perspective of the entrepreneur, rather than the perspective of the network.

Despite questions on network development being more frequently asked in the field of entrepreneurship, there has been some discussion on the process also within IE. For instance, Gabrielsson et al. (2008) claim that there are three phases through which born globals progress. Although they do not directly refer to network development, Gabrielsson et al. (2008) link different phases (i.e., introductory, growth and resource accumulation, and break-out to independent growth as a major player) to NDP. In the introductory phase, the focus is more on finding partners. In the growth and accumulation phase, INVs participate in selected networks to learn from their partners. In the break-out to independent growth as a major player phase, the born global becomes the driver of the network and has more power in choosing its position relative to other partners.

Similarly, Coviello (2006) and Pettersen and Tobiassen (2012) employed the life cycle model to analyze the early stages of INVs. Despite their stages differing slightly, both Coviello (2006) and Pettersen and Tobiassen (2012) consider that INVs go through the stages of idea conception, technological development, production, and growth. In this sense, life cycle theory is employed for describing the development stages of a new venture rather than stages of NDP. However, these studies are able to show that there are changes in the structural characteristics of a network (Coviello 2006), and in the type, content, and role of networks (Pettersen & Tobiassen 2012) that are characteristic of particular phases of INV development.

In the context of international network development, life cycle theories have particularly been applied in terms of internationalization. Although the Uppsala model has been extensively employed by scholars, also in the context of SMEs (Nummela 2004), IE has from early on been characterized by criticism towards predetermined life cycle theories (Coviello & Munro 1995). In fact, IE scholars (e.g., Schutz et al. 2009) have noted that small companies typically act in an unpredictable way, which does not match the stages models.

The paradigmatic worldview of IE perceives that the specific context (i.e., level of competition, nature of product, and size of the home market) influences activities taken by focal companies, and entrepreneurs have the power to act differently. In other words, critics perceive that entrepreneurs do not need to react to an internal or external stimulus objectively in a pre-determined manner (Nummela 2004). This does not mean that scholars applying life cycle theory are completely wrong, but that stages models cannot be generalized in all contexts (Oviatt & McDougall 1994; Coviello & Munro 1995). As a response, IE scholars have developed different network process models to challenge the stages models. In addition, some scholars (e.g., Coviello & Munro 1997; Coviello & Martin 1999; Coviello & McAuley 1999; Chen 2003; Johanson & Vahlne 2003) perceive that these two models should be seen as complementary rather than competing models of explanation. For instance, Chen (2003) builds on both the stages model and networking strategies in discussing how foreign direct investment can help to preserve and strengthen network relations for improving the viability of an investor in the host market.

In particular, this is evident in the recent move closer towards the network approach (Johanson & Vahlne 2009). As a consequence, NDP can be described in stages without perceiving it as a deterministic model. For instance, Larson and Starr (1993) represent network formation in stages but conceptualize the development as an entrepreneur-driven teleological process.

2.2.2 Teleological approach to network development process

The teleological approach to network development emphasizes that the process focuses on the envisioned end state of an entrepreneur. However, these end states are not pre-determined or constant, but tend to change as a response to external influences. From a teleological perspective, entrepreneurial behavior is adaptive. Activities are not characteristic of particular stages of company development as in the life cycle process theory (Van De Ven 1992). Rather, the teleological approach builds on the systems theory's concept of equifinality (McKelvey 2002); that is, there are various routes which an entrepreneur can select to achieve the desired end state. As understood from the perspective of systems theory, teleological mechanism is fundamentally different from pure cause-and-effect relationship of closed systems. Thus, teleological process theory aims at overcoming the limitations of life cycle theory's linearity, determinism, and predictability with a more open-ended and iterative approach (de Rond & Bouchikhi 2004). Most of all, the teleological approach emphasizes purposeful actors in explaining the sequence of events.

Teleological process theory stands in contrast to life cycle models, , which have been criticized for not taking an individual's capability to strategize into account (Andersson 2000). Teleological process theorists in turn consider that entrepreneurs play a role in the internationalization process of new ventures. Nummela (2004) explicitly suggests that teleological process models based on an entrepreneur's experiential knowledge are well suited to explain SME internationalization. Teleological process studies focus on how entrepreneurs are able to utilize the network to achieve their goals in selected international markets (e.g., Nummela 2004). When entrepreneurs identify opportunities, they seek support from their network for complementary resources. In this sense, teleologists perceive that network relations can be managed by entrepreneurs to fulfill the goals of the visionary founder (Jolly et al. 1992; Chen 2003). Thus, the teleological approach considers NDP as part of an entrepreneur's planned strategy, and internationalization process can be explained by analysis of key individuals in the focal venture (Andersson 2000).

IE researchers typically share the teleological perspective that network development can be intentionally managed by the focal company (cf. Coviello 2006), as entrepreneurs explore, evaluate, and select business partners. Varis et al. (2005) rightly criticize the IE literature for taking for granted that entrepreneurs find the correct partners. In addition, Ruokonen et al. (2006) note that networking is not about selecting a partner but finding one within a reasonable time frame. The focus needs to be shifted from partner selection to partner motivation or network management (Ruokonen et al. 2006), and from free entrepreneurs to entrepreneurs constrained by the context (Johannisson et al. 2002; Koka et al. 2006; Sigfusson & Harris 2012). These studies propose that it is only possible partly to control NDP. Similarly, Welch and Welch (1996), Sharma and Blomstermo (2003), and Coviello (2006) have emphasized how co-evolutionary development of INV networks is both path-dependent and intentionally managed in different stages. While this means that entrepreneurial activities are constrained by networks that emerged from previous activities, the process facilitates previous relationships in entrepreneurial activities.

From the teleological perspective, network development is conceptualized as a verb, networking. This opposes S-D logic's approach to the formation of networks as emerging from micro-actions of individual actors. When networks are portrayed as complex structures of loosely coupled actors, as in S-D logic, entrepreneurs are involved in managing in a network rather than managing of a network (Ritter et al. 2004). For instance, Slotte-Kock and Coviello (2010) neglect the idea that companies have ultimate control of network formation. Interestingly, even teleological network development studies provide evidence that the initiative for network development often comes from partners: "The actual push for partnership has come from [a focal venture's partner] Air New

Zealand" (Chetty & Blankenburg Holm 2000, 85) Also Andersson's (2000) research findings indicate that unplanned internationalization can occur as companies are pulled to internationalize. In fact, there is empirical evidence that internationalization process is influenced by partners' activity in international markets (Agndal & Chetty 2007; Kontinen & Ojala 2011), and the focal firm's role and position in the network (Coviello & Munro 1995). As other stakeholders can play a role in network development, this questions the ability of the focal firm to control the process. Instead, the activity of other stakeholders in initiating relationships introduces serendipity (Meyer & Skak 2002; Crick & Spence 2005; Harris & Wheeler 2005; Thistoll & Pauleen 2010; Kontinen & Ojala 2011), as unexpected events introduce new opportunities to the entrepreneurs. Previous empirical findings of Fischer and Reuber (2011, 11) give support for this kind of network development in the context of Internet-enabled markets. As such, it is encouraged also to have a perspective that portrays NDP as incorporating environmental influence on entrepreneurial decision making, not as a pure result of strategizing in a focal firm.

2.2.3 Dialectical approach to network development process

The dialectical process perspective argues that discontinuous development is driven by ongoing conflict from coexisting but opposing forces (Van de Ven 1992). International entrepreneurial process can be affected by interdependent, exogenous forces when actors within a service system have opposing goals and compete for scarce resources (de Rond & Bouchikhi 2004). For instance, an entrepreneur's aim to control network development can be opposed by other power-seeking partners. Thus, the dialectical process approach is in line with many criticisms against the teleological perspective. Dialectical process theory accepts that actors in an ecosystem are influenced by the environment, and that the ecosystem evolves as actors proactively or reactively respond to these events. As such, the dialectical perspective presents the problem of an open system in which it is not sufficient to control some variables to achieve intended consequences. In contrast to life cycle and teleological approaches, dialectical process theory does not focus on prescribed entrepreneurial activities or evaluate whether entrepreneurial choices are functional or dysfunctional (de Rond & Bouchikhi 2004). Instead, the dialectical approach aims at understanding development as an emergent form of conflicting forces.

Rather than emphasizing structure-reinforcing evolutionary process (i.e., morphostasis) with a focus on negative feedback loops, the dialectical perspective introduces positive feedback loops with interest in structure-loosening events and the emergence of new levels of system (i.e., morphogenesis). In

this sense, dialectical process is sympathetic to complex adaptive systems, as expectations and rule-following actors and organizations clash with improvised practices, which together form a new synthesis that resolves the conflict (Mirvis 1998; Weick 1998; Holbrook 2003). In other words, the development of a network as a complex adaptive system is considered to be constantly on the edge of chaos as opposing forces try to shift the equilibrium, whereas routines drive the system towards equilibrium. These opposing forces come from structures that constrain actors (Orlikowski 1992; Elango & Pattnaik 2007), and from other members who come and go, causing a dialectical opposition in NDP (Slotte-Kock & Coviello 2010). Thus, the dialectical approach takes into account the potential downside of a network and questions the power of an actor to create and shape networks.

Interestingly, Thistoll and Pauleen (2010) list several points concerning this kind of contrast between an INV and its network partners, as actors 1) have different approaches and motives for collaboration, 2) have different levels of skill and access to external resources, and 3) perceive value differently. As a result, there is constant tension between network partners that influences NDP. These tensions highlight that, even if network relationships were managed intentionally, consequences remain mostly unintentional as the focus is on possibilities of 'unknown future opportunities' (Thistoll & Pauleen 2010, 46) or 'hidden qualities of resources' (Holmlund 2012, 219). However, the active role of an entrepreneur is emphasized and, therefore, Thistoll and Pauleen (2010) do not perceive these opportunities as purely serendipitous. Instead, Thistoll and Pauleen (2010, 51) refer to these outcomes as 'invited occurrence'. As INV managers do not always know exactly what is needed for future opportunity creation, they participate in various events and talk to different people, although they cannot be certain of the consequences of these interactions.

Dialectical tensions can also stem from different perspectives on the kinds of change (if any) that are needed in a new venture (Ambos & Birkinshaw 2010). For instance, different opinions on how to develop a new venture can result in sustaining (i.e., value creating) or disruptive (i.e., value destroying) transitions.

As relationships and networks evolve, they can be similarly either supportive or distortive to operations of an INV. For instance, Turcan (2008) provides empirical evidence on how misalignment of goals between an INV and a venture capitalist eventually led to the de-internationalization of an INV in the case of a Scottish software company. Although this kind of dialectical perspective to NDP is not common in the INV network literature, it is implicitly supported in some studies. For instance, Sigfusson and Harris (2012) discuss that networks are not always beneficial for INVs, as sometimes a large number

of relationships can be time-consuming and distracting. In other words, a large network does not always ensure value creation for international entrepreneurs.

Guercini and Runfola (2010) explicitly describe the internationalization of an Italian fashion company as a dialectical process. In their case study, some existing relationships needed to be terminated over the internationalization process, whereas some were enhanced and new ones established. Managers of the fashion company perceived that acting as a retailer hindered the firm's opportunities to act efficiently as a manufacturer in its home country, and therefore they were forced to focus on serving a new international market. However, these opposing forces do not necessarily stem from the immediate network but from the wider environment. These findings are in line with Peck et al. (2005) who perceive that internationalization process is a dialectical process in which changes and opposing forces influence the focal company both in the host market and international markets.

Moreover, Das and Teng's (2000) study on alliance instabilities is a compelling example of dialectical network process research. They conceptualize alliance instabilities as sweeping changes occurring in a network that arise from conflicting forces in the alliance, and are unplanned from the perspective of its members. Das and Teng propose that these dialectical forces arise from behavioral (i.e., cooperation vs. competition), structural (i.e., rigidity vs. flexibility), and psychological (i.e., short-term orientation vs. long-term orientation) tensions within an alliance.

These dialectical forces do not only stem from instabilities between members of a network. In the Internet, major tensions are caused by opposing features of technology that trigger behavioral coping strategies (Mick & Fournier 1998). At a more macro-level, DiMaggio et al. (2001) highlight that people create structures and norms around the Internet. For instance, social roles, topical clusters of websites, and privacy norms on the Internet are all man-made as they have emerged from micro-level interactions between individual Internet users. These structures, as they have been formed, not only enable more efficient behavior but create tension for actors who want to act differently. Nevertheless, this kind of online tension does not only stem from emergent structures caused by interaction in Internet-enabled markets. In fact, empirical evidence shows that there can be an interesting tension between offline social spheres and online social networking, which might limit the growth of online social networking sites (Binder et al. 2009).

2.2.4 Evolutionary approach to network development process

Evolutionary process theory (Van de Ven 1992; Van de Ven & Poole 1995) focuses on cumulative changes in structural forms of systems. In terms of NDP, development is perceived as a function of an entity's competitive battle for survival. All actors in a service system fight for available resources, and only those survive that fit the environment. Activities emerge as a sequence of events, and networks emerge from these multiple resource integration processes. In the evolutionary theory, the process proceeds through a continuous cycle of variation, selection, and retention (Van de Ven & Poole 1995).

Variation refers to any changes from a routine (Aldrich & Ruef 2006, 18). In the context of network development, variation refers to cumulative changes in structural forms. In this sense, variation does not simply refer to a decrease or increase in the number of ties but to changes in the nature of relationships in different circumstances (Turnbull et al. 1996).

Selection in turn refers to the fit to the environment. There is an assumption that some changes in structural forms are more preferred in the environment (Aldrich & Ruef 2006, 21). Changes in the system occur as the environment selects those which fit best to the environmental niche. Those systems which have the best fitting resources are selected by the environment. In other words, loosely coupled ties between constituents of a system emerge as something that is selected by its environment (Van de Ven & Poole 1995).

Retention refers to the forces that counteract changes in systems (Van de Ven 1992; Van de Ven & Poole 1995). There are retaining forces that maintain inertia and persistence in systems. Although there may be changes in the environment and interactions, actors often rely on routines and institutions to facilitate daily decision making. Retention thus refers to structures in which constituents of systems are embedded. As a result of this inertia, cumulative changes do not entirely emerge from random actions and constant change, although some forces maintain positively selected variations (Alrdrich & Ruef 2006, 23).

By taking into account the randomness of environmental influence, evolutionary process theory is not as predictive as life cycle or teleological approaches. In fact, by accepting some degree of randomness, evolutionary models are metamorphic by nature (Pettigrew 1987). This means that organizational evolution is characterized by relatively long periods of incremental change that are punctuated by discontinuous reorientations, often triggered by external pressure. However, external pressure does not only cause tension as there is room for supporting forces to co-exist.

S-D logic with its focus on resource acquisition and integration on the basis of increasing viability in an environment strikes chords with the evolutionary

process model. In fact, Vargo (2007, 58) has explicitly stated that resource integration theory should be 'evolutionary'.

Evolutionary approaches are rather rare in entrepreneurship (cf. Hite 2005; Slotte-Kock & Coviello 2010), and particularly in IE. However, there is supporting evidence that the emergence of an INV's service ecosystem can be described with the evolutionary process theory. For instance, Madsen and Servais (1997) conclude that born globals grow in a manner that resonates with evolutionary thinking. Their research model suggests that INV development should not merely be perceived as a teleological entrepreneur-driven process but is influenced by organizational and environmental factors. Similarly, Loane and Bell (2006, 480) conclude that the evolutionary perspective on INV network development matches their empirical findings. In particular, they consider emphasis needs to shift in INV processes from a focal firm's resources to evolving networks that connect routines and resources, enabling an INV's activities in foreign markets. These findings are in line with evidence from the software industry (Coviello & Munro 1995; Coviello 2006), and more general shift "from planned networking to relationship evolution strategies" (Harris & Wheeler 2005, 190) in IE. Whereas part of network development is planned, some unplanned outcomes simply emerge from previous encounters and network activities.

This highlights the importance of users. For instance, Hibbert et al. (2012) emphasize how customers learn over and after resource integration processes, which feed into future resource integration processes. Although these issues are not discussed in the context of Internet-enabled markets, they can provide insightful new perspectives on the evolution of Internet networks (e.g., Dorogovtsev & Mendes 2003).

Thus, evolutionary process theories in a way combine insight from deterministic life cycle theories and deliberate teleological studies, following the 'emerging strategy' process of Mintzberg and Waters (1982). In other words, strategic planning is not solely perceived as a firm's intended, internal process but is influenced unintentionally by the external context, such as host country government, competitors, customers, suppliers, or intermediaries (Welch & Welch 1996), which altogether or individually can be sources of variation, selection, and retention.

This kind of emerging strategy approach is in line with recent research findings on IE in which companies are no longer perceived as entering existing markets but are considered to create the market entrepreneurially by proposing value in the form of unique combinations (Ellis 2011). Networks are thus partially subject to deliberate design. In other words, entrepreneurs and managers can initiate events that shape networks. These events can be both

structure-enforcing and structure-loosening, which enables strategic maneuvering (Madhavan et al. 1998).

2.2.5 Synthesis of process theoretical approaches to network development

Previous chapters have introduced four ideal process theoretical approaches to study NDP. However, it must be emphasized here that none of these approaches are exclusively sufficient to describe the process. In fact, as the ideal process theories are not independent or mutually exclusive, multiple change motors can be employed for analyzing a change process. Therefore, instead of focusing on only one process theory, a combination of process theories can together better inform on what occurs at different levels of a network over time (Schutjens & Stam 2003; Rasmussen 2011). In other words, if network development is solely analyzed in terms of, for example, evolutionary process, there is a danger of losing insight from other process theories. This has also recently been highlighted in the quad-motor conceptualization of network development by Slotte-Kock and Coviello (2010), as represented in Figure 8.

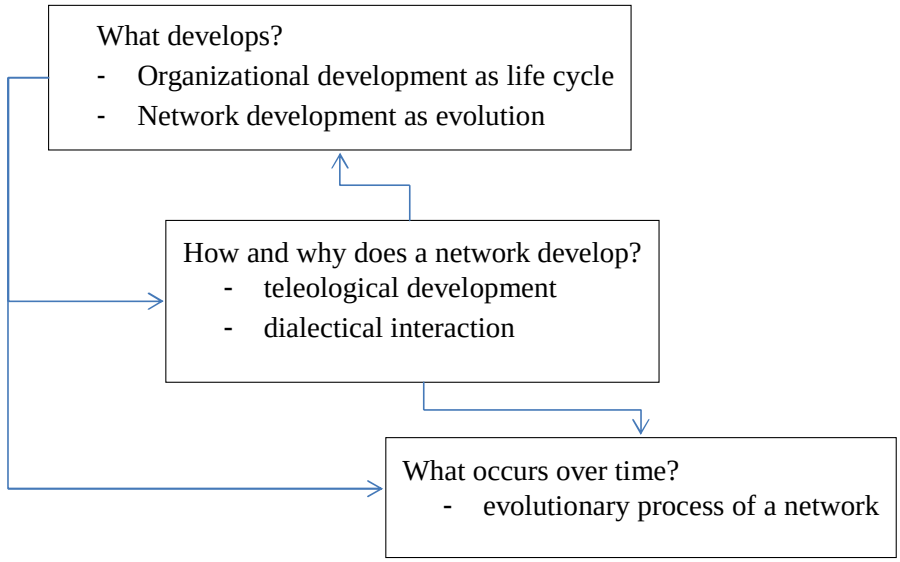

Figure 8 Quad-motor conceptualization of network development (adapted from Slotte-Kock & Coviello 2010, 50)

Slotte-Kock and Coviello (2010) synthesize different process theories to describe network development and explain why changes occur. In particular,

they emphasize teleological and dialectical approaches in explaining the mechanism of development process. Life cycle theory and evolutionary approaches are more suitable for describing development process. Whereas life cycle theory is suitable for describing organizational development, the evolutionary approach is more suitable for describing that which occurs over time at the level of a network.

Slotte-Kock and Coviello's (2010) conceptualization of NDP stands in contrast to conventional studies on new venture creation and network development. These studies typically focus on causal relations and descriptions of actions rather than explaining the underlying mechanism of change. As such, the quad-motor approach is novel in the domain literature as it has not previously been empirically employed. In fact, scholars typically rely on one ideal process theory to describe or explain changes. Also, beyond the domain literature, there are only a few exceptions (e.g., Calori 2002; Maon 2010) in which changes in organizational development are theorized with the quad-motor approach. The conceptualization by Slotte-Kock and Coviello (2010) in turn brings in the wider context in which relationships are initiated, transformed, and terminated.

However, the quad-motor approach for network development does not explicitly explain why some process theoretical approaches are more suitable for describing changes in a network and others in explaining the underlying mechanism of network development. As a result, it might be worthwhile to combine these ideas with the conceptualization of multi-level network development characteristic of S-D logic.

2.3 Synthesis of the theoretical framework on network development process

Above, overviews of S-D logic and four process theoretical approaches are put forward with a particular focus on NDP. In the following, some perspectives from S-D logic and process theoretical approaches are synthesized to provide the theoretical framework for understanding NDP of INVs in Internet-enabled markets. In this chapter, network development is modeled as a multi-level process characteristic of the service ecosystems approach, which can be described and explained with the help of particular process theoretical approaches.

The service ecosystems approach perceives that changes in a network occur through evolution or replication without explicitly referring to other process theoretical approaches. Thus, a network is understood as a form emerging from micro-level interactions between resource-integrating actors as these

actors co-create value. Instead of perceiving events of service exchange as separate transactions (i.e., small view), S-D logic highlights that these interactions are embedded in complex adaptive service systems (i.e., long view). In brief, networks emerge from social interactions at lower levels while being constrained by structures of social contexts at higher levels.

In turn, process theoretical approaches to network development at best describe the role of various process theories for describing and explaining changes in network development without conceptualizing network development as a multi-level process. Process theoretical approaches, particularly life cycle and evolutionary approaches, perceive that changes at the higher level feedback to lower levels (Figure 9). As a result, overriding social systems enable and constrain actions of an individual actor and the establishment of structural forms. The life cycle process approach focuses on actions that are characteristic of rule-following actors. It is perceived in the stages models that the level of development of a higher-level system results in a particular kind of behavior at the lower level. The evolutionary approach in turn describes the formation of higher-level structures through selection and retention. In other words, the evolutionary process approach assumes that higher-level systems (e.g., environment) constrain the development in lower levels by selecting the kind of development that best fits with the environment and higher-level structures. As such, the evolutionary approach does not focus on describing micro-level phenomena.

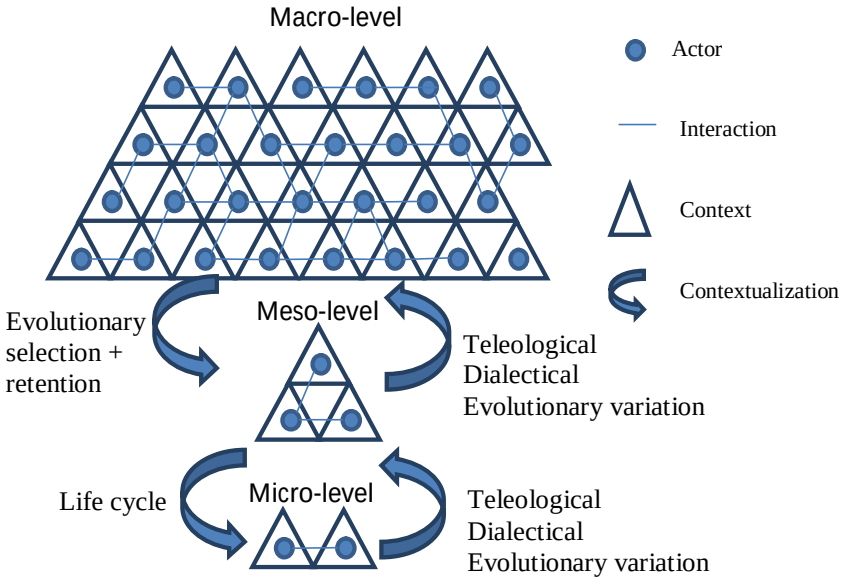

Figure 9 A synthesized model on network development incorporating service ecosystems and process theoretical approaches

The process of network development can be analyzed through different process theoretical approaches. Social interactions can be teleological, dialectical, or evolutionary by nature. Teleological interaction refers to an action of deliberate NDP by an actor. Dialectical interaction refers to an action, not necessarily in accordance with benefiting a network, which causes tension in network development. Evolutionary interaction refers to an action that causes any kind of variation to social systems at the higher level.

The synthesized model on network development (Figure 9) indicates the process theoretical approaches that can be employed to analyze changes occurring in a network. As such, the synthesized model can be employed to analyze the empirical findings.

3 METHODOLOGY

In this study, methodology is perceived as a description of the underlying philosophical assumptions of particular methods employed in the dissertation, in contrast to other potential definitions of methodology. These philosophical assumptions comprise ontological and epistemological questions that are interlinked with the aim of the research. Ontological questions focus on the existence of entities, properties of entities, and categorical relations between entities. Different worldviews explain the fundamental ontological dichotomies between, for instance, abstract and concrete, and determinism and indeterminism. Epistemological questions in turn focus on the nature of knowledge, and ways of acquiring knowledge. This can also be regarded as a standpoint of how scientific explanations can be understood, and how truth can be determined. This results in the following kinds of question:

- Ontological: What is a 'network'?
- Epistemological: How can a researcher know that there is a 'network'?
- Methodological: What methods and techniques should be employed for collecting and analyzing data regarding a 'network'?

I follow Sayer (1992) by treating methodology as a choice between alternative methods of theorization. In this sense, there is both a method in empirical research and in theorization. Insight on network development process (NDP) can be gained via both empirical observations and theoretical reflection. The methodological decisions on collecting and analyzing data regarding service ecosystems thus relate to the research questions and theoretical background.

3.1 Philosophical background of the research

Regardless of the dearth of empirical work in service-dominant (S-D) logic, it is clear from the conceptual work that Vargo and Lusch oppose marketing's positivist/empiricist paradigm (Arndt 1985; Tronvoll et al. 2011). Recently, Edvardsson et al. (2011), Löbler (2011), and Helkkula et al. (2012) have contributed to the understanding on philosophical roots in S-D logic. In general, they argue that there is conceptually a close linkage between S-D logic and phenomenology, as value closely relates to subjective perception. From the phenomenological perspective, reality is subjective by nature, which

influences the epistemological question regarding value, networks, and service systems.

In addition, by referring to the wider social context, the perception of value should not be restricted to a single actor but should incorporate multiple actors in a network. As Löbler (2011) notes, this echoes with social constructionism, which shares the idea that reality is constructed intra-subjectively, although it is intersubjectively mediated by shared understanding on culture and social context. In fact, S-D logic refers to Schütz's version of phenomenology, which emphasizes that reality is not purely subjective in terms of resource integration and experience but 'intersubjective' in terms of the exchange process and shared experiences (Löbler 2011; Helkkula et al. 2012). Every action gets its meaning from the world within and outside the actor's control (Schuetz 1951). As conscious experience is mediated by social context, both Löbler (2010; 2011) and Helkkula et al. (2012) emphasize the importance of an actor's lifeworld (i.e., Lebenswelt), referring to the phenomenological perspective in which meaning is based on an individual's lived experience in the social context. Importantly, this perspective emphasizes that both parties in service exchange perceive value propositions differently (Turnbull et al. 1996; Löbler 2011), or 'uniquely' and 'phenomenologically' (Vargo & Lusch 2008a, 7).

While this indicates that a network is ontologically based on socially constructed reality, it raises an important epistemological question: If a network is always subjectively perceived, how can we know that it develops in the first place? According to phenomenologist epistemology, service ecosystems cannot be objectively studied. As reality is socially constructed, a researcher interprets the data and recreates social reality. Reality cannot be revealed from any objective records but needs to be understood through individual sensemaking processes.

These ontological and epistemological assumptions on service ecosystem are shared by the social system theorists who perceive human actors as having agency, although their actions are simultaneously enabled and constrained by constantly reproduced social structures (Giddens 1984; Archer 1995). Thus, S-D logic explicitly strikes chords with not only social constructionism and phenomenology but also with the practice theoretical approach. Löbler (2011) explains this linkage by dividing the intersubjective perspective into interpretive research, constructionist perspective, and the research of practices. By analyzing these orientations, Löbler (2011) regards the potential of S-D logic as moving from interpretive-constructionist 'subject orientation' to 'sign orientation', which is more characteristic of post-structuralism, postmodernism, and their variations. In other words, instead of relying on phenomenology and social constructionism, S-D logic should build on philosophical roots shared by theories of practice as the meaning of signs is understood only as

being embedded in practices that are implicit and unobservable (Giddens 1984; Löbler 2010).

Vargo (2011b) agrees with Löbler and recognizes that this kind of transition towards 'sign orientation' is visible in Chandler and Vargo (2011) and Peñaloza and Mish (2011). Also, the practice approach has recently been implemented in the S-D logic-related literature (e.g., Järvensivu 2010; McColl-Kennedy et al. 2012; Moisander et al. 2012; Pareigis 2012). The combination of intersubjectivist and practice theoretical approaches is not straightforward. As distinguished by Reckwitz (2002), there are indispensable ontological and epistemological differences in the 'intersubjectivist' approach that focuses on social interaction between actors compared to the practice approach that focuses on practices as the context in which actions are embedded (Schatzki 2001). Whereas explicit coordination is embedded in lifeworld (i.e., phenomenology and social constructionism), the implicit level acknowledges unconscious coordination of signs and symbols characteristic of structuration theory.

What has been described above suggests that meaning arises from the conscious lifeworld and unconscious practice. There is a clear need to explain the mechanism by which lifeworld influences sensemaking or the process of network development. In addition, it is considered that the service ecosystems approach should be built on ontology that is more applicable to complex systems and the theory of emergence.

Bunge (1999) attacks Schütz's phenomenology by judging it anti-scientific. In his opinion, phenomenology fails to construct and test models of complex systems by treating all facts as subjective (or intersubjective), instead of material or objective. Moreover, Bunge (2004a) criticizes Giddens for not incorporating a mechanism of understanding when addressing understanding (i.e., 'verstehen'). For Bunge (2004a), verstehen refers to interpretation of individuals' intentions, not those of a system. To understand the underlying mechanism, we should investigate the system: the interaction between its constituents, and interaction between the system and its environment.

In fact, what is needed is a theory of knowledge that is able to address both meaning and causality (Elder-Vass 2007) or the mechanism explaining laws (Bunge 2004b). This might sound contradictory to the characteristics of social emergence (Kaidesoja 2009), but it does not stand in opposition to the definition above when the concept of emergence is addressed ontologically, not epistemologically: "Explained novelty is no less novel than unexplained novelty, and predicted novelty is no less novel than unpredicted (or perhaps even unpredictable) novelty: the concept of emergence is ontological, not epistemological." (Mahner & Bunge 1997, 29). Nevertheless, this does not mean that Bunge would consider that the behavior of a system could be

predicted by describing the components of the system. Although emergence can be explained, it cannot be reduced to the causal power of entities, as they have causal power only as part of specific wholes. In addition, mechanisms are not only causal but random (Bunge 2004a). As a result, it is encouraged to study mechanisms in which 1) entities comprise the system, and 2) the system interacts with the environment causally and randomly, and thus co-determine an event (Elder-Vass 2007; Mingers 2011). In other words, emergence is not planned or determined by isolated variables, it emerges from rule-following, and rule-generating, interactions between actors in social systems. These interactions can be simple or complex by nature, which makes emergence either predictable or unpredictable. This assumes that some higher-level properties are predictable from lower-level components, whereas sometimes the relation is non-linear to the extent that emergence cannot be reduced to the properties of lower-level entities (Sawyer 2001).

In critical realism (Archer et al. 1998), social systems and their structured properties are perceived to emerge from people and their interactive activities (Mingers 2004; 2011). Nonetheless, structures exist independently of actors and activities, as actual events that we experience (or not) emerge from interaction between underlying structures and mechanisms (Mingers 2011). However, the existence of real mechanisms is dependent on whether they have causal power or not. For critical realists, these mechanisms can be physical, social, or conceptual (Varey et al. 2002). Importantly, critical realist ontology is also interested in structures, which are present or not, and mechanisms that are triggered but have no effect on the structure due to opposing (i.e., dialectical) mechanisms (Mingers 2011). By perceiving mechanisms as both observable and unobservable, critical realists admit that knowledge can be produced by both empirical (i.e., objectivist) and rational (i.e., subjectivist) modes of reasoning (Varey et al. 2002). Epistemologically, it is thus possible to describe different entities and study their interactions within a service ecosystem. However, Wan (2011) suggests that despite merely describing entities and their interactions, the mechanism and context underlying the events occurring from the interaction should also be investigated. This emphasizes the need to study both inner (i.e., endogenous) and outer (i.e., exogenous) context as a source of change (Pettigrew 1987) in NDP. In this sense, entrepreneurial activities should be understood based on the internal structure and cultural-political context, and also on broad features of the outer context that legitimize activities of various actors.

The demands for contextualized explanation (Welch et al. 2011) are in line with previous studies in the domain literature, which suggest that the network development of an international new venture (INV) can be highly context-specific (Madsen & Servais 1997; Nummela 2004). In other words, international

entrepreneurship (IE) should have a critical realist approach to research, as it focuses on human actions and social exchanges by definition (Seymour 2006). As the context both shapes and is shaped by the phenomenon, contextualist research requires study on multiple levels (Michailova 2011). However, there is a need to distinguish between a focal firm and the entrepreneur, which are endogenous to the broader system, the network that is exogenous to the focal firm and the entrepreneur but endogenous to the broader system, and the context that is exogenous to the broader system (Slotte-Kock & Coviello 2010). As a result, multi-level studies on understanding entrepreneurial activities embedded in context would be welcome (Andersson 2000; Jack & Anderson 2002; Jack 2005; Godsiff 2010; Arenius & Laitinen 2011).

In sum, the aforementioned critical realist approach to process research is applicable to the research questions, as service is defined from the lens of a customer (Edvardsson et al. 2005) or, to be precise, in the context of an actor (Vargo & Lusch 2010). Multi-level research characteristic of the research approach enables study on resource integration practices from both individual and collective dimensions (Voima et al. 2011), and simultaneously addresses how the structure of a service ecosystem is shaped by the level above the network. Thus, it is possible to focus on the process of ecosystem development (Parkhe et al. 2006) by oscillating the foci between micro-, meso-, and macro-levels (Chandler & Vargo 2011), from transactions to networks (Boddewyn 1999), or from entrepreneurs and individual customers to communities as a unit of analysis (Chandra & Coviello 2010). Multi-level research can address value co-creation process more holistically than by focusing only on one level. This also addresses the need to study the co-evolution of resource integrating actors and service ecosystem over a period of time.

This kind of differentiation between units of observation and analysis is encouraged by the recent entrepreneurship literature (Schoonhoven & Romanelli 2009; Ciabuschi et al. 2012). This does not mean that differentiation is without challenges, as complex networks are neither fully exogenous to individual entrepreneurs nor to their startup companies (Stuart & Sorenson 2007). This also relates to the difference between social and business networks. Whereas social networks refer to the relationship between individuals, business networks refer to inter-organizational relationships (Jack 2010). In other words, these networks refer to different levels of analysis. Whereas the entrepreneurship literature typically focuses on relationships between individuals (Hoang & Antoncic 2003; Stuart & Sorenson 2007; Jack 2010), there are also studies that research new venture formation at the business network level (e.g., Ciabuschi et al. 2012). By building on the multi-level approach to the issue, this research bypasses the ‘either-or’ dichotomy between social and business networks, and considers it an essential ‘both-and’ question.

3.2 Research methods

As S-D logic and related complexity and process theories are not bound to any particular method, it is theoretically justified to employ multiple methods in the research. In fact, the multi-method approach is suggested by S-D logic-oriented marketing scholars (e.g., Edvardsson et al. 2011; Fisher & Smith 2011; Helkkula et al. 2012) in collecting data from actors in the context of service exchange and on the symbolic meaning of consumption within value co-creation and co-destruction practices (Plé & Cáceres 2010; Echeverri & Skålén 2011; Pongsakornrungsilp & Schroeder 2011). As social constructionists, they suggest the use of multiple qualitative data collection methods, such as in-depth interviews, observations, case studies, ethnography, participant inquiries, and narrative approaches (Pareigis 2012). These methods, particularly case study research, are considered suitable to network theory in addressing features of complexity (Gummesson 2007). Compared to quantitative studies, these methods typically provide a holistic perspective on the context (Sinkovics et al. 2008) enabling multiple units and levels of analysis (Langley 1999). Qualitative research methods are therefore preferred among complexity theorists (e.g., Simon 1992) and process theorists (Burgelman 2011; Pettigrew 2012). Although research methods of complexity theorists and process theorists remain rare in international business research, there are scholars in IE (e.g., Hoang & Antoncic 2003; Coviello 2005; Keupp & Gassmann 2009) who encourage the use of these kinds of multi-methods that enable contextualization, in sharp contrast to objective and generalized explanation-seeking deductive methods such as surveys or collection of general financial data. It is acknowledged that research on NDP can be conducted in a large-N study (Schutjens & Stam 2003). However, compared to large-N studies, qualitative research methods are typically better equipped to study unobservable constructs (Godfrey & Hill 2007) such as social context or networks. As a result, qualitative research methods are employed for data collection to achieve a contextual perspective on NDP.

The use of multiple qualitative research methods enables phenomenological research (Löbler 2011). In contrast to positivist methods focusing on objective approximations and generalizations, Helkkula et al. (2012) emphasize that phenomenological knowledge, as individual subjective experience in a social context, can be gained with narrative research methods or any method that intrinsically focuses on the interpretation of subjective experience and individual sensemaking of interactions. For example, a combination of ethnographic research with the narrative approach can provide stimulating insight on internationalization processes (McGaughey 2007). However, rather than merely following phenomenologist/social constructionist research methods, it

is necessary to study signs in symbolic interaction (Sawyer 2001, Löbler 2011), which in the critical realist approach requires collection of data from not only individuals but from and on material things.

Given the phenomenon in question, multiple in-depth case studies, employing a participant observation technique and other instruments that follow the process through time, seemed the most appropriate methodological approach to this research (Sinkovics et al. 2008). Case research is a typical methodological choice for scholars studying internationalization from the network approach, as in-depth case studies are feasible in revealing the 'unseen realm of networks' (Johanson & Kao 2010, 129). Based on the theoretical discussion, it is suggested that interactions result in complexity and contextuality. Case research is perceived as a relevant method for studying complex and context-specific issues (Welch et al. 2011) that are expected from the empirical data. The choice of case research is further encouraged in the complex contexts of network evolution (Coviello & Cox 2006; Gummesson & Polese 2009), and creation of new ventures (Jones & Holt 2008). Although the application of critical realism to case studies remains 'underdeveloped' (Elger 2010, 256), it has been argued that critical realism can be applied in case research (Easton 2010), and is superior to alternative methods of theorization processes, as "even single case studies are capable of developing and refining generalizable concepts and frames of reference." (Pettigrew 1985, 242). In this sense, case studies can be employed as an illustration (Siggelkow 2007, 21–22) of conceptual theory building in a real life situation with emphasis on explaining underlying mechanisms.

There are various ways to collect data within case studies; however, most of all, interviews are in line with the ontology and epistemology of the research objective, and the theoretical and philosophical background of the study. Employing in-depth interviews for understanding network formation has also been proposed by Ellis (2000). Narrative interviews are based on interpreting and making sense of human experience by listening to, collecting, and analyzing stories from an actor's lifeworld. These interviews are particularly relevant in understanding perceptions on value propositions in various contexts (Helkkula et al. 2012), enabling the revelation of meaning of a phenomenon as informants actively reconstruct and construct the past, present, and anticipated future. This is central to the critical realist approach, as it is crucial in understanding reality to ask what is meaningful to actors (McColl-Kennedy et al. 2012). In addition, narrative interviews enable the collection of processual data that are relevant to the phenomenon under study (e.g., Mainela & Puhakka 2009).

In addition to interviews, co-founders were asked to draw existing network pictures (Henneberg et al. 2006; Mouzas et al. 2008) and prospective network

pictures. A 'network picture' refers to a visual representation of an individual's understanding on a network. In this sense, network pictures are highly subjective, based on managerial sensemaking. These pictorial, conscious images of the surrounding environment can be interpreted by a researcher to understand managerial decision making in networks (Henneberg et al. 2006). As network pictures are highly subjective, they do not aim to provide an objective perspective on the network. In addition, it must be emphasized that network pictures never portray the full picture of a complex network as managers select particular aspects of the most meaningful events and create a simplified representation of the complex environment (Mouzas et al. 2008). The complexity of a network picture is influenced by the manager's experience and the specific tasks undertaken by an individual (Ramos et al. 2012). As such, even within an organization, network pictures are likely to vary from actor to actor (Colville & Pye 2010; Leek & Mason 2010).

To date, network pictures have been employed in a retrospective manner, as managers have drawn network pictures based on past events (e.g., Henneberg et al. 2006). Here, network pictures are employed both for understanding the current position of a company and for interpreting anticipated changes via visual representation in prospective network pictures.

In addition, real-time participant observation can be useful in understanding how practices and changes actually occur in the respective context. Participant observation shifts the perspective from managerial sensemaking to that of a researcher, and has previously been implemented successfully in the domain literature (Sigfusson & Chetty 2012). In particular, the emergence of social media platforms have enabled new ways of conducting 'netnographic research' (Kozinets 2002; Lewis et al. 2008); that is, conducting ethnographic research in an Internet-enabled environment. The netnographic approach provides a novel way of participating in a community by observing and analyzing online discussion, meanings, practices, and artifacts. Although participant observation in online communities can be beneficial for interpreting NDP in its context, it is encouraged to combine netnographic research with offline data collection (Prior & Miller 2012, 518). For instance, Sigfusson and Chetty (2012) iterate between face-to-face interviews and participant observations in a social media platform.

Sympathetic to the process nature of the study, narrative interviews, network pictures, and observations are all dynamic research methods that oppose the typical static (cf. Coviello 2006) and retrospective (cf. Jones & Holt 2008) research settings in new venture and INV research. Here, a static retrospective approach is not employed in the research, as ongoing longitudinal methods are more suitable for explaining the dynamic mechanisms of NDPs (Coviello & Martin 1999; Hoang & Antoncic 2003; Coviello 2005;

Ciabuschi et al. 2012). The longitudinal approach is also considered a preferred method for studying value formation process that has multiple phases (Voima et al. 2011). However, the approach in this research differs from quantitative studies with a comparison of two phases (Menard 1991). Instead, the study builds on the insight of Halinen and Mainela (2013) that addresses the specific characteristics of qualitative network process data.

Although the structure of the study might seem more or less straightforward, it must be emphasized that the structure of the dissertation is a result of a constant fine-tuning process that aims to make the thesis as clear as possible to the reader. The structure of the study does not resemble the chronological order of the research or writing process. In fact, over the research process there was a constant iteration between conceptual development, theoretical framework, philosophy of science, and empirical research process. Therefore, the theoretical background should not be considered an independent part that simply precedes the methodological choices and empirical findings. As such, the dissertation neither follows a purely inductive nor purely deductive approach to scientific explanation as it builds more on the grounds of abduction (Dubois & Gadde 2002) or retroduction (Mingers 2011). Here, both abduction and retroduction refer to retrospective sensemaking of the interplay between theory and data with elements of both deductive and inductive research. As a result, dynamic and prospective research methods are mixed with retrospective sensemaking. In particular, the study relies on retrospection while identifying actors or building life stories of various actors. This is not as negative from the perspective of process researchers as one might initially imagine. Although real-time analysis is encouraged, it often needs to be combined with retrospective analysis (Pettigrew 1987), as this combination enables the revelation of patterns and mechanisms of change better than real-time research alone.

In this research, a particular theory is not chosen a priori to explain and describe the process of network development. It is considered that the combination of several theories, or metatriangulation, can enhance the understanding on complex phenomena (Lewis & Grimes 1999). However, the inclusion of multi-level and temporal process theories needs attention in the data collection and analysis. Whereas a study based on life cycle theory is possible with a positivist study of a single entity, deeper understanding on the mechanism requires constructive research at multiple levels of analysis (Slotte-Kock & Coviello 2010).

Conventionally, scholars in the domain literature rely on data from focal companies alone (e.g., Mort & Weerawardena 2006; Ruokonen et al. 2006; Sasi & Arenius 2008), and thus have taken an egocentric perspective on data collection and analysis. This is surprising, as Coviello and Munro (1995) previously suggested in their seminal article that future studies should

incorporate multiple perspectives; a request that they soon repeated (Coviello & Munro 1997). As a result of this egocentric approach, information from actors external to the focal company has not been captured as a source of alternative perspectives on the INV network (Coviello & Cox 2006). These alternative perspectives are crucial to understand the intentions of other actors as variations in individual sensemaking of reality, and how different understanding forms the basis for their practices (Lamb et al. 2011). To date, the focus in IE has mostly been on intentional, purposeful activities of the founders, which are often observable in resource exchange processes with essential relationships defining the boundaries of the network (Larson & Starr 1993). On the one hand, the IE literature has accepted that only human beings can be intentional in their entrepreneurial activities. On the other hand, as opportunity discovery is a cognitive act, groups or organizations cannot undertake entrepreneurial activities, and therefore IE research must focus on inter-personal interactions and social networks (Ellis 2011). These interactions as resource integration practices can be reactive or proactive by nature (Coviello & Cox 2006). As a result of these shortcomings from focusing solely on the focal company, it was decided that the case is not the company but the network.

The shift of focus from the focal company and entrepreneurs to the actors in the service ecosystem is crucial to avoid falling into a methodological trap by relying solely on network structures in analyzing a firm's resources and capabilities, and thus missing the process perspective within the network analysis (Johanson & Kao 2010).

Over the research process, it was decided to focus on a single case network, as initially selected ecosystems were not as comparative as suggested by Pettigrew (2012). This choice was encouraged by the methodology literature (Dyer & Wilkins 1991) and by other researchers in related research settings (Koza & Lewin 1999; Ciabuschi et al. 2012) employing the single case method with encouraging research results. The limitations of a single case setting are acknowledged (Miles & Huberman 1994); however, learning from a particular case can be an asset rather than a liability (Dyer & Wilkins 1991; Dubois & Gadde 2002). In short, a single case setting can potentially provide closer insight on the dynamics of the phenomenon in a wider social setting. This only depends on the sensemaking strategies employed in theorizing from network process data (Langley 1999). Also Eisenhardt (1991) welcomes a single case setting when scholars address multiple sources of information.

It must therefore be noted that the unit of analysis in this study is a network. By changing foci, it can be studied from micro-, meso-, and macro-level perspectives (Chandler & Vargo 2011). When theorizing, a researcher needs to find the underlying mechanism that shapes NDP and the relationship between context, actions, and emergence. Here, focus is not on the startup company but

on the service ecosystems initiated by these companies or, more precisely, the entrepreneurs. As the ideal process theories operate in different units of analysis, it is possible to gain a more holistic understanding on the phenomenon.

3.3 Research process

The empirical part of this research is based on a longitudinal study of a single case network. This chapter describes how critical realist, qualitative, case process research was conducted in practice. As I go through the choices made during the data collection and analysis, insight from the framework of Barley and Tolbert (1997) is adapted. I also acknowledge the problems of employing case study methods for collecting data in a network setting (Halinen & Törnroos 2005). Therefore, I also highlight questions on network boundaries, network complexity, the role of time, and case comparison to the extent appropriate in this research setting. The chapter discusses how data were collected and analyzed on NDP of an INV; namely, Founder2be. Moreover, I justify the choice of an international social media startup from Finland as a relevant context for the study. I inform how the particular research site was selected, how and from which sources data were collected, and which strategies were utilized in analyzing the data.

In processual case research, the first requirement for the selection of a research site is comparability (Eisenhardt 1989; 1991). This means that cases are preferably from the same sector and from the same political and economic context (Pettigrew 2012). The choice of social media stems from my personal interest and a more general need for research on Internet-enabled markets, which are introduced in Chapters 1.1 and 1.2. Social media is a human communication platform that enables sharing of user generated information in Internet-enabled markets.

Here, I employ social media as a general term for combining the technological and ideological nature of Web 2.0 and various forms of user-generated media content (Kaplan & Haenlein 2010), which blends technology and social interaction for the co-creation of value (Agarwal et al. 2011). As such, in choosing a social media INV as a research site, I do not limit the general term ‘social media’ to any particular category such as social networking, content sharing, or virtual worlds (Mangold & Faulds 2009, Kaplan & Haenlein 2010). I consider that emphasizing the key role of users in social media makes it distinctive in relation to the traditional method of creating and delivering content online (Kietzmann et al. 2011). In particular, social media differs in terms of the importance of community and changing technological means, which can be particularly influential to NDP (Layton 2011, 264).

In practice, NDP of an INV can be studied in various contexts. However, I claim that an international social media startup is potentially a fruitful context to research the phenomenon. Methodologically, I consider that the influence of social context is more observable in the context of social media (Helkkula et al. 2012). Moreover, it is a context that potentially provides fast observable changes over the term of study (Barley & Tolbert 1997). By employing a high technology sample, I can compare research findings with the INV literature focusing, in particular, on high technology contexts (Madsen & Servais 1997) and Internet companies (Mostafa et al. 2005; Loane & Bell 2006). Nevertheless, this comparison needs to address temporal and other features of context. In addition, social media can provide attractive avenues for methodological contributions. Social media enables new ways to collect international data on users. Typically, it was difficult to identify customers; however, they are identifiable to the public in social media to a varying extent, with registered users as a minimum. Nonetheless, social media has not been utilized in data collection to its full potential. Furthermore, the choice of a narrowly defined context limits the generalizability of findings to other contexts.

The context is defined in international social media. The study aims at contributing to the research domain of network formation in the IE literature. Therefore, I considered it was necessary to have case ecosystems around companies which intend to internationalize early. In addition, I perceived that the international dimension added an appealing feature of contextual differences, as various actors came from different countries.

More particularly, I focus on international social media startups. As critical realist process research leans on subjective knowledge rather than objective or system level information, I consider startups a preferable context for studying NDP. As startups tend to be relatively small, differences between organizational and personal perspectives are not a major dilemma. In addition to size, young companies do not carry the burden of organizational culture from the past, which makes it possible to focus on real-time NDP. In other words, the service ecosystem is in the stage of early emergence, which makes it easier to identify and interpret. This follows from the proposition that networks of INVs increase in size and decrease in density over the course of time (Coviello 2006). Therefore, it is better to begin studying international companies before they enter their first foreign market (Sharma & Blomstermo 2003; Coviello 2006) or even prior to their legal birth (Madsen & Servais 1997). In addition, collecting data within a year from original conception and only over a year enables more reliable recall from entrepreneurs.

From all social media companies, I decided to focus on companies that were established in Finland. It must be admitted that selection of the Finnish context is a rather natural choice for a Finnish researcher. Although a case site

should not be selected for convenience, typically financial, temporal, and human resource issues guide the selection of contextual factors (Hantrais 1999). Nevertheless, the focus on a Finnish company is not considered a major limitation here. Previous empirical findings in IE have suggested that there are no significant national differences in terms of networking practices (Greve & Salaff 2003; Klyver et al. 2008), although network development per se can differ in various national contexts (Johanson & Kao 2010). In particular, there is a long tradition of studying network-related activities of internationally-oriented Finnish service and software companies (Edvardsson et al. 1993; Bell 1995; Hellman 1996; Salmi 2000; Yli-Renko et al. 2002; Ojala 2009), which provides comparative evidence to contextual theorization; however, with temporal limitations. Based on previous research, Finland can be considered a small, open economy (Korhonen et al. 1996). As a consequence, the research findings can be compared to the network development of companies from other small and open economies, such as New Zealand and Iceland, which have been studied more extensively within IE (e.g., Coviello & Munro 1995; Chetty & Blankenburg Holm 2000; Sigfusson & Chetty 2012). Collaboration is a necessity in small, open economies and companies are often driven from domestic markets to achieve economies of scale (Chetty & Campbell-Hunt 2004). Interestingly, there are also contradictory findings emphasizing the importance of cross-cultural differences on network formation (Steensma et al. 2000) and network development (Keillor et al. 2007).

After defining the general context of the research, I needed to select the research setting (Barley & Tolbert 1997). Initially, I rejected the single study case research approach as I acknowledged the importance of comparative cases in revealing common practices beyond individual online communities (Schau et al. 2009), and in contextualization of research findings (Eisenhardt 1989;Eisenhardt 1991; Whetten 2009). However, over the research process, I decided to focus on a single case network, as initially selected ecosystems were not as comparative as suggested by Pettigrew (2012).

First, I judged the suitability of potential networks based on descriptions of new ventures at ArcticStartup, the largest website addressing technology startups in the Nordic and Baltic countries. I searched for relevant companies in the Startup Index and created a list of 31 companies that, based on the given description, were social media companies from Finland and established within the pre-selected time frame of 2010–2011. Next, I evaluated their intentionality to undertake entrepreneurial activities across national boundaries (Jones et al. 2011) based on references to international activities and availability of foreign language on their websites. International orientation was later confirmed in the interviews. The preliminary suitability check resulted in a list of six companies (i.e., Nearparent, Favor, Founder2be, Liilak, Ziliot, and

Shobble) that I characterized as international social media startups from Finland.

Here, I must admit that at the beginning of the research I did not have a framework at hand with which I could have conducted theoretical sampling of case companies (Eisenhardt 1989). Instead of sampling, I contacted the first three companies on my list via email on September 13th, 2011. I decided to refrain from contacting the other three companies until necessary. Within three hours, I received a positive response from two companies, Nearparent and Founder2be. As I did not receive an answer from Favor within a week, I thought that it would probably not be as interested and committed to my research efforts as I wished. Therefore, I decided to move forward by cold calling other potential case companies. From the three remaining companies, I decided to send an email to Ziliot, as its co-founders had met via Founder2be. I thought this fact might contribute to both case studies. Within half an hour, Aniekan Okono from Ziliot accepted my request.

Having received positive responses from these three companies, I contacted them and had brief face-to-face discussions. After following Nearparent's NDP, I felt that it was insufficiently similar to other case networks (Pettigrew 2012), which made it difficult to collect comparative data from the ecosystem. Eventually, I decided to omit Nearparent from the study in summer 2012. I also acknowledged that a holistic longitudinal study of a number of case companies would be challenging to handle. In particular, as the research progressed, I noticed that the postponement of the launch of Ziliot made it difficult to collect sufficient longitudinal data on users and actors in the service ecosystem. Most of all, as the users of Ziliot were reluctant to answer to my interview requests, I was unable to collect comparative data from Ziliot. After summer 2012, I decided to focus solely on Founder2be from which I had collected the richest data for the purpose of this study.

Thus, I did not adhere to the initial plans but changed the approach to the data collection process during the study. As I did not focus on a formally regular data collection process, I was able to contact key informants whenever compelling data appeared. In this way, I aimed at ensuring a holistic understanding on the service ecosystem. I reassessed the method employed after every data collection event. To overcome the problem of complexity, I employed multiple data gathering techniques and secondary sources (cf. Halinen & Törnroos 2005). As a result, by combining multiple paradigms to understand complex and paradoxical phenomenon, method triangulation or 'metatriangulation' was facilitated (Lewis & Grimes 1999). In particular, I combined narrative interviews with observations and prospective network pictures as primary sources of data collection.

In narrative interviews, various informants were asked different questions as interviews are also embedded in a variety of contexts. Typically, I conducted discussions that were general rather than asking for specific actors' names, as recollecting names can easily lead to a narrow picture of a network, emphasizing mostly strong ties (Marin 2004). In general, I preferred extensive discussions and non-directive questions rather than presenting questions derived from theory. Naturally, some relevant themes were pursued by asking questions concerned with, for example, determining motives and origins of interaction (Harris & Wheeler 2005). With the help of these interviews, I was able to build narratives around the informants and around the emerging service ecosystem.

As the unit of analysis in the study is a network, the first task in the data collection was to identify the system's boundaries. This was not an easy task; however, guided by Halinen and Törnroos (2005), I decided to focus on the boundaries described by key informants (i.e., co-founders), including relationships both internal and external to the formal company. These choices were supported by discussion in the domain literature highlighting entrepreneurial perspective as paramount in understanding international network development (Andersson 2000). Therefore, I began data collection by interviewing the two founders of the company. I wanted to interview both co-founders, as information from multiple informants is considered to outperform data collected from a single source (Wilson & Lilien 1992). For instance, Coviello (2005) successfully combined information from co-founders by employing three primary informants. I followed her example by interviewing all co-founders of the company. First, I interviewed Oliver Bremer and Frank Haubenschild in September-October 2011, and Wolfgang Bremer after he joined the other co-founders in 2012. This research approach enabled me to conduct multiple interviews with the informants to collect processual data (Welch & Paavilainen-Mäntymäki 2013).

During the first interviews with the co-founders, further relevant people were identified. The co-founders provided me with information regarding potential informants and network pictures. Mostly, potential informants were referred to at the categorical level, such as 'users' and 'bloggers', or by references to companies such as Twitter and Google. The interview data emphasize users as they provided most insight for the research. The users were easily identified from the service, as they could be contacted directly via the case platform. Initially, I contacted users randomly from among the first 20 registered users, and among those who had registered more recently to the service. Later, I contacted users more selectively based on their geographical location, and various details in their public profiles. In particular, to obtain diverse perspectives, I contacted users with different roles in their public profiles. In

addition, I was interested in people participating in one of the offline events in New York organized by the focal venture.

Bloggers were similarly identified online. First, by email, I contacted people who had blogged about the case ecosystem before my empirical data collection. Over the research process, I also contacted some who blogged about the focal venture. Online services were also otherwise extensively employed to find relevant informants, and I found relevant people from other social media services such as Letslunch.com and Meetup.com.

Initially, informants such as users and bloggers were chosen from among people who already used the service, had blogged about it, or were otherwise likely to use it or blog about it. As the research progressed, I realized that it was necessary for me to obtain information from people who had not joined the case network. As discussed by Rossiter (2009), one-sided information from current users does not provide insight on whether something has gone wrong or failed in the service. In addition, the perspective of non-members is indispensable for understanding their role and the opposing tension on NDP (Ellis 2011). Similarly, it is necessary to acknowledge that some customers take a more active role. Also, it can be worthwhile to analyze 'sleeping' customers, whether they are merely passive or devoted and expect guidance from the focal company. These questions are of particular importance from the perspective of dialectical and evolutionary process research. Therefore, I contacted non-members, who were trying to find a co-founder online but were not employing Founder2be for that purpose. I also obtained additional insight on the context from bloggers who were unaware of the case network's existence.

In addition, towards the end of the data collection round I interviewed two interns who had worked for the focal venture during summer 2011. The interns had signed a non-disclosure agreement (NDA) with Founder2be, and the entrepreneurs did not want me to contact the interns. Not to violate agreements on confidentiality, I gave the co-founders of Founder2be the opportunity to review what the interns had told me in the interviews. After the review, I was given permission to include narrative from one of the interns (Lisa Arensburg) to give a more holistic perspective to my dissertation.

Apart from informative discussions with co-founders, interns, and users, I mostly conducted confirmatory interviews, which were necessary to understand their perspectives to NDP. With service providers in particular, it was beyond the scope of this research to gain a more holistic picture of their activities. Nonetheless, I visited employees in companies such as Twitter, Google, LinkedIn, and Quora to better understand their perspective on NDP, and their perception of their companies' roles in the ecosystem. From these social media partners, only a Twitter employee's story is presented as a narrative.

During the interviews, I tackled the complexity issue by employing research objectives as guidelines while simultaneously sensing embeddedness (Halinen & Törnroos 2005). A crucial aspect is to grasp time in these questions. As Halinen and Törnroos (2005) suggest, the focus in these questions relies on events relating to the formation of current relationships. I did not want to follow this guide too strictly, as the data collection aimed to address different process theories. However, I gained good insight on the relationship between three modes of time: past, present, and future. As described in the theoretical framework, actors act when previously integrated resources together with the present resource pool are integrated to create value in the future. Time is addressed in the research by identifying event trajectories leading towards service exchange, by building narratives from these event trajectories, and by examining both past and future related issues with various longitudinal research methods (Halinen & Törnroos 2005).

I encouraged informants both to talk about things related to the case ecosystem and everyday things in their lives. As Korkman (2006) notes, these small things can reveal non-problematic and self-evident aims behind the value co-creation process, and many innovations are developed around these mundane practices. Interviews were conducted both face-to-face and via VoIP ('voice over internet protocol', i.e., Skype) to reduce travel costs (Daniels & Cannice 2004). I preferred to first make face-to-face contact; however, due to financial and timing issues, in reality it appeared difficult to visit all informants. Also, in particular, it was expedient to ask follow-up questions without travelling to a meeting. In total, there were 35 interviews and nine less formal discussions with key informants. Interviews were more structured and focused on the themes of the study. Discussions in turn were more ad hoc by nature although they provided relevant information concerning the phenomenon and context, and are therefore included as primary data collection.

Although qualitative research is not validated by the number of interviews or length of interview data, the amount of data resembles the research setting in other single case studies conducted in similar research settings (e.g., Koza & Lewin 1999; Ciabuschi et al. 2012). Interview sessions lasted from 15 minutes to five hours. In the longest interview session, I followed a user (i.e., Aniekan Okono) more extensively, as at that point I was collecting information on him as an entrepreneur of a potential focal venture (i.e., Ziliot). The length of an interview thus did not simply result from an interviewee's willingness to communicate. Various interviewees were asked different questions, and therefore some were asked fewer questions. I always asked for permission to revert to the informants to ensure correct understanding on everything discussed, and did this via email or VoIP.

Data were in principle collected globally as I did not limit the context to internationalization in any specific country. Although the global approach can be regarded as a limitation in the contextualization of research, I aim at describing the country-specific context in the case description to identify country-specific limitations of the research. Most of all, the perspective is to a large extent focused on Western developed countries, and particularly to the USA. As face-to-face interviews were the preferred data collection method, there were more informants from Finland and the USA. Apart from one informant (i.e., Toni Perämäki), the interviewees from Finland were foreigners by background. International interviewees were interviewed in English, although mostly this was not their mother tongue. While this might have potentially caused some problems, I did not notice that language significantly influenced data collection.

All interviews were audio recorded when possible. Some of the interviews were only partially recorded as sometimes I was not fully prepared when the informants began to talk on engaging issues, and on a couple of occasions I encountered technical problems with the recording device. In addition, observed events and more informal discussions were not recorded, as recording might have influenced participants (Ghauri & Grønhaug 2002). I aimed to make the atmosphere as relaxed as possible during the recorded interviews (cf. Daniels & Cannice 2004). I also made notes during the interviews and informal discussions, which can influence how freely people talk (cf. Daniels & Cannice 2004), and afterwards. In particular, towards the end of the research process, interviews more resembled informal discussions mainly to verify my research findings and obtain further information on the context.

Findings from these interviews were further enhanced by field notes and from brief encounters and discussions with various informants. These real-time observations (Van de Ven 1992) were made to understand how practices and changes actually occurred in the context. As a registered user of the service, I was able to follow what happened in the service ecosystem. For instance, I received all the newsletters from the focal venture when other users signed up for the service. I set up my own profile and even posted my own business idea online to gauge the kind of reaction and discussion it provoked. As part of understanding the general context of international social media startups and practices of the social media startup entrepreneurs, I participated in six startup events in Finland and the USA. During the data collection period, I lived in Finland and twice visited the case network's main market in the USA. I travelled to New York and the San Francisco Bay area, as these two regions are known as leading hubs for international social media startups.

During the interviews, the co-founders of the focal venture were asked to draw network pictures to reveal their representations of the current network

and anticipated network development. Following the suggestion by Mouzas et al. (2008, 169) and Ramos et al. (2012, 964), network pictures were collected with a longitudinal approach over a period time. In practice, I asked the co-founders to draw network pictures at the beginning and end of the data collection process with a time lapse of one year. In their prospective network pictures, each co-founder drew a pictorial representation of the anticipated network one year forward, which was reflected against their network pictures drawn one year later. These prospective network pictures formed the structure for the data collection and data analysis. Although not all service providers were included in these pictures, there were sufficient to have an interpretation of the most important actors in the case network.

In addition to primary data collection via interviews, observations, and network pictures, I collected systematically secondary data relating to the case network. For instance, I received a notification via Google Alert every time Founder2be was covered online. In addition, I collected context-related information from leading social media startup blogs, such as TechCrunch and Mashable. I also followed the co-founders and other actors on social media services, such as Twitter, Facebook, LinkedIn, and Quora. From public online sources, I was able to use an interview of the focal venture entrepreneur (Oliver Bremer) from spring 2011. In addition to publicly available data, I requested and received some secondary material from the informants, such as internship placement portfolios, emails, and resumes. Combined, the primary and secondary data enabled me to gain a more holistic understanding on the informants.

As the data were in part collected retrospectively, the total span of this longitudinal research was almost two years. Initially, I planned for data collection to end around September–October 2012. I made the decision when the first interviews were focused on entrepreneurs' intentions one year forward, by when, according to the strict definition of startup by McAuley (1999), even the last of the initial case companies would have lost its international startup status. However, in September 2012, I re-evaluated what I had accomplished, and the potential benefits of continuing data collection. Despite the limitations of ending the data collection process, I considered that I was able to answer my research questions with sufficient and trustworthy empirical data (see Chapter 3.4).

In total, I conducted 35 interviews, observed in six startup events, and had four network pictures drawn. The primary data collection schedule is shown in Appendix 4. Typically, data are collected until a theoretical saturation point is reached (Mort & Weerawardena 2006), when the informants talk about the same themes, and "incremental learning is minimal" (Eisenhardt 1989, 545). While I analyzed the data, I was able to distinguish the pattern towards which

all informants guided me. As such, given the research questions at hand, I felt that instead of collecting further data I should focus on its analysis. This is a tradeoff between detail and abstractedness, or between a comfortable set of data and a convincing coverage of actors (Halinen & Törnroos 2005). With the research objective in mind, I felt that no more variables and their linkages were needed for the purpose of this research.

During the data collection phase, I had already begun to understand how to proceed with the data analysis. While I recognized that there are several ways to analyze and theorize from process data (Langley 1999), it became evident that there is a lack of the methodological literature focusing on analysis methods in relation to network processes (Halinen & Mainela 2013). However, Langley's categorization of strategies to narrative, visual mapping, temporal bracketing, quantification, alternate templates, grounded theory, and synthetic strategy is considered applicable also in the context of network process research. Most of all, these analysis methods are not exclusive, which enables the use of multiple strategies for analyzing qualitative research data. Here, I focus on narrative, alternate templates strategies, and temporal bracketing as they all focus on sensemaking of mechanisms, and are particularly suitable for theorization in a single case setting (Langley 1999).

As it is easy to struggle with a large amount of data, I decided to employ the *narrative approach* to begin data analysis. This strategy focuses on 'restorying' the case in detail from the raw data so that it is possible to cope with the amount of data (Eisenhardt 1989). While I acknowledge that the narrative approach might not be a conventional choice for a study employing practice theory, practice theoretical research typically focuses on the description of practices instead of 'thick description' (Geertz 1973) of actors involved in the case. However, the study is not on practice per se, but the mechanism of NDP. In addition, I employed narrative strategy mostly as a preliminary step in sensemaking rather than more substantially as employed by contextualist process researchers (Pettigrew 1985). Although the narrative approach enables accurate sensemaking of the case, it often lacks in simplicity and generalizability for theorization (Langley 1999). Therefore, I combined other strategies to theorize from the raw data.

In terms of process theorization, I combined diachronic and synchronic approaches to present and analyze the data in first- and second-order narratives (Soulsby & Clark 2011, 283). First, I employed diachronic data to write first-order narratives (Chapter 4.1) to describe NDP from the perspectives of various actors. The diachronic narratives contain a temporal aspect as they indicate how events chronologically occurred. Second, I rearranged the story in the construction of a second-order narrative (Chapters 4.2 and 4.3), whereby the focus shifts from describing to explaining the process in terms of

interconnection between actors, purposes, decisions, events, and chance (Soulsby & Clark 2011).

In addition to the narrative approach, I utilized an *alternate templates strategy* (Langley 1999) as I employed different theoretical lenses for analyzing and theorizing from the data. I do not simply retell the whole story from different angles but refer to multi-level and temporal process theoretical approaches for deriving insight from a rich case. The use of various perspectives is also encouraged by process theorists, as "any one theoretical perspective invariably offers only a partial account of a complex phenomenon" (Van de Ven & Poole 1995, 511). As a result, it is possible to examine the process from divergent perspectives and build stronger theoretical arguments, rather than merely restating what stands in the narrative (Van de Ven & Poole 1995; Soulsby & Clark 2011; Langley & Sloan 2012).

Moreover, I employed *temporal bracketing* as a strategy for making sense of the network process data. In contrast to the organizing strategy of the narrative approach, temporal bracketing is a replicating strategy. Temporal bracketing does not mean analyzing predetermined stages characteristic of life cycle process research but structuring any continuum or relation between non-linear events enabling the duality between events and structures (Giddens 1984, Langley 1999). Thus, it enables the analysis of feedback mechanisms, mutual shaping, and multidirectional causality. For instance, Denis et al. (2001) describe the link between events and related changes in organizational structures in different phases of development (i.e., from the initial constellation to the end of the study period). Mainela et al. (2011) in turn utilize temporal bracketing to link various activities to selected levels of a process. Here, I do not connect events to a particular structure but consider that an event can influence various structures. Connections between events and the selected structures are shown in Appendix 10.

Typical of the narrative approach, the data analysis began by verbatim transcriptions of the audio recorded interviews, which resulted in 656 pages of transcribed data. Despite the narrative approach typically aiming at 'thick description' (Geertz 1973) of the case, the large amount of data at hand encouraged me to conduct data reduction (Miles & Huberman 1994), which refers to the process of selecting, focusing, simplifying, abstracting, and transforming the data by writing summaries and coding. For the coding, I employed Nvivo 10 software, which enabled me to organize the interview data. This software was selected for coding as it is particularly suitable for analyzing data collected from social media sources. I coded the collected data myself. Other coders were not involved as I wished to have a comprehensive understanding on the wider context and relevant codes (Pratt 2009). The list of codes evolved over the research process as new themes emerged inductively from the data

(Bazeley 2007), and deductively from the simultaneously evolving theoretical framework (Bazeley 2007). After the themes were coded, the data were categorized according to actors and roles within the case ecosystem, which enabled me to write narrative descriptions and focus on various roles, practices, and structures (Langley 1999; Hedaa & Törnroos 2008). The data analysis thus proceeded to written summaries at the actor level to find patterns and processes within the case level (Pettigrew 2012). The result is a lengthy collection of narrative description on the emergence of the case ecosystem (Chapter 4.1) from the perspective of various actors.

Over the writing process I needed to make a decision on how much information should be presented, and on how many actors. First, I could not identify users with a common story, and thus decided it was better to include all interviewed users in the narrative description. However, as the interview with Michael Newcomb in New York was not recorded, I could not write a comprehensive narrative on him. In addition, an intern's (i.e., Solomon Mengistu) narrative was omitted at the request of the focal venture due to an NDA preserving confidential information. Discussions and interviews with other stakeholders were not reported when insufficient information was collected for a narrative. Therefore, I did not include a perspective from Google or Quora in the research. Moreover, the narratives of informants outside the service ecosystem were not described in narrative form, except for one non-user narrative (Exhibit 11), for which I collected more detailed information. The description of primary data is shown in Appendix 4.

In particular, the thick description of the case ecosystem enabled me to examine other aspects of the emergence of the case ecosystem. The initial narrative revealed some blank spots in the story, and encouraged me to collect more data to fill these gaps. Most of all, the narrative of the case ecosystem helped me to code the data again from the perspectives of practice theory and temporal process theories. Many codes followed the theory, whereas some emerged from the data. The interview data was first coded with 'open coding' and then merged into categories via 'axial coding' (Corbin & Strauss 1990). During the phase of open coding, I coded everything that seemed relevant to the research question. The initial coding of the first 14 interviews resulted in 93 codes with a total of 993 references (Appendix 6).

I began working on the set of codes, or categories, by determining which data I had coded under particular categories. Some of the codes, such as 'time' included both a description on the temporal context and a reference to a resource or effort that was spent or saved by an actor. In the phase of selective or focused coding, I increased the level of abstraction and aimed at finding patterns and hierarchies between categories that had been initially coded. For instance, opinions on governmental actions and schools were combined under

'institutions'. After the initial coding, I faced two challenges. While I had too many codes that provided overly detailed description, I realized that the descriptive content of the research defining NDP was insufficient to explain the emergence of the service ecosystem. The process theoretical lens is thus employed on the functional content explaining the mechanism for the emergence. In sum, the descriptive content answers the question concerning what happens in the emergence of a service ecosystem, whereas the functional content answers the question concerning how the service system emerges.

To increase the level of abstraction for the descriptive data, I wanted to focus on the actors' activities. The aim was to find themes within activities. By coding one sample interview of an entrepreneur (Frank), I coded 155 activities of actors in the network. With the need of a mid-range between detailed activities and general practices, I analyzed the codes further and determined that I could focus on coding roles, actions, and context. This resembled the 'markets as practices' approach (Kjellberg & Helgesson 2007). Although Kjellberg and Helgesson (2007) provided visualization of practices as a workable tool, they also noted that the three types of practice are entangled, and therefore these practices are not practical as descriptive categories. As a result, I decided to focus on value co-creation practices.

Unfortunately, the methodological discussion on data analysis is often missing in relevant studies (e.g., Högström & Tronvoll 2012), and there is not a workable template or theoretical framing for these value co-creation practices. McColl-Kennedy et al. (2012) categorize the activities as the customer's role, based on the number of interactions and activities. Similarly, Schau et al.'s (2009) and Åkesson's (2011) categorization of value co-production practices and role constellations are based on interaction. Due to the nature of the research questions, theoretical framework, and the interview data, this did not seem valid for analyzing the collected data because I wanted to have an understanding on both value co-production and value co-creation as a service ecosystem-level phenomenon. In addition, the proposed division between providers and beneficiaries in online communities (Pongsakornrungsilp and Schroeder 2011) felt overly harsh, as the theoretical framework does not encourage a dichotomy between gainers and losers in service exchange. Instead, I wanted to keep the enactment of roles separate from the practices to which other codes refer (Pareigis 2012), and from the effects of practices (Schau et al. 2009). Therefore, I built the thematic analysis of the data based on value co-production and value co-creation practices, and left the effects of these practices in a separate theme. This decision is elaborated in more detail in the following.

As the informants discussed their enacted roles, I noticed that they constantly referred to either the roles in the case network or outside of it.

Therefore, I thematized their activities in endogenous (i.e., inner context) and exogenous (i.e., outer context) roles. This helped me to find other contexts to which the informants referred. However, it must be admitted that the division between endogenous and exogenous roles is not straightforward, as often one activity refers to enacting multiple roles; for example, tweeting (i.e., the practice of using Twitter) can refer to the role of a sponsor in Founder2be's service ecosystem or to the role of a user in Twitter's service ecosystem.

After coding the activities, it was necessary to code the intended consequences of these actions to understand how they contributed to the value co-creation process (Schau et al. 2009; McColl-Kennedy et al. 2012), and eventually to the emergence of the service ecosystem (Schau et al. 2009). By analyzing the kinds of practice in which people were engaging, I realized that actors were mostly describing that which related to the social media scene as 'information collection' and 'networking'. In other words, I took into account both those who generate and share information and those to whom information is generated and shared. I did not make a distinction between providers and beneficiaries (Pongsakornrungsilp & Schroeder 2011), or active and passive actors (Åkesson 2011). First, I perceived that the actors to whom information is generated and shared can also be actively integrating resources. They are motivated by searching for information. Second, I perceived that actors who generate and share information are not motivated by these practices alone but by networking opportunities. Instead of merely collecting information, actors have social interactions so that someone else would be able to combine his/her knowledge and skills with other resources. Altogether, these practices of information collection and networking relate to findings from various theoretical backgrounds, such as the practice theoretical approach to S-D logic (Järvensivu 2010), international startups (Jolly et al. 1992), and the international business network literature (Björkman & Kock 1995).

However, as I had an interest in motives for these actions from the outset, I was not convinced by references to resource integration practices at the level of information collection and networking. Instead, I began focusing on personality-related issues that arose from the data. Some activities could not be simply explained based on the search for information or willingness to build a network. Instead, these references pointed to personal development. I categorized these references to one's personality as 'self-identity enforcement', as it fits with insight from identity-based networks (Hite & Hesterly 2001), and to role enactment in virtual communities (Pongsakornrungsilp & Schroeder 2011) as the basis of identity creation explaining social behavior.

In sum, I was able to analyze the data based on resource integration practices, which related to the enactment of endogenous or exogenous roles. However, as suggested by the theoretical and philosophical background of the

research, it is not sufficient merely to understand interactions between constituents of a system, interactions between the system and its environment have to be understood. Coding an environment seemed a challenge as I would have to code everything not belonging to the ecosystem. In the initial coding phase, I found references to families and jobs, which were decisive in the context of research. However, I realized that these were more likely to be important in the context of actors, rather than in the context of the ecosystem. I understood that I should focus my coding on 'one level above'. This level was eventually found at the contextual limitation of the research; namely, an international new venture in Internet-enabled markets. As a result, I coded the environmental data if they referred in general to the international business system, Internet-enabled market, or the startup scene. Together, these codes formed the basis for analyzing the multi-level emergence of the case ecosystem (Chapter 4.2).

In addition to the multi-level approach, I wanted to analyze the data via temporal process theories (Chapter 4.3), which were likely to give different insight on the research problem. I realized that it was easier to find codes relating to life cycle and teleological processes from the coded data. This is understandable as the data were collected and narratives were written at the level of an actor. To analyze the emergence of the service ecosystem, it was necessary to remember the difference between the unit of observation and the unit of analysis. Whereas I was collecting data from entrepreneurs, users, and other human beings as units of observation, I was interested in NDP.

As I aimed to examine the data through temporal process theories, I needed to have a separate set of coding for each process theory. Different activities with reference to 'stages' were coded for life cycle theory. Teleological data analysis only included references to 'envisioned end state' and 'end states'. Dialectical analysis of the data included the coding of 'dialectical forces'. Eventually, the data were coded from the evolutionary process perspective including 'selection', 'variation', and 'retention'.

After I had established the set of categories, I felt that I still needed a template through which the data could be analyzed. I found Abrahamsen et al.'s (2012) template, which focuses both on description of 'what' happens at different levels and ascription of 'why' these changes occur at different levels. However, Abrahamsen et al.'s (2012) template had some limitations in relation to the theoretical background. Therefore, the template was slightly modified before data analysis. First, as Abrahamsen et al. (2012) are mostly interested in sensemaking, the template for analyzing network change mostly focuses on intended consequences; they rely on retrospective sensemaking of network changes in a manner that neglects the intended/unintended aspect in data analysis. Second, although they extensively discuss the importance of

time, Abrahamsen et al. (2012) do not include temporal aspects in their template.

Eventually, I organized the data into two dimensions: the level of analysis and the driving force of change. The level of analysis represents various levels of the case ecosystem with which the actors interacted. By organizing data in this manner, I perceived that the level of change can occur at the level of an actor, service ecosystem, or its environment. The template that was employed for analyzing the transcripts is shown in Appendix 7. In the template, the 'what' column provides a description of the changes whereas the 'how' and 'why' columns provide 'mechanismic explanations' for these changes. By relating the codes from the temporal process research, I was able to link temporal process to the multi-level data analysis. In terms of the template, the passage of text is given a level of analysis, description of change, and explanation of the change. Thus, I was able to follow the development of the network from a multi-level, temporal process perspective.

By employing this template modified from Abrahamsen et al. (2012), I was able to review transcripts and relevant passages from the text. Ultimately, it was crucial to find common themes to theorize from the contextual information. Most of all, I needed to determine how different value creation practices were linked together, and on what level these changes were occurring. Here, again, insight from Abrahamsen is beneficial as all changes at the actor level are necessarily embedded in a wider context. Eventually, the modified template enabled me to extract scripts characteristic of particular periods, and examine them for evidence of change in and between different levels of interest (Barley & Tolbert 1997).

3.4 Trustworthiness of the research

Trustworthiness of research can be evaluated according to several criteria. Most of all, it is acknowledged that the choice of criteria needs to be in line with the ontological and epistemological assumptions of the research (Andersen & Skaates 2004). In particular, there are separate evaluation criteria for quantitative and qualitative research, as they typically approach the scientific explanation from different angles. In qualitative research, the evaluation criteria created by Lincoln and Guba (1985) is commonly employed. They suggest that trustworthiness is reflected against credibility, transferability, dependability, and conformability. These criteria are of particular value to a 'naturalistic inquiry' conducted by a subjectively interpretative human researcher.

Credibility refers to truthfulness in interpretations on the data (Lincoln & Guba 1985). The interpretations of the researcher need to be in line with the informants' multiple realities. The task is twofold; first, the research should be conducted in a manner that increases the probability of credibility. Second, credibility of the findings should be approved by the creators of the realities.

Challenges relating to credibility were encountered over the research process. To reduce the gap between data collection and interpretation, the suggestions by Huber and Power (1985) were followed. They particularly encourage the researcher to motivate informants to cooperate, to minimize the time gap between occurrence of the phenomenon and the data collection, and to frame questions. In this study, the entrepreneurs were motivated to participate in the study by being told that the research findings should assist their business development as I would share my insight from the data collection. Beyond the entrepreneurial team, other informants were not deliberately motivated by any rewards.

The focal venture was co-founded by two people, and the entrepreneurial team was later joined by a third person. In the case of startups with multiple co-founders it is challenging to choose whose perceptions and intentions to study, as within new ventures even the founders often perceive network development differently (Arenius & Laitinen 2011). For the reader to have an understanding on multiple intentions and realities, the plan was eventually to write a separate narrative on each actor in Chapter 4.1. However, I wanted to keep the narrative of the entrepreneurial team as a coherent piece in the case research report, otherwise restorying the emergence would have become a challenge. As a result, I aimed to reconstruct the narratives as well as possible.

To improve credibility, I let the informants comment on their respective narrative descriptions. Most of the informants perceived that I had understood them correctly and that the narrative reflected them correctly. Most of the comments focused on clarifying some details and updating what had occurred after the interview. However, feedback was also received on false interpretations. This was beneficial, as some of the interviews were conducted in noisy lunch bars or via VoIP with poor Internet connection. These technical issues challenged transcription and interpretation. In addition, some of the field notes were mislayed before they were systematically analyzed. As such, being able to revert to the respective informant, collect more data, and rewrite the narrative accordingly was indispensable. The informants were able to correct some misunderstandings. In addition, some confidential or personal facts that were unnecessary for the research were deleted in case the informant did not want them published. However, I discussed which facts were necessary for a trustworthy narrative. Thus, I interacted with the informants to ensure a credible description of their realities.

There are also many challenges to the credibility of the research. Retrospectively, I realize that I might have employed multiple informants in some of the company (B2B) actors. Although I was able to collect a large amount of data on the research phenomenon, there were some restrictions that impacted my data collection. Some of the requested data from entrepreneurs and interns could not be revealed, as it contravened the privacy policy of the focal venture. For instance, I could not identify those who had paid for the premium subscription as this information was not publicly available, and its revelation would contravene the privacy policy.

To increase credibility, I could have employed another interviewer and conducted more structured interviews (Huber & Power 1985). Furthermore, I heavily rely on informants, who might have provided biased or inaccurate information on themselves (Huber & Power 1985). Therefore, I might have employed multiple perspectives and several methods and sources for data collection to minimize the possibility of false interpretation of reality in individual narratives (Huber & Power 1985; Leonard-Barton 1990). However, information regarding the unit of analysis, the network, was collected in the abovementioned manner. In particular, employing network pictures simultaneously with interviews from multiple informants is considered here to increase the credibility of the research. In general, the study incorporates multiple perspectives on the research objective (Eisenhardt & Graebner 2007), which increases trustworthiness of the research findings.

In addition to limitations in data collection, choices made in data analysis also might influence the credibility of research findings. Here, it must be noted that the data were analyzed only qualitatively. I acknowledge the benefits of analyzing qualitatively collected data quantitatively (e.g., Coviello 2005). However, as data were available only for a partial network, due to the huge size of networks and a general unwillingness to participate in the study, quantitative analysis of the data might have resulted in less reliable or even anecdotal research findings. To some extent, choices on data analysis are thus limited by data collection. For instance, as downloading all the content from the case website contravened the company's privacy policy, I was unable to analyze the whole network from the database.

Transferability relates to the uniqueness of the case, which refers to the extent that research findings are transferable to other contexts (Lincoln & Guba 1985). Without having knowledge on another context, I cannot make a particular claim that the research findings are generalizable. However, there are ways to increase the transferability of the research. First, the assessment of transferability can be conducted with reference to the extant literature (Eisenhardt 1989) that will indicate to which domain the research findings can be generalized. Second, my task is to provide an explicit chain of evidence or

depth of description, so that the reader can evaluate the context-specificity of the research findings. As Lincoln and Guba (1985) suggest, the research should provide 'thick description' (Geertz 1973) on the research context. In terms of thick description, I encountered two challenges from the perspective of the inner and outer context of the study.

First, in the study, the inner context of the research is described only partially. As a result of multiple realities, I am unable to provide a thick description on the level of an actor. However, by incorporating the inner and outer context of the service ecosystem, I give a thick description of the service ecosystem. The focus is on some of the informants, who provided me with their insight on the appropriate level.

Second, I describe the outer context of study only partially. The number of enacted roles, practices, and structures in the study are limited, as the outer context would easily have guided focus onto things that are irrelevant to the perspective of value co-creation (Korkman 2006) and NDP. As I needed to focus on some parts of the context, the importance of some of the social systems, such as friends and family, are not discussed in detail in the research.

Dependability refers to the reliability of the research findings, and to the overall research quality and consistency. This refers to the possibility of replicating the study to evaluate that the research findings are not reliant on me as the researcher or the choices I have made. Therefore, I describe the research process adequately and truthfully (Ghauri & Grønhaug 2002). I aim to provide a transparent perspective on the research process by, for instance, putting forward detailed information on the interviewees (Appendix 4), secondary data (Appendix 5), the initial coding sheet (Appendix 6), and the template for analyzing data (Appendix 7).

This is not to say that I, as the researcher, did not have influence on the research findings. In fact, the influence of a researcher on empirical evidence begins with the choice of research site, and the attitude towards the research process (Miles & Huberman 1994). In addition, social interaction between the informants and me might have influenced the dependability of the research findings. In general, our face-to-face meetings were mostly relaxed and open, and I think that distortion was less likely in such a situation. As some of the interviews were conducted via VoIP, the connection between the informants and me was more distant. It is also acknowledged that there might be problems of informants providing false information, as they want to give a good impression of themselves. The informants were informed early in the process that the research findings would eventually be published online. In my opinion, the threat of informants providing false information would remain even if other scholars undertook the study. In addition, based on my experience, there is a stronger threat that the informants unintentionally gave false information

based on cognitive limitations leading to memory errors rather than purposeful distortion (Mintzberg et al. 1976). Furthermore, it must be acknowledged that only approximately 10% of the people I contacted agreed to an interview; as such, those who responded positively to my request might be different by personality, and might have significantly different worldviews from those who were unwilling to participate in the study.

Confirmability refers to an unbiased method of conducting research. In other words, the research should be conducted in a manner that it is not a mere 'self-fulfilling prophecy' (Poole & Roth 1989). I acknowledge my influence on the research findings through my own interpretations, as a priori practical or theoretical insight on the phenomenon might have influenced the way empirical data were collected and interpreted. However, to avoid a biased perspective of the process, I constantly alternated between data collection and analysis (Sinkovics et al. 2008). For instance, I derived the coding scheme from the data, rather than a priori from theoretical constructs. In addition, I studied the process of emergence from various theoretical approaches, which supports the logic of the underlying model (Whetten 1989).

I did not know any of the informants in person prior to contacting them. I have not been an employee in any of the organizations under research. However, I became a user of Founder2be early in the study, after case selection but prior to the first interview, and I am also a user of other actors in the ecosystem, such as Twitter, Facebook, and Google. This evidently influences me as a researcher, but I aim at being as open concerning this as possible. Most of all, as I participated in the process of emergence, I interpreted the phenomenon from my own perspective. Nevertheless, I consider that I managed to remain sufficiently detached to conduct unbiased interpretation.

In sum, I aim to show throughout the research report that the results are not from my own imagination. Instead, I demonstrate the logical interplay between the data and interpretations in Chapter 4. The choices I have made are described in detail in Chapter 3.3. Moreover, in the following Chapter, I provide a detailed narrative description of the phenomenon under study. The narrative descriptions are reinforced with selected quotations to enable the reader to make his/her own interpretations from the research.

4 CASE DESCRIPTION AND ANALYSIS

In this chapter, I report the research findings through case description and analysis. To describe the case, I have chosen a 'multiple case narrative report' as it is particularly useful in reporting several bounded stories with multiple actors and research sites (Shkedi 2005). However, this does not mean that I group all informants based on their common characteristics. Instead, the narrative told from the perspective of the entrepreneurial team functions as the frame of the whole narrative. Otherwise, I describe other informants in their natural context in separate exhibits.

In the analysis part, I build on the narrative descriptions to identify actors' resource integration practices in the case network. I make a distinction between the enactment of exogenous and endogenous roles. In terms of enactment of exogenous roles, I focus on the structures of the startup scene, Internet-enabled markets, and the international business system. By endogenous roles, I refer to roles that are enacted within the structures of the case network. After discussing the enacted roles, I analyze the case through various process theoretical lenses. Thus, I link multi-level analysis with temporal processes. Eventually, I discuss the main empirical findings and answer the research questions.

4.1 Narrative description of network development process

Frank Haubenschild and Oliver Bremer have known each other for a long time. In the latter part of the 1990s, they both studied Computer Science at the University of Siegen in Germany. Soon after graduation, Frank began work as an automobile engineer for Continental Automotive in Germany; Oliver continued his studies in the USA. After graduating from the University of Tulsa, Oliver began working for Nokia in Helsinki, Finland. Despite the spatial distance, their friendship continued.

One day, Oliver had an idea for a business but realized that he could not build the service on his own, he needed a co-founder. Finding a co-founder is encouraged in the startup literature. Oliver recognized that instead of doing everything on his own, he needed to team up with someone possessing relevant technical experience. Frank was one of the people Oliver contacted,

as he knew Frank's capabilities and was keen to work with his old friend. Unfortunately, Frank did not like the idea and decided not to join the project.

Oliver continued the struggle to find a co-founder for his idea. With no luck, he attended startup meetups to find relevant expertise. After a while, Oliver realized that a solution to his problem could not be found in the online environment either. Suddenly, he noticed that others were struggling with the same issue, and he soon had another business idea. How exciting would it be to find co-founders online prior to meeting them in the real world, similar to online dating? This would save time for startup entrepreneurs who were busy developing their businesses.

Oliver contacted Frank to introduce the idea of a co-founder matchmaking site. The idea was straightforward: to help people who are interested in creating a startup to find each other. Frank became interested in Oliver's idea, and decided to work on it. Oliver and Frank became a team, the co-founders of Founder2be, and the friends began talking to each other more frequently.

In the early conception, the idea was to have a 'Match.com for finding a co-founder', on which people post their profiles online for other users to browse, and then make contact if they are interested in a profile: "We are making Founder2be to lower the hurdle and enable all those sitting on the sidelines, wanting to do something great, not knowing how to get started, to take the first step." Many people warned Oliver and Frank that their idea was doomed to fail, that this kind of idea would never work as thinking about finding a co-founder online is too obscure. Co-founders are instead supposed to be found in face-to-face meetups where you can talk, and check whether you are on the same wavelength with each other. Startups are considered things that require a high degree of trust, which cannot be built on the basis of a few emails: "A lot of people have said, you must know your co-founder for a very long time and I think that's not true."

As Oliver had previously participated in these kinds of startup meetup, he understood what these people were talking about. However, regardless of their critiques, Oliver asked himself the question: "What do they know?" Globally there are millions who have found their spouses online. To Oliver, there was no question that the same model would work for finding a co-founder. Based on his understanding of online dating, Oliver understood that "no one responds 'I do' after the first messages sent online". Instead, one exchanges ideas and describes oneself as a person. Only after that is the decision made on whether one is willing to meet or not. Oliver believed that the same would apply to co-founders, and hoped that others were ready to share his vision.

Startup meetups are run daily by various individuals and organizations around the world. Although not all necessarily focus on people finding a co-founder, they are organized around themes that are expected to attract startup

entrepreneurs: ‘That cool thing you’re working on’, ‘Marketing for startups’, ‘FailChat: Exiting Gracefully’ are just a few promotional examples from these events. Oliver perceived that most of the people who participate in these meetups already have an idea for a startup and are aiming to find help. Many do not have the time to help others, as they are committed to investing in their own idea. As such, these meetups are not real matchmaking events.

The roles soon emerged: Frank took more responsibility for code writing and technological issues, whereas Oliver took more responsibility for marketing, and was more willing to focus on entrepreneurial activities. To operate Founder2be, Oliver and Frank registered a limited liability company in Finland. Despite the new company’s official incorporation, Frank was not willing to leave his job in the research department of Continental Automotive; he was enthusiastic about how Internet-enabled services can improve the experience and safety of driving. Instead of resigning, Frank decided to work on Founder2be during his evenings and weekends at his home near Siegen, Germany – the city where he was born, the city where his family and friends live, and the city about which he was writing a book.

While developing the site, Oliver participated in different events and openly discussed the plans for Founder2be. He pitched potential users and organizations, and started to collaborate with co-working spaces, accelerators, and other organizations in the startup scene in Finland, Germany, and the USA. He was not afraid of someone stealing the idea. In any case, he thought that there would be some emergent competition, and felt that he needed feedback on his idea. In January 2011, Oliver was again talking to a random acquaintance, when Anna Bessonova overheard the conversation: “She said, ‘You know what you are talking about is interesting. Can I hear more?’ I said, ‘Of course.’ And so, I explained it and then after I explained it turned out that, ‘I'm from ArcticStartup’.” As a result of this brief conversation, the first blog article on Founder2be was published on January 31st, 2011. This blog promoted the launch of private beta to readers of ArcticStartup, a technology website that reviews and reports on technology startups from the Nordic and Baltic countries.

Exhibit 1 Blogger’s perspective – Anna Bessonova

At the age of 17, Anna Bessonova graduated from high school in Russia. She was willing to continue her studies abroad, and was looking for countries where she would like to go. She also pondered on university degrees, as she did not have a clear picture of what she wanted to do. Eventually, the bachelor’s program in sociology at the University of Helsinki sounded tempting to her. Conducted in English, free of charge, and close to

her parents, the program was of interest to Anna. Especially when her friend's mother recommended the program, Anna was convinced and applied to the university. She was accepted to start in August 2006.

During her studies, Anna was actively involved in various student activities including the international student association and the debating society. In February 2010, Anna was introduced to the technology and startup scene, when a friend asked her to join an event hosted by Aalto University's entrepreneurship society (AaltoES). The friend had been involved with the society for a few months and thought that Anna might also be interested in their activities. Anna was a bit skeptical as she was not as enthusiastic about technology or startups as her friend. It all changed after she drank her afternoon coffee with a group of friends. Anna heard about a meetup event at AaltoES later that day, and her friend asked if she would like to join: "I was like, why not?" This was the first occasion that Anna had been introduced to the startup scene, and she immediately enjoyed the spirit of the event: "It seemed very alive." She was introduced to many interesting people. For instance, Anna met Kristo Ovaska, a founder of AaltoES with a mission to spread the entrepreneurship society movement to other Finnish universities. When Kristo heard that Anna was from the University of Helsinki, he immediately introduced her to his friends at the event. Kristo did not introduce her simply as Anna but "Anna, the founder of Helsinki University Entrepreneurship Society".

After the networking event, Anna felt that she was obliged to launch the entrepreneurship movement in her home university: "I already have like two contacts in LinkedIn who think I am a founder of this thing." She felt that it would be embarrassing not to pursue it. Anna was ready to try different things, and now she had already got a kick-start by meeting important people in the local startup scene.

Anna founded HUES (Helsinki University Entrepreneurship Society) in March 2010, and managed to attract more than 300 members during the first month of operation. She ran different events with interested people, and collaborated with AaltoES. One day, at a social networking event, she met Kristoffer Lawson, founder of Scred. Kristoffer mentioned that they were potentially looking for a summer intern to assist with their community management. Anna agreed to spread the message to the university students. Eventually, she was told that the internship had been confirmed, applied for it, and was recruited to the startup in May 2010.

After the summer, HUES was not experiencing the same momentum as it had during the spring semester. Anna was busy starting her studies in the master's program on global media and communications. However, this did not mean that she lost her interest in startups. As a matter of fact, new

opportunities emerged in the startup scene when she noticed that ArcticStartup was recruiting. Anna knew the company as she had met Antti Vilpponen, co-founder of ArcticStartup, during her internship at Scred. Anna perceived that ArcticStartup was a tempting combination of technology, startups, and communications – a good fit with her studies and extracurricular interests. She applied for and got the job.

At ArcticStartup, Anna had to write one or two stories a day. Due to the region being small and topics scarce, sometimes this was challenging. As Anna tried to find interesting startups, she continued attending startup meetups. One day, Anna's friend introduced her to Oliver Bremer at a networking event in Helsinki. Hearing that Anna was from ArcticStartup, Oliver told her about his idea of a co-founder matchmaking site. Anna found the idea interesting, and was impressed with Oliver's entrepreneurial approach. They got on very well, and stayed in touch at different events. Later, Oliver invited Anna to Founder2be's office for an interview. Anna was a bit skeptical about the potential of the company as she wondered whether startup entrepreneurs have money to pay for such a service. However, Anna acknowledged that she did not have knowledge on the market, and was convinced by the way Oliver talked about the service and his plans, which were backed with theories of entrepreneurship. In general, Anna liked the idea, and decided to write a blog post on it in January 2011.

Anna worked for ArcticStartup until November 2011. She gained a good understanding on how media works and on the daily lives of people who cover startups. She also learnt how to pitch to a journalist. As Anna was not interested in pursuing a career as a journalist in the near future, she thought of applying instead to a PR company. She approached Netprofile, a public relations company for the technology industry. In December 2011, Anna joined Netprofile with her focus on public relations in English- and Russian-speaking markets. She was excited to see the other side of the fence, working hard to get media coverage for Finnish startup companies.

The service was described in detail in the blog, including some of the team's plans for the future. Most of all, readers of ArcticStartup are promised free premium subscriptions: "Since Founder2be is being launch [sic] today, the first 50 people who retweet this launch tweet and request access for the service at www.founder2.be[5] will receive free premium subscriptions." (Anna Bessonova @ArcticStartup). To be honest, Oliver and Frank were a bit disappointed with the number of retweets the blog post received. They realized that they had not had time to focus on building a following on Twitter, and that it

[5] In her blog post, Anna referred to Founder2be's secondary domain.

is not sufficient to rely solely on ArcticStartup. Nevertheless, the entrepreneurial team was positively surprised by the initial response to this announcement. As a result of this awakened interest, they decided to increase the intake for the private beta beyond the envisioned 50 users, and asked the extra people to join a waiting list for the next versions.

Thus, Oliver and Frank required several partners, with differing levels of importance, to get the site up and running. Initially, the most influential group of partners were the users, the content creators for the website. The users were allowed to register and input content directly after the private beta version of Founder2be was launched. Ron Broens was one of the first users.

Exhibit 2 User's perspective – Ron Broens

In the mid-1990s, Ron Broens met and married a Finnish woman in the Netherlands where they lived for seven years, after which they moved to Finland. The couple had two children and Ron worked in the vibrant mobile phone industry. He worked as a senior mechanics designer, project leader, technology analyst, and technology & innovation manager before resigning his job to work as an innovation consultant at Pera Innovation.

The CEO of Pera Ltd in the UK had learned of blue ocean strategy at INSEAD graduate business school, and wanted to combine it with open innovation processes and Pera Ltd.'s core competencies. As a result of TEKES (Finnish Funding Agency for Technology and Innovation) national funding, Finland sounded like a good option for UK-based Pera to launch the new innovation service. This also sounded appealing to Ron. During his time at Pera, Ron had the opportunity to talk to approximately 70 vice presidents, managing directors, and other senior managers about what they wanted from innovation consultants. However, Pera was soon in trouble in Finland; within the first year, four of Pera Innovation's five employees were fired in Finland, including Ron. However, he was not desperate: "For a very long time, I had wanted to start my own company. So I said 'okay this is now or never', and I started my own company in Finland." He wanted to do intellectually challenging work that would inspire him. To Ron, operating his own company would meet that requirement, and in June 2010, aged 40, he established his own company, BOOI Innovations Oy. Ron perceived BOOI as an acronym for blue ocean strategy and open innovation. The combination of these two trendy concepts reminded him of Pera Innovation.

From his time as a consultant at Pera, Ron had learnt that senior managers want innovation processes that run as projects with an end in sight; senior executives do not continuously want to hire external resources to shape and run their business. In addition, innovation process must be customizable to

customer needs. Moreover, Ron understood that innovation process has both process and human aspects. The problem is that these skills require different kinds of people, who often have difficulties in communication. Left- and right-brain dominant people perceive the world completely differently, as do people with different kinds of personality from introverts to extroverts. Ron developed modules to balance the human and process sides of innovation development. This ranges from assessing people to assessing a client company's overall innovation capabilities and strategy, and from training people to develop creative skills, innovation capabilities, and innovation strategy to eventually implementing a comprehensive system.

The focus on matching different kinds of people is rather natural to Ron, as he has been reflecting his own personality for 14 years, since he took his first MBTI (Myers-Briggs Type Indicator) test. By his own assessment, Ron is an "intellectually-driven, extrovert, intuitive thinker, judger (rather than perceiver), ENTJ in the Myers-Briggs Type Indicator, which is a typical personality type for CEO". In contrast to materialistically-driven people, he does not focus on money. In the early stage of building the company, he did not take any salary as "I'm still enjoying myself". While Ron considers that he made his decisions rationally rather than emotionally, he recognizes that his personality has been shaped by the social environment. Being raised in an extrovert family in the Netherlands, the move to Finland made him more introverted. Together with his wife, Ron adapted to his social environment, including both Dutch and Finnish influence.

One of the reasons for starting BOOI Inovations was that Ron wished to better balance his work and private life. Ron's wife supported his entrepreneurial activities. While he wanted to be in control of his future finance and pensions, he questioned how much one actually needs to survive. He valued more the time spent at home with his children than money gained from spending long hours in an office: "I see my kids in the morning and getting ready for school. I can get them from school."

In addition, Ron thought of undertaking doctoral studies for a couple of days a week if the business began to run smoothly. Most of all, Ron wanted to do stimulating things, such as helping companies to innovate. However his company was hit by the economic downturn: "Especially after the two week summer holiday, I lost fifty-five to sixty thousand Euros in revenue, potential revenue." Currently, he is negotiating with companies to fill in his pipeline.

While contacting potential clients, Ron received an email concerning Founder2be. Among the first users, Ron decided to investigate the website purely as it was interesting to see how the service worked. In fact, he had no intention of finding a co-founder for his company. First, he entered his

Founder2be-profile to attract potential clients. Second, he employed the content of Founder2be as an inspiration that might lead to further innovations in BOOI Innovations. This was typical behavior for him as, to improve his innovation company, he often employs new "gadgets" to see how they work and what business principles or models they employ. In fact, he constantly subscribes to different online services to find interesting stories that he can share in seminars. In return, Ron is ready to help developers, and he therefore sent feedback to Oliver. He let Oliver know that Founder2be did not work from the Sleipnir browser, which is a Japanese customizable web browser that is not commonly employed. Although this might seem like a minor matter to a developer, it was an important issue to Ron. Instead of just using Microsoft and Apple products that “everyone else” uses, Ron wants to try other things. Usually, he employs freeware, such as FreeMind for mind-mapping, Mozilla’s mail server, and OpenOffice for presentations. As he perceives these services valuable, he is ready to donate money to them and promote them to his clients. This is important to an evangelist of open innovation.

Ron is intellectually interested in blue ocean strategies and open innovation, and Founder2be potentially gives him insight to do his job better. He found one interesting idea, but no one requested his help. Soon, he became a passive user of Founder2be, and does not see a long future for the service. He does not actively promote Founder2be, as he is not impressed with what Founder2be has to offer. However, Ron accepts that Founder2be provides him value, if only potentially, as he does not know what he wants to be when he grows up: “If I knew that, life would be very boring.” Ron just does whatever he thinks is right for him at particular stages in his life - based on his intuitive judgment.

Oliver and Frank received valuable feedback from these first users. Based on that feedback, they developed the platform according to the needs of their users. They added more social features to the service, such as enabling comments and ratings for other people’s ideas. In addition, they added more questions to the registration form to improve user profiles. Although this lengthened the registration process, it gained more information on the users. While reading the feedback, Oliver and Frank found themselves in a difficult position. To what extent should they consider requests to keep the service as effortless as possible without negatively impacting any potential users? As Oliver says: “The key to a great product is simplicity and ease of use, which means we won't implement everything that we get asked for. A great product is when you cannot take away from it anymore – and not when you cannot add to it anymore.”

The proof that Founder2be works was provided a couple of weeks later. As Oliver wrote in the Founder2be blog: "This is the stuff dreams are made of. You quit your job and set out to do something, which many people tell you it can't be done. You start slaving away night and day, weekends, and pour every free minute into proving that it can be done indeed. And then, less than two months after launch, it happens: The first call with someone proclaiming excitedly: 'Thank you! We met our co-founder on Founder2be and now we are starting up with our startup'." The message was from Aniekan Okono, who was soon to launch his B2B networking site.

Exhibit 3 User's perspective[6] – Aniekan Okono

Nigerian born Aniekan Okono, aged 31, having earned sufficient money by acting as a landlord in his father's house in Nigeria, moved to Kokkola, Finland, with a mission to empower people in developing countries. While studying business administration at the Central Ostrobothnia University of Applied Sciences, Aniekan became more interested in entrepreneurship. He developed an idea for a magazine in which he would cover startup and technology news in Europe. A part of the project was intended to give exposure to startups that otherwise find it hard to get publicity in the media. Aniekan applied for funding for his project from a Finnish regional funding agency but was rejected. Disappointed with the decision, Aniekan decided to move from Kokkola to Jyväskylä, 150 miles further inland.

In the background, Aniekan had a dream of helping to overcome poverty in Africa. He knew what life is like on the periphery and how important it is for people to trust business partners before wiring them money. Aniekan realized that available online platforms overly focus on developed country entrepreneurs, and considered that there should be a solution which would "give people the opportunity to make money for themselves". Aniekan knew the conditions in Nigeria and other less developed countries, and perceived that the Internet was restricting revenue making opportunities for many people. As a result, Aniekan developed an idea for a business networking site named Ziliot.

Aniekan believed that Ziliot would be able to mobilize people in poor countries, and show local opportunities both to online businesses and a wide range of tradespersons from car mechanics to painters. Most of all, Ziliot was expected to help with finding business contacts online so that people

[6] This narrative is written based on information received from Aniekan Okono. It has also been sent to Juha Kovanen and Teodor Kostov for review. They agreed with publishing the narrative as Aniekan's version of the story.

would not have to walk from one village to another. Aniekan's aim was to provide "a one-stop place" for businesses to find opportunities and contact potential partners. Aniekan developed his idea by analyzing well-known sites such as LinkedIn, Alibaba, Freelancer.com, and Facebook. It was important that Ziliot seemed unique and had features not utilized by competitors. In particular, it was deemed necessary to be able to judge a company from reviews and local connections, such as a local Chambers of Commerce.

For the development of Ziliot, Aniekan required partners, and partnered with Tuan Vu, a Vietnamese programmer living in Finland. Together with Tuan, they developed the idea further, first making mock-ups of potential features of the service. Soon, they considered it might be worth trying to find an experienced chief technology officer (CTO), who could give "extra firepower on the development side". In the spring 2011, among the first users, Aniekan signed up to Founder2be and tried finding relevant people in the neighborhood. He found Juha Kovanen from Jyväskylä, whose profile showed the kinds of skill for which Aniekan was looking. Aniekan contacted Juha and described what he and Tuan were working on. Juha replied within 20 minutes: "Let's meet tomorrow." Juha joined Ziliot and gave advice on technological development. However, in May, Juha decided to leave Ziliot.

During the summer 2011, Aniekan actively promoted Ziliot in online discussion forums. He followed interesting comments and articles relating to his idea. For instance, on Quora, he followed related questions and added his own comments. In this way, he built his social identity online to be a thought leader in his own field. Aniekan perceived that it would appeal to journalists and gain him free coverage. In addition, he was able to find people "at the points of their needs". In other words, it was hoped that while searching for a solution to their problems, these businesspeople would find a link to Ziliot.com and register with the service.

In this way, Aniekan was able to attract the first registered users to Ziliot. Ziliot was still in stealth mode, but it was important for Aniekan to develop a sense of attractiveness. He also gained coverage for Ziliot in blogs in Finland and Germany. Presence in blogs is important, and Aniekan aimed to have a blog post on Ziliot in at least one key site in every country. In particular, if the service looked good, it was expected to generate discussion. Aniekan dreamt of being covered by a major tech blog such as TechCrunch or Mashable, and contacted these sites. However, they were not interested in Ziliot, which was still in stealth mode. People registered but users were unable to do anything. Aniekan let them wait; there was nothing to discuss.

After summer 2011, the launch of Ziliot felt like a distant dream when

Tuan moved to Helsinki to study full time, and took a part-time job. He was willing to continue in Ziliot. Based on Juha's advice, the team had chosen a platform for coding that hindered Ziliot's development. Aniekan was not happy with what he saw, different features utilizing different designs: "It is important that Ziliot feels like one page." This was the kind of the thing that Aniekan learned by speaking to other people, and particularly to other entrepreneurs. However, Tuan disagreed, and did not consider these steps a priority. Eventually, the work load became too much for Tuan and progress was too slow for Aniekan. Aniekan needed to continue without Tuan.

Aniekan decided that the development process needed to be started from scratch by employing the server side scripting language PHP, as the coding language previously employed was too difficult and discouraged people from joining the project. This was a momentous decision by Aniekan who had seen the amount of effort required to code the first version. Aniekan went back to Founder2be and tried to find people with relevant skills. Via Founder2be, Aniekan met a Chinese programmer, who went to Jyväskylä and started working for Ziliot. After two months, Aniekan perceived that the new programmer had not finished a single code and could not undertake any other tasks in the company: "He lied on his profile on Founder2be. He doesn't have any IT skills." Aniekan asked the Chinese programmer to resign from the company.

A new team of programmers joined Ziliot, but Aniekan remained frustrated when the new coders also ran late. What was supposed to be delivered by the first week of October was postponed until late October. The open source platform made it difficult to have the kind of user experience at which Aniekan aimed: "I want it to be faster than that. I want it to be done so that I can rest." Aniekan tried to find alternative designers online. He went through portfolios and contacted people whose designs he liked most. These designers billed Ziliot €70 to €90 per hour. Nonetheless, open beta launch was postponed, first to November and a couple of weeks later to the beginning of January 2012.

Aniekan was willing to launch early, as it was the only way he could actually learn from users. On Quora, Aniekan asked: "How unpolished can my minimum viable product be?" He was encouraged to launch his minimum viable product as soon as possible. Aniekan realized that at some point he needed to launch the service, as otherwise nothing was going to happen. He began to feel depressed due to the obstacles in the development process. During the Launch Pad program at the University of Jyväskylä in November 2011, Aniekan was approached by a new acquaintance: "Is this a private meeting? Can I stay?" The person was Teodor Kostov, a Bulgarian student of international business at JAMK University of Applied Sciences,

in Jyväskylä. Teodor listened to Aniekan, and liked the idea and the passion stemming from Aniekan. As he had always worked with startups, Teodor suggested that he join the project.

As a result of renewed hope for progress, Aniekan found his passion again, which is proved by records of Skype discussions. Discussions on Sunday mornings began at 11am and continued throughout the day and night. The team around Aniekan kept on growing, with programmers joining from Bulgaria, Finland, Poland, China, and Nepal, in addition to a designer and a co-owner from Latvia. More were expected to be recruited in the future. As a startup, Aniekan perceived that Ziliot was in a position where they needed to welcome all the help that was given to them, although the assistance did not always prove helpful.

The decision to change to a new platform gave flexibility to service development, and everyone was able to contribute to the process. The visible progress also brought Aniekan back from the edge of frustration to a mood of contribution: "I can't give up, not now. Not now. I see that every day, as we get closer, it becomes more possible to succeed... So, I have that spirit of desire, to still do it. I cannot give it up, but look for the solution until I get it done. When I really get it done, I will be happy. My life will be happier." To speed up the process, Aniekan again browsed online to find more people for the design and development teams.

Even before the launch, the startup had thus become international with international people contributing to the project. The team was employing technological solutions for communications and task sharing. Even though team members were not physically sharing room space, Aniekan took a lot of time to explain what was going to happen in the company, and why something was done the way he wanted. Despite its internationality, to be convincing to Western users, Aniekan wanted to retain design in Europe or in developed countries. This was important, and Aniekan repeatedly emphasized the importance of user experience to the targeted young entrepreneurs and managers in developed countries. After them, the rest of the world would join Ziliot.

However, progress required users. In late 2011, Ziliot had approximately 250 subscribers waiting for the beta launch, although Aniekan was not expecting a huge conversion rate from these subscribers. He thought that, in the early launch, they needed hundreds of companies to show interest in Ziliot. This was the only way to have content with which to attract further users. Moreover, these companies would be important for attracting new users: "Users will share it, use it on their networks, tell other people about it, when they like it. It spreads and the press would also write about it." As long as the product was good and looked nice, Aniekan believed that it would

gain much more attention via word of mouth rather than by paid advertisement. As such, it was also important that these early adopters generated quality content on the website, as it was an important benchmark for future users: "The culture that they've seen on the site, it's what they will follow."

By the first months of 2012, Aniekan would have liked to have had at least 5,000 registered users in Ziliot. The stream of postponements had not lowered Aniekan's high expectations for the success of the launch, and he expected Ziliot to start booming. After the launch and growth, it was expected that investors would come in and provide funding for "a lot of manpower", which could help in developing new features on Ziliot, or at least "enough money to cover some costs". However, Aniekan had a passion that stemmed from something much deeper than a distant IPO: "I'm going there. I have a mission. Nothing stops me. I don't [know] why would something stop me? This has to be done." More important than making money was "to do something that has a meaning".

The first steps towards making something meaningful were taken in February 2012, when the beta version of Ziliot was eventually launched. The first members signed in and posted proposals for collaboration. After the launch, one dream came true when information on Ziliot at growvc.com caught the eye of two Swiss students, who agreed to invest in Ziliot a few months later. Money was welcome as Aniekan was still living on his savings. To attract more registered users, the money from the Swiss students was intended for advertising.

In reality, registered users were still facing a poorly made platform, which was full of bugs. Aniekan was frustrated with the programmers' work, which was managed by Teodor. Eventually, Aniekan asked Teodor to resign in July 2012, when they had disagreements concerning the company's money. The Swiss investment was gone and Ziliot was cashless. The site remained barely working well, and there was no advertising to attract more users. Aniekan's entrepreneurial stress increasingly grew: "We are waiting for a miracle to happen."

This was hard for Aniekan, as Ziliot had become much more than just a startup project to him: "I'm wondering what would be able to stop me ... I prefer to die rather than hanging on like this. When I get it done, I will be so happy because I believe it's going to help people to improve their lives"

For the next step, Oliver and Frank planned to develop a network of partners, and sent more invitations to potential partners to register for the beta version. Their focus over the following months was on building a partner program to find more users for the service. The potential partners for the network included incubators, universities, and other organizations and

individuals who were already, for example, hosting events, providing co-working spaces, and training: “Pretty much anybody who will support on entrepreneurship and innovation. Anybody who has a goal of making people start a business.”

In their actions, and by taking their startup forward, Oliver and Frank were influenced by the startup literature. Frank was reading Jessica Livingston’s ‘Founders at work’, which is a collection of interviews with founders of famous technology companies: “At least from these interviews that I read at the moment, there is always something which you cannot plan but more particular things ”that might make the whole thing explode into something big.” Frank considered that contacting various people, which Oliver was doing, was the most crucial aspect for the development of Founder2be. Oliver attended several meetups and seminars organized by organizations such as the Helsinki Hub and the Finnish Software Entrepreneurs Association.

Oliver attended these events to build partnerships for their Global Alliance Program. A great opportunity for collaboration emerged when Oliver was invited to give a presentation on Founder2be at Helsinki Hub’s weekly breakfast meeting on March 1st, 2011. Oliver’s presentation resulted not only in collaboration with the co-working space, Helsinki Hub, but additionally John Greene, a Lecturer of Digital Marketing at Helsinki Metropolia University of Applied Sciences, found the idea intriguing and blogged about it. Later, this resulted in a series of interviews with Oliver and video blogs by Mihail Donchev, a student of John Greene.

Later that spring, Oliver was contacted again by the Metropolia University of Applied Sciences. Oliver was asked if he could provide an unpaid internship for international students: “I thought it was a good idea because people had helped me in my life and I understand [that] having internship is part of what they must do for school. So, it's okay, if I can have someone now … but I wasn't looking for interns.” As a result of this contact, Lisa Arensburg and Solomon Mengistu, students from the Metropolia University of Applied Sciences, joined Founder2be as interns to help to reach out to potential partners and bloggers.

Exhibit 4 Intern’s perspective – Lisa Arensburg

In 2008, Lisa Arensburg, originally from Ukraine, began her bachelor level studies in international business and logistics at Helsinki Metropolia University of Applied Sciences. At Metropolia, there were a few courses that addressed topics on entrepreneurship and online marketing. Lisa found these topics interesting, and while reading the Metropolia blog, Lisa found out about an innovative Internet company, Founder2be. She found the company

interesting, and three months later noticed a job advertisement - Founder2be was looking for interns: “I thought it was a very good concept and would address the real problem, and so I became very interested in working on it.”

Based on what she read on the blog, Lisa thought that Founder2be was doing an important job in helping to find co-founders. In comparison to other alternatives, Lisa thought that Founder2be would be a good option for her future career development. She expected that it would be possible to participate more closely in a startup with the development of the business model, and combine her interest in entrepreneurship and innovation. Lisa joined Founder2be in June 2011, and worked there for the next three months.

Together with another intern from Metropolia, Solomon Mengistu, Lisa took responsibility for Founder2be’s business development and marketing. Although Lisa focused more on marketing (e.g., contacting bloggers and writing newsletters), both she and Solomon contributed to both areas of work. On a daily basis, they tried to find relevant online partners, and attended networking events to talk about Founder2be and encourage people to visit the website. Located in Aalto Venture Garage, Founder2be’s team worked in an open space with other startups. Feedback was easily received from people working and hanging around Aalto Venture Garage. These networking opportunities became crucial, and Lisa aimed to build on them while promoting Founder2be. Technologically, all the main features were already in place, and the only thing that the startup needed was more users. In addition to getting more users, after analyzing competitors, Lisa also discussed how to develop a business model strategy with the team.

Lisa had a lot of responsibilities in Founder2be. Although Oliver was guiding the interns, Lisa and Solomon needed to come up with their own ideas on how to attract users, bloggers, and potential partners. In Founder2be, there were rarely plans, deadlines, or standards of how work should be done, or feedback on how the work had been done. Mostly, Lisa and Solomon conversed together and shared opinions on what they might do to achieve their goal – to help Founder2be grow.

Lisa’s hard work paid off for Founder2be when references to the company were made in various blogs, such as The Next Web and Doug Richard School for Startups. Lisa was pleased to notice that the user base increased during her internship, as these blogs brought more users to the site.

By working towards the goals of Founder2be, Lisa also developed herself in terms of creative entrepreneurial spirit, networking with inspiring people, and gaining more experience, which was also visible to others via her CV and recommendations from Oliver. The benefits from internship went far beyond the credits needed by her school for compulsory practice.

A year after her internship, Lisa became a student of entrepreneurship at Aalto university. Lisa often participates in events hosted by the business school's entrepreneurship society, AaltoES. At these events, Lisa is able to learn from the great speakers, and network with the audience. Networking is again important, as Lisa has formed a new venture with her class mates. No matter where Lisa works in the future, whether in a company or starting her own venture, the internship experience will have a lasting influence on her: "Even if I don't become an entrepreneur myself, this entrepreneurial spirit that I have developed during my internship will only be an advantage, whether I work for a small company or a big corporation." No one knows what the future holds but Lisa is happy about her choices to date.

The team at Founder2be hoped that accelerator programs and other organizations working in the startup scene would be willing to join their Global Alliance Program. Ultimately, the aim was that these partners would spread the word and drive more traffic to Founder2be. Oliver and the interns sent emails to relevant programs that they found online. They told them about the matchmaking service that they had for future startups. One result of this process was that Founder2be teamed up with YourStory, an Indian organization with "the most followed web platform for startups and SMEs in India". There was no formal agreement over the content of this collaboration, but YourStory was covered in Founder2be's blog: "Founder2be expands to India". In addition, YourStory had their logo and a description put in the website's partner section. In return for this collaboration, Founder2be was covered on YourStory.in. A few months later, such partnerships expanded to Finland, China, South Korea, the United Kingdom, Singapore, Australia, and the USA.

Exhibit 5 Global Alliance Partner's perspective – Toni Perämäki

In 2009, Toni Perämäki was a student of management and organization at Turku School of Economics, Finland. He was head of the organizing committee for Contact Forum, a student recruitment fair, which is organized annually by the student association. The role suited Toni, who had become interested in challenging projects, and wanted to drive things forward with a group of like-minded people. Planning for the fair took most of his spare time that year.

In the fall 2009, Toni heard that some students at Turku School of Economics were developing Boost Turku, a student-based network for young entrepreneurs and entrepreneurially-minded people. A group of students interested in entrepreneurship, among them Antti Jokela and Linda Liukas, had met each other at a conference earlier that year. They thought that

something should be done to develop university-based entrepreneurship in Turku. As Linda had earlier begun her minor studies at Aalto University, she had become involved in a similar development in Helsinki at AaltoES. As a group, they were also encouraged by the experiences of high-level universities in the United States, such as the entrepreneurship societies at Berkeley, Stanford, and MIT. After the conference, they contacted other entrepreneurially-minded people, and continued discussions with a larger group of students. Eventually, as its first board, eight of the most active students started planning the activities of Boost Turku in 2010.

After everything was planned and organized with regard to the recruitment fair, Toni was able to contribute more actively to the development of Boost Turku. He became the first chairman of the society in March 2010, and later the first paid employee in May 2011. As the chairman of Boost Turku, Toni was in close collaboration with AaltoES, and attended some of their events during the year. At one of these events at Aalto Venture Garage, Toni met Oliver Bremer. Oliver was about to launch Founder2be, which was a potentially beneficial service to the members of Boost Turku. After their first encounter, Oliver phoned Toni and suggested a partnership. The beta version was almost ready for launch. Toni briefed the board on the service and showed them the platform. Everyone agreed that Founder2be would be beneficial to startups by bringing together ideas and skilled people. In addition, Toni felt that the collaboration suited the general idea of helping startups. Most of all, Toni considered that there were no major risks involved in the collaboration from the perspective of Boost Turku.

Toni signed up to the service and filled in his profile. He did this to see how the service worked. In reality, he had no intention of starting his own business. Therefore, he had no need for the service, and after a couple of visits he did not return to the site. Although Toni was enthusiastic about entrepreneurship, and saw entrepreneurship as a viable option in the future, the timing was not right for starting his own venture: “I ran out of time anyway.”

At the beginning of the partnership, Founder2be was mentioned in the Boost Turku blog. In addition, collaboration with Founder2be was similarly mentioned in their newsletters. Generally, the partnership remained “fairly light” with no obligations on either side. Sometimes, people asked for help with where to find more skilled people for their teams, and then they might have been told about Founder2be. Otherwise, Founder2be was not promoted actively by Boost Turku. The entrepreneurs of Founder2be were not actively asking for help from their partners. According to Toni, this influenced the partner’s activities: “We don’t have time. And it is not our task to be in contact with them. We do not have ‘promotion of Founder2be’ marked in

our weekly calendar. The relationship remains fairly light."

Naturally, Toni hoped that Founder2be would be able to attract more users, as then it would become more relevant to their members as a tool for finding matching skills. If Founder2be proved its ability in team building, then Boost Turku might also have become more interested in active collaboration, and consider how it might be employed in its own activities. Until such time, Boost Turku would not change its activities in promoting Founder2be. Although Toni believed in Founder2be's ability to initiate contacts, he still thought that it did not solve the problems of team building and management, which are important in the startup context: "People work around the clock in a small booth. It needs to work out also on a personal level."

On the one hand, Toni considered that Boost Turku should not bind itself to one commercial enterprise, such as Founder2be. In this sense, Boost Turku remained open about collaboration with other similar services. On the other hand, collaboration with Founder2be might rule out some of its competitors in the future as Boost Turku has no incentives or resources to promote a number of alternatives to its members.

In sum, Toni is proud of what they achieved with Boost Turku in a short period of time. Being constrained by available resources, they did not settle on providing miniaturized versions of activities initiated in the United States. Instead, they invented new ways of "creating startups, promoting entrepreneurship, and building a tribe". Toni himself has continued to help startups in new ways. Being passionate towards entrepreneurship and startups, in July 2012, he became an Entrepreneur and Regional Director for the Founder's Institute's Finland Chapter. Toni still finds helping others important, and considers he can do this in his new entrepreneurial role: "Motivation comes from working together with other people to achieve our goals and surpassing them."

Despite these new partners, the team did not stop trying also to reach other partners to join their Global Alliance Program. They received diverse responses, although many of the targeted organizations did not respond at all. However, Oliver often did not know if these organizations were recommending Founder2be to someone in need of a co-founder.

Oliver and Frank knew that partnering is a good way to facilitate growth, but that it is not sufficient in itself. This team of two also realized that they had a limited number of available hours. They needed to focus and do things that most mattered. As most of the other programs were focused on already established teams, they were not necessarily the best channels for Founder2be's

marketing communications. Essentially, what Founder2be needed was more potential co-founders: “and that’s the main thing”.

Exhibit 6 User’s perspective – Hugo Bernardo

Hugo Bernardo was originally from Portugal. His family has a small wine business there. But Hugo was not just interested in wine; at heart, he’s a technology person. In 2000, Hugo started a software company in Madrid, Spain. After working for a few years in established companies in Portugal, Hugo began studying for an MBA at MIT's Sloan School of Management. Hugo graduated in 2009, and soon after found himself back in the startup scene as a co-founder of Piictu, a mobile app for communication through photos. This introduced Hugo to mobile apps. Eventually, Hugo had an idea that was more appealing to him as it combined his interest in technology, mobile phones, social activities, and wine. In December 2011, Hugo began full-time to develop Easy Vino, a wine recommendation app to help choose wine in restaurants and stores.

Until the summer 2012, Hugo developed the app on his own but required help in taking it towards launch. He was actively trying to find a partner with whom to develop the app and for business development. He tried finding co-founders in both online and offline environments. For instance, he posted a proposal to a LinkedIn group:

“Wine Startup looking for a technical Co-Founder (SF Bay Area).

I started Easy Vino late last year and I'm now looking for a technical co-founder, preferably with experience in Python (Django). We are currently in beta and about to release our mobile app and need someone who can take the technical lead from here. We're based in SF. Easy Vino is a wine recommendation app that helps people pick wine in restaurants and stores. We are developing a proprietary taste-profiling model to match specific wines with the user's taste. It's an exciting product in an industry that's ripe for disruption.”

This message was read by Oliver Bremer, who was a member of the same LinkedIn group. Oliver was not willing to join him but considered that Founder2be might be helpful to him: “If you haven't done so yet, I'd suggest to try www.founder2be.com. Disclaimer: I co-founded this site which turned into one of the biggest co-founder finding websites when I couldn't find a co-founder myself :) And now I moved onto the next thing already. Best of success to you!”

Hugo registered on Founder2be, and described his idea on the website. He described it in more detail than is typical of Founder2be’s users. Hugo thought it important to give as much information as possible to ensure

relevancy of contacts from other users. He was not afraid of anyone stealing his idea: “It is hard for you to get people excited about your idea. And then it is even harder [to find] someone who would be so excited to copy it.”

Hugo did not have high expectations for finding a co-founder online, as he preferred finding these people through friends and their links, as in his previous startups. However, Hugo decided to try online services. He thought that he could effectively browse interesting profiles and then narrow down the people he thought might be worth meeting. Also finding a co-founder directly offline was an alternative. Hugo was a relative newcomer to the Silicon Valley startup scene, and had friends in Portugal. However, he was not willing to find a co-founder from Portugal, as he believed that the app needed to be developed where the market was located. Therefore, he first aimed to find a co-founder in the USA.

To find a co-founder, Hugo participated in meetups such as Startup California. As he has only recently begun more actively to look for a co-founder, he did not always know where to go. He attended different events just to see what was going on, and what kind of people attended these events. Hugo acknowledged that the majority of people he met at these events were not interested in his idea, but he hoped that someone would step in and help him to take the app to the next level. He knew that he had a good product and plans for monetizing, so he was confident that eventually someone would become interested in Easy Vino and decide to join him.

Eventually, Hugo met Tiago Pais. Tiago was originally from Portugal but his recent startup project had brought him to San Francisco. Tiago joined Easy Vino as the CTO and lead developer. Together, they participated in the Startup Chile program. Despite moving to Chile, they kept the focus on building the pilot in California. Soon after they started in the program, Easy Vino became available in restaurants in downtown San Francisco and downtown Palo Alto.

The exciting part of the startup is that Frank and Oliver did not know where Founder2be was going: “Maybe we fail, but maybe come to something big which we do not know at the moment.” New competitors continually emerged, one user even registered with Founder2be to build a competitor for it. However, the team behind Founder2be was not overly concerned about their competitors. Instead, they saw competition as validating their idea and, no matter what happened, they knew that they had already learnt a lot that would be useful in future projects. Apart from making money with the web site, they were encouraged by the fact that they were actually able to help people. Positive feedback from their users truly mattered to them: “It is always quite motivating to get emails or texts from users in China, in Africa, or wherever,

and they're writing, 'wow, it's really nice idea', 'I like the concept' and 'keep going'." Nevertheless, they needed to critically evaluate whether this was something that was going to boom, or whether they should leave the project in the background, and stop developing new features and actively promoting the service. They evaluated the effort required; a matter that was particularly relevant, as Oliver and Frank also had other ongoing projects.

Exhibit 7 User's perspective – Ahmed Shalaby

Ahmed Shalaby was originally from Egypt. Being a medical doctor (cardiothoracic surgery) by education, Ahmed moved to Finland in 2005 to work in Tampere University Hospital Heart Center. Since then, Ahmed began to think differently about his career in medicine. Ahmed slowly became more interested in projects in which he could match his talent and skills in building up social innovations.

In fact, in September 2008, Ahmed started a company named Human Information Technology Laboratory. The purpose of the company was "to promote the Finnish culture and technology for internationalization through selected and evaluated experts and organizations in a variety of countries". Among other projects, in May 2011, Ahmed started working on a project named "Dream City", which was a project balancing both social and economic approaches. Dream City drew together people with a variety of expertise, and let people learn from things at which they are really talented, thus promoting personal inspiration. Ahmed and his colleagues were able to conceptualize this kind of collaborative work in a pilot project, which Ahmed then wanted to commercialize. Eventually, the project became a startup named Novogenie.com.

Novogenie is located in Tampere, Finland. Externally, it seemed like the ideal place for a business developing ecosystems to promote entrepreneurship and innovations. However, Ahmed's focus was on the 13 percent unemployment rate in Tampere. Together with his colleagues, he contacted unemployed people, students, and local and regional business incubators and innovation promotion centers. Ahmed saw that a high level of unemployment causes stress and phobia which hinders innovation development. Ahmed perceived Tampere as the perfect spot to reverse the sense of stress and phobia.

Novogenie is focused on resetting the mindset in Tampere. Ahmed encourages people to be entrepreneurial and innovative. He links together different actors in the innovation system but, most of all, outside the traditional innovation system. The focus is on training innovative people so that they are able to create innovations and improve the city's economy: "So,

if I would like to develop an economy or develop a community, or a system, we just don't start from that level at all. We start it from the person himself. And we make this alignment in himself, not in the system. The system comes later." For personal development training, Novogenie builds on the concept earlier developed in the Human Information Technology Laboratory. The aim is to provide a platform for individuals and organizations for creative planning and day-to-day interaction. Together with his colleagues, Ahmed has developed several modules that can be variously attractive to different segments, such as students and the unemployed. For the development of these courses, the project requires plenty of talent from different fields of expertise from the public sector, communications, IT, business incubators, and also investors.

Ahmed saw a lot of potential in mobilizing masses of people behind the startup, but was not sure who might be interested in contributing to the project. In a related pilot project, there were 35 people working for the common cause from several countries. While trying to find more people to become involved, by chance he found Founder2be. Ahmed immediately understood the service and decided to register. He described their project and hoped that someone would respond. After registration, Ahmed became a passive user. He had filled in his profile that was available to all users. However, he did not comment on others' ideas or actively try to find contributors. In reality, Ahmed was not relying on finding experts only from Founder2be: "I don't have really much, too much expectation, as in, that opportunity will really come from there, but it might happen." Instead of waiting for others to contact him online, Ahmed proactively contacted potential contributors offline. He knew what he expected from prospective partners. When the company identified a need, Ahmed and his colleagues began searching for people in their social networks, and evaluate who might have interest in the project. To date, Ahmed and his colleagues have managed to find the required expertise from their social networks. And this is what they are telling the innovative people. Once a person understands his talent, he can consider what can be done with this talent. In other words, a person can find an opportunity in the market, which is what Novogenie tells innovative people.

At the beginning of 2012, Novogenie began finding more people to collaborate in its development courses. Founder2be did not prove useful. As Ahmed admits, "[the profile description] is not that clear on what it is all about". The Novogenie concept was already attracting active partners to join the project. As Ahmed describes, it is about "how to maximize the benefits for an already existing service". Rather than always developing something new, it is more important to harmonize already existing services. As

Founder2be and various entrepreneurial societies are full of people with talent and potential for entrepreneurial activities, Novogenie encourages these people to take the next step to maximize the benefit of people's talent and the surrounding community. By grouping together existing services, the community's resources can be employed more effectively.

In October 2012, Novogenie.com was launched in beta. The first service aimed at discovering more on one's personality and resources, to give ideas on how to develop one's resources, and how to make the best use of personal resources by matching them with the resources of other people. User feedback on the beta version was encouraging, and Ahmed decided to continue with his selected career to improve other people's creativity for the sake of a better society.

Six months after its launch, Founder2be had managed to attract 3,500 users from all over the world, with the key countries being the USA and Finland. To the co-founders' surprise, there were also many users from India, as well as from smaller countries in Asia and Africa. Oliver had previously been told by an Indian friend that startups are not hyped in India; however, it seems that in a country with such a large population, there is a significant share of people who find services such as Founder2be relevant to their needs. Founder2be attracted various user profiles. In the beginning, many users were attracted to the service just to check what it was about, without exactly knowing how the service might be beneficial to them.

The amount of users that Founder2be had managed to attract was already more than any similar company had managed before, which was encouraging news for Oliver and Frank. Nevertheless, Frank and Oliver realized that some money was needed to cover the website's operating costs. Therefore, Oliver first tried to find relevant advertisers by himself, an attempt which soon proved to be unsuccessful. He was able to interest some advertisers, but they eventually declined, especially when these US-based companies realized that Founder2be was based in Finland, and that the company was entirely focused on the online market with no real-life events. Nevertheless, with their focus on future companies rather than established startups or enterprises, Oliver considered that they had something unique to offer to advertisers.

In the spirit of 'bootstrapping', Oliver was living on his savings; he had decided to commit to his entrepreneurial activities as long as he had any savings. At the beginning of his entrepreneurial career, Oliver undertook some consulting work for a few hours a week, which provided a little extra funding.

Regarding future plans, there were also some differences between Frank and Oliver. Whereas Oliver thought that there was actually no need for seed capital, Frank considered that it might be the biggest change in the coming

year for Founder2be. This might be a result of their different perspectives on what was going to happen for the company over the next year, rather than on the importance of external funding: “You do not need money to take the first step. Not having the money keeps you utterly focused, helps you concentrate on essentials and make the right decisions.” (Oliver @ArcticStartup).

Frank considered that an external investor might become a part of the network in 2012. This was also indicated in Founder2be’s network picture, as portrayed by Oliver (Figure 10) and Frank (Figure 11). They both perceived the role of users, bloggers, and other contacts as indispensable. Despite minor differences in their sensemaking, they both portrayed the network rather similarly. Most of all, they did not expect radical changes in the types of actor engaged in the service ecosystem. Rather, they expected that there would be more of the same kind; that is, more users, more bloggers, and more Global Alliance Program partners.

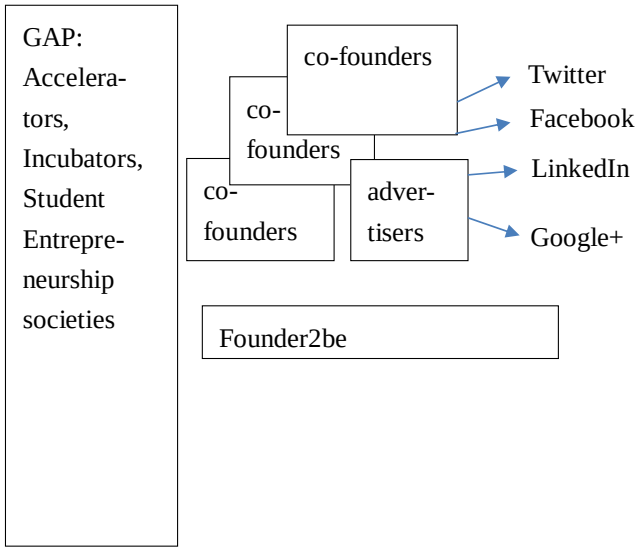

Figure 10 Oliver’s perception of Founder2be’s network in September 2011.[7]

[7] Original network picture can be seen in Appendix 8.

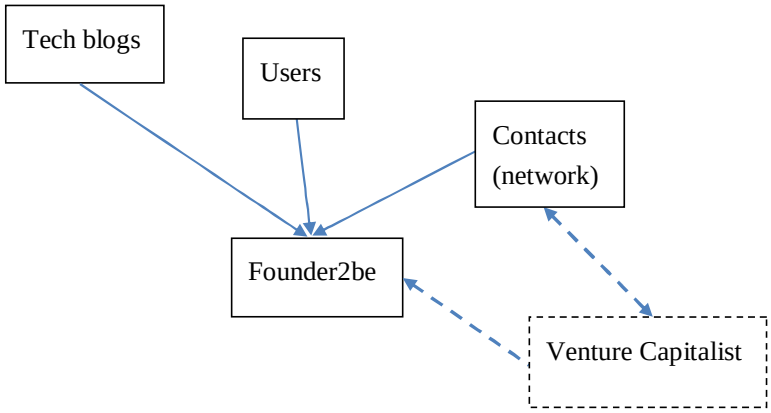

Figure 11 Frank's perception of Founder2be's network in October 2011.[8]

Although not actively seeking funding, Frank thought that Oliver's contacts might bring some interesting opportunities in the future. As that point, they were actually rather happy that they could work independently, without third party expectations that inevitably come with external funding. Here, Oliver emphasized the role of advertisers. In fact, Founder2be began making some money when they signed a deal with InfluAds, which specifically targeted startups and entrepreneurs. The money from these advertisements was sufficient to cover the costs of hosting, software licenses, and other related costs. At that point, advertisers were a source of revenue generation. However, in the future they expected more revenue from users.

Exhibit 8 Advertising network perspective – Anibal Damião

Portuguese born Anibal Damião moved to Denmark in 2006 to take his MBA. After graduating he was recruited to an advertising agency. Later in 2008, the economic environment turned ugly. The subprime mortgage crisis had started escalating in the USA a couple of months earlier. Companies in Europe had yet to realize the potential consequences, and the crisis hit Europe only around September 2008 when Lehmann Brothers filed for bankruptcy protection in the USA. Large banks such as Dexia and Fortis faced severe liquidity problems in Europe.

[8] Original network picture can be seen in Appendix 9.

As a response to the increasing risk of recession, many companies began cutting their spending, and many began to cut their advertising budget. This impacted on advertising agencies. Whereas others were mainly concerned about their jobs, Anibal was afraid of becoming bored in the office. No longer were there any interesting projects, and Anibal soon started thinking about alternatives he had at hand.

In January 2010, Anibal began running his own company, InfluAds. Anibal was driven by the problems that he had encountered in advertising; in particular, bad quality in the online advertising sphere. Anibal began thinking about how there could be better quality advertisements that would be attractive for both advertisers and publishers. Anibal and his colleagues were mostly attracted by networks selling minimalist online ads. While Anibal examined these networks more closely, he noticed that minimalist ads were not offered to a wider audience. Anibal saw a great potential for offering these ads to publishers which paid attention to the appearance of their websites, and how banners influenced user experience.

InfluAds aimed at matching advertisers with end users via relevant publishers. The focus was on relevance: “If we have our network around the web development, we only accept relevant advertisers.” With limited resources, InfluAds needed to focus on smaller actors in the publishing sphere. Smaller publishers mean less money, and that is how they could introduce the service to advertisers. Most of all, InfluAds was successful in attracting advertisers, which were happy with the publishers, the way their ads were placed, and the audience they were able to reach. However, many advertisers remained interested in an immediate return on investment, rather than long-term brand creation: “Most of them [advertisers] would always be interested in how much money they put in and how much money they will get back.” But some advertisers were also interested in which forums their banners were placed. Therefore, InfluAds aimed at providing impressions for advertisers in the relevant forums.

Similarly, publishers were interested in how much money they could generate with the content of the website. In return, publishers needed to provide content and experience which drives future traffic: “By partnering with us they [publishers] are actually able to get them an interesting amount of revenue without sacrificing too much of their user experience.”

A lot of work was required to reach advertisers and publishers. As InfluAds was not well-known, the sales team needed personally to contact various potential partners in their network. Therefore, InfluAds needed to focus on the most tempting networks. In fact, InfluAds focused on digital media, in which one of the focal themes was startups and entrepreneurs. This was why Anibal was interested in having Founder2be in their network

of publishers. “They [Founder2be] have a very interesting model, and then when you look at that kind of a network that we are doing and the kind of audience that they have – you see that there is matching value because the individual user in their site is very valuable. And we are a network that can actually benefit from them – leverage that. So, that’s an interesting match that we have.” For Anibal, it was not a liability that Founder2be was an international new venture (INV) from Finland. Instead, he felt sympathetic to new ventures from peripheral locations. In fact, Anibal used to write a blog on startups outside the spotlight of the big media: “It’s a very interesting subject to me because I’m European. And we play different games when we go against Silicon Valley-based companies.” Anibal was also interested in startups in their early phases, which are not typically covered in the media.

Changing online advertising culture is not easy. After 2.5 years, in the summer 2012, Anibal considered that “we are still in the initial phase of – of our launch.” The network of publishers and advertisers had grown but InfluAds could still be considered a startup from the periphery. InfluAds customers are mostly in the USA, but the headquarters remain in Copenhagen, Denmark.

In addition to income from advertisements, Oliver and Frank had plans for premium services, which would provide users a better experience in return for a monthly fee. Initially, Oliver and Frank had considered that one of the premium features might be ‘Tips & Tricks’ in which people could share useful information on relevant things for creating a startup, such as formal paper work on registering companies, choosing insurances, and other pertinent issues. However, monetizing a web service such as this can be challenging, as people often expect everything to be free in an online environment. However, changes in the recent emergence of the app market were encouraging. Even though people were paying very little money for apps, they were paying something, and thus were becoming accustomed to paying for online services. Despite Founder2be’s willingness to monetize soon, they were not ready to do so yet. Oliver and Frank wanted to postpone the launch of monetized services until they aroused the interest of one of the biggest technology blogs. This was going to boost the launch of premium subscription, as achieved by ArcticStartup in launching the private beta. Lisa and Solomon’s hard work during the summer helped Founder2be to be cited in blogs such as The Next Web, webgeekly, and Doug Richard School for Startups. However, to increase the attractiveness of higher profile blogs, they planned to give away free promotional accounts.

Oliver and Frank soon learned that it was better not to write randomly to people in leading technology blogs, such as Mashable.com, whose bloggers get “10,000 emails every morning” but to approach them through introductions. Nonetheless, Frank and Oliver hoped to get picked up by one of the most influential technology blogs: “I think if we could get on the very big blog like Mashable or TechCrunch that would probably be a kind of an explosion for us.” However, Oliver and Frank knew that this was unlikely. In fact, Oliver and the interns had already contacted them several times without getting any response. Usually these blogs only became interested in companies such as theirs after successful investment rounds. In any event, they decided to try as they could not be sure what contact might bring: “We have to probably knock on 100,000 doors, and just one will open with the right person behind it.” Therefore, Oliver and Frank also had plans to launch the premium services on their own.

Exhibit 9 User’s perspective – David San Filippo

David, aged 33, was a business developer from New York. He had always wanted to do something of his own, but had not always done that. He first took the traditional path of education, and went to college in 1996 to study electrical engineering. In 1999, amid the dot-com boom, he managed to get a job in gorp.com. After a round of layoffs, David found himself working for Ericom where he first acted in product development and then moved to sales. As he traveled around the country a lot representing his company, he had met several interesting people. Among them were people who had started their own company in tablet photo application. David decided to help his friends. This was 2003, around which time the first tablets began to appear. They pitched to several retail stores, and continued iterating the product until he learned that his colleague, aged 25–26, had passed away with stomach cancer. David understood that he needed to move on to projects that he would find interesting: “It made me think in terms of how short life is.”

David soon moved to another company and tested whether he could employ his knowledge in a larger company. This did not mean that he would be entering a larger company to cash in: “I actually thought it was underpaid when I joined.” David was not driven by money; rather, it was his passion for solving problems.

Lack of ideas was not a problem. In fact, David had always had plenty of ideas. He has had ideas ranging from headphones integrated into hats to 30 domains with different ideas for online businesses; however, they had not all gone very far. In early 2012, he had yet another idea. This time the idea was

to combine social networking and wedding planning in a single website. David's sister was about to get married later in the year, and David was willing to solve the problems relating to wedding planning. He found the idea interesting, particularly as he would have the opportunity to build something new, and to try out some new technologies that he had not been able to try in his full-time job as a solutions architect at Avanade.

Technologically, the project was not challenging for David: "I know the tools I will be using to build it and I think I can probably get it up rather quickly. It will probably take me a couple of months part-time to get it done." He was willing to work part-time on this project, as he enjoyed his job; however, but he was always interested in doing something on his own: "I am comfortable right now with my job. So, it's hard – especially I've got kids, I have some savings, I don't really want to leave." Part-time activities were suitable to David, as he could then work for himself, towards running his own business or increasing his market value outside the company: "My kids go to bed early, my wife goes with them. So, I have my night that I work on different things … Sometimes, I thought about time, if I want to spend time taking someone else's risk? I'd rather focus on myself." The working environment at Avanade was supporting David in his entrepreneurial activities, as long as there were no conflicts of interest. He even obtained comments from his colleagues to help him choose which of the many ideas were the most feasible to progress.

After working for a few weeks on his idea concerning the wedding theme, David accepted that he did not really know what to do with the side project. He was already spending a lot of time on it. First, he could spend time on marketing and community building, but "that's not my core strength". His sister was already helping David by tweeting and blogging about the project, but David was not certain that these activities were sufficient for community building. Second, David did not have a plan for monetization. Therefore, he decided to take a break from the project to evaluate whether or not it was worth the effort or whether he should pursue another of his ideas. With this in mind, he researched startups and related social sites, and participated in meetups to try to expand his network of like-minded people. David was also a student at the Founder's Institute, where he studied some philosophies around startups such as lean startup methodology, and was simultaneously developing his own ideas.

David registered with Founder2be as he wanted to take some of his side projects to the next level or start a new one that had a chance of sustaining a company. After registering with the service, David soon forgot it, and returned to it later only to find that there were many messages for him. He had thought that he would get emails signifying when he received messages

via Founder2be. David felt bad that he had not been replying to these messages but was happy that people with similar interests had contacted him via the service.

Later David logged into Founder2be every couple of weeks to read about interesting ideas, which might be worth joining at some point. However, he was then working full time at Avanade and on the side project with her sister. Nonetheless, he thought of participating more actively in the future and, in particular, if they held some real life events where technical and non-technical people could meet. These were the kind of events David had previously attended to meet new people and listen to other people's pitches, which he enjoyed.

David was not sure whether Founder2be was really helpful for developing the wedding site: "I don't need a founder. Maybe I do, I don't know. I haven't got to that one yet ... I don't know if I outsource it or find someone who could be a partner in the UX [user experience] design side. I am not good at design." David wanted to keep the technical aspect in his hands, as he had bad experience of working with outsourced technical partners, particularly from India: "There are definitely good people out there ... But it adds to the level of effort and you really need to do how to do it. I really have doubts that someone not technical can manage that." To this point, David had only partnered with his sister, which had brought the New Yorker brother and Californian sister closer together. Even if the wedding project does not go far, David is happy about the experience of working with his sister: "I have been talking to her like twice a week. Discussions will go on in emails and everything, so it's good."

Oliver and Frank understood that one of the key issues was to get more registered users onto the site, but they had not set any official targets for the number of users. The problem was that most potential users had not even heard about Founder2be. Most of all, potential users were difficult to identify, which made it difficult to inform them on the service. Whereas existing startups and entrepreneurs were relatively easy to find with traditional marketing methods, it was much more challenging to find "the guy who has been sitting in his office, or at home, or at work, or wherever, thinking about something he might want to do and never told anybody about it". Oliver and Frank were struggling to find ways of identifying these people and getting their message through to them. Despite the Global Alliance Program and their presence in online content, Frank and Oliver considered that it was mostly the friends of these people who knew about secret plans or expertise that could be employed in starting up a business. Here, blogs were considered important media to reach these people, alongside social media. However, Oliver and

Frank had not made any press releases or hired a PR agency to take care of media relations on their behalf.

Exhibit 10 User's perspective – Kevin Brouillaud

In Paris, France, summer 2011, 20-year-old Kevin Brouillaud made a decision to stop his business school studies for a year. After developing an idea on social e-commerce for a few months, Kevin realized that he needed more time to develop his idea for a startup. Kevin wanted to bring e-commerce to social life to make it more "sociable". He felt that e-commerce lacked human interaction, and this gap could be filled by incorporating social networking services with e-commerce. Kevin thought that questions should be asked concerning products by sellers and buyers prior to an online transaction. This would include sharing information on what people had bought. If the idea did not start to fly, Kevin had decided to return to school in October 2012.

Among his school mates, it was not typical to be a college dropout. Kevin knew that without diplomas it might be difficult to get a job in the future. However, Kevin's business school was international by background, and encouraged him to start his own business. His parents had also supported his decision. Also, other people had been encouraging. Friends loved the idea of dropping out the college. Kevin felt that people admired his ambition to become a CEO without a diploma or long track record. This was important to Kevin: "Sometimes you ask yourself to be sure you don't take the wrong decisions. But when you see how people encourage you, there are no doubts."

In October 2011, Kevin's idea was almost complete in its conception. He was talking with several people in France about starting the company. For instance, he met an entrepreneur who was able to help him financially. Kevin considered that it was relatively easy to find like-minded people in France. There were plenty of organizations that ran meetups for entrepreneurs. However, professionals such as programmers needed to be found abroad as he perceived it difficult to find like-minded programmers in France: "As a young entrepreneur, I can't pay them until we have funds, but people don't want to work without being paid." Kevin wished that he could find entrepreneurially-minded people abroad over the Internet. On the Internet, he found different communities, such as LinkedIn and Viadeo, where people could meet and hire people, or just talk to other startup entrepreneurs to exchange ideas. Kevin also visited a French site named teamizy.com to find programmers: "The goal is to meet entrepreneurs and future partners so people write their skills or project in their profile, and people talk to each

other." As these sites did not prove to be helpful in finding technical co-founders, he visited Quora, and typed in a question: "How to find good technical co-founders?" A startup advisor, Mircea Goia, had given a thorough answer to the question earlier in the year. Kevin was not alone with his query. In fact, closer to 10,000 people had read the same answer. Among them, Oliver had read the answer, and had requested an addition to Mircea's original answer: "Founder2be.com is another one. Kind of like match.com for co-founders, about 2,500 co-founders already, tech and non-tech." Therefore, before Kevin had typed in his question, Founder2be had already been added to the list of sites to find a co-founder by Mircea. His interest was awakening. Kevin clicked the link and found Founder2be "cool and useful", and decided to register to find web developers. After employing the service for a while, Kevin realized that it could also be helpful with the future launch in the US market. He planned to start the company in Silicon Valley, as "we have to be where the competition is". Kevin perceived that people in Silicon Valley are more entrepreneurially-minded. As a result, Kevin considered that he could find Silicon Valley-based programmers, who were ready to work unpaid for a startup. However, the idea was to first find some funding for the company, and then pay programmers. At the point of registration, Kevin quickly filled in his registration information, and did not pay attention to all the detailed questions. He planned to post his idea and contact interesting people in the future. Soon afterwards, Kevin remembered that he had not posted his idea on Founder2be. However, to Kevin, it was more important to register with several online communities, as it was equally likely that someone else would be able to find him: "Being on many websites allows me to leave like a mark on the Internet, like 'hello, I'm there if you are looking for me.' If I can't find people, people can find me."

During the year, Kevin had met a number of business angels and other professionals, but was not successful in recruiting programmers as co-founders. Fortunately, he had a friend who did coding as a hobby. As Kevin was struggling to find other developers to his startup, they began working together. To contribute to the project, Kevin also started to study programming.

At the end of his sabbatical from business school, Kevin decided to continue in the educational program. This did not mean that he would quit his startup project. Instead, he undertook his six month internship in his own company. To speed up the process, Kevin and his friend raised money from "friends and family", and looked for web programming firms in Asia, as "they are very skilled and their wages are not as high as in the Western world." They found a company that should be able to finish the project for a few thousand dollars; after which, Kevin expects to have the kind of a

service that attracts further investments: “Once the company is founded and our website launched, I will be able to look for investors, and finally start and launch my business as I dreamt about a few months ago!” It was envisaged that Kevin would end his internship in January 2013, and continue his schooling either in London or New York: “Wherever I go, it will be good to make tech/web contacts.”

Instead of putting their efforts into traditional media, Oliver and Frank had plans to make Founder2be more viral. This meant encouraging people to refer the service to others, either directly online or indirectly offline. In this respect, the sharing functions available in Twitter, Facebook, LinkedIn, and Google+ were important. The founding team of Founder2be was planning to facilitate this by giving free subscription of premium plans to people who told their friends about the service, and thus drove paid subscribers to the site.

The problem was that even though the message got to these people, many of them did not take immediate action to register and eventually forgot about it. However, Oliver was not so concerned about the people who had forgotten their service or did not register for other reasons. Naturally, they wanted to have a wider user base as “it is never enough”, but Oliver understood that in its own niche, the potential co-founder market, “it [Founder2be] will never ever be like Facebook”. Oliver was more interested in people who had indicated by registration that they might find this kind of service useful. To make the service more valuable to users, Founder2be required both more users and engaging content for the users. The problem was that, in the early stage, some of the users simply filled in their profiles and waited to be contacted. In fact, some of the profiles were left nearly blank. In addition, co-founders would have liked to have had an improved ideas section. The registration format was quite easy to change, but convincing people to share their ideas was more challenging. Many first-time entrepreneurs were afraid of having their ideas stolen.

Exhibit 11 Non-user perspective – Ian Hafkenschiel

Ian Hafkenschiel was a co-founder of SocialWimzy, a social network centered on group purchases of event deals. He was looking for co-founders both online and offline. Although he employed some online tools for finding co-founders, he preferred references from close contacts and did not feel comfortable collaborating with random people.

Ian preferred collaborating with his roommate as it was more convenient for him. Although his roommate would not have the exact skills needed for taking the startup to the next level, living in the same apartment stimulated

motivation. Although they both knew how to write backend programming; they were actively seeking a third partner, someone knowledgeable on mobile apps, as "three to five programmers can develop much faster". In addition, Ian thought that interns could be involved to perform the time consuming marketing tasks in social media. Ian put a lot of emphasis on team building as he perceived it crucial for the success of the startup, and that it was not sufficient simply to gather together all the talents but to define their roles in detail.

Ian had an extensive social network on LinkedIn. He had more than 500 connections, and had reached out to all relevant networks in LinkedIn, such as 'Entrepreneurs Connection @Santa Clara University', 'Find Co-founders. Advice Startups. Work for Equity', and 'On Startups – The Community for Entrepreneurs'. Ian employed these networks to find potential co-founders and posted a message to each of these groups: "Looking for interns/co-founders for new social network/ecommerce startup in Silicon Valley. We are currently located in Santa Cruz. We are primarily looking for web developers at this point. Contact me if you are interested in being involved and I can give more details."

This did not mean that Ian would be joining forces with the first web developer from whom he received a message. Instead, he wanted to meet a number of people to discuss their respective expectations. Eventually, Ian received plenty of responses – more than he expected. Although these responses were not always what he was looking for, Ian considered these messages a valuable source of information. Subsequent conversations helped him to improve the idea and, at a minimum, the encounters helped him to practice his pitch.

Despite the messages sent via LinkedIn, Ian preferred finding co-founders in an offline environment. He was not interested in employing online services as he was not comfortable teaming up with "complete strangers", as he refers to people beyond the 3rd level of connections in his network. In addition, Ian was not comfortable posting his idea online, as he was afraid that someone might steal the idea. He wanted everyone to sign a non-disclosure agreement (NDA) before his pitch: "Some people are naive or think that they are so talented that no one can do it better." Therefore, Ian was not interested in forums such as Founder2be in which people promoted their ideas before launch. Ian understood that working in stealth mode made it more difficult to find co-founders; however, he was convinced that it represented higher quality. In fact, no one had yet refused to sign the NDA, and only one person wanted to edit it.

Most of all, Ian thought that the closer the potential co-founder was to his personal and business network, the higher the quality. That was why Ian

extensively relied on his high school and college networks, and took part actively in alumni events. These networks provided him access to a large social pool, and to parties where he could find similar-minded people. Most of all, by meeting these people in person, it was easier to judge how their personalities matched. In fact, many of Ian's contacts originated from his MBA program at Santa Clara University. In addition, his former professor at the Claremont McKenna College had been helpful in introducing Ian to the current students of the college. Fortunately, one of these students seemed to have the kind of talent and experience on mobile app development for which he was looking.

As Ian's business idea was not technical, it was difficult to protect with patents. In the beta phase, Ian was planning to open the idea for people within his two–three degrees with some level of trust. Ian true believed his idea was something that would have a big impact and, as the idea was related to social networking, first mover advantages were important: "Social network is about building, If you are first to do it, everyone is already on your network."

However, building a social networking application was time consuming, and required a skilled and committed team. Ian met two marketers with strong backgrounds; however, both seemed to be busy with other jobs and traveling around the world. The development of SocialWimzy was hindered further, as Ian's original lead developer left the project. In turn, Ian partnered with his old roommate who then lived down the street from his apartment. His old roommate stepped in as the lead developer and project manager. In addition, they were trying to find unpaid interns from Santa Clara University. In sum, Ian was very happy with how things were progressing for SocialWimzy, and he had high expectations for the future of the company: "I am more confident than ever in this project."

In October 2011, the premium version, or Pro Plan, was launched to generate some revenue. Pro Plan included advanced search functions and, in addition, Founder2be promised that the ideas of Pro Plan users would be featured on the site. Pro Plan users also received an ad-free experience, and an option to see who had visited their profile.

The launch of Pro Plan was also meant to encourage people to share knowledge on Founder2be via Twitter and Facebook. The users were promised free Pro Plan for a month if they managed to invite a purchasing user to the site, or a free plan for a week if they tweeted about Founder2be or signified 'like' on the Facebook site. As such, the launch of Pro Plan was regarded as more of an experiment than for actual revenue or user-base generation. Frank and Oliver wished to find out if they could convert users to paying

customers, and wanted to determine how changes in the user interface changed conversion rates. Oliver perceived that this was the way in which he could establish whether people were actually ready to pay US$34.95 per month for extra features. An advanced search was considered to be more relevant when the user base grew, as going through all the relevant profiles on the basis of their role and location, enabled by a basic search, was time-consuming. This was expected to generate a higher conversion rate in the future, which Frank hoped would be somewhere between 5% and 10% over the following year.

In addition to the use of features in Pro Plan, Oliver and Frank noticed that there were many messages sent between users, and they thought about ways that this could be monetized. They were hesitant to monetize the complete messaging service, as it was perceived to be one of the core features of Founder2be. Instead, Oliver and Frank thought that they could limit the number of free messages which could be sent per day, while paying customers would have unlimited messages for free. As such, they could make it easier for paying customers to contact relevant people, and help them to move faster in finding a relevant co-founder. However, as users might soon change to other media of communication such as email, Facebook, or Skype, it was not possible for Founder2be to rely heavily on monetizing messages beyond the first contact.

Although Pro Plan did not generate revenue immediately, they woke the interest of bloggers who passed on the information to their followers. Oliver wrote in Founder2be's own blog about Pro Plan's financial incentives, worth US$10,000. There was, however, no actual cost to Founder2be; it only represented lost revenue, which probably would not even be close to US$10,000 without a promotional campaign. Oliver's announcement was given some attention in The Next Web, and this blog post was shared on Facebook and LinkedIn. Soon, this attracted attention, even in China where a local blogger wrote about Founder2be. Within a couple of weeks, all free Pro Plan accounts had been taken up.

Exhibit 12 User's perspective – David Toborek

Polish-German by birth, David Toborek began his studies in Poland and moved to the UK to take a master's degree. After graduation, David started working for a professional services firm in Southern Germany, while simultaneously developing his own company. That was a lot of work: "After working 17 hours a day, I just thought 'okay, this cannot be the reason for my life' and I folded my company." Soon after, he also decided to quit his job, and moved to eastern Germany to begin work in the e-commerce market.

At the age of 27, David still retained his passion for his initial startup idea, which was to combine businesses in an online forum. He was about to start it again. However, David did not want to perceive it as a formal company; he treated the project more as a hobby: "I'm not doing business just to be rich. I'm doing business because making a business is something more like being an entrepreneur." David enjoyed being an entrepreneur. He wanted to help people but he could not do it on his own: "You need a good team, the right time, the right idea, [and] the right place." He had everything ready for the website but was not ready to launch it without help from others.

For David, the team was more important than the original idea, as a good team would be able to develop the idea further. However, building a company or a team was not easy. David found it challenging to find a good team when he did not have money to compensate or to commit to them. Although people often said that they were ready to help, in reality they are not so committed to other people's projects.

Eventually, David learned about Founder2be from a German web forum, which he occasionally read. He decided to join Founder2be to find committed people for his hobby. As a minimum, he wanted to obtain feedback on his idea. In general, he was skeptical of meeting co-founders online but decided to try: "I don't think that you can really establish valuable contact through the Internet." David discussed the issue with a friend in Sweden, who shared his perspective. Nonetheless, David took a chance and posted his idea on Founder2be in September 2011. He did not receive any comments, and decided to post it again three weeks later; again, no comments were received.

At the beginning, David also read others' ideas and commented on them. He found some ideas interesting, and tried to help people move forward. Soon, he found reading others' ideas time-consuming, and the discussion on the website was not rewarding. David lost interest in Founder2be.

As there were so many alternatives available for free, David considered that Founder2be was charging its users too early. They did not have sufficient content, so "why should I pay?" In David's opinion, the premium version was not offering anything really valuable. Moreover, paying nearly US$15 for a site one only visited once or twice a week was too much for him. This also affected his use of the unpaid version, as he was only able to find limited profiles based on role, city, and country. As a result, David worried that other users might cancel their registration, and decrease traffic on the site. However, he did not cancel his registration. His profile remained active, and also his "all-in-one platform" business idea. In reality, David became a passive user of Founder2be.

Eventually, David stopped developing the "all-in-one platform" in 2012. He also quit his job in eastern Germany, and joined another company in Amsterdam. As David wanted to find interesting people in his new city, he attended a startup networking event. At the event, he met a local assistant professor with a tempting business idea. David continued discussions and decided to take care of the technical side of the project, which was to be launched later in 2012.

For Christmas in 2011, Oliver spent two weeks with his family in Germany. Naturally, this was a terrific way to spend more time with Frank, who lived in the same neighborhood. By working together in the same room, their communication was much more efficient, and they made good progress in some of the development projects at hand. More intriguing, however, was the immense spike in registration that followed Christmas day: "We were really wondering, where all these people were coming from." Oliver opened their web analytic program, and seemingly there had been a blog post on Mashable.com. Founder2be was mentioned, along with several other companies, in an article by Lauren Drell on how co-founders find each other. Lauren listed various ways that co-founders meet, and among them she mentioned Founder2be: "Well, there's TechCo-founder, FounderDating, and Founder2Be, for the Match.com types." The readers of Mashable became interested in Founder2be, and decided to register for the service. This all came as rather a surprise to Oliver and Frank: "You know, you try for months to get published by one of the really big ones [tech blogs] and you don't succeed, and then suddenly you have success and you didn't do anything extra."

Exhibit 13 Blogger's perspective – Lauren Drell

Lauren Drell started paying attention to social media opportunities while at graduate school where she studied journalism. After graduating from Northwestern University, Illinois, Lauren became a multimedia journalist at AOL Small Business, covering entrepreneurs and startup co-founders. Lauren got further insight on small businesses and the startup scene by following closely what happened in her boyfriend's lobster restaurant, Luke's Lobster. Luke, a son of a lobsterman from the coast of Maine, worked as an investment banker after graduating from the Finance and Management program at Georgetown University. However, his love of lobsters led Luke to the idea of starting up a lobster restaurant in New York, although starting a restaurant on his own was not an easy task for a full-time investment banker. Therefore, Luke decided to post a vacant position on Craigslist. He received a response from Ben, who had a degree in history

from Yale University but whose true passion was cooking and writing about seafood.

Together with Ben, Luke's father, and a team of ten people, Luke opened the first restaurant a few months later in East Village, New York. Luke was the President of the company, and worked long hours growing the business: "His hours are crazy. The other night they were redoing the floor in one of the restaurants [until] four in the morning." Lauren helped Luke by taking care of the company's PR activities, which gave her further insight on how small companies can leverage social media. They were able to build a good buzz around the company, and what started as a single restaurant in East Village soon became a chain of restaurants along the East Coast of the United States. Following her success, Lauren was also encouraged to start her own PR agency although she did not want to do that, as she preferred in-house PR: "To start my own agency … it's just not what I believe ... Because I see Luke all the time, he talks about it all the time. I know what's going on in this company, I know all the people who are involved … I am so familiar with it. I feel I will do a better job than some freelancers who we might hire."

Instead of starting her own PR agency, Lauren responded to an advertised job at Mashable in early 2011. Lauren thought that she could combine her interest and knowledge on social media and startups at the news company focusing on these very topics. Lauren applied and got the position in the company, which first began as an Internet blog by Pete Cashmere but has since grown into a digital media news company. As the role of Mashable was constantly evolving, the staff met regularly to discuss what the company was and outline what kinds of story to write. In 2011–2012, the focus was on "the intersection of digital and technology in your life". Basically, as long as the stories somehow related to interesting technologies that improved life rather than just covering everything available online, Lauren had autonomy to cover a wide range of topics.

It is important to acknowledge that the revenues of Mashable were based on advertising and not subscriptions. This required a lot of page views and impressions to please the advertisers. However, Lauren felt that the writers at Mashable should remain autonomous, and cover stories that they found relevant and not necessarily aimed at generating high page view numbers. Although autonomous, the people working for Mashable had a common sense of stories and the audience they were serving, and therefore had a particular angle to the news they typically covered: "We have our own point of view on news, so we cover the same stories but in a different way."

Lauren first started as an assistant editor at Mashable, and after a few months was promoted to associate editor. In her role, she managed

advertiser-supported campaigns and wrote and edited content in these series. She negotiated on the audience that the advertisers wanted to reach, and how many posts would be required to reach the target audience. As each contract ended, Lauren decided who would write or make a video blog or an infograph on a particular aspect of the campaign. She edited the articles, and posted them online.

Sometimes, Lauren stepped in and decided to write the articles herself, as writing was something that she truly enjoyed, and about which she was passionate: “Writing actually isn't my primary duty, but I do enjoy it and I work extra hours so that I can write.” In this way, Lauren also met interesting people in digital media and the startup scene: “It's just fun talking to these people.”

Ideas for articles came from life around her and from messages that were forwarded to her. Daily, Lauren received hundreds of emails from PR people, from small startups, and internally from her colleagues concerning topics she might cover. What ended up being covered on Mashable was not a result of simply following any criteria, there were particular things that Lauren always did before writing on a topic. The key thing for Lauren was that the pitch was interesting. If it bored her, she simply deleted the email and moved on to the next pitch. Although Lauren received many press releases from professional PR agencies, she preferred messages that were written by entrepreneurs showing passion for the product and topic: “They [PR companies] might think a product is really cool, but it is something that they can’t tell me in the same way as someone working in the company from the beginning. What do they say about the product – it doesn't have the same authentic view. So, the delivery is definitely important.”

In particular, Lauren looked for functionality to which she could refer in her story. In addition, Lauren liked little anecdotes that made the story interesting to the reader, and easier for her to write the blog post. After that, she checked for functionality, and that the covered startup or app was free of bugs: “If it's interesting and it's useful, then we will write about it … We want to write good things.”

Lauren needed to think about her readers and what might be important to them. Occasionally, the pitches she received resulted in a story on one company in particular; more often the pitches became parts of stories such as “7 Profiles of Successful Entrepreneurs”, “8 Tips for Building your Brand on the Cheap”, “9 Captivating Data Visualization Projects”, or “The Innovators Behind 10 Hot Technologies”. By following Lauren’s work, a reader soon understood the pattern. Nevertheless, the topics varied and one never knew the focus of the next article.

Lauren thought that how Luke eventually found Ben as a co-founder via

Craigslist was interesting. In addition, Lauren knew that her former school mate had started a business with her boyfriend: “I was just thinking like, where do these people meet?” Lauren thought that this question might be relevant for readers, and suggested the topic to her editor, Matt, who liked the idea. Lauren began working on the topic as a side project in August 2011: “I just decided I would tweet ‘Hey startups, how did you pop out your team?’” The message spread, as entrepreneurs and PR agencies recognized that Mashable was looking for interesting stories to be pitched. As a result, entrepreneurs and PR agencies contacted Lauren, and she talked to a number of startup co-founders to gain an understanding on the topic. As part of her story, Lauren tried to find further information via Google on “How to find a co-founder”. She found information on the online service named Founder2be. Lauren thought it would be relevant to tell people that there were services which literally helped an entrepreneur to find a co-founder. She noticed that Founder2be already had a profile at Mashable. Consequently, she thought that it might already have been covered in one of the earlier articles. As the website also visually appealed to her, Lauren thought that Founder2be was a reliable company which might potentially benefit Mashable’s readership. Eventually, her article was published on Christmas Day 2011 under the title “How Do Co-Founders Meet? 17 Startups Tell All”. Lauren mentioned Founder2be as an example of an online service that was targeted at finding a co-founder.

The influence of that reference on Founder2be was something that Lauren did not fully realize, but found interesting: “They [Founder2be] were just an intro ... It's just that one mention can go a long way with a big audience. It's pretty cool.” Primarily, Lauren was only editing and writing stories. However, the consequence of helping startups such as Founder2be by providing them an audience of hundreds of thousand felt good: “It's pretty cool, it's weird, and it’s funny.” Although she did not reply, Lauren received a couple of messages of thanks after Christmas, one from Oliver. These were just two of many thank you notes Lauren received that year.

As a result of the blog citation on Mashable, awareness increased on Founder2be. Many bloggers copied the Mashable article, and translated it into their local languages; this provided yet more coverage for Founder2be. Instead of having to widely disseminate press releases, bloggers were contacting Oliver for comment. The increased attention in the blogosphere drove traffic to Founder2be, and there was a significant spike in user numbers.

Oliver and Frank realized that it was not sufficient just to have users; they also needed to be encouraged to post ideas. In the background, Oliver and Frank worked hard to improve user experience, and reworked the ideas section

so that it was easier for people to find relevant contacts and ideas. They hoped that this would increase the conversion rate of posted ideas. In particular, Frank and Oliver believed that users needed to be able to tag ideas and profiles with keywords, so that the ideas and profiles could more easily be matched by automatically notifying other users with similar interests. In addition, the redesigned version on which they were working was meant to enable featured ideas to improve their coverage. To increase their outreach to non-members and eventually get more users to their site, Oliver and Frank also discussed the option of adding Facebook comments to ideas.

At the same time that they were improving the features of the website, they also focused on search engine optimization (SEO), which would make it possible for Founder2be to be included on the first page of a keyword search for "co-founder". Clearly, results varied based on language and country, but this certainly helped drive traffic to their website. This was crucial, as paying to appear on the first page of the search result would be expensive for Founder2be. This development work took time away from activating the partner network, which was still considered a way to promote the growth of the user base.

Analysis of the source traffic indicated that a significant number of users were finding Founder2be via Twitter. Founder2be's Twitter account became more active when Wolfgang Bremer joined the team in 2012. Wolfgang is Oliver's brother, and he had therefore also known Frank for a long time. A designer by education, Wolfgang advised on the user interface, and tried to help as much as possible outside his day job at Nokia's Berlin office.

Wolfgang began working with Founder2be in the evenings and during the weekends. He attended startup events in Berlin wearing a Founder2be t-shirt. He talked to people, and promoted Founder2be to those for whom the service seemed relevant. Some people recognized him as being from Founder2be, and that made him "super happy and super proud".

Wolfgang had a habit of browsing online content, and taking part in conversations whenever it felt appropriate and potentially beneficial for Founder2be. His girlfriend lived in another city, so browsing for one or two hours in the evenings was not a problem. Whenever Wolfgang found relevant content for potential co-founders, he tweeted about it with relevant hashtags and links to drive traffic to Founder2be.com. He also wrote blog posts relating to Founder2be and took part in discussions occurring on Quora. In this way, Wolfgang tried to attract an audience who might be interested in beginning a startup. These people were found from blogs with particular keywords, and Wolfgang participated in their discussions by commenting on their blog posts or retweeting their ideas. This job was relatively easy for Wolfgang as related

topics were constantly covered in various discussion forums and tech blogs around the world.

Exhibit 14 Twitter employee's perspective – Thomas Arend

Thomas Arend took his master's degree in mathematics and computer science, and his Ph.D. in artificial intelligence at the Technische Universität (Technical University) Berlin, Germany. After working for more than 20 years for IT companies such as IBM, SAP, Google, and Mozilla, he was recruited as an International Product Lead at Twitter in September 2011 while simultaneously working as an advisor for the Rosetta Foundation and for startup incubators such as Hattery Labs.

Thomas was thrilled about Twitter's story, which had started only a few years previously in a small company named Odeo. Before Twitter, Odeo was developing a podcasting platform until Apple launched podcasts for iTunes in 2005. As a result of the change in the competitive environment, the company began developing a new idea. In 2006, co-founder Jack Dorsey devised a system whereby an SMS could be sent to one number and get broadcast to all one's friends. What was at one time termed "statuses" by Jack now acquired the name "twttr". As Thomas explains, the name came from the twitch in a pocket when a mobile phone vibrates. As "twitch" is not a good name for marketing, they picked the next word in the dictionary: "twitter [v.] – to utter a succession of small, tremulous sounds, as a bird". According to Thomas' understanding, Twitter was initially developed only for internal communications at Odeo: "They just tried to organize their own communication and thought 'wouldn't it be awesome if everyone would know what others are up to, where they are, and what they do', so that's how that service started – as an intra small business communication." Particularly at that time, people had difficulty in understanding why anyone would want to post their SMS on a public page on the Internet.

Eventually, Twitter's potential was realized in March 2007 at the South by Southwest (SXSW) conference in Austin, Texas. Essentially, all the tech people attended and, after Twitter staff had installed two flat panel screens in the hallways, they could visualize firsthand how Twitter worked. People were encouraged to register and receive tweets during the conference. The tweets were found particularly useful outside the conference room in the evening when the message spread concerning the best bar in town. This brought hundreds of people to the same location, and proved the power of Twitter to the tech community. According to Thomas, the consequences came as a surprise even to the founders of the social media service. Later, similar evidence was gained during the democracy movement in the Middle

East, and during the moments following the Fukushima earthquake, when people were able to get real-time information on what was occurring in Japan.

The power of Twitter attracted Thomas to join the company in September 2011. Thomas believed in the opportunities that Twitter could bring to society. In particular, he was interested in one of the corporate goals, which was printed on a sticker on his laptop: "Reach every person on the planet." While other companies such as Google and Facebook kept adding more features, Twitter's strategy was to simplify (which also happened to be one of the ten core company values). In particular, as Thomas tried to keep the service as simple as possible, he needed to have an understanding on the diversity of web and mobile users around the globe: old and young, tech savvy or not, in cities and in rural areas. Due to this diversity, it was important to find the right balance of simplicity and ease of use while catering for experienced users. Thomas helped by listening to all kinds of feedback. While he loved reading feedback from tech-savvy experts as they knew Twitter very well, the group of "not-so-tech-savvy" users was growing rapidly and Thomas wanted to make sure that these users also derived great value from Twitter: "I want to make sure that everybody can be on Twitter, if they so choose."

In his work, Thomas learnt every day about unusual and interesting cases of usage. Twitter is an open platform, which means that everybody can employ it the way they like: "For example, hashtags, retweets and @-mentions were all created by Twitter's community of users worldwide – that is not something Twitter came up with. We are in awe every day over the amazing ways people around the world use Twitter." As Twitter is kept as an open real-time communication platform allowing only 140 characters, users have created their own language to communicate in brief. For new users, hashtags and retweets might be difficult to understand, and might hinder initial adoption of Twitter. In addition, people might be afraid of sending messages as, depending on the settings, tweets are publicly available.

As people in different countries have different ways of adopting technologies, they need to have examples of how the service can be useful. For instance, when the German soccer goalkeeper, Oliver Kahn, tweeted live on German National Television during the Euro Cup 2012, he attracted tens of thousands of followers on Twitter. This is where Thomas typically steps in. He helps celebrities, sports stars or politicians use Twitter: "If you want to tweet, we can help you keep it safe, or we can educate you and give you some best practices and show you how you can manage having millions of followers." These activities are expected to bring new users and also

indicate to others how Twitter can be employed as a real-time communication tool.

However, this is only scalable for people and organizations with thousands of potential followers. These are the kinds of people who Thomas needs to find, although sometimes they also contact Twitter directly to ask for guidance as they have realized the potential of Twitter. Despite the lessons provided by Thomas on best practices, he denies that the company ever paid for or promoted accounts of celebrities.

In fact, Twitter also had to think about its revenue and cost structure. Although Thomas is not responsible for revenue generation, he stated that "Twitter is not charity, no it's a business, and of course at the end of the day, all of what you see around has to be paid for." With a lack of financial resources, it is not possible to give "royal treatment" to all users such as Wolfgang from Founder2be. Although Twitter has already grown to a company of approximately 1,000 employees, it is not possible to know all 500 million users who generate more than 400 million tweets per day. Therefore, Twitter needs to rely on its community of volunteer localizers. In fact, there are more than 800,000 volunteers who enable Twitter to operate in as many languages as possible.

In only 5 years, Twitter has become one of the top 10 visited websites on the Internet. However, Thomas aims at getting more active users. Most of all, his job is to strive towards user happiness. As users enjoy tweeting and reading tweets, Thomas expects that the cycle will also bring more users and help to "reach every person on the planet." In the new Twitter headquarters in the Mid-Market neighborhood of San Francisco, Thomas is seemingly proud to work for Twitter and its corporate goals.

Similarly, some users also tweeted about Founder2be. There are accessible buttons through which users can tweet about the service in general, about a particular idea, or about their profile; however, until then, this had not been sufficient to create a buzz about Founder2be in social media. Based on Founder2be's experience, the entrepreneurial team noticed that they needed to be active to maintain the discussion and thus keep the user base growing. Founder2be's account was mostly kept active in Twitter, and to some extent on Facebook. Due to a lack of time, the co-founders of Founder2be could not invest in all available social media such as LinkedIn and Google+, for which they also had active accounts. Twitter and Facebook were perceived as more relevant for the company, and thus were considered more likely to bring extra traffic in a shorter time. In fact, approximately half of their traffic came from social media referrals, and the other half was direct traffic when people heard about the service and typed "Founder2be" into Google or "Founder2be.com"

into their browsers. However, the team's increased activity in social media did not correlate with the number of registered users. Instead, user growth remained fairly linear.

A new way to attract more users occurred in July 2012 when Oliver traveled to New York, where others encouraged him to run a meetup. He made the decision to run an event only three days before the date of the actual event. After a couple of emails and Facebook 'likes', the event was a success, with some 40 participants: "Finally, after so many people said that, I finally did a meetup and it sold out in 24 hours. Then I made more tickets at Eventbrite, and they again sold out in 24 hours. Then I organized the venue and there were maybe 40 people who paid to come to the meetup." Oliver was surprised that there were so many people willing to spend money to meet people and learn more on Founder2be. The experience was encouraging: "If I was doing this full-time in New York, I would … make a series of events." Oliver liked the idea although the execution of the plan would require moving to the USA, and other ongoing projects were keeping the co-founders in Europe. In addition, Oliver thought that Founder2be could remain as a purely online service, and they were prepared to let other people take care of meetup events.

Exhibit 15 Event participant's perspective – Jaclyn Siu

In 2012, Jaclyn Siu, originally from Hong Kong, was a 22-year-old journalism major at New York University. She had begun her studies three years previously in 2009. Subsequently, she has interned in fashion companies such as Refinery 29, Althea Harper, and Seibu Hong Kong. Currently, Jaclyn is looking to start her own company or alternatively find a full-time job. The potential startup would be at the intersection between fashion and tech.

In Hong Kong, people are more conservative and prefer pursuing careers in respected professions in established companies: "Going to the boarding school [in Boston, MA] changed my life, changed my mind, changed the way I thought, changed my perspective, and it gave me pretty much a target for my life which is writing." The passion in writing guided Jaclyn to study journalism in New York City. After she began her studies, she became interested in many different things, including startups, when she began an internship at StyleMusée in October 2011. StyleMusée is located in a co-working space, WeWork Labs. There, Jaclyn met interesting people working on fascinating projects. Jaclyn began questioning her conservative career choices, which were expected by people in Hong Kong: "I actually called my parents two days ago, and said 'I am not going to be a lawyer'. That was an interesting conversation."

When Jaclyn got her own idea for a fashion mobile application, she thought that she could begin to work towards establishing her own venture. During the summer 2012, she attended meetups and workshops in New York City to socialize in the startup scene, and to get feedback on her idea. Eventually, she found a niche to which she could target her "minimum viable product"; namely, to fashion-conscious young male professionals. Through her experience in the fashion industry, Jaclyn had learnt that her target segment typically resisted shopping. Jaclyn decided to develop an app, which was going to be "a personal stylist and shopper app for the fashion-conscious man".

In mid-July 2012, Jaclyn again found herself browsing networking opportunities via Eventbrite. She had just finalized the first version of the web prototype, and it was time to obtain feedback from like-minded people. Randomly, she found information that Founder2be, the world's largest co-founder search website, was hosting its first meetup in New York City. Jaclyn had not previously heard about the service, but "at that time it was exactly what I was looking for." She was looking for feedback from other entrepreneurs. In addition, she kept her eyes open for a potential co-founder. To Jaclyn, building a team is like dating. Therefore, she preferred going out and meeting people rather than finding them online: "Anyone can put on a website what they are doing … but getting along with them, you can only determine that in person." Jaclyn thought that she needed to find a person or a few people who really understood her vision.

Although Jaclyn's internship at StyleMusée ended in August 2012, after the school restarted in September, she was not able to attend as many events as in the summer. Jaclyn decided to hire programmers instead of actively looking for a CTO. There were basically two reasons for this. First, Jaclyn felt that finding a CTO would be much more difficult than getting herself to where she wanted to be. In particular, this was difficult in the booming tech startup scene in New York: "Startup is the new thing to do, and everyone wants to be in touch because, to put it awfully, that's where the money is at." When demand for technical people is high, it is hard to find a CTO without a lot of capital. Second, the more Jaclyn thought about her app, the more she realized how important programmers are in building the database. She decided to temporarily stop looking for a co-founder and focus on improving what she already had. Jaclyn paid the programmers from her own savings; however, as they were friends and friends of friends, they did not charge her the full amount. In common with Jaclyn, they were students and did not mind being part of something without being monetarily compensated.

Jaclyn realized that working on her own might be a disadvantage when

approaching venture capitalists (VCs), but it was important to her that she could prove the kind of prototype she was able to build: “It's kind of like saying to the VCs, ‘Hey, this is what I can do without a lot of capital and without a CTO. Imagine what I could do with your million dollars?’” Jaclyn knew what needed to be done, and thought that she could move on with her idea without a co-founder. She aimed at attracting venture capital with which to buy outsourced application building services.

In addition, Jaclyn participated in an entrepreneurship competition hosted by New York University. The competition continued until May 2013. The tempting grand prize of $75,000 would provide a great boost to Jaclyn’s startup at the time of her graduation. However, before then, Jaclyn went to school, did a startup, and looked for a full-time job. As a consequence, Jaclyn did not sleep as much as she would have liked. At the same time, she was very happy with what she was doing.

Until this point, Founder2be had not run any Google Ads apart from utilizing the free starter package worth €75 provided by Google. Wolfgang thought that the next step would be the inclusion of more advertisements on Facebook and Google. This required tracking results and optimization. As these activities required time, the entrepreneurs disagreed on the feasibility of online ads, which is not to say that they did not all consider, with the right kind of conversion, that results would be good. However, Oliver was interested in Google and Facebook ads and even affiliate networks, although he thought there would be a lot of work needed to make their campaigns attractive to potential publishers. InfluAds brought in some revenue although it remained small compared to online subscriptions. Alternatively, the entrepreneurial team could start selling their own ads, but this would need time, which was limited.

Exhibit 16 User’s perspective – Kapil Mittal

In Agra, India, the home of the Taj Mahal, Kapil Mittal was around 30 years old but had already managed to build his career. He’d got an MBA in India with several years of experience as a sales manager. As Kapil described in his resume:

> *“Over six years of experience in International & domestic sales/marketing functions and proven track record of building high net worth accounts in global market. Well-equipped office IT skills, marketing functional skills in addition to client relation development and task management across multiple function including sales, marketing, administration with good analytical skills. Well-versed in International business practices and protocol. MBA degree with specialization in Marketing.”*

After working for several years as a sales manager in India, Kapil was willing to move on with his career: “Every person has their own ambitions, and I have two long-term ambitions. First, I want to see myself on the strategic level of a big MNC. Second, in terms of academics I want to have a Ph.D. in a good international university”. As a result, Kapil began looking for international options to pursue his academic ambitions. Eventually, Kapil found a handful of alternatives to undertake a master's program in Finland, for which he was eligible to apply and which could help him on his way towards his Ph.D: “After doing the master’s program, I will have a good European degree. Thereafter I can pursue the Ph.D., maybe in Finland or at some other good international university.” Kapil decided to apply to the master’s program in Global Information Technology Management at the Turku School of Economics, Finland. He was admitted in spring 2010, and the semester began a few months later in August.

In Finland, Kapil built contacts and was looking for available Ph.D. positions. He noticed that most Ph.D. positions were available to students in natural sciences, rather than management. Therefore, he tried to develop alternative career plans, and build as many contacts as possible. Kapil practically signed up anywhere possible to build his social networks in Finland. In December 2010, he managed to secure a position as an international relations representative for the Helsinki Inventors' Association. During spring 2011, Kapil continued building his social networks in Finland, and browsed through interesting startups at ArcticStartup. There, he found information on Founder2be, and registered for the beta version to see if it would be beneficial to him. He was interested in finding someone who could take the initiative in a startup. This did not mean that Kapil had a business idea or was willing to join someone as an entrepreneur per se. For him, being an entrepreneur required a sound mental and financial situation. At that point, he was not in the fortunate financial position of being able to undertake “charity”, as he termed working free of charge for a startup.

Kapil expected that once he was hired, he could develop the ideas in a company. Until then, Founder2be might potentially raise interesting job opportunities, paid jobs in which he could prove his skills. However, Kapil eventually became disappointed with Founder2be. After using the service for a while, Kapil perceived Founder2be as merely a medium for sharing perspectives on ideas. He was disappointed in the service development after the beta version, and became a passive user. However, he kept his user profile available for potential employers.

Later in the spring 2011, Kapil encountered personal incidents. As a result, he needed to visit his home where he had a wife and a baby girl, who had been born a year earlier, just before the master’s program began in

Finland. However, Kapil did not plan to stay with them but to get back to university as soon as possible. Unfortunately, he did not have sufficient money to return to Finland. It seemed that he needed first to work before he could continue in the master's program.

Kapil searched for interesting companies via online job portals such as Stepstone and Monster. He sent hundreds of job applications every month. First, he applied for jobs outside India. Then, he decided also to apply for jobs in India: "I am actually very much open because, for me right now, the priority is money." With no positive response, Kapil started to become frustrated. His family needed financial support and he required funding to finalize his studies in Finland. Although employers showed interest to Kapil's profile, they were not ready to hire him. Kapil even contacted Oliver "to understand things and seek opportunities". Kapil did not know what might come from contacting Founder2be's entrepreneurs, he only perceived that the site was not revenue-oriented and that he could help in turning it into "a money-making machine". Kapil knew the local market in India, and he also had contacts in the Middle East, who might prove helpful in promoting Founder2be. He often had ideas on how to develop businesses although, typically, managers were not ready to listen to him. Oliver listened to him and asked Kapil to forward his plans and budget proposal. Kapil presented his ideas on how to increase brand awareness in the Indian market with offline strategy; namely, via face-to-face personal connections. Kapil was certain that everyone would approach the Indian market in a similar manner because online strategies do not work in India as they do in Europe or the USA. Nevertheless, Oliver rejected Kapil's proposal. Kapil considered that Founder2be had no real interest in investing effort in the Indian market. To Kapil, Oliver seemed to be more focused on his own new venture. Kapil was demotivated by Oliver's negative response but had no other option than to continue seeking other job opportunities.

By October 2012, Oliver, Frank, and Wolfgang had been able to build the world's largest co-founder search site. They were proud of what they had achieved. Founder2be already had more than 11,000 users.

Compared to the previous year's situation, Founder2be had become more passive on many fronts, as the entrepreneurs had less time to spend on building the ecosystem. The Global Alliance Program partners remained in Founder2be's service ecosystem as they could potentially direct users to register in the service. Collaboration remained loosely defined with no formal obligations. In general, the service ecosystem was around the platform and co-founders who found the platform via partners. This is represented in Figure 12 and Figure 13.

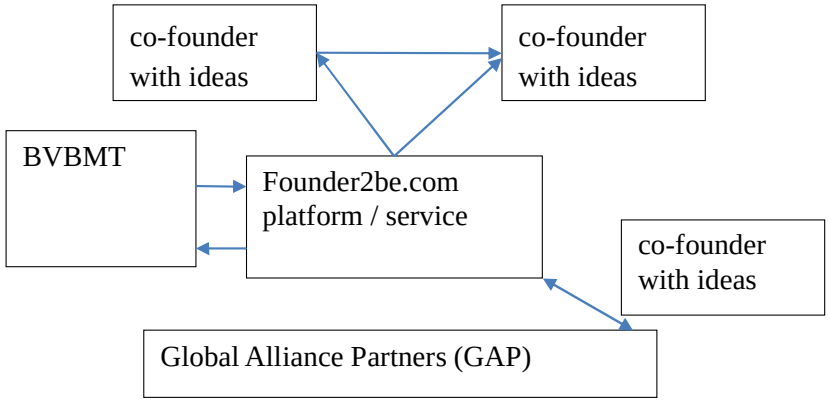

Figure 12 Oliver's perception of Founder2be's network in September 2012.[9]

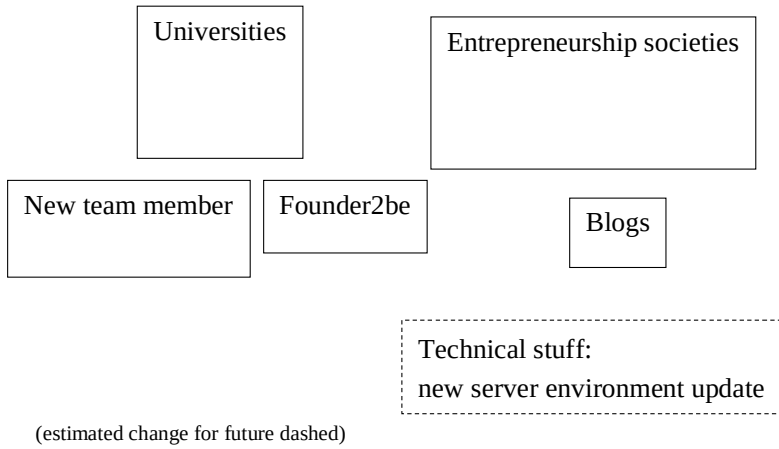

Figure 13 Frank's perception of Founder2be's network in October 2012.[10]

Oliver still considered global partners a potential way to attract new users. He believed that, in the near future, they were going to reach out to some incubators, and grow the partner network in size rather than range. Similarly, Frank perceived that universities and entrepreneurship societies in the USA

[9] Original network picture can be seen in Appendix 8.
[10] Original network picture can be seen in Appendix 9.

were potential partners for making Founder2be viral. In addition, he thought that bloggers remained relevant to getting publicity in the press. Mostly, they had stopped pitching to bloggers. Recently, in addition to the real-life event that was hosted by Oliver in New York, promotional activities had mainly relied on Wolfgang's tweets and presence at startup events in Berlin.

The team discussed the possibility of including a new team member to take charge of promotional efforts in the US market. However, no decision had been made. Frank had even removed users from his network picture, as he perceived their importance concerning technological development had diminished. This did not mean that they would not receive feedback from users. In fact, they often received positive feedback on what they are doing. In addition, they received a lot of feedback, even for slight optimization and tuning of the service, which was highly appreciated by the team. As Wolfgang said: "People seem to be really engaged in the service." It was also constantly being suggested to the team that they include new features such as crowd-funding opportunities, which, in fact, might have been a natural addition to the service. However, the entrepreneurs were willing to keep the service simple, and focus on being a platform for first stage contact and the sharing of ideas: "I think that's a good idea as well or a good service, but it's a different thing, it's a different service ... You have to be focused. You have to be able to say 'no'." In other words, the platform was considered already feature-rich in the sense that the team did not perceive a need for technological development. Instead, Founder2be needed to focus more on users, and better conversion to paid subscriptions: "The more people there are, the more likely they are to buy Pro Plan."

After approximately two years from idea generation, Founder2be was mostly working on its own. Growth was steady, and they had more than 11,000 users. These users had both registered their profiles and approximately 1,500 ideas for startup companies. However, no one knew how many companies had been formed as a result of co-founders meeting via Founder2be.

In sum, Oliver, Frank, and Wolfgang were happy with what they had achieved. They had built a service from scratch, and demonstrated the potential of the business model: "We could have lots of positive feedback … people love free stuff, right? But for someone to take out their credit card, type it in, and spend US$35 or US$90 on using what you have built, out of nothing … every month that's something cool… A lot of startups do not generate a single sale."

4.2 Enactment of roles over the network development process

4.2.1 Enactment of exogenous roles

Exogenous roles refer to the observation that there are other structures building, forming, and co-evolving simultaneously with the case network. It is important to identify these exogenous roles, as they clarify resources that enable and constrain service exchange, resource integration, and value co-creation of various actors in the network. Therefore, in the following, the function or role of the focal service ecosystem in relation to higher-level structures is analyzed.

The case network is only one structure that enables and constrains actors in their resource integration practices. In addition to the emergence of Founder2be as structure, the importance of selected structures are highlighted; namely, the startup scene, Internet-enabled market, and the international business system. By focusing on these structures, it is not claimed that there would not be other important structures. In fact, in the narrative descriptions above, actors and their decisions are often reflected against friends and families, their own firms, and other jobs or university education as structures constraining or enabling resource integration practices via enactment of exogenous roles. However, the focus here is on these particular structures as they are fundamental to the understanding on the mechanism of network development in the context of INVs in Internet-enabled markets.

The case network can be regarded as part of the *startup scene*, within which, in fact, many actors in the ecosystem act according to their role. Similarly, the focal venture and the case network are approached as part of a wider startup ecosystem. The majority of these practices seem to be performed unintentionally. In this sense, these activities are not to reproduce the structures but for other reasons. The startup ecosystem is gaining momentum, and seems to be booming everywhere. People establish entrepreneurship societies around the world, and blog posts and books are written on successful recipes for creating new ventures. For instance, while entrepreneurs are guided to ‘bootstrap’, to minimize spending on everything, to turn down paychecks, and run businesses with their own savings without external help, they are expected to attract venture capital as soon as they get the business into a good shape. In addition, startup entrepreneurs soon learn the preferred type of business (i.e., need for ‘scalability’), the ways of conducting business (i.e., ‘customer development’ and ‘pivoting’), and the way of being an entrepreneur (i.e., ‘bootstrapping’). These concepts have become the mantra for the startup structure.

Startup companies are following the process of these success stories in building up their companies. Thus, over time, actors in the context have developed their own jargon to discuss these issues, which are generally perceived as important in the startup scene. This is partially traceable to information search practices of reading books, blogs, and listening to others' stories. To some extent, this is also followed by the entrepreneurs of Founder2be. They are mimicking a kind of suitable behavior of a startup entrepreneur, which they have learnt by participating in new ventures, by reading books, and by participating in networking events.

The startup scene also influences many users of Founder2be. People encounter startup news in the media, and they see friends undertaking entrepreneurial activities. As a result of these success stories, startup entrepreneurship is considered a legitimate profession, and there are even romanticized narratives of successful entrepreneurs that make Founder2be a potential shortcut to wealth and fame. To some, running a startup is just a way of having fun; people participate in offline events as they find it a great way to spend time.

There are also structures that counteract the emergence of the Founder2be service network. As entrepreneurial activities are more popular in Internet-enabled markets, it is more difficult to differentiate between ideas. This causes difficulties for getting exposure in the media. Although free coverage in the blogosphere and viral marketing are considered typical ways of gaining publicity, they prove to be a challenging task in the startup scene.

One of the strongest counteracting structures is the prevailing assumption that the platform was not helping to find a co-founder. In the startup scene, people are encouraged to go to meetups, and to meet people with whom they get along and who they can trust. Before the establishment of Founder2be and towards the end of 2012, the common mantra remained that: "You don't find co-founders online because we meet up." Interestingly, many of the registered users also shared this perspective.

It is also interesting that the emergence of the service ecosystem provided an alternative for finding a co-founder. On the one hand, together with offline meetup organizers, the case network built a culture in which, to meet like-minded people and start a business with them, one did not need previously to know those people. On the other hand, Founder2be with other online services was building a culture in the startup scene whereby one did not need to meet these people first in an offline meetup, one could find them first online. Naturally, these kinds of structure change slowly, and the case ecosystem's role in the environment remained obscure. Nonetheless, as thousands of users started employing online services, as some people found online co-founder

matchmaking beneficial, and as influential bloggers informed on these success stories, online solutions slowly gained legitimacy in the startup scene.

In contrast, the experience gained by the co-founder team at offline events seemed interesting. However, although Oliver, Frank, and Wolfgang knew each other prior to the establishment of Founder2be, they were able to question the structures of the startup scene. In addition, the co-founders were not simply following the common mantra on high growth, Series A funding (i.e., a company's first significant round of venture funding), and IPOs. Instead of welcoming external investments, they wanted to have control of their own activities, and do what felt right to them.

The case ecosystem is not only evaluated against other startups but also as part of *Internet-enabled markets*. In the external context, social media has been booming in Internet-enabled market since the 2000s. In particular, the growth of platforms such as Facebook, Youtube, and Twitter exposed hundreds of millions of people to social media. As a result, people have become accustomed to posting profiles publicly, finding information from social media, and sharing information. 'Liking' and 'tweeting' has become socially acceptable behavior.

As other platforms in Internet-enabled markets gained millions of users, they have also been employed to find a co-founder. In this sense, these platforms can be regarded as competition to the focal venture. Examples in the narrative refer to the use of LinkedIn and Craigslist in finding a co-founder.

The emergence of other social media companies thus provides an example for other startups to develop something similar in Internet-enabled markets. In addition, some exogenous roles have already evolved around social media. For instance, some users have become powerful by engaging a large number of followers. To some, the number of Twitter followers and Facebook friends has become a symbol of importance. As a result of this development, references in some blogs have also become more desirable than in others. Similarly, the team behind the focal venture aimed at building a following and getting exposure in leading blogs.

Although other social media services can be regarded as part of the service ecosystem, they are also partly in the environment. This depends on the level of analysis. For instance, Founder2be, as a new venture in the Internet-enabled market, relied heavily on other social media services in its promotion, and employed three types of practice: first, the co-founders were actively tweeting (i.e., the practice relating to the use of Twitter) about the company. This was intended to attract people as users. In addition, it increased the company's credibility to users and bloggers. Second, the management of Founder2be also encouraged users to tweet and share information via Facebook. However, for the users, the intention was not necessarily to increase exposure of Founder2be

but to have advanced features available free of charge, instead of paying for them. Third, other social media services could provide a way to identify potential users; for instance, activity in LinkedIn groups and Quora discussions brought traffic to Founder2be.

Interestingly, to some, sharing information in social media is just a practice that has developed over time and most people no longer think about their intentions in online platforms. Some actors try to promote themselves, which indicates a process of self-identification instead of the more organization-oriented promotion referred to above. For instance, the practices of tweeting and Facebook 'liking' create value for many as they give meaning to other practices. In other words, people are able to gain social recognition for their actions via social media.

Although social media has importance by enabling the promotion of a focal platform, it simultaneously constrains resource integration processes. In other words, social media often create markets or practices that set the limits or guidelines for future services. For instance, Founder2be as a pioneer of online co-founder matchmaking often employs the slogan 'Match.com for co-founders'. Although finding a co-founder online is a relatively new phenomenon or had previously only been experimented by a small portion of entrepreneurs, many people have tried online dating. The habit of finding friends online has thus become a legitimate activity around which some rules and norms have developed in the Internet-enabled market. These rules and norms, together with signs and symbols, are now employed as metaphors in the context of co-founder online matchmaking. In this sense, new market creation does not occur in a vacuum.

As a first-mover in the Internet-enabled market, Founder2be became interesting to advertisers; in particular, to those companies that were trying to reach potential entrepreneurs (i.e., the same target market as Founder2be), the focal company seemed to be an interesting partner. Although the lack of other co-founder matchmaking sites clearly provided Founder2be with opportunities, the entrepreneurs needed to work hard to find the new venture's own role within Internet-enabled markets. As such, bloggers play an important role. On the one hand, entrepreneurs take the initiative and contact bloggers to gain online exposure; they want their companies to be exposed in top-tier blogs as they have wider readership, and thus better opportunities for attracting users to register with their service. As a result, most new ventures aim at these leading blogs, which makes it difficult to be promoted in leading blogs such as TechCrunch or Mashable. On the other hand, as Founder2be became better known, bloggers also contacted them directly. Bloggers also follow other blogs and simply copy content and translate it to another language. This is highlighted in the narrative, which reveals that some bloggers are in need of

interesting stories, and are happy to write one if it is brought to their attention. By writing something interesting, their articles are shared in social media. Thus, by writing interesting articles, it is possible to attract more people and build engagement with the blog. This gives these blogs credibility, on which other bloggers rely.

As, among other well-known companies, Lauren Drell (Exhibit 13) covered Founder2be on Mashable, the credibility of the new venture was increased. In a way, Lauren's blog was a sign for people that Mashable perceived both Founder2be and the whole concept of online search for co-founders as legitimate action. This helped Founder2be and other co-founder matching sites to create a new Internet-enabled market.

Although the structures of Internet-enabled markets can be perceived as beneficial to some extent, they also create constraints. People employing social media are accustomed to using it free of charge. Although some social media services, such as LinkedIn have introduced premium accounts, the decision to limit the availability of free content raises questions among the users of Founder2be. As a result, there might be a threat that people who employed the previous version stop using the service. However, as a result of iPads and iPhones increased popularity, people have become accustomed to spending money for useful applications. This might also slowly change the habit of consuming social media, and lower the threshold for premium account subscription.

People are expected to become more interested in paying for premium accounts as the amount of data increases in the service. As there is more content, the platform is expected to become more legitimate. It must be admitted that over the research process, Founder2be did not become a household brand with which everyone would like to engage. In addition, the increasing number of users did not result directly in increased promotional activity or word of mouth promotion; rather, growth of the user base remained fairly linear over the research process. In this sense, viral marketing in Internet-enabled markets might not always function as planned. In addition, there can be important cultural differences, as suggested by the differences of marketing Internet-enabled services.

Similar to the structures of the startup scene and Internet-enabled markets, national states as structures enabled or constrained the case network actors' activities. In this sense, the case network can be also perceived as part of the *international business system*. However, questions concerning the international context are not necessarily important, as the co-founders and other actors did not need to make decisions on which markets they served or on which online environment to focus. Instead, the co-founders aimed at establishing partnerships and acquiring users from all over the world.

Although national borders are not necessarily that visible in the context of the case ecosystem, they nevertheless influenced the emergence of the network.

For instance, bloggers are typically oriented towards national or regional markets. They might have local advertisers interested in a local audience, which in turn wants to read about what happens in their own local community. As a result, Founder2be generated most interest among Finnish and German bloggers due to being the home countries of the entrepreneurs and their company. Through the practice of focusing on the home countries of companies and entrepreneurs, these bloggers in turn continued the discourse on national borders and these nation states became more visibly structured. Simultaneously, as the focal platform was open for any nationality, it also received international attention.

To some extent, willingness to undertake entrepreneurial activities is perceived as being shaped by national cultures. People in the USA are expected to be more open towards startups and entrepreneurship. This results in other entrepreneurs' focus on the USA. For instance, entrepreneurial meetups in the USA are attended by people from Russia, Ukraine, Israel, and India. Although, it is interesting that the Indian national culture does not encourage entrepreneurship.

These kinds of assumption on national differences constrain actors as they try to make sense of the surrounding world. The co-founders of Founder2be focused very much on the US market, as they perceived it to be potentially vast and was culturally proximate to them. However, these national cultural structures were also driving people to Founder2be, as the online platform provided users with an opportunity to contact people internationally. In particular, this is beneficial when international partners are considered more tempting compared to domestic alternatives. For these users, it made no difference whether the platform was based in Silicon Valley, or Finland, or elsewhere in the world, as long as there were relevant users in the preferred region.

The general attitude to entrepreneurship also influences willingness to establish a startup. Thus, it influences the need of actors to find a co-founder and, ultimately, the demand for Founder2be's service. These attitudes, as well as the general economic situation and the situations of institutions, were beyond the control of Founder2be's entrepreneurs. Thus, demand for finding a co-founder online was a result of a longer socio-cultural process, predating the launch of Founder2be.

In this sense, the case ecosystem's role in the international economy becomes evident. People from all over the world variously face the economic environment and act accordingly. As Founder2be attracts unemployed, employed, self-employed, and students from all over the world, exogenous roles can be understood to be based on people's socio-economic status.

For example, when people move around the world, their self-identity reflects the role of an immigrant or a foreigner. Greater internationalization might also need better mobility. However, a lack of resources and other ongoing projects limits the possibility of localizing marketing approaches in each market. Thus, exogenous roles in the international socio-cultural environment were important for actors in the case ecosystem.

In sum, exogenous roles refer to social structures, which belong to the environment of the service ecosystem. The enactment of exogenous roles by actors is thus closely interlinked with the system's role enactment in the structures of higher-level systems. Higher-level structures both enable and constrain, which is evident in terms of international business structures. On the one hand, international business structures are constraining whereas an online solution provides an opportunity to access global resources. On the other hand, the case network internationalized from day one, although the home countries of the entrepreneurs and their venture hindered online exposure to some extent. While actors enact exogenous roles, they are free to act differently. In fact, the narrative analysis indicates that entrepreneurs and other actors alike can enact both structure-enforcing and structure-loosening roles. This is evident in terms of the structures of the startup scene. To a large extent, the co-founders of Founder2be were following the mantra of successful new ventures. However, they also questioned the established method of finding co-founders and encouraged an alternative behavior. In addition, the actors not only changed existing structures but acted to create new structures. This is particularly evident in terms of the case network or, more widely, in Internet-enabled markets, in which Founder2be can be perceived as a pioneer in institutionalizing the market for finding co-founders online.

4.2.2 Enactment of endogenous roles

Fundamentally, the case network comprises the entrepreneurs who developed the platform, and users of the platform who generate its content and employ the platform for their own benefit. There are several value co-production practices that the co-founders and users undertake in interaction with each other and with the platform, which is the primary servicescape for the interaction. In the primary servicescape, value was produced by Founder2be's co-founders in developing the platform. They engaged in practices, such as idea generation, programming, and communicating with users.

The service ecosystem of Founder2be comprises various roles that are enacted by different stakeholders. In general, the focus is on the entrepreneurs and the users. As these two groups need to be combined, also interns,

bloggers, and other service providers can be regarded as active stakeholders in the case network. However, the roles as entrepreneurs, users, or bloggers do not describe how these players act. Instead, the endogenous roles listed below describe the role of the emergent case ecosystem. From the research data, it was possible to deduce five case-specific endogenous roles that are shown in Table 3.

Table 3 Endogenous roles enacted in the case network

Role	**References**
Idea generator	Galbraith (1983)
Sponsor	Galbraith (1983)
IT designer	Fleischmann (2006)
Content contributor	Oreg & Nov (2008); Yang & Lai (2010)
Financer	Minola & Giorgino (2008)

Idea generator refers to a person who helps to identify problems and suggests solutions to these problems. In this sense, an idea generator is needed for the emergence of the case ecosystem, as without it there would be no focal service. Although idea generation can mostly be characteristic of an entrepreneurial team, other players also act as idea generators. For instance, the interns Lisa and Solomon provided ideas on how to improve Founder2be's situation. In addition, user insight was utilized early by collecting data from the beta version.

A *Sponsor* is a person who works actively to have more resource-integrating actors involved in the network. Promotion began early as Oliver promoted to Frank the idea of building a team around the concept. In addition, one of the most important tasks was to get more users to generate content. Although Frank participated in the task, it was mostly addressed by Oliver, Wolfgang, and the interns, Lisa and Solomon. Enactment of the sponsor's role comprised several activities, such as contacting bloggers and attracting potential partners to the Global Alliance Program. To some extent, these activities cannot be perceived as solely value co-producing activities, as they did not necessarily result in value co-production. This is linked to the themes of control and unpredictability. Oliver and the interns spent a lot of time interacting with partners but the results were mild. Oliver admitted that Global Alliance partners were intended for co-promotion but the program was loosely structured, and they were not ready to enact the role of a sponsor. However, these actions were motivated by the idea that these activities would eventually produce exchangeable resources. In addition, some enacted the role of sponsor unintentionally; for instance, startup bloggers played an interesting role in the service ecosystem, as they hardly perceived their important role in marketing.

Nonetheless, as they blogged about the startup, coverage was gained that otherwise could never have been afforded by the company.

An *IT designer* is a person who works to provide an artifact as a mean for value co-creation. In this sense, technology development practices aim at guiding the behavior of other actors in a service ecosystem. This endogenous role is similarly necessary for the service ecosystem, otherwise there would be no platform for value creation. In the case ecosystem, Frank mostly focused on the development of the platform. In addition, users also enacted the role of IT designers by providing feedback for the development of technology.

A *Content contributor* is similarly crucial for the case ecosystem, as without content in the platform there would be completely different value propositions. Although reactions to the activities of sponsors and IT designers varied, importantly, some users decided to generate content. By enacting the role of content contributors, users engage in several practices, which have remained more or less the same from early description before the launch of the beta version: "They [registered users] tell about their skills, interests, experience, and share as much or as little as they want about their ideas." As a result of these activities, the entrepreneurs were able to propose value for users. Within the platform, it was possible for users to find information on potential co-founders and their ideas, and possibility to contact them. Content in this context refers to both publicly available information and the private messages that were sent via the Founder2be platform.

A *Financer* is crucial in the sense that he or she provides monetary resources and incentives for entrepreneurs to keep an ecosystem alive. Service remains at the core of exchange practices, as without expectations of service of some sort there would be no interaction between actors. Transfer of money is still perceived as an important exchange practice. As long as money is needed, the role of a financer remains crucial for the viability of the ecosystem. Financers comprised the co-founders, paying users, and advertisers (or, more directly, InfluAds). As long as interpretation of the service ecosystem enabled value co-creation, financers were prepared to engage in the network.

4.3 Process theoretical perspectives on network development process

4.3.1 Life cycle approach to development of the case network

In the life cycle approach, it is considered that resource integration practices and enactment of roles vary in different stages of the temporal process. In other words, some practices and roles are more characteristic of particular phases in the life cycle of the case ecosystem. As the stages were constructed,

some information was always missing. Nevertheless, based on the empirical data, six temporal stages in the emergent case ecosystem address most of the development (Table 4).

Table 4 Stages of network development based on dominant roles and practices in the case network

Stage	**Dominant role**	**Dominant resource integration practices**
Prenatal stage	Exogenous roles of co-founders	Operand resource development
Idea generation stage	Idea generator	Integration of prenatal resources for opportunity creation
Promotional stage	Sponsor	Intentional resource integration for increasing awareness
Technology development stage	IT designer	Intentional information collection and utilization for the development of an artifact
Content generation stage	Content contributor	Information sharing via developed artifact
Monetization stage	Financer	Integration of monetary resources for improved value proposition

The *Prenatal stage* refers to the period before the initial idea for the case ecosystem. Although the prenatal stage is almost bypassed in the narrative above, it is crucial in the early emergence of the case ecosystem. While empirical evidence on the importance of past contacts remains controversial, inclusion of the prenatal stage is necessary in the description of network development process (NDP).

Activities in the prenatal stage refer to some crucial events that drove towards the establishment of the focal venture. In the prenatal stage, the co-founders are described as gaining knowledge and skills through, for instance, education, work experience, and the startup literature. These provided the basis for skills, such as coding and sensemaking in general, that guided the manner in which Founder2be was managed by the co-founders. It can also be recognized that Oliver's previous participation in startup meetups and experience from online dating were important resources in discovering the opportunity for Founder2be. The prenatal stage also covered the social network development, as the friendship between Frank and Oliver, and the brotherhood between Oliver and Wolfgang, influenced the team formation in

later stages. All of these events developed knowledge and skills (i.e., operant resources) that were enacted during the establishment of Founder2be. These events also generated some operand resources, such as money, that enabled Oliver to undertake full-time entrepreneurial activities. Mostly, operand resources are developed in the latter stages.

The service system's prenatal stage refers both to the co-founders' resource integration activities and those of other stakeholders in the case ecosystem. As they participate in the service ecosystem in later stages, it is important also to understand other stakeholders' histories. This forms the background basis on which they are able and willing to integrate resources into later stages for the benefit of themselves and the ecosystem. This does not necessarily mean that these events would have been crucial to the establishment of the service; however, they play an important role in its later emergence.

Similar to the co-founders, previous resources of other actors stemmed from education, work experience, family, friends, and other contacts. A number of events led Anna Bessonova (Exhibit 1) from ArcticStartup to attend the event where she met Oliver for the first time. Similarly, there were a number of events that brought Ron Broens (Exhibit 2) to Finland or Hugo Bernardo (Exhibit 6) to Silicon Valley, eventually establishing their own companies and finding information on Founder2be. Users had experience of employing other online services, which provided them resources for using Founder2be. However, no actors are alike, and it is difficult to find a rule-followingly typical story from the narratives. In addition, more typical practices of other actors in the prenatal stage mostly refer to activities that were prenatal to the establishment of their own company, rather than to a particular stage of Founder2be's network development.

The first concrete step towards launching a startup is when the idea begins evolving in *the idea generation stage*. In the case of Founder2be, the idea originated from Oliver's difficulty in finding a co-founder for his business idea. As he realized that meetups would not solve his problems, he began thinking about a solution based on his experience with online dating. At this stage, Oliver integrated resources from the prenatal stage to generate the idea for his startup.

As Oliver discussed the idea with Frank, they defined the features necessary to operate the service. In this stage, they collected information widely, and relied on subjective sensemaking concerning what was needed. Fundamentally, it was required that people and ideas were presented, that people could find interesting people and ideas, and that it was possible to contact other people. In this sense, the features of the service remain mostly untouched.

Although the basic functions of the service did not change, Founder2be was developed with the help of users. Feedback was received on, for instance,

small technical details and new features that users would find beneficial. As such, users were also important in the idea generation stage. In particular, the early adopters of the service actively provided feedback. Thus, the activity of these idea generators can be perceived as, to some extent, rule-followingly typical in the early phase of emergence.

However, it must be emphasized that external opinion played a larger role only after the launch of the service. While Oliver and Frank asked for people's opinions on the idea prior to the launch, initial discouraging feedback was mostly neglected. Nonetheless, some ideas were eventually accepted as they were frequently put to the entrepreneurs, such as the idea of hosting a real life event in New York.

The *Promotional stage* covers activities relating to increasing awareness of the service to a wider audience, and related activities within the community. In this sense, the team formation stage can be considered related to the promotional stage, when Oliver promoted his initial idea to Frank. The promotional stage was more closely linked to the technology development stage, as the first versions of the service were employed to attract attention from bloggers and gain feedback from early adopters. Promotional efforts were instantly international, as the co-founders wanted feedback from various contexts around the world.

Activities in the promotional stage included various efforts such as contacting people by email or by tweeting, building the Global Alliance Program, activating the partner network, marketing, SEO, and monetization. In general, these activities in the promotional stage refer to the team's efforts in making Founder2be more viral. The team contacted various bloggers and partners. In addition, the launch of premium plans was both focused on monetizing the service and making it more viral.

Here, it is not forgotten that other actors also enacted the role of sponsor in the service ecosystem. However, rather than promoting the service as a rule-followingly typical behavior connected to a particular stage of the focal venture, the analysis shows that other actors engaged in promotional efforts more or less unintentionally. In other words, they integrated resources for purposes other than promoting the service ecosystem.

The promotional stage preceded, followed, and ran in parallel to the idea generation stage; in particular, when the promotional stage was considered to comprise team formation activities. First, Frank and Oliver had previously known each other. As such, their collaboration stemmed from the prenatal stage. Second, team formation only began after Oliver had the idea for Founder2be. As Oliver knew Frank's skills and personality, it was natural for Oliver to contact Frank. Team formation did not end when Oliver and Frank agreed to work together. Instead, it continued with the inclusion of interns in

the team. Moreover, the decision to include Wolfgang in the team was a significant step in team formation efforts.

The term 'team' is defined here as a set of two or more people who interact dynamically, interdependently, and adaptively towards a common goal, each having specific roles or functions[11]. As other actors apart from the co-founders and interns could not be identified as having a common goal, they are not included in the team formation. In sum, activities in the team formation stage mostly comprised contacting people, discussing goals, and sharing tasks between team members. As such, all team members contributed to the development of the ecosystem in the team formation stage.

In the *technology development stage*, resource integration practices focused on information collection, and utilization of information for self benefit and that of others. As Frank's and Oliver's knowledge and skills stemmed as resources from before the idea generation stage, the technology development stage can be seen to overlap with other stages. However, more intentional, service-specific technological development began when the initial team of Frank and Oliver was formed.

The technology development stage comprised a number of activities from collecting information from books and online to writing code. User feedback was an important source of information, which was collected by the team. This feedback was filtered by the founding team, as they tried to focus on the most important features of the service.

Although the technology development stage spanned across NDP, its relative importance varied over time. As such, the major changes from one stage to another are clearly visible. For instance, when Wolfgang officially joined the startup in 2012, technological development was ending from the perspective of writing new code: "Founder2be is already feature-rich in the way that it accomplishes all the things it really needs to accomplish … That's why I think the next step would really be for growing the user base."

Nevertheless, users continued to send feedback. They suggested new features and minor changes that would improve their own service experience. In this sense, the technology development stage was closely related to the idea generation stage. However, the two can be distinguished as technology development remained the entrepreneurs' task. This stands in contrast, for instance, to open source service development.

In the *content generation stage*, the focus shifted from back end programming to inputting information into the platform. Although it was possible to blog in Founder2be's website, this content was mostly targeted at promotional efforts, and was therefore conceptually distinguished from content generation.

[11] Following the definition by Rouse et al. (1992, 1297).

In other words, interest was on information that enabled value creation for resource integrating actors.

In the context of social media, the content generation stage is distinguished from other media as it emphasizes the role of users. Otherwise, content generation could be regarded as part of technology development, which focuses on the development of an artifact to enable value creation to resource integrating actors. In social media, there is an important distinction between the roles enacted in technology development and the content generation stage.

Temporally, the content generation stage was thus only possible after the technology development and other preceding stages. In particular, as the entrepreneurs did not crawl information (i.e., the process by which information is found from vast numbers of websites), they completely relied on content generated by users. Naturally, the entrepreneurs could guide content generation with the help of technology. However, eventually it was the users who decided whether they were willing to generate content. Users also decided on the quality of the content, and created the culture of information sharing around the platform.

The *Monetization stage* refers to activities relating to turning a project into a business venture. To some extent, this stage stemmed from the idea generation stage, as Oliver and Frank thought early about various ways to monetize the service. In the early stage, they did not focus overly on the precise form of monetization, but thought of different ways to monetize the service to justify the potential business opportunity. Initially, Oliver tried to sell advertisement space on his own. However, he encountered trouble as potential advertisers wanted to advertise in real-life events in the US market, rather than purely online.

In effect, only the beginning of collaboration with InfluAds can be perceived as the start of the monetization stage, when InfluAds combined advertisers and Founder2be. Instead of selling to a number of potential companies, Founder2be sold their online advertising space to one firm, which then sold it further to multiple advertisers in its own network.

The entrepreneurs continued monetizing the service when they launched premium plans for Founder2be's users. This enabled them to receive money from the users in exchange for more advanced features of the platform.

In sum, a particular pattern can be identified in NDP as changes in the focal company's activities when temporally emerging from a stage to another. In this sense, it is possible to follow the typical life cycle approach by taking a focal company approach to service development. In fact, from the perspective of the co-founders, it appears that the emergence of the case ecosystem was following the prescribed life cycle model.

However, users and other stakeholders also need to be considered. In various stages, different roles enacted by actors are emphasized. In the prenatal stage, actors enacted exogenous roles. However, from idea generation onwards, actors began enacting roles which were endogenous to the service ecosystem. As such, there is a link between the various stages and endogenous role enactment. The life cycle approach can thus be useful in placing a temporal aspect on the enactment of endogenous roles described in Chapter 4.2.2.

Life cycle theory describes the practices of resource-integrating actors as rule-following activities. 'Rule-following activities' refer here to rules of the case ecosystem or, in other words, enactment of endogenous roles. The life cycle approach is useful in describing these practices retrospectively. However, the appropriateness of life cycle theory in NDP is questioned, as the theory mostly describes practices of an entrepreneurial team from the perspective of the network. At a higher level, the life cycle is a more complex combination of lower-level life cycle activities, and it becomes more difficult to follow the pattern or sequence of activities. In particular, this can stem from the lack of common motives or goals, or lack of control in guiding simultaneous activities leading to the development of a network. At the level of a new venture, these kinds of pattern can be found as co-founders, employees, or, in rare cases, other stakeholders share the vision to improve the viability of a network. Therefore, I later propose that changes at the system level are more appropriately described as evolutionary process.

Life cycle theory addresses the sequence of activities. It can be posited that the life cycle model matched the description of activities by various actors, which followed a particular order. However, this was not necessarily synchronous with the level of development of the network as a whole. Here, the stages neither reflect complex NDP nor changes at the macro-level. Therefore, life cycle theory might be more applicable to the study of relationship development process rather than constantly evolving networks. Stages merely describe what is rule-followingly typical at the lower level of individual actors and their role enactment. As such, I face similar challenges as Slotte-Kock and Coviello (2010) in the conceptualization of NDP, as the life cycle model does not really describe what happens at the level of a network. Fortunately, NDP can be understood by applying other process theoretical approaches at various levels.

4.3.2 Teleological process approach to development of the case network

In contrast to perceiving service ecosystem development as a deterministic process from idea creation towards international service ecosystem, the emergence can be perceived teleologically as a process, which is intentionally

and adaptively operated by entrepreneurs (or other stakeholders) towards the envisioned end state. As described in Chapter 2.2.2, envisioned end states can be multiple and change over time. Although the co-founders of Founder2be had no clear end state constructed in their minds, the process can, to a particular extent, be studied as a teleological process.

The co-founders were driven in their actions by a common understanding on the need for more users, and the eventual need for money for the focal venture to survive. Partly, this resulted from the co-founders' sensemaking of their environment. In contrast to life cycle theory, the entrepreneurs did not undertake prescribed activities from the structure, they created the structure with visionary activities.

It is evident in the narrative case description that Oliver and Frank had a rather clear vision of the service from the beginning. They aimed at developing a service that would help potential entrepreneurs effectively find co-founders in an online environment. In the envisioned end state, to match ideas with complementary skills, the platform provided a list of profiles and a list of ideas. As a result, the platform required thousands of potential co-founders to register their profile and also actively present their ideas for a startup. The ultimate aim of the co-founders was that the platform provided such value that users were willing to pay for employing more advanced features. This envisioned end state remained surprisingly unchanged from the early discussions between Frank and Oliver until the end of data collection.

Teleological process towards the end state did not mean that there would only be one route to the envisioned end state. In fact, Oliver, Frank, and Wolfgang tried various approaches concerning how to get more users, how the users would post more ideas, how the users were made to provide more information about themselves, how they were made to share information about Founder2be, and how they were made to pay for premium service. This is in line with systems theory's equifinality; that is, there were various routes to reach the end state. As described in the narrative description of the case ecosystem, there were various activities undertaken by the entrepreneurs. All of these activities from idea generation to early team formation, to subsequent technological development, and to promotional activities, strived towards the envisioned end state.

The means to reach the end state were adapted as the entrepreneurs struggled to get the expected results. For instance, the user base was growing more slowly than expected, and growth remained 'fairly linear' despite promotional efforts. Although the user base was constantly growing, this did not correlate with higher growth rates. Therefore, the entrepreneurial team considered ways to make the service more viral. In other words, other actors were expected to enact the role of a sponsor. As exposure in a major technology blog sounded

tempting to the co-founders, the team worked hard to contact bloggers, and to gain exposure. Even though they eventually managed to get exposure on Mashable and a temporal spike in user numbers, the Founder2be's co-founders soon noticed that reaching the bloggers directly was a challenging task, and not necessarily worth the effort.

The co-founders aimed at viral marketing through their own activities. They provided free premium accounts for sponsors, and wrote blogs and tweets that they thought others might retweet. However, the sponsor role was also given to Global Alliance Program partners, which were expected to share information about Founder2be. As the gain from the partnerships remained mostly invisible to Oliver and Frank, they did not actively develop these relationships beyond the initial informal agreements on collaboration.

As mentioned earlier, it was not sufficient for the entrepreneurs to have as many users as possible. Instead, they also thought that the users should bring money to them. At the beginning, Oliver and Frank thought about possible means to monetize the service. They considered the options of selling additional services in a 'Tips & Tricks, section and selling advertisement directly. Eventually, they decided to launch premium accounts, and relied on advertisements sourced via a third party ad network, InfluAds. The launch of premium accounts brought some money with which to develop the service. This money could be further invested in attracting more users. However, there was insufficient money to hire people to undertake activities that were perceived as important in further developing the network.

In general, Oliver's and Frank's, and later Wolfgang's, efforts in developing the new venture were purposeful and adaptive. They envisioned a socially constructed end state to the network, and made selections to reach it. As these efforts were perceived as trial and error, there was no sequence of events as in the life cycle model; instead, different means were applied to achieve the kind of ecosystem that seemed most feasible to the entrepreneurs. Particular end states tended to change in response to external environmental forces, as an environment does not react to activities as wished.

Although the emergence of the case network appears purposeful, it failed on a couple of points, depending on one's perspective on the emergence. *First*, the resource integration practices of the co-founders were not teleological in the early phases of the emergence. It would be naive to claim that Oliver and Frank studied computer science at the University of Siegen to gain skills to develop Founder2be. In addition, even the idea generation phase was not completely focused on the development of Founder2be. Instead, the idea for Founder2be was born randomly, rather than resulting from a deliberate idea planning session.

Second, from the perspective of multiple levels, it is striking how the teleological process model explains the emergence of the case ecosystem as an entrepreneur-driven process. Also, other stakeholders engaged in teleological processes, and influenced the emergence of the service ecosystem. However, these envisioned end states did not refer to the end state of the case ecosystem but to the end state of each actor and their companies. For instance, bloggers were not concerned about the future of the focal venture. Similarly, users were driven by their desire to start their own company, as people wanted to have intellectually challenging and inspiring occupations, or wanted to help others, or to experience the life of an entrepreneur. In general, these actors were reinforcing their self-identity, rather than striving for the envisioned end state of the case ecosystem. As other actors joined the service system, they rarely had an envisioned end state in mind for the meso- or macro-level service system. Rather, they envisioned an end state for themselves.

In sum, teleological processes can be found to some extent in individual processes among the actors. However, the analysis shows that the teleological approach does not give a holistic explanation to the emergence of the case ecosystem. Entrepreneurs might envision end states that drive their resource integration practices; however, the co-founders might also have been more interested in their own well-being than that of the macro-level service system. This might be interpreted as entrepreneurs being willing to undertake actions that increase viability of the ecosystems. These system features are beyond the mere aggregation of actors. In fact, entrepreneurs believe that as macro-level systems and structures develop over time, proposed resource integration practices become more legitimate to users and other stakeholders.

The teleological process model seems to explain convincingly network emergence if the focus is on entrepreneurs or managers operating the process. When other actors are taken into account, it can be seen that these actors often engage in their own resource integration practices, and strive towards their own envisioned end state, rather than that of the focal network. The research indicates that the perspective of multiple actors cannot simply be discarded, as they provided content to the case platform and employed it for various purposes. These purposes were not always shared by the entrepreneurs. Most of all, users did not typically consider themselves as being actors in the network. On the contrary, they typically had no plans or even hopes for the future development and viability of the network.

4.3.3 Dialectical process approach to development of the case network

According to the dialectical process approach, a service ecosystem emerges from constant conflict between opposing forces. These opposing forces can be found in the opposing goals of actors within the network, or between the network and its environment. In this sense, the dialectical process of emergence needs to be understood holistically. For instance, competition not only emerges from other companies in the same field; also, advocates of sole proprietorship or offline partner searches were opposed to Founder2be's concept. In making decisions to employ Founder2be or develop it further, there was thus constant tension between the co-founders' own opinions, expectations for the benefits against other people's opinions, and their respective sacrifices. As the context of these activities constantly changed, also the perspective on the development of Founder2be was always evolving. In this analysis, I concentrate on the following dialectical forces, which were deduced from the data:

- Planning – emergence.
- Need for service – other needs of actors.
- Agency – social structure.
- Value created to the service ecosystem – value created to other systems.
- Value creation – cost of reproduction.

Planning – emergence refers to the constant struggle between the need to plan for the future and changes in the environment. As stated by Frank, the future of Founder2be remained unknown to the co-founders: "Maybe we fail but maybe come to something big, which we do not know at the moment." This gives a different picture of the emergence compared to teleological process. Whereas some results of activities appeared as planned, there were also unintended consequences.

Unintended consequences also drove different actors to the service ecosystem. Failure in one aspect created new opportunities. In this sense, the general economic environment, entrance of competing services, or attitude to entrepreneurship can be regarded as important factors that drove the service ecosystem forward. These kinds of environmental change were far beyond the immediate control of the focal venture, which thus could not be simply planned by the entrepreneurs. In other words, individual effort was not always sufficient to achieve intended consequences of actions. This shifted the focus from short-term planning to long-term emergence.

The focus on planning was to ensure enough interesting content so that actors could employ it for value creation. This was not always possible, as users did not act in accordance with the co-founders' plans. Actors might not

provide ideas, promote the site, generate content, or pay for it as planned. In the context of social media, this tension between planned behavior and an emerging ecosystem is crucial, as evidently the culture is mostly created by the users. There can also be other limitations on the availability of resources, which results in not all plans being realized. For instance, other partners did not always share the interest in promoting the case ecosystem, which caused tension between the ecosystem's needs and other's motives to satisfy those needs.

Need for service – other needs of actors refers to a dialectical tension between the problem solved by the focal venture and the reasons why the problem or the solution were not seen as tempting in the environment. As Founder2be proposed value to its users, some found the value proposition attractive in the given context. However, some users were willing to employ Founder2be for completely different reasons, such as to attract potential clients or to find inspiration for other projects. This also relates to the above-mentioned dialectic relation between planning and emergence. For instance, a booming startup scene could have been beneficial to the emergence of the case ecosystem by attracting more people to find more co-founders. Conversely, it could increase the number of potential co-founders in one's own social circles, and thus diminish the need for finding a co-founder online. In this section, other needs are divided into enthusiasm for entrepreneurial activities, temptation of finding a co-founder offline, and attractiveness of sole proprietorship.

First, there is a dialectical force emerging from general and individual enthusiasm for undertaking entrepreneurial activities. In this sense, Founder2be operates in a niche market, which was understood by the entrepreneurs. However, whether people want to act as entrepreneurs is an important question in defining the potential of the focal venture, at least with the given platform. For instance, Kapil Mittal (Exhibit 16) emphasized that entrepreneurship requires a sound mental and financial situation, which he did not have. Also, other actors were happily engaged in established companies, such as David San Filippo (Exhibit 9) or Frank. As such, the idea of becoming a full-time entrepreneur is not as tempting when an actor enjoys his/her job in an established company and gets sufficient money to support his/her family. In addition, ongoing studies can encourage people to continue towards a diploma before launching their own venture. Although this does not necessarily mean that there would not be a need for the focal venture's service, in general, these kinds of environmental influence can diminish willingness to invest time and effort into the service.

Second, people in the startup scene often emphasize that one needs to know a co-founder offline prior to launching a new venture. It is considered that trust cannot be established between co-founders by employing online services,

and therefore finding a co-founder online is not encouraged. This was also the feedback received by Oliver and Frank at the outset. Interestingly, many actors also questioned the approach, although they have tried utilizing online services to find co-founders. This required a lot of work by the entrepreneurs to convince various partners and potential users that finding a co-founder online was actually possible. Thus, it was necessary to create a new culture of online co-founder matchmaking or, as a minimum, to convert the hostile prejudice in the startup scene. In the rhetoric of online advocates, the online solution would be to provide a larger number of random people, who can be browsed efficiently.

Third, some people might question the necessity of launching a company with a co-founder. Although this is against the typical mantra in the startup scene, examples such as that of Jaclyn Siu (Exhibit 15) emphasize that sometimes people might choose sole proprietorship. This indicates that people have the capacity to act against social structures. However, this does not necessarily mean that it would be beneficial to the case ecosystem.

Altogether, these reasons discouraged users from finding co-founders online. At which point the tension caused by more traditional competition, from other companies that provide a similar solution, could be perceived. Although direct competition was also mentioned in the narratives, it is not as evident as in more established markets.

The discussion above refers also to the dialectical tension between *agency – social structures*, which highlights in one way the multi-level nature of dialectical tensions. Similar to Jaclyn Siu (Exhibit 15), who acted against the commonly encouraged way of finding a co-founding CTO, Frank and Oliver decided to follow their own opinion and not listen to discouraging comments on the feasibility of their idea. Also in the later stages, the case entrepreneurs needed to balance between their own opinions and feedback from users, who suggested new features at the cost of simplicity. Similar questions are answered daily in other companies, such as Twitter.

The co-founders of Founder2be perceived that it was possible to change the culture of finding a co-founder. As such, they shared the approach of Anibal Damião (Exhibit 8), the CEO of InfluAds, who aimed at changing the culture of online advertising. Although following their own opinions might potentially provide avenues for success, it also caused tension with actors who thought more traditionally. For instance, when Oliver tried to sell them advertising space, the online approach to source potential startup entrepreneurs was not tempting for advertisers, who were more willing to advertise in offline events. In addition, as people were accustomed to receiving information free of charge, it caused unwillingness to launch a ‘Tips & Tricks’ section in which practical information could be shared with potential entrepreneurs.

In one sense, the dialectical tension between agency and structure also reflects to the opposing forces of self-identity and the social environment. To some extent, this can be regarded as a change of behavior due to environmental pressure. The narratives of Ron Broens (Exhibit 2) and Jaclyn Siu (Exhibit 15), for instance, highlight the importance of a new living environment on their personality and approach to entrepreneurship.

The question on agency relates also to control, as the entrepreneurs wanted to keep control of the development of the service. This was reflected in their negative approach to external investments. While this reflects their willingness to act differently and not strive towards venture capital, it indicates that they believed in what they are doing and did not want other people to disturb the situation. Moreover, it refers to the fourth major dialectical tension, which questions for whom value is actually created.

Value created to the service system – value created to other systems refers to the fact that improvement of the viability of a network is not necessarily always perceived as improving the viability of an actor or other service ecosystems, which are often more important for actors. The case network's viability was constantly questioned as the co-founders lacked time and money to invest in promoting the service. This could have been solved by bringing in more resources. The co-founders acknowledged that it might have been helpful to distribute the workload, but they were not ready for that. There was a conflict between independence and dependence for the entrepreneurs. Whereas third party funding could benefit the network, it might have negatively impacted the co-founders who could control the amount time they allocated to the venture.

The co-founders were unable to work full-time on developing Founder2be, as they had other ongoing projects. The lack of time forced the entrepreneurs to make, for instance, decisions such as whether to focus on technology development or promotional efforts. The entrepreneurs did not have sufficient time to optimize online advertising or run a series of offline events in the US market, as other obligations kept them in Europe. As such, even the entrepreneurs and the benefits of other service systems they engaged can be regarded as dialectical forces. However, it might be difficult to assess the value of some of the resource integration practices, as the experience and information gained from other projects could also be employed as resources for the benefit of Founder2be.

There was also conflict between the enactment of roles and the development of Founder2be. It is not evident that all users enacted the endogenous role of the content contributor described in Chapter 4.2.2. People did not always share ideas, nor typically comment on other's ideas or send messages to each other. Although this would have been beneficial to the network

development, people might have considered that it was not beneficial to them or to the development of their own venture, which would typically be more important than the well-being of the case ecosystem. This is most evident in Ian Hafkenschiel's narrative (Exhibit 11), who was not willing to share information on his idea, and did not perceive random people as potential co-founders.

The lack of collaboration or interest in enacting endogenous roles not only stemmed from other actors. In fact, there were people who were willing to promote Founder2be, but the entrepreneurs could not afford to pay them. Investing more money would have been another option, but the co-founders were not ready for that. In this sense, people who were willing to help, be that promoting the focal platform, developing ideas, or generating content, also required incentives. The lack of common goals with users and other partners concerns tension between creating value to the service ecosystem and creating value to others. In this sense, loosely coupled alliance partners lacked incentives to drive traffic to Founder2be, and vice versa.

Although user-generated content was generally considered to increase the viability of the service ecosystem, it can also have harmful consequences. Profiles that merely generated noise rather than creating value for other users can be perceived as an opposing force. First, in the early stages, fake profiles appeared frequently in the platform. Second, there might have been people who contacted potential co-founders too often. Especially, designers received a lot of messages. As a result, some users might have considered that membership in the focal platform required too much effort; in particular, if received messages were not relevant to these users. Third, the overall appearance of the user base and the generated ideas influenced how Founder2be was being perceived. A number of poorly articulated ideas can distract users. Consequently, users might not have persevered and read ideas that could have been of interest for them. Importantly, ideas posted in the platform created a practice for the users concerning what was revealed about a business idea. This might in turn have influenced whether the service was appealing to users, bloggers, and other important stakeholders.

In sum, this refers to the dialectical tension between *value creation – cost of reproduction*. In principle, there were opposing forces of expected benefits and perceived sacrifices in service exchange. To minimize the perception of effort, the entrepreneurs tried to keep the case platform as simple as possible and keep information concerning users to a minimum. Simplicity could be perceived positively by some users; however, it might negatively influence the experience of more advanced users. In particular, after the launch, Founder2be only required Facebook-login; that is, Facebook username and password to register with the service. This was convenient for many as hundreds of

millions of users already had a Facebook account. Alternatively, users could register with the service with their own email addresses, which are even more prevalent than Facebook accounts. This all made initial exchange between users and Founder2be relatively effortless. No money was involved, and as stated on the login page: "You are just 60 seconds away from your new founder2be account."

In particular, there needed to be a focus on effort in the launch phase, as lack of content did not provide many opportunities for value creation. In this sense, value propositions might have been completely different in the early stage of the service. For instance, as early adopters of Founder2be, Ron Broens (Exhibit 2) and Kapil Mittal (Exhibit 16) did not sign in to find a co-founder. Nevertheless, they provided important content to the platform, and created value to the service ecosystem in general.

Here, it is emphasized that cost of reproduction does not simply refer to money. However, monetary issues can also be important; for instance, advertising efforts are typically considered in the light of monetary return on investment rather than long-term brand creation. This was also the basis of Founder2be's decision-making when considering whether to invest in online marketing or not. Conversely, people did not simply want to optimize their income revenue. Instead, people wanted to do something meaningful. This was apparent, for instance, in the narratives of Aniekan Okono (Exhibit 3), David San Filippo (Exhibit 9), and David Toborek (Exhibit 12). Similarly, this is highlighted in the case of Lisa Arensburg (Exhibit 4), who preferred meaningful experience and career development over a paid alternative that was less meaningful to her. However, this did not mean that value created by interns would be free of charge. Instead, time and effort was needed in guiding them to get positive rather than negative results from the perspective of the service ecosystem.

While there was a lack of incentives for network partners such as incubators in the Global Alliance Program and bloggers to work for the benefit of Founder2be, it can be posited that these partners did not perceive that the given incentives would create value for them as they were mainly concerned with their own well-being. In this sense, motives for engaging in resource integrating practices were the same as the reasons explaining why someone was not engaging in these practices; they either had expectations for value creation or not. In addition, a sense of community was missing.

The tension between value creation and cost of reproduction was constantly present as the entrepreneurs considered what kinds of effort to invest in developing Founder2be. For instance, benefits of exposure in established technology blogs was reflected against the effort needed for receiving the exposure. Similarly, coordinating outsourced work, identification of potential

users, or meeting potential co-founders required effort. This tension drove actors in their decision-making, as they tried to improve the viability of themselves and service ecosystems that had meaning to them.

The dialectical approach seems applicable in analyzing the opposing forces of the actor level on the higher systems level. In other words, whereas a network might emerge from a set of value-creating activities, a service exchange event might not necessarily feed into the development of the respective service system. This provides an interesting insight on how value can be co-created or co-destructed in an opposing way at different levels of a service ecosystem.

4.3.4 Evolutionary process approach to development of the case network

In previous chapters, I have analyzed data from various perspectives focusing on both positive and negative interaction between actors, between actors and the network, and between the network and its environment. The evolutionary process model combines the focus from micro-level interaction between the constituents of the system and the fight for survival of the ecosystem at the macro-level; that is, the interaction between the system and the environment. The process proceeds over a continuous cycle of variation, selection, and retention.

A network constantly evolves as actions at the micro-level cause *variation* to the structure. This variation enabled the kind of development of network that was partly planned by Founder2be's entrepreneurs (i.e., teleology). Activities in the prenatal stage created resources which were later enacted for service development. For instance, social relations that were formed before the launch of the service caused variation to the higher-level service system under which the network was embedded. Friends later joined the network as team members and sponsors.

The most evident variation in the network was caused by the increasing scope of network partners. The case network, which began with Oliver, Frank, and their previous resource networks, extended to a wider network of users, businesses, and bloggers, which all enacted important roles in enabling or constraining activities in the network.

Variation did not always contribute to the envisioned end state. In fact, the narrative description indicates that the reaction of other actors to the co-founders' propositions were seemingly random. To a large extent, the entrepreneurs only had a general understanding on what kinds of partner were needed, instead of having specific wishes for potential users and other collaborators. For instance, only a share of contacted incubators began collaborating with

Founder2be, whereas some did not reply at all. Similarly, some users actively promoted Founder2be to potential users, whereas others remained passive.

Instead of focusing on planned activities with specific partners, Founder2be's co-founders focused on increased awareness in a wider spectrum. The decision to participate in various events was intended to increase exposure of Founder2be; however, Oliver, Frank, and Wolfgang rarely knew who was attending. People participated in these events rather randomly. It was seldom that they had any particular interest in Founder2be or any other startups presenting at the events. The same can be said about bloggers, who also brought random consequences to the emergence. For instance, the blog reference by Lauren Drell (Exhibit 13) on Mashable showed a spike in the growth of the user base. However, this remained only a temporary spike. After a month, the growth of users dropped back to the level prior to Christmas Day 2011. Although the entrepreneurs of Founder2be had actively aimed at being exposed on Mashable, eventually the narrative shows that the service rather randomly became part of the blog post.

In sum, as micro-level interactions caused variation in the system, the higher-level system became more complex (i.e., in terms of potential selections). Consequently, the ways in which the network enabled and constrained lower level actions became more diverse. Therefore, management of NDP became increasingly more challenging. Similarly, it was difficult to propose value for potential partners, as a complex network can serve various needs simultaneously.

Although actors have various motives and there are unintended consequences of their actions, it does not mean that network development need only be a random process. Instead, the environment *selects* those changes which fit with the environment. In this sense, the focus changed from micro-level interactions to the network and its environment. Although social interaction in the case network might cause variation to the underlying structures, the environment always selected the behavior that caused changes in the structure.

For instance, the creation of a new culture around finding co-founders online did not occur in a day or during the data collection period. Instead, there were strong forces that were in favor of finding co-founders offline. For instance, as people were being influenced by the startup scene, they constantly repeated what they had learnt on the importance of trust.

Although strong structures cannot be changed in the short term, it is evident that there were people who were willing to try an online search to find a co-founder. In this sense, the environment enabled forms of operation that were alternative to the dominant way of finding co-founders. The issue was on finding an environmental niche that welcomed new behavior. Eventually, this enabled the efforts of the co-founders to bring in particular kinds of actor who

generated content and promoted a new kind of behavior. These users also created a new culture around the environmental niche. The creation of new culture was supported by the entrepreneurs with a mix of intended and unintended consequences. For instance, while marketing communications were directed to specific key markets, there were also unintended responses from other countries. Wolfgang constantly tweeted about Founder2be with relevant hashtags without knowing who was following and searching for this kind of information. In addition, blog posts are often geographically focused but reach a wider international audience.

As the co-founders made sense of the environment, they had an idea of what kind of people and for what kind of needs the service might be beneficial. This was improved by actively requesting feedback from users. In addition, some users sent feedback proactively, as they wanted improved user experience for themselves. As such, the entrepreneurs did not need to simply react to the tensions of selection but could proactively drive the required changes with a better fit to the environment.

With regard to selection of the environment, there was constant tension between value creation and the cost of reproduction. Whether other stakeholders became interested in Founder2be relied on their sensemaking of the environment. For instance, incubators became partners only if they perceived that Founder2be could improve their viability in the environment. Similarly, bloggers only wrote about Founder2be if they perceived that it improved the viability of their blog or themselves. As actors tried to improve their viability in the environment, they drove changes in the environment and wished for positive selection within it.

Network development is not a completely chaotic process of constant changes stemming from variation and selection. Instead, evolutionary process theory perceives that there are forces which aim at maintaining the status quo of the system. For instance, this refers to the structures of an Internet-enabled market, the startup scene, and the international business environment. Altogether, these kinds of structure resist change pressure originating from micro-level actions.

In addition to structural influences, rule-followingly typical practices of actors were maintaining the status quo of the network, as they behaved in an expected way. This kind of behavior caused *retention* in the network. These rule-followingly typical practices are characteristic of the life cycle approach. The evolutionary process model differs from the life cycle approach in terms of describing changes as structures shaped by resource-integrating actors, not as prescribed stages. The evolutionary approach accepts that some of these resource integration practices in Founder2be's network were rule-followingly typical and caused retention. It also can be accepted that these activities

intentionally developed the system towards the desired end state (i.e., teleology). However, the evolutionary approach describes these emergent changes as system-level structures, which allowed changes from prescribed models, unintentional consequences from entrepreneurial activities, and forces of influence beyond the entrepreneurial team.

However, there was no need for major changes within the higher-level structures. The environment is generally friendly towards INVs in Internet-enabled markets. The Internet is freely available for the majority of people around the globe. Individual actors are willing to launch their own companies or join startups. In fact, there is a boom of entrepreneurial activities in several industrialized countries. The rhetoric in the startup scene promotes collaboration, and people are transparent about their startup plans. Also, people increasingly spend time online and, in particular, increasingly engage in various social media services. As such, posting a startup idea online is normal behavior to potential co-founders. Also, changes in the app market support monetization plans of a new venture as people learn the habit of paying for online content. Consequently, enacting various endogenous roles in the case network in fact supports prevailing structures rather than merely generating change pressure.

The evolutionary process model focuses on system-level changes, and is perhaps the best model with which to describe changes in the levels of a network. It takes into account forces which both drive an ecosystem towards a state of equilibrium and bring changes to the ecosystem. This does not include only the interaction between actors and the network but the interaction between the network and its environment, emphasizing the importance of environmental selection in the survival of a system.

4.4 Main empirical findings

4.4.1 Developing a framework for network development process of international new ventures in Internet-enabled markets

This study provides a mechanismic explanation on the emergence of self-organizing service ecosystems by including a temporal aspect to the multi-level phenomenon. As a response to the first research question (*RQ1*), it can be stated that the case network emerged as a result of complex interplay between actors and social structures, as actors engaged in resource integration that was constrained and enabled by social structures of the network and its social context (i.e., *how*). This occurred as actors aimed at improving their

own viability in the environment (i.e., *why*). The network emerged over this co-evolving process.

In this sense, I consider that, for a comprehensive explanation of NDP, scholars need to consider actors at the micro-level and enactment of various social roles in the macro-level environment. The process of network development is shown in Figure 14. It is based on the empirical findings on the duality between resource integrating actors and the structures of service ecosystem and its environment. Here, networks are not conceptualized as a mere aggregation of service systems or snapshots in time, but structures of service ecosystems that enable and constrain actors in their resource integration practices.

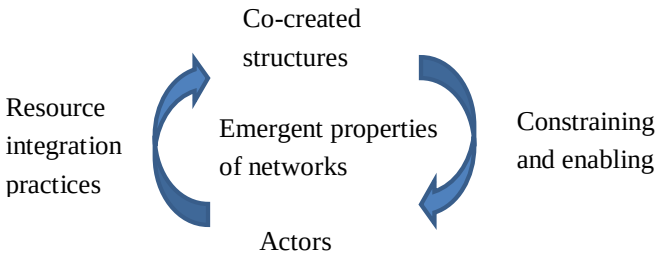

Figure 14 Self-organization of networks as recreation[12]

The research findings indicate that the network emerged from a flow of intentional actions through service exchange; however, this does not mean that all actions were consciously motivated by the sensemaking of NDP. In fact, acts often had unintended consequences, which might feed back to unacknowledged conditions of further acts. For instance, the users and bloggers did not typically think that their actions co-created value by legitimizing the use of the online platform. In addition, resource integration practices were undertaken simultaneously by multiple stakeholders, influencing and being influenced by their surrounding context. As a result, various roles were enacted, and dynamism was recreated in the network. This kind of dynamism was neither linear nor sequential but complex and recursive, as the enactment of social roles influenced the emergence of networks, which in turn fed back to the enactment of social roles.

However, I do not perceive that NDP is a mere replication of resource integration practices; rather, it resembles the model of a morphogenetic cycle

[12] The figure is inspired by the model of self-organizing social systems by Fuchs (2002, 17).

(Archer 1982), which distinguishes actions from structures temporally and thus enables co-creation of new networks and other structures. Consequently, it is not sufficient to study multi-level emergence, the temporal context needs to be taken into account. In other words, the focal system's properties cannot be reduced to the properties of its constituent entities at the particular time of emergence. The properties of a network are assumed to both pre-date and emerge from micro-level interactions. A network is thus partly based on past action and cannot be reduced to the constituents of the current system. Similarly, the constituents of pre-existing systems create new structures (i.e., morphogenesis) which both enable and constrain individual actors in the future. Nevertheless, morphostasis also has a temporal dimension by focusing on the persisting existence of the system. Without morphostasis, structures such as a service ecosystem cease to exist.

At a higher level of abstraction, it is perceived that pre-existing structures, such as the startup scene, Internet-enabled markets, and the international business system, contextualize service exchange (Figure 15). Service exchange can in turn recontextualize these structures (i.e., morphostasis) or create new structures (i.e., morphogenesis) such as the social media industry or online co-founder matching. These created and recreated structures in turn frame future service exchange events, and can be integrated as resources in the process of value co-creation. Here, service exchange refers to the small perspective on value co-production in social integration, whereas structural elaboration and creation of a network refer to the long perspective on value co-creation or co-destruction in system integration.

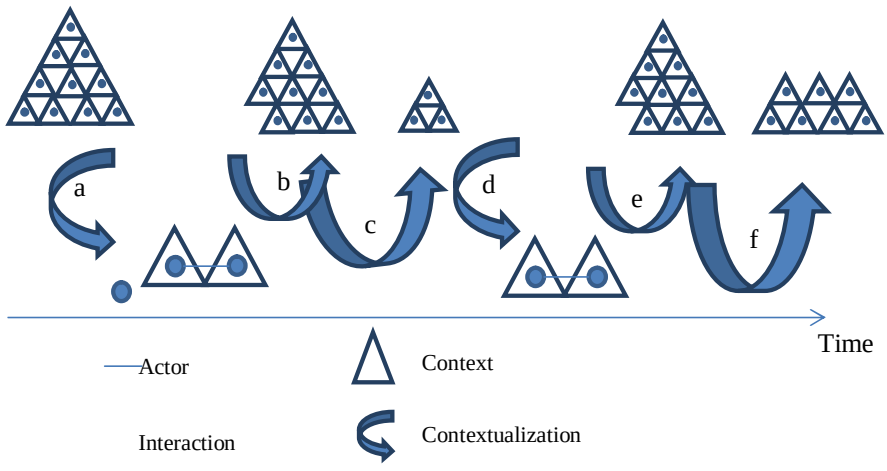

Figure 15 Network development process as a morphogenetic cycle

There are multiple ways that the higher-level structure can influence service exchange. Contextualization "*a*" describes a situation in which pre-existing structures influence service exchange. While these structures are not questioned, they are likely to result in rule-following actions. For instance, users of social media have resource integration practices which are typical of that context, and actors in a network tend to undertake activities which are characteristic of the network's stage of development. Contextualization "*b*" indicates that service exchange between two actors can result in both structural elaboration (i.e., morphostasis) and creation of new structures (i.e., morphogenesis). For instance, Aniekan Okono (Exhibit 3), who sourced a co-founder for Ziliot via Founder2be, changed the structures of social media in part by showing that an online service can be useful in finding partners for startups. Contextualization "*c*" refers to morphogenesis, as service exchange between users does not merely change a single structure but creates new structures, such as online co-founder matching. As a result, the structure impacts service exchange for some actors in the future. In fact, contextualization "*d*" refers to situations in which service exchange is influenced by more than one predominant structure. For instance, the users of Founders2be enacted multiple exogenous as well as endogenous roles, which enabled or constrained their perception on the environment and, consequently, their behavior. Contextualization "*e*" highlights that interaction between actors does not necessarily cause changes in the structures. For instance, rule-following practices typically merely reinforce existing structures. However, contextualization "*f*" indicates that there might be changes in some structures while other structures remain unchanged. For instance, blog posts on Founder2be did not change the structure of the technology blogosphere but impacted on a lower level by increasing the legitimacy of Founder2be. In this sense, one activity can be related to both retention as well as variation. These abstract ideas are explicated with contextual information in the following.

In terms of the *startup scene*, the narrative of the case network describes a situation in which there was a social structure prior to idea generation (Figure 15). In the startup scene, it is a practice, or mantra, that a new venture needs to be co-founded by two or more people. These people either know each other beforehand or meet in real-life meetups organized for the like-minded. These practices were also well-known by Oliver and Frank. They had previously worked in young firms and established startups. Frank knew his co-founders, and Oliver had attended real-life meetups. However, they questioned whether a real-life meetup was necessary or whether an online platform would more efficiently achieve the same result. Oliver and Frank integrated resources and launched Founder2be. This did not have a huge impact on the startup scene. Many first users had experience in finding co-founders through traditional

means. Nonetheless, they were driven to try the new website for various reasons. The potential of the concept was proven when the first matched co-founders Aniekan Okono and Juha Kovanen (Exhibit 3) claimed that they had found each other via the online platform. While the success story was not well-known, new competitors began emerging and thus it seems that others believed in the concept. In fact, although Founder2be soon became the largest platform in the industry, it was not the first of its kind nor widely recognized in the startup scene. As the other platforms grew slowly and did not make headlines, the startup scene remained relatively stable. However, some bloggers became interested in Founder2be. Eventually when Founder2be and other online co-founder matching websites were featured by Lauren Drell (Exhibit 13) on Mashable, it became more legitimate to source co-founders online. This brought more users to Founder2be, and there were more requests for offline meetups. Eventually, Oliver organized a real-life event in New York. As a result, there was an interesting combination of traditional co-founder meetups and online networking tools in the startup scene.

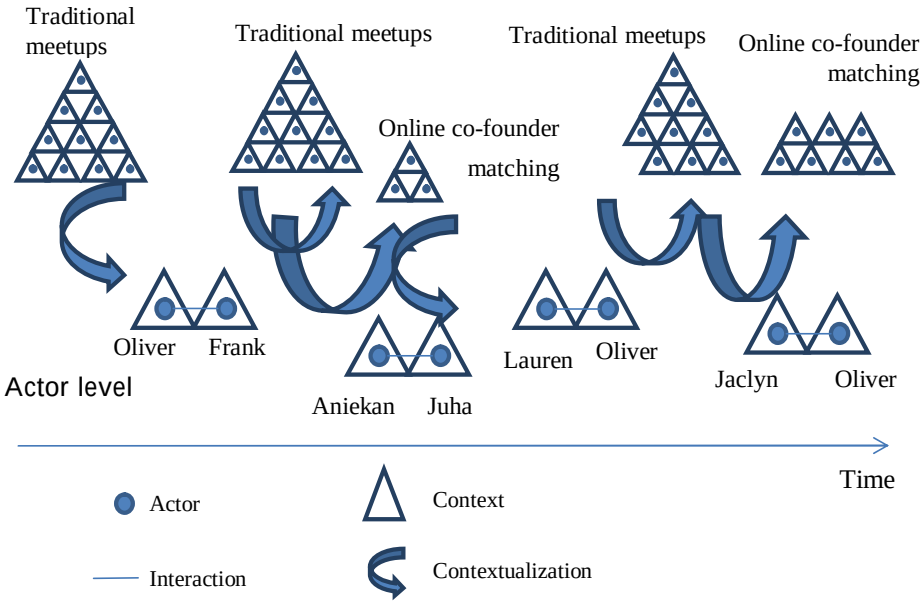

Figure 16 Morphogenetic cycle of the case network in the startup scene

In terms of *Internet-enabled markets*, the case network built interestingly on online platforms developed for the purposes of people beyond the startup scene (Figure 17). In particular, the existence of dating platforms helped

Oliver and Frank design Founder2be. Moreover, the launch of the platform was enabled by people being accustomed to using various platforms in Internet-enabled markets. By being sufficiently similar to other social networking sites, it was relatively easy for users to enact the endogenous role of content contributors in the network. The social networking boom was also helpful in spreading the message in Internet-enabled markets via Twitter and Facebook. Also, the business models of existing websites helped with monetizing the service. However, the events that occurred in Founder2be cannot be perceived as revolutionary in terms of evolving Internet-enabled markets. Instead, its influence can be perceived as retention, as the establishment and usage of Founder2be counteracted changes at the higher level. Nonetheless, there was variation in terms of recreating the online co-founder matching industry within Internet-enabled markets. In addition, the interaction in Founder2be helped the creation of new ventures, such as Ziliot (Exhibit 3), in Internet-enabled markets.

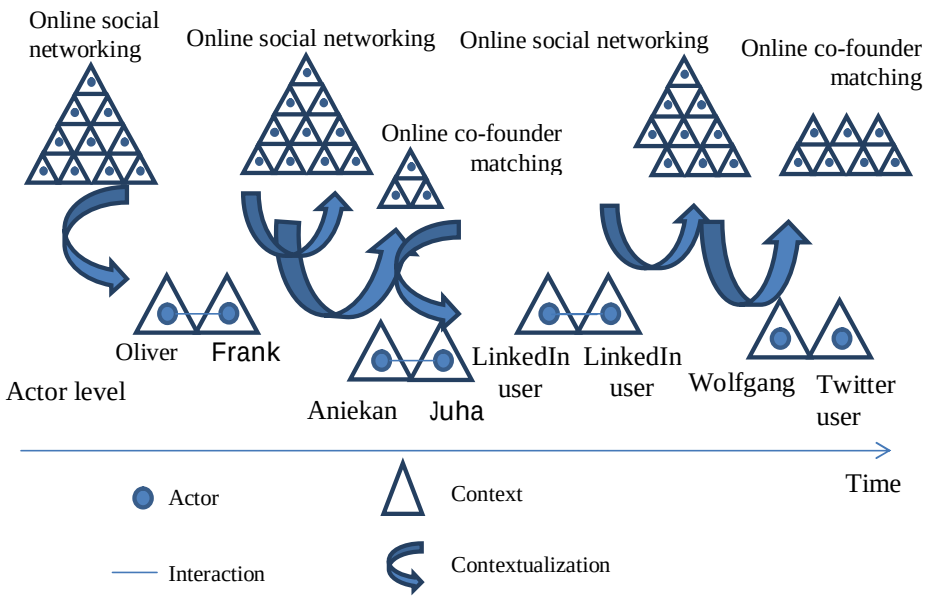

Figure 17 Morphogenetic cycle of the case network in Internet-enabled markets

Similarly, in terms of the *international business system*, there was not much variation (Figure 18). This does not mean that national boundaries had no influence on the emergence of the case network. The international business system brought in differences in geography, institutions, and business culture.

Previously, real-life meetups had kept founding teams spatially limited and had partly reinforced the status of leading clusters in Internet-enabled markets, such as Silicon Valley or New York. Although people were spatially limited in time, they might have gained a lot of international experience. For instance, the narrative description of the case network highlights the international background of several actors. These backgrounds help in understanding the prevailing structures of national businesses. However, there can be constraints in understanding the business culture of other foreign countries. The entrepreneurs of Founder2be tried to overcome their lack of knowledge by partnering globally with actors carrying better knowledge on local market conditions. In Internet-enabled markets, the country-of-origin is easily hidden; however, sometimes coming from a peripheral location can also be an asset. For instance, bloggers often prefer writing about entrepreneurs from their own home region. In addition, Anibal Damião (Exhibit 8) from InfluAds felt sympathy for entrepreneurs trying to launch online businesses outside the spotlight of Silicon Valley.

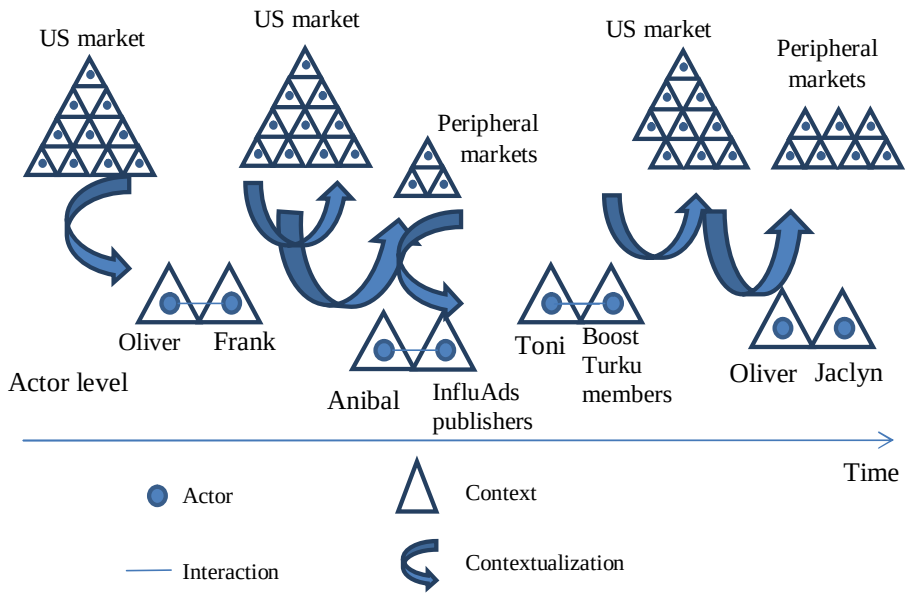

Figure 18 Morphogenetic cycle of the case network in the international business system

Above, I have described the interplay between resource integration practices of actors and constraining and enabling practices of social structures from the perspective of the contexts selected for the data analysis. The case network emerged during this interplay, as the resource-integrating practices of

actors co-created structures, which were specific to the service ecosystem. This phenomenon occurred more explicitly at the level of endogenous role enactment.

Prior to the idea generation, there was no case network per se (Figure 19). In the idea generation stage, Oliver began deliberately pushing his idea forward with Frank. Other people, who perceived the surrounding environment differently, told them not to try. Perhaps they were more accustomed to traditional meetups and considered other online social networking tools to be sufficient, or perhaps they did not understand the global demand for an online co-founder matching service. Despite these counteracting forces, Oliver and Frank continued networking. In the early stage, network development was very much a result of deliberately building the network. Soon, other actors, such as Anna Bessonova (Exhibit 1) from ArcticStartup, played roles in the network development. As described in Chapter 4.2.2, the progress of the platform required new endogenous roles. As the actors perceived that interaction with and within the platform was beneficial for them, they enacted roles that were influential in the NDP. This does not mean that all service exchange interaction were equally important for NDP. However, even retrospectively, it is difficult to rate the relative difference between important and unimportant interaction.

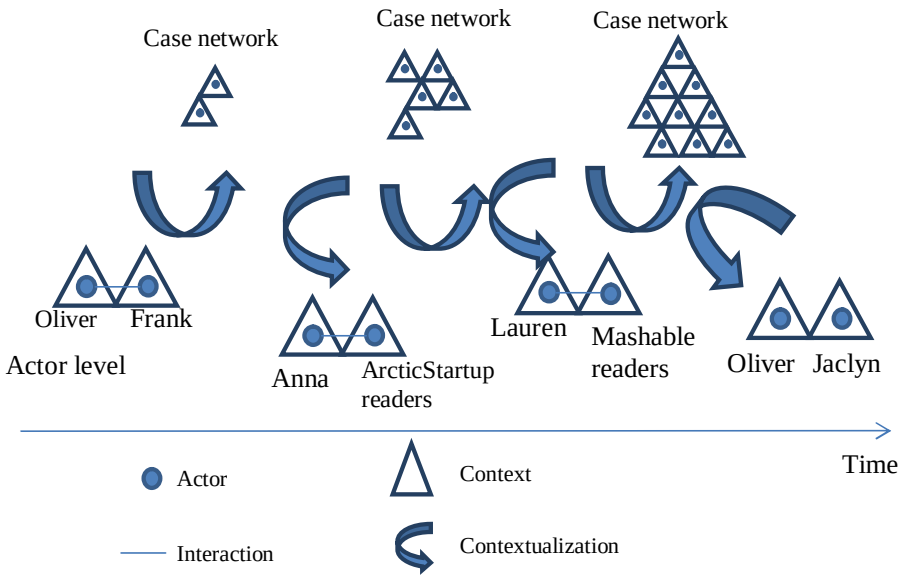

Figure 19 Morphogenetic cycle of the case network

As the service ecosystem emerged, some activities can retrospectively be identified, as in the life cycle model, to belong to a particular stage. However,

by simply putting idea generation, technology development, and promotion into separate stages, we are vulnerable to losing insight on co-evolving processes. At the systems level, life cycle theory is problematic to apply as different actors do not engage in various activities simultaneously. However, the life cycle model proves useful in identifying rule-following activities and to understand the temporal aspect of these activities. In other words, life cycle theory enables matching resource-integrating practices of individual actors in relation to their perceived social context.

Each process theory focuses on different issues in the emergence. *Life cycle theory* describes (i.e., *how*) the practices of resource-integrating actors, as rule-following activities. Life cycle theory builds on particular activities that are characteristic of a specific stage. This links practices (i.e., rule-followingly typical activities) to network development. As such, life cycle theory cannot be understood from practices at the actor level alone and requires understanding on what occurs in the wider context. In other words, as life cycle theory focuses on activities, it requires other process models for explaining the mechanisms that occur at the higher level of the system.

Similar to life cycle theory, the *teleological approach* focuses on the practices of the entrepreneurial team. Nevertheless, it is more explanatory (i.e., *why*) in terms of explaining the changes in the network based on intentional actions of the entrepreneurs. In line with life cycle theory, the entrepreneurs were rule-following to some extent. In this sense, the structural development of the network was guiding their behavior. This led towards retention (i.e., in terms of the evolutionary approach) of NDP. However, as the entrepreneurs adapted to the changes in the environment, they were able to change their plans and reconstruct the envisioned end state. In this sense, teleological forces also caused variation to the network development.

While the focus is on the entrepreneurs or managers operating the process, the teleological process model seems to explain convincingly the emergence of the network. When other actors are taken into account, it can be seen that these actors often engaged in their own resource integration practices, and strove towards their own envisioned end state, rather than that of the focal network. The research indicates that the perspective of the multiple actors cannot simply be discarded, as they provided content to the case platform and employed it for various purposes. However, these purposes were not always shared by the network actors. Most of all, users did not typically consider themselves to be actors in the network. Furthermore, they did not typically have any plans or even hopes for the future development or viability of the network.

Most of all, variation to the service ecosystem is explained (i.e., *why*) by *the dialectical process approach*. As viewed through dialectical lenses, there was

constant conflict between resource integrating actors and the emerging ecosystem. In contrast to life cycle theory and the teleological perspective, the dialectical approach emphasizes that not all resource integrating actors are rule-following or simply act to help a system towards its envisioned end state. The question is not only whether there are motives but what discourages actors from engaging in service exchange. From the perspective of dialectics, there is constant conflict between the environment and a network. Partly, the evolving environment supports the emergence of an ecosystem, whereas to some extent there is a misfit that, in turn, shapes the network. In other words, there is constant conflict between retention of a service ecosystem and the selection of the environment.

Focus on the dialectical approach emphasizes these kinds of opposing force, which hindered the entrepreneurs in achieving their envisioned end state. These are clear when analyzing competitors or non-members. However, opposing forces are also found to have stemmed from the entrepreneurs' practices. For instance, other ongoing projects were taking time and attention from the development of the case network.

Teleological and dialectical approaches thus explain changes in the network based on interaction between resource-integrating actors and the ecosystem, and between the ecosystem and the environment. As previously mentioned, these changes can be described (i.e., *how*) with the help of *evolutionary process theory*, in terms of retention, variation, and selection. In contrast to life cycle theory, the focus is not on changes occurring in the practices of resource-integrating actors but on changes occurring at the level of a network. As a result, service ecosystems are not only concerned with cumulative changes occurring at lower levels of the service system. Instead, a service ecosystem develops in relation to its environment as a result of opposing forces and environmental selection. In other words, the service ecosystem is not only a sum of activities or a number of ties developed at the lower levels. Instead, a network is a complex adaptive system that emerges from interactions and relationships at the micro-level under constraints of the macro-level environment. The environment takes into account actors, such as non-users, non-members and competitors, who are important to the emergence of a network but who are not necessarily directly embedded in the service ecosystem. Thus, the environment set the context in which the case ecosystem strove for survival.

Rather than perceiving that entrepreneurs take prescribed actions or that they proactively manage network development, evolutionary thinking considers that a system will self-organize in response to external stimuli based on variation, selection, and retention. Value is co-created or co-destructed from the perspective of the service ecosystem depending on whether resource

integration practices improve or diminish the viability of the system in an environment.

4.4.2 Motives for engaging in network development process

In this chapter, I discuss the main empirical findings of the research from the perspective of the second research question (RQ2): *How and why do motives for engaging in network development process change across a network and over time?*

On the one hand, it is impossible to provide a generally specific answer to the second research question. The motives for joining the network varied from person to person, and cannot be attached to one value proposition that all actors similarly interpreted. This is evident in the narrative description of the case network. On the other hand, the research findings suggest that interesting theoretical propositions can be made at a higher level of abstraction.

The motives for engaging in NDP are highly contextual. As described in the previous chapter, some enacted roles were more characteristic of particular stages of the life cycle. In the early phase, such as the prenatal stage, NDP was driven more by social relationships. In other words, Frank not only engaged in NDP but was doing a favor for his friend, Oliver. Additionally, the users who participated in the early phase of network development were more motivated by potential future gains than immediate gains. This is evident, as there were not many users in this particular platform. As time passed and the network grew, it became easier to make value propositions based on immediate gain.

Although these perspectives on motives relate to time, a more interesting insight from the data is that motives for engaging in NDP change over time. Whereas some actors were more involved at the beginning, they spent less time in the platform when they experienced that there was no value co-created for them. While this might stem from the fact that actors, driven by experimentation, felt that nothing changed in the platform over time and therefore stopped regularly visiting the site, those who tried finding a co-founder might either find a co-founder or make other career choices.

Characteristic of Internet-enabled markets, the actors remained resources for the social media service even when they lost interest in actively participating in value co-production. In this sense, these actors continued co-creating value at the system level, although they might have forgotten that they had already had interaction in the past. Value co-creation is thus temporally distinguished from social interaction. In addition, value co-creation at a higher level might, to large extent, be unintentional from the perspective of actors who participated in the process.

Although social interaction can have higher-level consequences, the research findings emphasize the importance of self development, as the actors enforced their self-identity. Actors seem to have engaged in activities that were expected to improve their own viability. In other words, people do not behave randomly but aim at surviving in the environment, or improving their well-being. This perspective places value-in-context at the core of the emergence of a service system. Although all systems strive for survival, only human beings as agents are able to employ that purpose in decision making criteria when participating in a service system. This links the question on motives to the intended consequences of actions. As such, actors do not participate in a service ecosystem but engage in value co-creation processes that form a part of the wider service system.

As the decision to undertake service exchange is proposed to be a result of contextual sensemaking, a perceived network influences decision making. A social network influences the resource integration process via social rules (i.e., norms) and social roles, as people seek acceptance from the environment. These social roles and norms do not necessarily stem from the service system (i.e., endogenous roles) but simultaneously from various other structures (i.e., exogenous roles). By taking into account the exogenous roles of resource-integrating actors (e.g., friend, family member, entrepreneur, or student), the research findings emphasize the enactment of roles beyond interactive value formation process. Thus, the extension of resource integration practices from the enactment of endogenous to exogenous roles enables oscillation of the foci from social interaction (i.e., co-production of value) to systems integration (i.e., co-creation of value). Although individual actors' motives cannot be understood without the social context, they are only one aspect of value co-creation process.

Here, I propose that *actors are more likely to be focused on value co-creation at the lower level than the higher level*. Based on the empirical findings, the specific motives for exchanging service vary between different actors, and over time. The most striking is the finding of unwillingness to develop the network further or, more specifically, the lack of common goals between the parties of a service ecosystem. By intuition, it is understandable that actors who join a network as idea generators, sponsors, or content contributors might have a very distinct set of objectives compared to the formal owners and managers of the platform.

In particular, it is interesting to note that motives for engaging in NDP vary in terms of 1) whether an actor is focusing on expected benefits to self or the wider network, or 2) whether benefits are expected to be realized immediately or in the future. In this sense, it is possible to propose that motives can be divided into both multi-level and temporal dimensions (Figure 20).

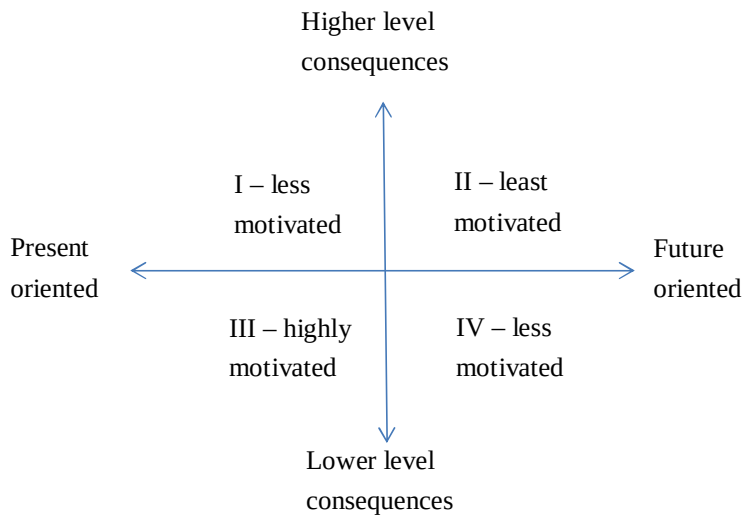

Figure 20 Multi-level and temporal dimensions of motives in network development process

Motives for engaging in the network can be analyzed both temporally and at multiple levels. In the first quadrant (I), human actions are motivated by immediate gain at the higher level. For instance, this might refer to improved viability of a service network, well-being of a local community, or benefits to an organization such as a new venture. The improved status of a higher-level construct, such as a community or new venture, does not bring immediate gains to the actor but can later become positive for an actor. For instance, there was no immediate reward for an actor when the interns tried to find new partners to join the case network. In the second quadrant (II), the focus is on improving the viability of a higher-level system in the future. This shifts the focus from immediate gain to an expectation of the future viability of an organization, community, or service network. In comparison to the first quadrant, this refers to more uncertain gains in the future. For instance, the benefits from a partnership are not necessarily considered to bring an immediate inflow of users, legitimacy, or money, although they can be considered positive for the network in the long run. Then, engagement also depends on whether each actor considers the future viability of the network individually beneficial. In the third quadrant (III), the focus is on immediate gains for self. Actions are undertaken to improve the viability of self in the environment or to continue the current narrative of self-identity. For instance, users who tried to find co-founders were mostly focused on improving their chances of establishing a company rather than improving the legitimacy of the platform with an increased number of active members. For instance, bloggers and partners

mostly focused on their own job and their own organization rather than the viability of higher-level networks. The fourth quadrant (IV) depicts actions as being motivated by potential gains for self in the future. In this sense, although actions might even be harmful in the present or to the network, they are expected to increase the viability of self in the future environment. For instance, interns and users might have considered that interaction would not necessarily result in immediate gains for self but believed that it would pay off in the future. In fact, many actors in the case network did not necessarily expect an immediate positive response from interaction within the network. Instead, they accepted that it might take time before value would be co-created. Figure 21 shows how the motives of an action (t=1) are prompted by intended changes in the structural- and actor-level contexts.

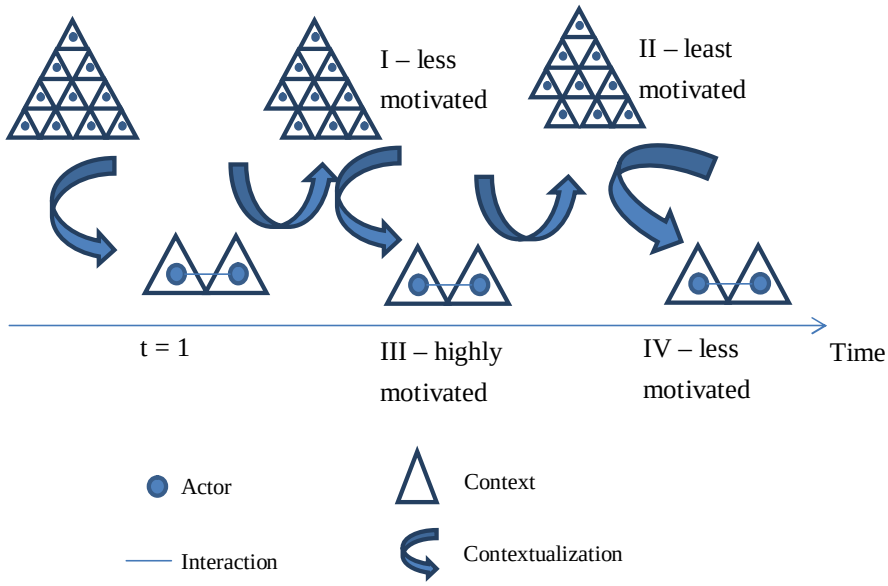

Figure 21 Dimensions of motives illustrated in the morphogenetic cycle

Based on the research findings, I propose that people decide to be active members and enact endogenous roles only if the behavior is suitable to an individual actor's situation or, to be more precise, enforces self-identity. In this sense, the case entrepreneurs aimed at making the platform easier and richer to get the kind of content they wanted. However, it depended on the context of potential users as to whether they perceived a need for such a service.

The research findings similarly indicate that actors engaging in NDP do not typically focus on the well-being of the higher-level system but on the gains

for self. Although some actions had positive results for the network (i.e., value was co-created to the benefit of the service ecosystem), these consequences at the network level might also be unintended. This does not negate the intentions of the organization or the team that strove for the benefit of the service ecosystem. However, I propose that, to these people, the service ecosystem was more important for their own self-identity enforcement, and therefore they were more interested in the present and future viability of the macro-level system.

The research findings also support the idea that it is more important to design a service ecosystem that fits other resource integration practices than it is to have a fit of perspective on the development of the service ecosystem. This is based on people's focus on creating value for themselves, rather than that of higher-level systems. Similarly, the research findings suggest that people are more motivated by immediate results than the future potential of their actions. Therefore, I propose that *actors are more likely to be focused on value co-creation in the present than the future.*

This proposition suggests that most actors' motives stem from third quadrant (III) motives. Nevertheless, users registered with the case platform for different reasons. One registered to find a co-founder, another wanted to determine how the platform worked, others were seeking jobs. Quite typical of the case platform, the actors counted on unknown future benefits to self (i.e., quadrant IV). As these people registered with the case platform, it proves that some value was proposed by the integration of the platform with other resources, and users were ready to expend effort on filling in their registration information. The perception of value proposition varied between and across levels as actors perceived themselves in the environment and aimed at maintaining their self-identity. To pursue this narrative, they undertook actions with intended consequences in changing self (i.e., lower level) or the environment (i.e., higher level). Their motives also varied over time, as events changed the perception of self in the context. As time passed, structures changed and were created as discussed in the previous chapter. Consequently, actors might have perceived new opportunities in resource integration, and perceived value propositions differently. These value propositions, in turn, might have been either perceived as something of immediate benefit or more future-oriented consequences at lower and higher levels.

4.4.3 Control of network development process

Based on the empirical analysis above, the role of an individual in NDP appears twofold. First, resource-integrating actors form the structure of a

service ecosystem by engaging in resource integration practices, and (re)creating the structure by enacting endogenous roles. Second, actors also enact exogenous roles. This highlights the finding that a service ecosystem is not simply structured by actors in isolation but gets its form in interaction with actors and its environment. This finding also has influence on the possibility to control an emerging service ecosystem. In the following, I focus on the third research question (RQ3): *How and why does control over network development process change across a network and over time?*

In brief, the research findings highlight that service exchange and engagement in a network not always only stem from an external actor's motivation. Instead, the case entrepreneurs actively promoted the platform, and contacted people to acquire more users to the online platform. When the network grew, more promoters appeared and there was less control over NDP. The interns were already partially independent. Eventually, there were blog posts written by people who had not been contacted by Founder2be's entrepreneurial team.

In terms of control, it can be considered that the interns were to some extent more controllable than many other groups of actors. To a large extent, they shared the same goal with the co-founders of Founder2be. This can be explained from the perspectives of service exchange, resource integration, and value co-creation. As the success of Founder2be was linked with the stories of individual actors, these individuals engaged in social interaction. If Founder2be became successful, the team that had built the platform could employ the success story as a resource in future encounters. In this sense, the co-creation of value at lower and higher levels mingled. Moreover, the viability of the case network became a shared goal.

Here, control can be considered something relating to self-identity rather than the level of service ecosystem. Service ecosystems get their form from multiple interactions by endogenous and exogenous role enacting actors. As each actor makes his/her own decision to undertake service exchange, emergence of the service system is far beyond the control of a focal company. This does not necessarily mean that NDP is completely chaotic. As a matter of fact, the empirical findings indicate that a focal venture (or the entrepreneurs) can propose value to other actors. In addition, they can develop technology and other artifacts that guide the endogenous role enactment of these actors. However, a focal company does not have the power to change social systems or to force other actors' behavior. Instead, the focal venture can match their offered resources and proposed value to the norms and social roles enacted by other actors. As such, the results provide further empirical evidence that entrepreneurs are involved in managing in a network rather than managing a network.

As previously mentioned, a network develops from a range of individual actions with intended and unintended consequences. Structures are formed by past actions and the wider environment, such as the prevailing economic situation, spatial contexts, available technology, and general approach to entrepreneurship. In sum, it appears that controversial findings from the literature on whether NDP can be controlled largely depend on whether the unit of analysis has been observed vertically (i.e., in terms of levels) or horizontally (i.e., in terms of time) closely or from a distance.

Most of all, the morphogenetic process approach indicates how entrepreneurs are influenced by the environment and are not always able to react or take control of network development. In line with the dialectical alliance literature, networks become characterized as heterogeneous entities in which performance is socially constructed by members, and in which change is largely driven by unintended consequences. For instance, the research findings indicate that not all resource integrating practices create value at the service ecosystem level. Some resource integration practices of the case entrepreneurs and content providers might have been harmful for the service ecosystem (i.e., co-destruction of value). Nevertheless, this does not mean that these practices were intentionally harmful to the system. In fact, some practices can only be perceived retrospectively as harmful or often the effects simply remain unknown.

Even if neither entrepreneur nor any other actor had full control over the consequences of their actions to the development process, this does not mean that NDP would be completely random. Instead, I propose that this again relates to the multi-level and temporal dimensions of control (Figure 22). In brief, it seems that the higher the level of analysis, the less control an individual actor has over the consequences of his/her actions. Similarly, the longer the development process, the less control an actor has over the consequences of his/her actions.

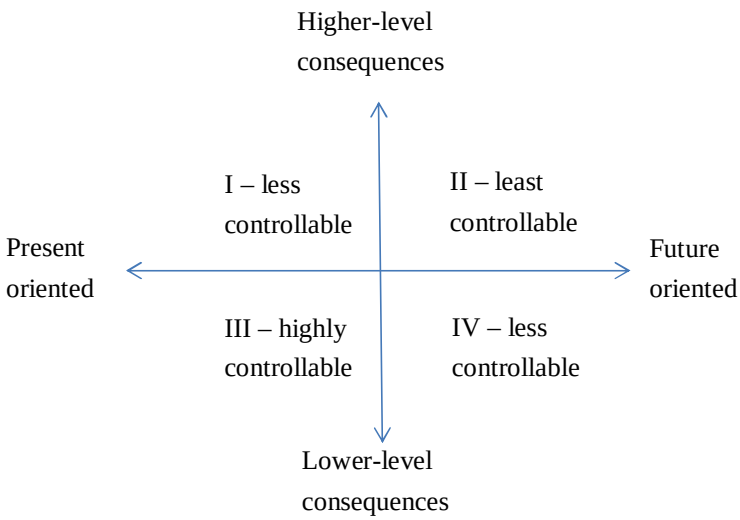

Figure 22 Multi-level and temporal dimensions of control in network development process

As a result, there are four perspectives to control, which can be employed for understanding the change of control over NDP across a network (i.e., lower/higher level) and over time (i.e., present/future). As the unit of observation varies from actions of an entrepreneur to actions of another stakeholder, there are major changes in the possibility to control the consequences of these actions. In general, as the macro-level and future dimension bring more actors and uncertainty to the fore, it is difficult even to control the consequences of one's own actions in this respect. Figure 23 shows how an actor (t=1) can control the changes in the structural and actor-level contexts.

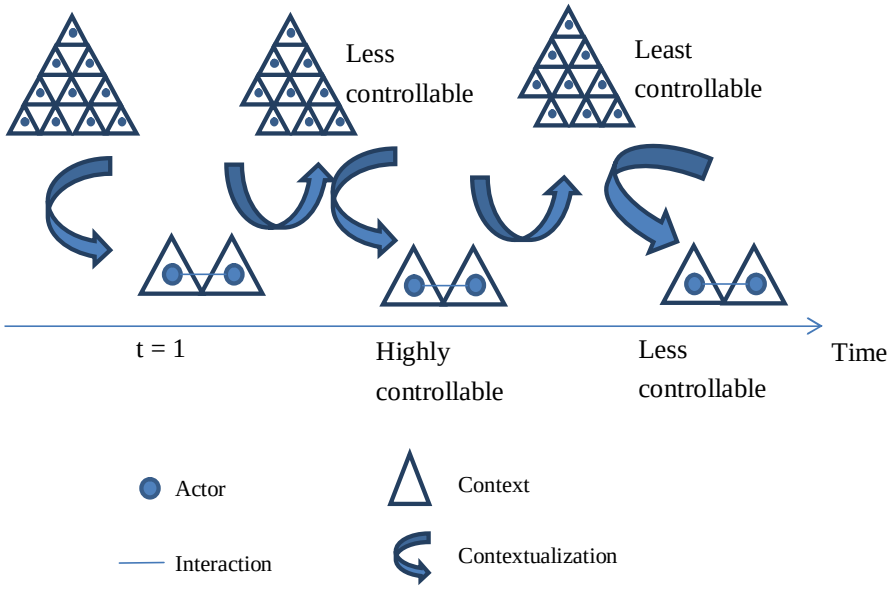

Figure 23 Dimensions of control illustrated in the morphogenetic cycle

After launch, other actors loosely take control and the development process can only be guided or orchestrated by the value-proposing entrepreneurs. The ability to control network development in an international new venture (INV) also relates to the multiple levels of a service ecosystem. I propose that *there is more control over intended consequences of actions at the lower level than on the implications of actions at the higher level*. At the higher level, the complexity of a network increases. Therefore, there are more forces of variation and retention influencing the network, and the environment is able to make more selections in terms of emergence. For instance, while an entrepreneurial team has better control over value creation for themselves and their new venture, it is difficult to control what happens at a higher network level, such as controlling user-user interaction and its consequences on the development of the network.

This is also characteristic of the temporal development of a network. There is less complexity and actors have greater control over NDP with regard to actions focusing on present consequences. Thus, I propose that *there is more control over intended consequences in the present than on implications of actions in the future*.

For instance, the case entrepreneurs could control social interaction in the present, and they could propose value to other actors. As a result, there might have been more users, blog posts, and partners. However, the entrepreneurs had no control over what was going to happen as a result of these social interactions in the longer run. This is also accepted by the entrepreneurs as

they realized that, while time passed, there were many other actors and structures that played roles in NDP.

To conclude, this empirical study discusses the mechanisms of NDP in the context of an INV in Internet-enabled markets. The study identifies various roles enacted by actors in the network, and processes that occurred. These events were initiated by various actors, for various reasons, and with various consequences. However, all these events can be better understood with a closer examination of the relationship between resource-integrating actors and their perceived social contexts. Modeling this co-evolutionary relationship as a morphogenetic process also helps increase understanding on questions concerning motives and control in a networked economy.

5 DISCUSSION

In the preceding chapter, I described the narrative of the case network development and explained the phenomenon as a multi-level and temporal process. At this point, I summarize the study, present the conclusions, and discuss the theoretical contributions, practical implications, limitations, and my suggestions for further research.

5.1 Summary of the study

In today's competitive business environment companies need to rely on network partners to gain and maintain competitiveness. The focus shifts from individual ventures to their networks. In particular, these issues are considered important to international new ventures (INVs) in Internet-enabled markets. First, new ventures are assumed to lack their own resources to compete in international markets. Second, networking is highly emphasized in Internet-enabled markets. However, a review of the literature revealed a surprising scarcity of research on network formation among INVs, and particularly among those operating in Internet-enabled markets. In addition, the literature review indicated that there is a lack of longitudinal approach, process theorizing, and partner perspective within the domain literature. As a result, there was a call for a multi-level and temporal process approach for studying the phenomenon.

To address the knowledge gap, the aim of this study is to increase understanding on network development process (NDP) in the context of INVs in Internet-enabled markets. The main research question of the study is:

- *RQ1: "How and why does the network of an international new venture develop in the context of Internet-enabled markets?"*

In particular, the research aimed at revealing mechanisms of NDP between and across multiple levels, and over time. This led to other research questions that addressed conflicting arguments in international entrepreneurship (IE) regarding motivation and control in INV networks.

- *RQ2: "How and why do motives for engaging in network development process change across a network and over time?*
- *RQ3: "How and why does control over network development process change across a network and over time?"*

In the study, the research questions were approached with the so-called service ecosystems approach, combining service-dominant (S-D) logic with various process theories. S-D logic combines insight from various theoretical schools that are relevant to understanding NDP. However, S-D logic has not explicitly focused on NDP. Therefore, more insight was brought from process theories. By combining theoretical ideas from S-D logic and process theories, it was possible to synthesize a model on NDP, which takes into account both multi-level and temporal dimensions.

Methodologically, this study builds on the critical realist approach for studying mechanisms in multi-level and temporal studies. From various data collection methods, case study was considered the most suitable based on its applicability to address complexity, to contextualize actions, and to oscillate focus between multiple levels of analysis. A single case network was selected as the research target. The research site was the network forming around Founder2be, an online social media platform with a focus on combining startup ideas with potential co-founders. The study utilized the methods of narrative interviews, participant observations, and network pictures in collecting data on NDP. These methods were considered suitable for the planned longitudinal research approach. In the data analysis, multiple strategies were employed for theorizing from the process data; namely, the narrative approach, alternate templates strategy, and temporal bracketing.

First, the illustrative case indicates how the case network developed when actors enacted roles. Roles stemmed from both within the network and beyond the network. Second, the illustrative case suggests that different endogenous and exogenous roles were more dominant in various stages of the network development. Third, the illustrative case shows that NDP was not simply following stages. The network development was not completely teleological as there were opposing forces influencing its path. Fourth, the empirical evidence suggests that various process theoretical approaches describe and explain different parts of the network development. Fifth, the illustrative case suggests revisiting the service ecosystems approach from the morphogenetic approach. Sixth, empirical findings provide interesting insight on the motives of various partners for engaging in NDP. Mostly, other actors were not interested in NDP, and even the entrepreneurs did not necessarily always manage in a way that was beneficial to the network. It is proposed that motives varied in terms of multiple levels and temporal dimensions. Seventh, the illustrative case indicates that NDP was not completely in the control of the new venture. Instead, the findings show that control diminished vertically and horizontally as complexity in the network increased.

Based on this discussion it is possible to highlight some features relating to the questions on control and motives. These propositions on NDP across the network and over time are represented as follows:

- *Actors are more likely focused on value co-creation at the lower level than the higher level.*
- *Actors are more likely focused on value co-creation in the present than the future.*
- *There is more control over intended consequences of actions at the lower level than on implications of actions at the higher level.*
- *There is more control over intended consequences in the present than on implications of actions in the future.*

By addressing these theoretical propositions, the study provides new insight on how to study questions on motivation and control. The propositions highlight that a temporal and multi-level approach is needed to grasp the true nature of control and motivation. It is acknowledged that these propositions simplify the questions on motives and control in this highly contextual study. Moreover, the propositions do not address changes occurring in network development per se. Nonetheless, it is considered that the models on motives and control embedded in the morphogenetic cycle enable understanding on various perspectives to questions on motives and control in complex NPD. As a result, the models encourage scholars of the domain literature to have a more holistic approach to questions on motivation and control.

These research findings have potential to contribute to the domain literature and wider to IE, S-D logic, international business, and entrepreneurship. In particular, this research increases understanding on open questions regarding NDP, and control and motives in the context of INVs in Internet-enabled markets. Methodologically, the study builds on the longitudinal research approach. In particular, the study contributes by introducing prospective network pictures as a methodological tool for analyzing changes in NDP.

Altogether, these research findings suggest a new way of studying a venture's NDP from a morphogenetic service ecosystems approach. Managers should understand the wider structures influencing the motives of other actors. This kind of contextual awareness is needed as other actors seem to be significant drivers in NDP. As other actors are not necessarily interested in the well-being of a network, managers must align the network's needs with those of individual actors.

5.2 Conclusions and theoretical contributions of the study

Based on the empirical evidence, networks are considered self-organizing structures, which can be perceived as both independent and dependent variables introducing duality of networks. NDP is influenced by both micro-level service exchange events between resource-integrating actors and higher-level social structures. The study puts forward that networks are constantly formed (i.e., morphogenesis) and reformed (i.e., morphostasis) in a co-evolutionary process between these forces. This is modeled as a morphogenetic cycle of NDP.

Modeling NDP as a morphogenetic cycle has important implications on how questions on control and motives in NDP are perceived. Perhaps most importantly, the research neglects the idea of linear and predictable network development. However, it is not considered that networks are neither managed nor completely adaptive. Instead, the research findings support the perspective of managing in a network. The actions of actors in a network are motivated based on their perception of the context. As such, it is considered that both social and economic ties are important for network formation.

On the one hand, NDP is driven by intentional entrepreneurs and other actors. The research findings highlight that, as networks emerge from resource integration practices at lower levels, IE scholars should pay attention to both individual actors and contextual factors. As a result, some roles and resource integration practices of intentional actors can be linked with stages of NDP. On the other hand, the empirical findings interestingly indicate that these intentions are not always shared by other actors within a network or in the environment, and this can cause tension in NDP. Thus, what is described as an evolutionary process is actually driven by both teleological actions of an entrepreneurial team and dialectical forces adding tension and unintended consequences to the process. In other words, there is justification for a quad-motor process theory, which combines insight from the life cycle, teleological, evolutionary, and dialectical approaches (Van de Ven & Poole 1995) to describe and explain NDP.

Importantly, the study acknowledges the potential of non-linear and dialectical NDP which are typically neglected in the international business literature (cf. Elango & Pattnaik 2007; Ellis 2011). Moreover, the longitudinal case study adds particular understanding on how networks are ‘created’ over the internationalization process (Johanson & Vahlne 2009). In brief, the research supports the perspective that network development and internationalization are associated with both reactive and proactive behavior of an entrepreneur (Freeman et al. 2012).

Conventional models on NDP do not explain network formation from the partner's perspective. Here, it is shown how network partners potentially cause dialectical tension to teleological NDP. As a response, the study introduces a morphogenetic service ecosystems approach as a complementary perspective on multi-level emergence. Here, it is pinpointed that, to date, S-D logic's perspective on NDP has mostly been based on the morphostatic rather than morphogenetic approach. The morphogenetic approach to network development seems to be more applicable in explaining the mechanism of emergence in complex adaptive systems. For instance, it enables drawing on different kinds of network, instead of relying on existing structures. This kind of phenomenon is found to be characteristic of born globals (Freeman et al. 2012).

Previously, NDP has been suggested in S-D logic to occur through evolution or replication. The research findings partly challenge this perspective by emphasizing interaction between a network and its environment. In other words, rules that actors develop for coping in unique service exchange processes refer to higher-level rules employed for the self-identification they pursue.

In line with Ciabuschi et al. (2012), this research perceives new venture development as a 'fuzzy' nonlinear process that involves a number of partners from various legal entities. These actors and the service systems both enable and constrain resource integration practices, as the actors undertake collective actions. In addition, Ciabuschi et al. (2012, 227) propose that "[t]he willingness of others to co-act will likely depend on the perceived impact of the new business on the value of their own resource collections." To some extent, this is evident in the research findings. Conversely, the research findings also suggest that partners who co-act with the focal firm are not necessarily interested in the new venture development or the resource constellation that it will bring to the focal company; instead, these partners are more interested in value created to themselves or other ecosystems. Although these propositions relating to motivation and controllability are novel in the domain literature, they are rigorously based in multi-level and temporal process theories. For instance, Giddens (1984) considers that as the spatial and temporal distance of consequences increases, it is more likely that consequences are unintentional.

Based on the empirical evidence, self-identity enforcement is suggested as a motive to engage in resource integration practices. The study thus provides an explanation to recent interest in S-D logic on why people enact practices (Akaka 2012; Truong et al. 2012). There is supporting evidence in the context of the blogosphere, where bloggers act for selfish reasons but co-create value for and with their rivals and readers (Mayzlin & Yoganarasimhan 2012). Here, it is suggested that motivation for value co-creation will benefit from a closer link to the self-determination theory (Ryan & Deci 2000). In addition, the

study provides understanding on the dynamics of the value co-creation process (Woodruffe-Burton & Wakenshaw 2011) by studying the construction and maintenance of self-identity as practices embedded in a wider service ecosystem.

In this research, the willingness of stakeholders to participate in the entrepreneurial process is perceived from a multi-level perspective. At the micro-level, stakeholders anticipate value creation for themselves. They do not necessarily have anticipation of higher-level value creation. In other words, they are not necessarily interested in the future survival of the wider service system.

In the study, various endogenous roles are induced. Moreover, these endogenous roles are linked temporally to the identified stages in NDP. Thus, some endogenous roles are found more dominant in particular stages of network development than others. In the study, this is explained from the perspective of resource integration practices, as some resources become more fundamental as the network evolves. By linking resource integration practices and enactment of social roles to NDP, the study has potential to contribute to previous studies on resource integration practices by shifting the focus beyond interaction between front line employees and customers.

Altogether, the existing scholarly work in the selected research domain focuses on focal firms with presumed control over network formation. In this sense, the study provides both a multi-level and multi-actor perspective on NDP. First, this adds understanding on the decisions and actions that entrepreneurs and managers need to make in 'building' the networks. Second, the multi-actor approach enables the role of other partners in the network formation to be emphasized. This stands in contrast to previous research emphasizing network building as an entrepreneurial decision making process (e.g., Loane & Bell 2006). By emphasizing the role of other actors, the study aims at contributing to the discussion on the motives of various stakeholders to play active roles in building ecosystems that they do not own (Chandra & Coviello 2010; Fisher & Smith 2011). As previously mentioned, this is particularly welcome in the context of Internet-enabled markets.

Previous research in the domain literature describes networks as aggregations of mere lower-level interactions. Here, the empirical study pays closer attention to higher-level constructs that are characteristic of the domain literature; namely, the startup scene, Internet-enabled markets, and the international business system. The key part is that the research oscillates the level of focus from service exchange to the context of a network. The interrelation of these levels is separated in endogenous resource integration practices that form the network directly from exogenous resource integration practices, which form the structure indirectly. In addition, the study questions whether an INV can

reasonably be considered free to select its partners, or whether partners intentionally create their own networks, or whether they even decide on networks in which they are willing to engage. In other words, the dissertation challenges the assumption of emergence as a linear, predictable process under the control of INVs as is typical in the network formation literature on IE.

By referring to various dialectical forces, the study takes into account various benefits and sacrifices that generate value-in-context and drive NDP. Specifically, the study conceptualizes value co-destruction from a wider systemic perspective, which is a unique approach compared to the current value discussion in the strategic management and services marketing literature (Martelo Landroguez et al. 2013). In particular, the research takes into account unintended consequences rather than perceiving value co-destruction as a mere misuse of resources from the value proposer's perspective. In addition, the research findings provide further understanding on value co-production and co-creation by referring to the enactment of endogenous and exogenous roles. Thus, the study provides empirical evidence on the difference between social integration (i.e., value co-production) and systems integration (i.e., value co-creation).

Based on this concluding discussion, the research aims at contributing to multiple streams of the literature. First, the research domain of IE is the focus domain of this research. The research is motivated by the revealed research gaps in NDP of INVs in Internet-enabled markets. These potential contributions are summarized in Table 5. Second, the research aims at contributing to the S-D logic literature, as the service ecosystems approach was chosen for the theoretical lens through which to study NDP. Third, the potential contribution to other streams of the literature, particularly to international business and entrepreneurship, are discussed.

Table 5 A summary of theoretical contributions of the study

Research gap	**Contribution of the study**
1. There is a dearth of research on international new ventures' (INV) network development process (NDP), particularly in the context of Internet-enabled markets.	The study focuses on NDP of an INV in the context of Internet-enabled markets. The research model shows how a co-evolving network is influenced by both micro-level interactions and higher-level structures. Resource integration practices are distinguished between enactment of exogenous and endogenous roles. The research identifies the roles and resource integration practices in various stages of NDP in Internet-enabled markets. The research increases understanding on control and motives as varying constructs in terms of time and multiple levels.
2. Open questions remain on who controls NDP.	The research indicates how NDP can be simultaneously perceived as a result of both planned networking and an emergent form of unplanned evolution. In particular, the study identifies five dialectical forces influencing NDP. Although individual actors enact social roles, they have power to act differently. In addition, their actions can have unintended consequences, particularly over time. Propositions are presented for a sense of control in terms of multiple levels and temporal dimensions.
3. There is no clear understanding on what motivates actors to form and join networks.	The presence of multiple levels and temporal uncertainty influences motivation to engage in a network. The research findings emphasize the change in motives regarding the level of intended consequences and their temporal aspect. Actors are found to have different motives for engaging in the network, and sometimes these motives can cause tension in NDP.

4. Longitudinal research and process theorizing in INV network development research remains scarce.	The study builds on a longitudinal research setting, real-time data collection, and prospective network pictures. Several strategies are employed for process theorization; namely, the narrative approach, alternate templates strategies, and temporal bracketing. Consequently, the research findings discuss how roles develop over time, as some roles become more dominant when different resource integration practices become more characteristic of a particular stage in NDP.
5. There is a lack of studies building on network data beyond focal firms.	The study builds on data collected from entrepreneurs and other actors in the network. Observations were made to better understand the context of the research.

To summarize, the study addresses research gaps in the NDP domain in the context of INVs in Internet-enabled markets. In the study, the phenomenon is approached by avoiding assumptions on network formation that are paradigmatic to IE. Instead, the thesis builds on a combination of process theoretical approaches (Pettigrew 1987/2012), which enables studying both multi-level (i.e., vertical) and temporal (i.e., horizontal) changes in the service ecosystem. This is a novel approach in the domain literature. Also, there are only a few empirical studies (e.g., Calori 2002; Maon 2010) in which processual changes are theorized with a quad-motor approach.

In particular, this research contributes to the domain literature by providing contextual information on NDP of INVs in Internet-enabled markets. While interest in the online environment is apparent in other *IE research*, it is usually found as a secondary or tertiary theme in research (Anwar & Tariq 2011). This is somewhat surprising, as new ventures in Internet-enabled markets typically internationalize rapidly. The nature of an intangible offering enables focus on technological expertise and networks that enable early internationalization, even to markets that are not culturally proximate (Freeman et al. 2012). Moreover, the potential of social media to explore and create opportunities has previously been acknowledge in the IE literature (Fischer & Reuber 2011). Although it is acknowledged that the Internet creates new business models in IE (Anwar & Tariq 2011), the IE literature has not paid close attention to this particular context. An important exception is Reuber & Fischer (2011), who identify firm-level resources in Internet-enabled markets. Whereas Reuber and Fischer's (2011) study on Internet-related IE focuses primarily on firm-level resources, this study approaches resource integration from a wider network

perspective. In this sense, the resource integration practices shown in this study can be regarded as parallel to Kietzmann et al.'s (2011) building blocks of social media, which emphasize the active role of users as resource integrators in social media. Similarly, the empirical evidence is in line with Chandra and Leenders (2012) who found that users of social media often begin to use a platform by experimenting and then start employing it for their own purposes to co-create value for themselves and others. Here, actors are mostly found motivated by lower-level consequences, rather than being focused on the platform's survival. The thesis concludes, in line with Chandra and Leenders (2012) that value propositions are perceived phenomenologically by independent actors.

Understanding on the particular context and its limitations is important as the presented illustrative case from an Internet-enabled market focuses on a platform designed for creating new ties. This opposes the research findings that indicate social media services are primarily employed to strengthen current ties rather than create new ones (boyd & Ellison 2007; Sigfusson & Chetty 2012). According to this study, it seems that this kind of generalization cannot be made; one needs to have a deeper analysis of the value proposition of a social media platform. In fact, the research suggests that value propositions are made both by the focal company and in customer-to-customer interaction. In particular, as complexity in a network increases, entrepreneurs lose their power to control the value propositions. As such, the development does not lead to decentralization of decision making within a new venture (Kazanijan & Drazin 1990) but a shift of control to a wider network of actors. By acknowledging the decentralized control of traditional service providers, this research answers to the call by Edvardsson et al. (2011) to add more insight on how users shape service systems in Internet-enabled markets as the users actively participate in service co-production.

In terms of contextualization, the study also discusses how the structures of Internet-enabled markets influence the process of network development. This research can be regarded as complementary to the study of Drori et al. (2009) that focuses on the distinct structure of Internet-enabled markets and the startup scene. The research answers their call by observing the dynamics of another Internet startup. By incorporating the structures of Internet-enabled markets, the startup scene, and the international business environment, this study also complements the research by Sarason et al. (2006) that perceives entrepreneurship as co-evolvement of entrepreneur and social systems. With regard to the social system, the empirical evidence indicates only a minor influence of the international business system on NDP. As a result, this study questions the importance of national boundaries compared to other contextual limitations in Internet-enabled markets.

In particular, the research complements value creation practices and role constellations found previously in online communities (Schau et al. 2009). Although the research is conducted in a unique context, the research findings can be beneficial in answering open questions on why people participate in online communities, and which resource integration practices are likely to co-create value. In this sense, the research findings give supporting empirical evidence to studies focusing on co-creation of meaning in consumption (e.g., Cova & Pace 2006; Schau et al. 2009; Pongsakornrungsilp & Schroeder 2011). In sum, by referring to both endogenous and exogenous roles, the study refers to wider social roles as the basis of resource integration practices in these online communities.

More generally, the study aims at contributing to the various network schools within the INV literature (Nummela 2004; Keupp & Gassman 2009; Johanson & Kao 2010), and particularly to the IE network literature (Loane & Bell 2006; Mort & Weerawardena 2006; Freeman et al. 2007; Sasi & Arenius 2008) that questions the importance of firm-specific advantages and instead builds on social exchange theory and inter-organizational resource creation. The focus in the INV network formation literature is typically on resource exchange processes that are mutually beneficial for the interdependent parties of interaction (Sasi & Arenius 2008). In general, researchers consider that social and business networks provide external help to resource-constrained new ventures in their internationalization efforts (Loane & Bell 2006; Mort & Weerawardena 2006; Ruokonen et al. 2006; Kiss & Danis 2008). These studies traditionally assume that INVs join established and static networks. This perception is challenged by the research findings reference to co-evolving structures.

In practice, every exchange event creates and potentially changes the respective network structure. Therefore, this study responds to the calls in IE (e.g., Coviello 2005; Al-Laham & Souitaris 2008; Keupp & Gassmann 2009) by increasing understanding on how a network influences organizational decision making in the internationalization process and vice versa. In line with Loane and Bell (2006), this study portrays internationalization as a complex process in a constantly evolving environment, opposing the traditional firm-centric and linear models of internationalization processes. On the one hand, in the context of this complex interplay between an internationalizing firm and its environment, networks as independent variables both enable and constrain the internationalization process of a startup (Coviello & Munro 1997). On the other hand, by focusing on network development as a dependent variable, it is possible to learn about network dynamics characteristic of the business network literature, rather than merely focusing on static structural analysis characteristic of social network research (Hoang & Antoncic 2003; Slotte-

Kock & Coviello 2010). This criticism is in line with earlier reviews on entrepreneurship research. Scholars in entrepreneurship typically neglect the business formation process (Gilbert et al. 2006) and highlight the role of an independent entrepreneur (Kaulio 2003). Although scholars have recently become interested in explaining the process from the perspective of the wider context, the study is an answer to the call for more empirical research (Ciabuschi et al. 2012; Coviello & Joseph 2012) with a multi-level approach to NDP.

Methodologically, the study introduces a novel approach to the problem of network formation in the domain literature. In comparison to conventional positivist research designs with static snapshots of one-sided information on linear causation, the study examines the phenomenon with an approach that is more suitable to the research questions and theoretical framework of the study. To capture the changes, the study is based on longitudinal process research by collecting network pictures over a period of time. In particular, the study introduces a method of prospective network pictures, which was developed as a method to reflect the changes in entrepreneurial sensemaking over time. These prospective network pictures provide a novel way to study intentional and unintentional consequences in NDP. By incorporating prospective network pictures with a collection of pictures over time, the study introduces a novel way to conduct the requested dynamic research with network pictures (Mouzas et al. 2008; Colville & Pye 2010; Ramos et al. 2012). Prospective network pictures can contribute to the domain literature, and potentially even wider as the use of visual materials is limited in business studies (Paavilainen-Mäntymäki 2009). Here, it is emphasized that although the prospective network pictures were drawn only by the entrepreneurs, the research findings are otherwise based on multiple narratives.

By referring to ‘multiple narratives’, the study provides a novel approach to reporting on change processes in networks. In particular, by shifting the unit of observation, the study challenges the role of a formal firm as the unit of analysis in the domain literature. As such, the narrative description provides an example on how to separate the unit of observation from the unit of analysis, and how to study the duality between actors and new ventures (Hite & Hesterly 2001). Most of all, the multi-level and multi-temporal model enables the events and influences within a single framework to be studied. This can be beneficial to future scholars in overcoming challenges of addressing both chronology and connections in the same study (Halinen & Törnroos 2005).

By building on complexity and systems theoretical concepts, the unique service ecosystems approach opposes the perspective that NDP is entirely in the control of a focal company. This is in line with the recent IE literature that describes new venture formation as a complex, non-linear process (Mainela et

al. 2011; Ciabuschi et al. 2012). Here, the study takes a unique approach to the topic from the perspective of service exchange. In other words, networks are conceptualized as emerging from service exchange events, not as outcomes of deliberate processes of forming or joining a network, as is typical in the domain literature. Service exchange of resource-integrating actors relates to the emerging structure of a network, which introduces a duality between service exchange and the network. In brief, the structure both shapes service exchange and the actions of resource-integrating actors that shape networks and other higher-level structures. This wider approach also informs the IE literature on motives for engaging in NDP. In brief, the study is in line with the IE's research stream that emphasizes the socio-phenomenological reasons for interacting in a network (e.g., Ellis 2000, Harris & Wheeler 2005; Han 2008; Sasi & Arenius 2008; Ellis 2011).

As the service ecosystems approach is revisited with the morphogenetic approach, it is possible to combine understanding on individual characteristics and internationalization practices with individual characteristics (Lamb et al. 2011). Moreover, the multi-level approach in the study reflects the perspective of the IE scholars (e.g., Hoang & Antoncic 2003; Johannisson 2011) who describe networks as having both structural and interactional dimensions. This discussion contributes to the IE literature by linking actors with networks. However, there is generally a lack of discussion on how and why they are interconnected (Lamb et al. 2011), and how social networks influence IE (Ellis 2011). In other words, the research findings on aspects of multi-level NDP can be employed to provide new light to studies on the emergence of structural and interactional dimensions.

By oscillating the motors of change between different levels, it is possible to make a clearer distinction between actors, organizations, and networks in the domain literature. Typically, the domain literature on network formation in INVs focuses on stages, and emphasizes organizations as the content of change (e.g., Coviello & Munro 1997; Slotte-Kock & Coviello 2010). In these studies, life stages and phases refer to those of an organization rather than those of a network. The struggle in employing life cycle theory to explain network development is understandable, as evidence from the network development literature employing life cycle theory is scarce, with the exception of Steier and Greenwood (1998). Therefore, by approaching the phenomenon of IE from multiple process theoretical approaches, it is possible to understand the potential benefits of employing various theoretical lenses. This kind of multi-level approach to IE is characteristic of more recent perspectives with focus on entrepreneur, firm, network, and environment (Chandra et al. 2012; Peiris et al. 2012). In this sense, the study follows the example of Chetty and Blankenburg Holm (2000), who studied an internationalizing company in an

evolving context. The introduction of process theories also binds the research closer to recent attempts on taking a multi-motor process approach to understanding related phenomena on the formation of a new venture network (Slotte-Kock & Coviello 2010).

In sum, this research introduces a model of NDP from a broad and integrative perspective. In line with Slotte-Kock & Coviello (2010), this research enables both entrepreneurial decision making and the broader social context to co-exist and co-evolve. Most of all, it is suggested that an integrative model of IE needs to include other actors rather than merely focusing on entrepreneurs and their resources in developing an international opportunity (Peiris et al. 2012). In this sense, the process perspective of the internationalization and network approaches are not perceived as contradictory but complementary approaches (Coviello & Martin 1999; Nummela 2004). However, it must be noted that the process approach focuses more on network development than on internationalization per se. This puts more emphasis on the development of domestic resources that were previously considered important (Coviello & Munro 1997) but often neglected in IE research with more intensive focus on international activities.

As a contribution to *S-D logic*, the study answers the request to study how service systems are formed, and particularly how resource integration practices and macro-level structures shape service systems (Edvardsson et al. 2011; Vargo & Akaka 2012). In particular, the thesis distinguishes and relates empirically between the multi-level, temporally evolving service systems and structures of complex networks (Chandler & Vargo 2011). The research provides empirical evidence on both resource integration and value co-creation, two areas of research in which empirical evidence remains scarce (Arnould 2008; McColl-Kennedy et al. 2012; Pareigis 2012).

More particularly, this research contributes to S-D logic by providing requested empirical evidence on value-in-use (Strandvik et al. 2012), particularly on value-in-use in the social context (Högström & Tronvoll 2012). To date, the concept of value-in-social context has mostly remained conceptual. This research provides empirical evidence on how the context and social roles of multiple stakeholders both enable and constrain resource integration practices, and influence NDP. Thus, this research answers the call from Akaka and Chandler (2011) by providing empirical evidence on how actors enact various roles, and how the enactment of roles can variously influence value creation.

In addition, the study informs S-D logic by taking a dialectical process approach to NDP. It is claimed that the proposed morphogenetic service ecosystems approach might potentially benefit from a closer dialectical approach, as this kind of shift in control is perceived crucial in advancing marketing from ‘goods-dominant’ logic to S-D logic (Lusch et al. 2007). The

dialectical approach helps to take the cost of reproduction into account in the emergence of service systems, and introduces an alternative framework for studying value co-destruction practices (Plé & Cáceres 2010; Echeverri & Skålén 2011; Pongsakornrungsilp & Schroeder 2011).

By addressing an *international business* phenomenon from the S-D logic approach, this dissertation also contributes to the international business literature. As noted in the recent literature review by Ehrenthal (2012), S-D logic remains relatively unknown in the research stream of international business with only nine references to the seminal articles of Vargo and Lusch (2004/2008a). Although there might be more references (see limitations of Ehrenthal 2012), this gives a convincing argument for acceptance of S-D logic in international business as in other substantive domains. In particular, no references have been found to the most recently added foundational premises (FP9 and FP10) that can be perceived as the origins of the service ecosystems approach. Thus, this research can be regarded as complementary to previous S-D logic studies in the international business domain (e.g., La et al. 2008; Singh et al. 2010).

By building on S-D logic, this dissertation aims at contributing to the evolving interaction paradigm (Toyne & Nigh 1998) and the context-focused paradigm (Calhoun 2010). In particular, the empirical findings indicate the importance of multi-level temporal process research in addressing the context (Michailova 2011). Michailova (ibid.) defines context as "a dynamic array of factors, features, processes or events which have an influence on a phenomenon that is examined". Importantly, it is noted that context is not just a straightforward entity having one-way causation on the phenomenon, but also involves something that is multi-faceted and both influences and is influenced by the phenomenon under study. This complex nature of context is described as Janus' face of context (Gummesson 2006b, 173): "Change the context and the entity itself is different, it realizes another of its infinite potentialities and it becomes something different. Something more."[13]

In addition, this research brings new insight to the literature on international business networks. Although the network approach has been explicitly employed as a framework in internationalization studies over a fairly long period of time (Johanson & Mattsson 1987; Blankenburg 1995; Lu & Beamish 2004; Fletcher 2008; Johanson & Kao 2010), motives for network or alliance development are mostly studied from the focal firm perspective. In reality, networks are often initiated by partners (e.g., Sigfusson & Chetty 2012). Therefore, this study can be regarded as an important add-on for encouraging

[13] Original quote by Zohar (1997, 46).

the change of focus from the focal company to customers' customers and customers' suppliers (Sadler & Chetty 2000).

As noted by Johanson and Kao (2010), studies on networks in internationalization typically approach networks as either dependent variables influencing the internationalization process (i.e., 'functional group') or as independent variables as structures resulting from internationalization (i.e., 'structural group'). Instead of dichotomizing between these two groups, the research complements studies that aim to combine the two perspectives (Coviello 2006). It is possible to oppose the conventional teleological perspective on NDP by oscillating the foci between the focal firm and various stakeholders. In other words, the research findings challenge the focal company's ability to select partners, and to create and manage networks (Roy & Oliver 2009). Instead, it is considered that there are various motives for local partners to interact (Turnbull et al. 1996) and become part of an international ecosystem (Dong & Glaister 2006). In particular, networks are perceived as sources of resources for various actors (McDermott & Corredoira 2010).

In addition to the multi-level approach, the study contributes to the studies on dynamic development process of international networks (Yan & Zeng 1999; Hyder & Ghauri 2000). As Johanson and Kao (2010) point out, the network approach in internationalization is mostly studied in relation to the Uppsala stages model. Whereas scholars first called for a closer integration between the network approach and Uppsala model (Welch & Welch 1996; Coviello & Munro 1997), it has since been perceived that the network approach can give an alternative explanation for internationalization (Ellis 2000). For instance, Lamb et al. (2011) perceive that networks emerge in a company's internationalization activities. This is also emphasized by Johanson and Vahlne (2009) in their revision of the Uppsala model.

In sum, studies on networks in internationalization have remained modest (cf. Sadler & Chetty 2000) and specific to a few contexts. Typically, internationalization studies that apply the network approach focus on benefits of networks from a priori highly internationalized networks of established and large manufacturing companies. In this sense, the thesis contributes to the field by providing empirical evidence from the perspective of a new and small service company.

Previously, service internationalization research has been criticized for being based on a static company resource-based perspective (Javalgi et al. 2003; Javalgi & Martin 2007), which suggests that entrepreneurs choose the markets they serve. This might result from the tendency to neglect the role of various actors in creating and managing international service networks. For instance, in the internationalization model of service firms (Cicic et al. 1999), the social environment is only implicitly present in the company's external

environment. This contradicts the ideas of services marketing, which typically emphasizes interaction and inseparability of consumption and production. This contradiction is surprising, as the need for services internationalization literature is explained on the basis of these unique features. The research thus contributes to the interaction and network approaches (Edvardsson et al. 1993; Hellman 1996; Coviello & Martin 1999; Freeman et al. 2007; Freeman & Sandwell 2008) to the internationalization of service firms. The cited studies consider that the network of an internationalizing service firm influences, but does not completely determine (Bell 1995), a company's willingness to internationalize, the speed of internationalization, target market selection, and entry mode choice. However, these studies address network governance and structure typically as independent variables. Although network dynamics is considered to provide a richer basis for theorizing service internationalization, scholars have mainly been fixed on positivist network outcomes (Hoang & Antoncic 2003). In this sense, this research contributes to the multi-level network dynamics research (Abrahamsen et al. 2012).

From the perspective of multi-level network dynamics, this research can also be positioned in the *entrepreneurship literature*. The empirical findings emphasize the importance of multi-level temporal process research in addressing the context in entrepreneurial activities (Jack & Anderson 2002; Rasmussen 2011). Complementary to Ciabuschi et al. (2012), this research focuses more on the post-launch period instead of mere technological development process.

By studying practices, the study extends and expands the entrepreneurship research by Johannisson (2011). Instead of focusing merely on the activities of an entrepreneur or on activities occurring in the immediate interaction with a new venture (i.e., organizing context), the research takes a wider network perspective on new venture creation. These questions are also relevant from the perspective of entrepreneurship. For instance, Johannisson et al. (2002) studied the role of embeddedness in new business formation. More recently, Johannisson (2011) suggested practice theory as an appropriate approach for studying entrepreneurship. In this sense, the resource integration practices of various actors and references to endogenous and exogenous role enactment are expected to give new insight on how a network of actors can contribute or oppose new venture formation.

As a contribution to the entrepreneurship literature, the study also brings additional insight from S-D logic to the field. Ehrenthal (2012) has found out that S-D logic remains relatively unknown in the entrepreneurship literature, with only 11 references to the two seminal articles by Vargo and Lusch (2004/2008a). In comparison to the international business literature, entrepreneurship scholars have paid more attention to the newest foundational

premises (FP9 and FP10). Nevertheless, as most of the references in entrepreneurship remain of minor significance (e.g., Bettiol et al. 2012), this research contributes to the recent interest in employing S-D logic in the substantive domain of entrepreneurship by implementing S-D logic as a theoretical lens to the study.

5.3 Managerial implications

In addition to the suggested theoretical contributions, this study provides interesting insight to entrepreneurs and managers alike. By emphasizing the service ecosystem approach, the study gives another aspect of approaching INV development. In addition, it is believed that the findings on motives and control over network can provide interesting insight to managers.

With regard to the motives for engaging in network development, practitioners should pay closer attention to how value propositions are in line with the self-identity enforcement of other actors, and how value proposition might satisfy intrinsic motivations. Here, a closer link between S-D logic and self-determination theory might be beneficial for practitioners. First, S-D logic shifts the focus in network development to other actors. Second, self-determination theory enables understanding on actors' various motives for contributing to NDP. The empirical part of the study provides an illustrative case emphasizing self-identification. Here, actors engage in service exchange as they are interested in potential opportunities that might come from collaboration. For greater engagement in NDP, intrinsic motives might also be valuable. In this study, the motivation of users is additionally divided temporally and to multiple levels. This grid might be useful for managers in understanding what kind of value they are proposing; whether value proposition focuses on the well-being of self or higher-level constructs, and whether value propositions focus on an actor's present or future gains.

These questions on motivation are highly relevant, as the research findings emphasize that many key activities can be undertaken by actors other than entrepreneurs or their teams. Therefore, it becomes crucial to understand the enactment of endogenous roles by other actors. In case some activities are key activities, entrepreneurs need to consider how to ensure that they are undertaken by their partners. For instance, in the context of social media, content generation activities are undertaken by users; this is a key activity, and more crucial than some extra features provided in the platforms.

Related to the previous point, all resources need not be owned or controlled by entrepreneurs as other actors enact various roles, even if they are not hired by the entrepreneurs' companies. However, entrepreneurs must be aware of

their key resources and consider the way they are enhanced, even if they are not the property of a focal company. In brief, entrepreneurs should have a wider perspective on their resources, and consider how they can facilitate their usage.

In general, these practical implications are in line with the popular Business Model Canvas (Osterwalder & Pigneur 2010), which links other actors, value propositions, resources, and processes with benefits and costs of these operations. Here, it is pointed out that these value propositions need also to cover understanding on cost-of-reproduction. This means that entrepreneurs should have a better understanding on the burden value propositions cause to their partners, and not only focus on the revenue-cost dimension from the perspective of the focal company. This helps to understand the dialectical forces that might make some partners unwilling to undertake key activities. The research findings indicate that sacrifices can crucially discourage actors from enacting the kinds of role that would co-create value for the service ecosystem. This insight is not novel to the marketing literature or even common sense. However, it is worth highlighting that cost-of-reproduction seems to be contextual, and uniquely and phenomenologically perceived merely as value. In this sense, cost-of-reproduction should be taken into account for different people at different times.

The morphogenetic service ecosystems approach of the study challenges Osterwalder and Pigneur's (2010) explicit focus on customer relationships. To ensure viability of the service ecosystem, entrepreneurs need to be able to maintain mutually beneficial business relationships with all critical resource-integrating actors. To some extent, proposed value to other partners can be in the form of money, which might seem a simple transaction. However, the study emphasizes better understanding on the life and context of a company's partners. In this sense, entrepreneurs are encouraged to consider what kind of value they could propose for various actors. For instance, an entrepreneur might need to ask questions such as "what is the value proposition for content contributors?" or "what is the cost-of-reproduction for the staff?", and "how could the cost-of-reproduction be minimized to facilitate the willingness of these actors to integrate resources for the benefit of the service ecosystem?"

Entrepreneurs should consider what all activities mean with regard to reproducing the service ecosystem. In other words, how do activities and the resources needed to undertake these activities influence the future of the venture? For instance, co-marketing with a supplier might harm the future potential of the company if it discourages collaboration with other companies, or constant focus on getting exposure in top-tier blogs might reduce time for other marketing activities.

Similarly, revenue should be considered value or benefits with which to integrate resources in the future. In this sense, revenue can be in the form of education or reputation, which can be facilitated in the future for the benefit of the service ecosystem, and eventually to the benefit of the venture and the entrepreneur.

5.4 Limitations of the study and suggestions for further research

In addition to several contributions, this study is subject to limitations that are discussed in the following. By identifying these limitations, I provide suggestions on potential research paths for further research. In the spirit of parsimony (Whetten 1989), the study focuses only on those factors in the study that are fundamental to the contextual explanation of the phenomenon (Welch et al. 2011), setting the boundaries for generalizability of the research findings. For instance, environmental influence is emphasized from the perspective of contextual limitations of the research. In this sense, the structures of Internet-enabled markets, the startup scene, and the international business environment are highlighted in this study. However, other structures around the service ecosystem are not discussed in detail. Thus, in the future, scholars might pay more attention to other structures as contextual limitations.

By focusing on a new venture from Finland, the study neglects cross-cultural differences in NDP, which forms a significant limitation from the perspective of cross-cultural research. However, it might be argued that, although the focal venture is legally based in Finland, the case ecosystem is international and multi-cultural. As the narratives in Chapter 4.1 indicate, national borders as structures do not keep people away from different startup hubs. In particular, the entrepreneurial team and the interns were originally from outside Finland. They have connections beyond national borders, which would not be revealed in large N-studies. Moreover, the service was first launched in English, therefore the Finnish language is not an important cultural factor here. In addition, it is also agreed that overly focusing on a cultural environment can hinder understanding on other contextual and micro-level aspects (Jones et al. 2011), which are of particular interest when ‘theorizing about context’ (Whetten 2009, 30).

The abovementioned contextual limitations reflect to the typical limitations of single case research. It is acknowledged that methodological choices influence understanding on the research phenomenon. In this sense, it is encouraged to undertake similar studies in other contexts. For instance, if data were collected around a company for which the international service ecosystem is an unintended consequence of entrepreneurial activities, further insight

on contextual explanation could be developed, particularly in terms of the international business system. In addition, the single case might not represent an ideal example of emergent structures, at least in the given time period. During the research collection phase, there was no major observable increase in online co-founder matchmaking in the startup or social media scene. In this sense, there can always be discussion on whether a case is successful or not. While the case network grew rapidly over a couple of years, it did not create important institutions over the research process, and the network's scope remained rather static during the data collection period. However, the case provides an important illustration of the conceptually developed model. Furthermore, it is possible to understand what kind of mechanisms occur in a real life situation.

As data were collected over a short period of time, it is difficult to study the past from which some important resource integration practices emerged. As shown by Akaka (2012), some resource integration practices can be tracked back 100–200 years. In this sense, emergent structures might be better identified if more time was spent on the field or if historical research methods were employed. With a more longitudinal research approach, scholars might be able to reveal new stages in service ecosystem development. As the network was followed for less than two years after establishment of the new venture, it is possible and even likely that not all stages in the case NDP are revealed. In fact, empirical evidence suggests that transition towards committed network development can easily take more than three years (Coviello & Munro 1997). In this sense, from the outset it was unlikely that the case ecosystem would mature over the research process, and the research findings might emphasize forces in the early stage of network development. Although this is a major limitation in the research, it can be addressed with follow-up research in the future.

Although the co-founders did not expect major changes in the network, prospective network pictures are perceived as a useful tool for facilitating discussion on potential changes, and for retrospective discussions on changes in entrepreneurial sensemaking. There needs to be more research conducted on prospective network pictures before their validity for data collection or their managerial implications can be justified. In addition, future studies might benefit by collecting network pictures both from the focal venture and other actors. Although this is potentially considered a challenging task (Holmen et al. 2013), it would give better understanding on the role of other actors in NDP.

Although the study utilizes multiple perspectives on the phenomenon, the research findings rely mostly on interviews. Retrospectively, it is considered that observational data might give more evidence for the research of resource

integration practices (McColl-Kennedy et al. 2012; Pareigis 2012). In addition, a more emic approach (i.e., study based on local observations by a participant researcher) might be taken with the help of netnographic research (Schau et al. 2009). Here, closely following the research process of structuration provided by Barley and Tolbert (1997) might be beneficial for future research.

The grid for motivation remains unelaborated and it would be interesting to focus in further studies on how different kinds of value proposition attract different people in terms of expected consequences for self/others and the present/future. This kind of study would better inform practitioners on how to attract actors who are more beneficial to the long-term wellbeing of a network. As such, the study provides only a general approach to questions on network development, and further studies should provide more detailed answers to the questions asked by Harris and Wheeler (2005, 204): “How do the roles develop over time? What are the features of the many relationships that do not develop, and why do they not develop? What are the influences of different types of personalities in this process?”

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APPENDICES

Appendix 1 Search terms employed for identifying the relevant literature for the review

The number of hits in EBSCO Business Source Complete was limited by focusing on articles with the following terms in the abstract: “network”, “social”, “alliance”, “relationship”, or “ecosystem”. Among selected key journals (Jones et al. 2011, 649), the search was extended to include abstracts and keywords. However, the following were omitted from the search: Internationali* OR “international business” OR “foreign market”, as they heavily influenced the number of articles by identifying mostly unrelated studies. Similarly, Reuber and Fischer’s (2011, 662–663) literature search process was modified to source the literature relevant to the review. Instead of repeating the search as such, the review focused on articles in key journals published in 2011–2012 (33 journals reviewed by Reuber and Fischer 2011) containing the terms “social media” or “Internet” in their keywords or titles. This provided an opportunity to examine more recent international entrepreneurship (IE) studies conducted in the context of Internet-enabled markets, as the review by Reuber and Fischer ended at 2010.

By following the scientific journals listed by Reuber and Fischer (2011), it was noted that the findings from the title and keyword search from entrepreneurship and international business fields were practically non-existent. Most of the hits came from the journals focusing on management of information systems and marketing. Therefore, the search was extended to abstracts in the journals that covered entrepreneurship and international business, as it was expected that these journals would more likely cover the IE related literature. Eventually, the search terms were as follows:

Network development of international new ventures (INV):
(((KW (International entrepreneurship)) OR (KW (entrepreneur AND international)) OR (KW ("International new venture*" OR "born global" OR "global start*" OR INV)) OR (KW ("Instant export*" OR "instant internationali*" OR "rapid export*" OR "rapid internationali*" OR "micro MNEs")) OR (KW (mcdougall OR oviatt)) OR (KW (Entrepreneurship AND national)) OR (KW ("global entrepreneurship Monitor" OR GEM))) AND (AB (network* OR social* OR alliance* OR relationship* OR ecosystem*))) OR ((((AB (International entrepreneurship)) OR (AB (entrepreneur AND international)) OR (AB ("International new venture*" OR "born global" OR "global start*" OR INV)) OR (AB ("Instant export*" OR "instant internationali*" OR "rapid export*" OR "rapid internationali*" OR "micro MNEs")) OR (AB (mcdougall OR oviatt)) OR (AB (Entrepreneurship AND national)) OR (AB ("Global Entrepreneurship Monitor" OR GEM))) AND (AB (network* OR social* OR alliance* OR relationship* OR ecosystem*))) AND (SO ("journal of business venturing" OR "Entrepreneurship theory & practice" OR "Journal of International Business Studies" OR "journal of world business" OR "Management international review" OR "International Business Review" OR "International Marketing Review" OR "Journal of International Marketing" OR "Academy of Management Journal" OR "Academy of Management Review" OR "Journal of International Entrepreneurship")))
International new ventures in Internet-enabled markets:
((AB (Internet OR "social media")) AND (SO ("journal of business venturing" OR "Entrepreneurship Theory" OR "Journal of International Entrepreneurship" OR "Small Business Economics" OR "Strategic Entrepreneurship Journal" OR "International Business Review" OR "Journal of International Business Studies" OR "Journal of World Business" OR "Management International Review"))) OR (((KW (Internet)) OR (KW ("social media")) OR (TI (Internet)) OR (TI ("social media"))) AND ((SO ("journal of business venturing" OR "Entrepreneurship Theory" OR "Journal of International Entrepreneurship" OR "Small Business Economics" OR "Strategic Entrepreneurship Journal" OR "International Business Review" OR "Journal of International Business Studies" OR "Journal of World Business" OR "Management International Review" OR "Academy of Management Journal" OR "Academy of Management Perspectives" OR "Academy of Management Review" OR "Administrative Science Quarterly" OR "California Management Review" OR "Harvard Business Review" OR "Journal of Management" OR "Journal of Management Studies" OR "Organization Science" OR "Organization Studies" OR "Research Policy" OR "Sloan Management Review" OR "Strategic Management Journal" OR "Communications of the ACM" OR "Information Systems Research" OR "Journal of management information systems" OR "Management Science" OR "MIS Quarterly" OR "International Marketing Review" OR "Journal of International Marketing" OR "Journal of Marketing" OR "Journal of Marketing Research" OR "Journal of the Academy of Marketing Science" OR "Marketing Science"))))

Appendix 2 Summary of the literature on network development process (NDP) of international new ventures (INV) in Internet-enabled markets

	Loane et al. (2004)	***Arenius et al. (2006)***	***Coviello & Cox (2006)***
Main argument on network development	Internet-enabled new ventures develop new domestic and international networks to internationalize.	Internet decreases the effects of psychic distance in network formation.	Network resources change as INV evolves.
Geographical context	Northern Ireland, Republic of Ireland, Belgium, Sweden, Canada, and the United States.	Finland	New Zealand
Industry context	Internet-enabled firms	Software development	Internet-based software
Research method	Case	Case	Case
Primary source of data	Focal firms	Network actors	Focal firm
Process data	No	Yes	Yes
Process theorization	No	Yes	Yes
	Ruokonen et al. (2006)	***Gabrielsson & Gabrielsson (2011)***	***Sigfusson & Harris (2012)***
Main argument on NDP	Partnership strategy in network management is dependent on the nature of product and requirements for partners.	Internet is part of a multi-channel strategy that evolves over the internationalization process of INV.	Network formation can be studied based on international entrepreneurs' activities and their relationship characteristics.
Geographical context	Finland	Finland	Iceland, Scotland
Industry context	Software	High-tech, high-services, and high-know-how/systems businesses.	Software development.
Research method	Case	Case	Case
Primary source of data	Focal firms	Focal firms	Focal firm
Process data	Yes	Yes	Yes
Process theorization	No	Yes	No

Appendix 3 Co-citation analysis

The database search from ISI Web of Science included a search of articles published between 2004–2012 on service-dominant (S-D) logic. The key articles were found by searching for articles with the term "S-D logic" or "Service-dominant logic" in their titles or keywords. As these search terms did not capture some key articles published by Vargo and Lusch, all articles published by "Vargo" and "Lusch" within this time period were included in the analysis. To minimize the influence of other authors with the same last names, the search was limited to the business and management literature. As a result, the search function was as follows:

Search term: (AU=(Vargo OR Lusch) OR TS=(s-d logic* OR service-dominant logic*) OR TI=(s-d logic* OR service-dominant logic*))
Refined by: Document Types=(Article OR Review); Web of Science Categories=(BUSINESS OR MANAGEMENT);
Databases=SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH;
Timespan=2004-01-01 - 2012-12-31

The search resulted in 169 scientific articles on S-D logic. The co-citation analysis was based on these articles' references. There were 11,069 valid references in total. The co-citation analysis employed CiteSpace, a freely available Java application for visualizing and analyzing trends and patterns in the scientific literature (Chen 2004/2006). The co-citation analysis focused on the most cited authors in S-D logic. First, the phases of S-D logic were divided into three distinct periods: 2004–2006, 2007–2009, and 2010–2012. Second, 1.0% of the most cited authors from each slice were selected. This maintained focus on the most cited authors in each period. Third, to avoid over-representativeness of more recent references, the maximum number of selected authors per slice was limited to 15. Fourth, to improve the validity of the Figure 2, the similarity of results was checked against several other methods varying the temporal slices, as well as the number of nodes in each time period. The visualization of the co-citation analysis was made with a minimum spanning tree. Pruning of the sliced network was set to "true".

Time period	Number of cited authors	Number of nodes
2004 – 2006	101	1
2007 – 2009	1,816	15
2010 – 2012	3,873	15

Appendix 4 Primary data collection schedule

Role	Date	Type	Name	Location	Duration
ENTRE	9.19.2011	Interview	Oliver Bremer	Helsinki	2 hours
General	9.27.2011	Observed	Boost Turku kick-off	Turku	3.5 hours
User	10.3.2011	Interview	Aniekan Okono	Jyväskylä	2.5 hours
User	10.5.2011	Interview	Kapil Mittal	Skype	1 hour
User	10.14.2011	Interview	Ron Broens	Salo	2.5 hours
ENTRE	10.20.2011	Interview	Oliver Bremer	Helsinki	30 min
ENTRE	10.20.2011	Interview	Frank Haubenschild	Skype	1 hour
User	10.24.2011	Interview	Kevin Brouillaud	Skype	1 hour
General	10.24.2011	Observed	Boost Turku event	Turku	2 hours
User	10.25.2011	Interview	Aniekan Okono	Skype	30 min
User	10.27.2011	Interview	Kapil Mittal	Skype	30 min
User	11.3.2011	Interview	David Toborek	Skype	45 min
User	11.7.2011	Interview	Aniekan Okono	Jyväskylä	5 hours
User	11.16.2011	Interview	Ahmed Shalaby	Skype	1 hour
ENTRE	1.10. 2012	Interview	Oliver Bremer	Skype	30 min
User	1.12.2012	Interview	Ahmed Shalaby	Skype	15 min
STAKE	2.6.2012	Interview	Toni Perämäki	Turku	1 hour
User	2.29.2012	Interview	David San Filippo	NY	1 hour
User	2.29.2012	Discussed	Neil Jacobs	Skype	1 hour
STAKE	3.1.2012	Interview	Lauren Drell	NY	1 hour
User	3.2.2012	Interview	Michael Newcomb	NY	1 hour
STAKE	3.12.2012	Interview	Greg Anderson	Skype	1 hour
ENTRE	4.24.2012	Interview	Oliver Bremer	phone	30 min
User	5.16.2012	Interview	Aniekan Okono	Skype	30 min
STAKE	5.21.2012	Interview	Anibal Damião	Skype	45 min
ENTRE	6.1.2012	Interview	Wolfgang Bremer	Skype	45 min
General	6.12.2012	Discussed	Elina Fahlgren	SFO	1 hour
General	6.12.2012	Observed	FailCon event	SFO	2 hours
General	6.13.2012	Observed	efactor event	SFO	2.5 hours
STAKE	6.14.2012	Interview	Thomas Arend	SFO	1.5 hours
General	6.14.2012	Observed	#thatcool event	SFO	1 hour
General	6.14.2012	Observed	Startup California	SFO	2 hours
User	6.15.2012	Interview	Hugo Bernardo	SFO	45 min
General	6.17.2012	Discussed	Lydia Sugarman	SFO	2 hours
non-user	6.17.2012	Interview	Ian Hafkenschiel	Skype	30 min

STAKE	6.18.2012	Discussed	Google employee	SFO	1 hour
STAKE	6.18.2012	Discussed	Richard Henry	SFO	5 min
STAKE	6.18.2012	Discussed	Cinjon Resnick	SFO	15 min
ENTRE	8.14.2012	Discussed	Oliver Bremer	Skype	10 min
ENTRE	9.14.2012	Interview	Oliver Bremer	Helsinki	1.5 hours
Intern	9.26.2012	Interview	Lisa Arensburg	Skype	30 min
User	9.27.2012	Discussed	Kapil Mittal	Skype	20 min
PARTI	9.27.2012	Interview	Jaclyn Siu	Skype	1 hour
ENTRE	9.27.2012	Interview	Wolfgang Bremer	Skype	15 min
ENTRE	10.4.2012	Interview	Frank Haubenschild	Skype	1 hour
User	10.6.2012	Discussed	Kapil Mittal	Skype	20 min
User	10.7.2012	Interview	Kapil Mittal	Skype	1 hour
Intern	10.12.2012	Interview	Solomon Mengistu	Skype	1 hour
STAKE	10.15.2012	Interview	Anna Bessonova	Skype	30 min
User	10.21.2012	Interview	David Toborek	Skype	30 min

ENTRE: co-founder of the focal company
STAKE: other stakeholder
PARTI: participant in the network's offline event
NY: New York
SFO: San Francisco

All other locations refer to cities in Finland

Appendix 5 Description of secondary data employed in the research

Publication date	Source	Type	Short description
1.14.2011 – 10.24.2012	Facebook	Facebook Wall	Activity on Founder2be's Facebook wall
1.15. 2011 – 10.24. 2012	Twitter	Tweets	Tweets by @Founder2be
1.16. 2011 – 7.31. 2012	Founder2be	Blog posts	Blog posts on Founder2be.com
1.31. 2011	ArcticStartup	Blog post	Blog post on Founder2be by Anna Bessonova
2.16. 2011	ArcticStartup	Blog post	Blog post on Founder2be by Anna Bessonova
3.2. 2011	MarketSharing	Blog post	Blog post on Founder2be by John Greene
4.6. 2011	ArcticStartup	Blog post	Blog post on Founder2be by Anna Bessonova
4.14. 2011	Metropolia Blog	Video Interview	Interview of Oliver Bremer
6.22. 2011	webgeekly	Interview	Interview of Oliver Bremer
6.27. 2011	Doug Richard's School for Startups	Blog post	Interview of Oliver Bremer
7.19. 2011	The Next Web	Blog post	Founder2be reference in blog post by Martin Bryant
7.26. 2011	Mashable	Comment on an article	'Findacofounder' encourages visiting Founder2be.com
9.13. 2011 – 10.24. 2012	Founder2be	Profiles and ideas	Public profiles and startup ideas presented on Founder2be
10.11. 2011	The Next Web	Blog post	Blog post on Founder2be by Martin Bryant
10.26. 2011	Silicon Allee	Interview	Interview of Oliver Bremer
11.30. 2011	email	newsletter	Founder2be newsletter
12.13. 2011	email	newsletter	Founder2be newsletter
12.25. 2011	Mashable	Blog post	Founder2be referenced in blog post by Lauren Drell
2.28. 2012	email	newsletter	Founder2be newsletter
3.7. 2012	ArcticStartup	Blog post	Founder2be referenced in blog post by Greg Anderson

Appendix 6 List of initial codes in qualitative data analysis

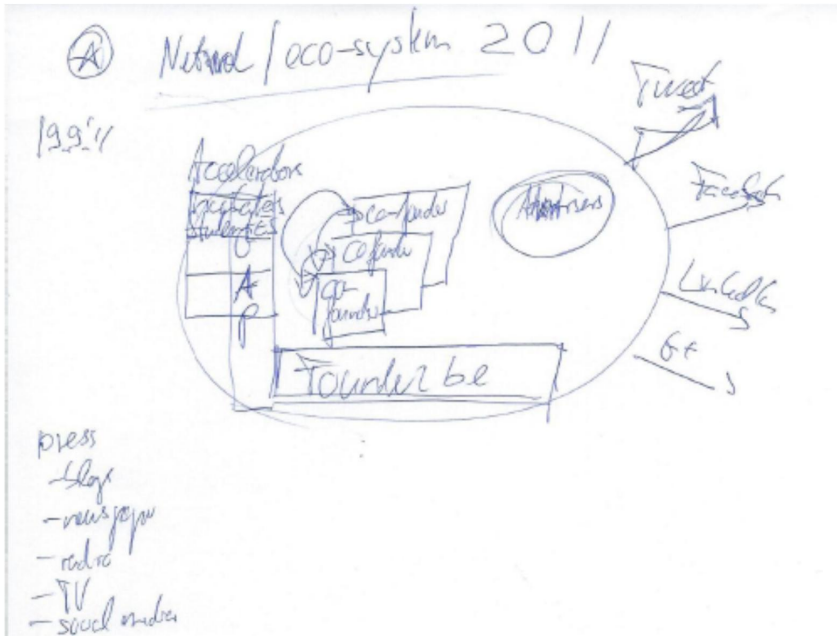
Name	Number of sources	Number of references
advertising	2	3
age	2	3
assumptions	6	9
blog	6	39
bloggers	2	2
book	3	9
brands	3	5
co-founder	6	13
commenting	1	2
communication	7	15
community	1	2
competitors	8	19
context	5	15
control	5	7
development stage	1	1
dialectic force	6	14
economic environment	3	8
education	3	6
end state	10	46
entrepreneurship	3	8
envisioned end state	11	52
exchange practice	5	10
feedback	3	3
finding customers	1	1
finding people	1	1
Finland	1	1
Founder2be actions	1	1
freedom	2	2
future expectations	14	47
helping	1	3
idea generation	3	7
incentives	4	4
income	5	20
India	2	4
information collection	7	10
institutions	6	19
intended consequence	2	4
international	9	19
job	6	11
language	1	3
learning	1	1
level	1	1
marketing	1	1
meaning	2	4
meeting people	1	2

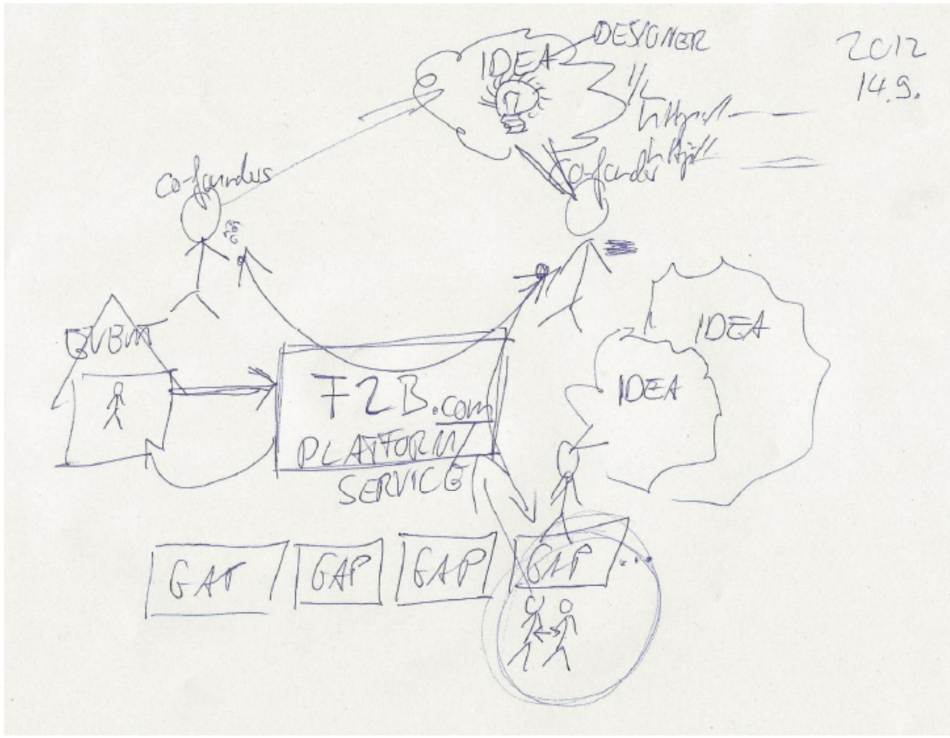
meetups	2	2
methodology	9	22
money	13	54
motive	8	28
network	4	5
networking	8	28
non-members	1	5
normalizing practice	2	2
other opinions	7	15
partners	6	19
passion	2	2
passive user	3	4
past	9	21
paying for premium	1	1
personality	5	29
phases	3	9
pitching	1	1
place	9	36
planning	1	1
problem identification	1	2
programming	1	3
promotion	7	23
references	1	1
registering	2	4
representational practice	3	7
resource integration practice	5	7
resource needs	4	7
resources	6	13
role	3	4
rules	5	6
serendipity	3	3
service providers	3	5
sharing	1	2
sign	1	1
skills	1	1
social media	2	6
social system	5	18
symbol	3	4
system	1	2
team building	2	5
technology	7	22
time	9	28
trust	2	3
uncertainty	4	8
users	10	37
value	5	11
value proposition	9	16
venture capitalist	1	3

Appendix 7 Template for analyzing a passage of text

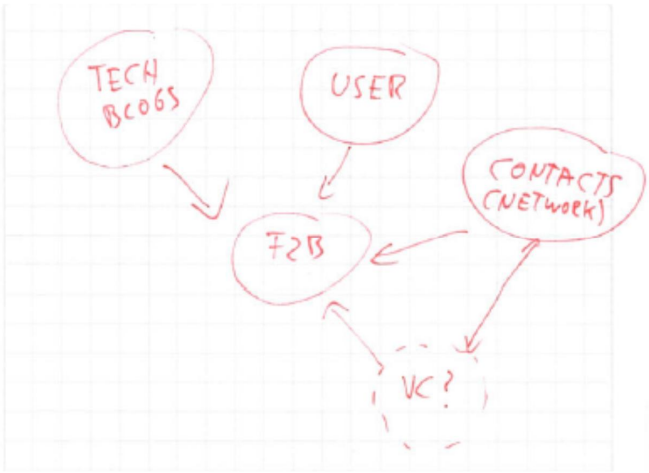
1. Passage of text	"Actually, I did not use a lot of these sites to be honest. I just started going out and meeting people because anyone can put on a website what they are doing, what they say they are doing, but when you meet someone in person, obviously you get to talk to them about what they are working on, but a lot of getting along with them and especially as a co-founder, a lot of it is in the chemistry whether you guys click well, whether you guys get along and whether you guys just work well together, and I feel like that connections can only – you can only determine that in person. It's like online dating, you can put up your profile and you can Photoshop your picture and you can say that you are the author but if you go on a date with that person, and that person is not like what he or she says on the page, or you just don't feel it, then you don't go anywhere. So, I feel like I am just like the same thing, but without the romance. So, I think that actually looking for a founder is difficult, especially when, as I said before, a technical co-founder is especially very hard to come by. So, I just figured, I will just work on what I know needs to be worked on, and in the meantime if I find it was, great, I'll do it on my own – if I don't, then I will get an investment and outsource to an app building company or something." (Jaclyn Siu, Exhibit 15)					
2. Level of analysis for where change occurs	**3.** What is happening? (description)	**4.** When is the change occurring? (present / future)	**5.** Level of analysis for the origin of change	**6.** What is driving the change? (explanation)	**7.** Is the change intended?	**8.** When did the change force originate? (past / present)
micro-level	Here, interviewee describes how she has mostly met people offline, and how she decided to manage without a co-founder.	present	macro-level	This change is explained by difficulties in finding a good technical co-founder, and the idea that you need to get along with your co-founder personally.	unintended	Change originates from the dialectic between past structures on expected behavior and present understanding on making things otherwise.

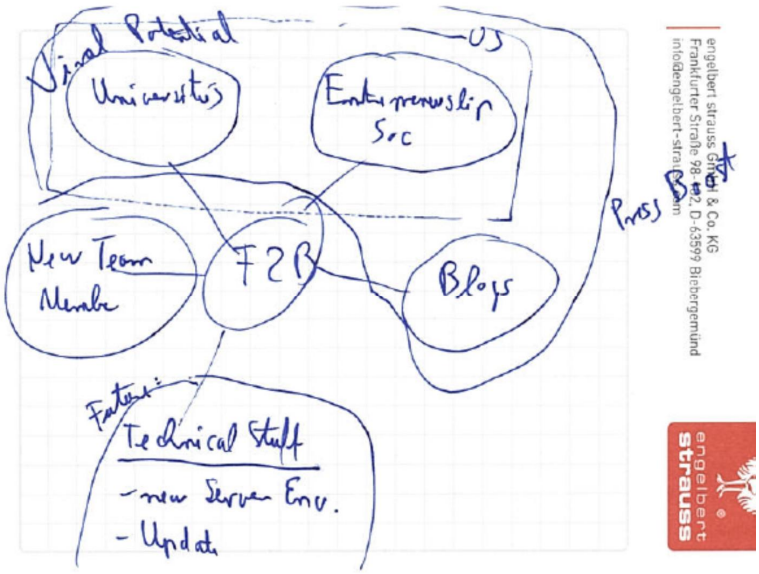
Appendix 8 Original network pictures by Oliver Bremer in September 2011 and September 2012 (no changes anticipated)





Appendix 9 Original network pictures by Frank Haubenschild in October 2011 and October 2012 (dashed = anticipated change)





Appendix 10 Connections between empirical events and selected structures

	Before idea
Startup scene	Oliver works in a startup. Frank plans a startup with his friends. Oliver discovers an opportunity for a startup. Oliver suggests collaboration to Frank. Frank does not join Oliver's first idea. Oliver attends startup events. Anna attends meetup events. Anna founds Helsinki University Entrepreneurship Society. Toni founds Boost Turku. Hugo co-founds Piictu with a friend. Ron launches BOOI Innovations. Aniekan thinks of solving the problem of lack of exposure to startups in traditional media. Startups as side projects for David San Filippo. Startups as a hobby for David Toborek. Lauren covers startups at AOL. Lauren's boyfriend opens a restaurant chain. ArcticStartup covers startups in Northern Europe. Culture of working without monetary compensation.
Internet-enabled markets	Oliver and Frank study computer science. Wolfgang develops Internet-enabled services. Oliver tries online dating. Oliver tries finding co-founders online. Anna joins ArcticStartup. Ron uses various Internet-enabled services. Aniekan thinks that Internet-enabled services overly focus on the needs of developed countries. Bad online advertising encourages Anibal to launch his own venture. Minimalist ads are provided only in a niche market. InfluAds provides an opportunity for publishing minimalist ads. David San Filippo works in Internet companies. David Toborek works for an e-commerce company. Lauren's boyfriend uses Craigslist as a way to find a co-founder. Lauren helps with social media and learns online marketing. Thomas studies computer science. Thomas works for IT companies. Twitter launches an open platform for real-time communication. Twitter emphasizes simplicity. Users generate culture and own language around Twitter.
International business system	Oliver studies in the USA. Oliver works in the USA. Wolfgang works in the USA. Oliver moves to Finland. Oliver hears that India is not tempting for startups. Anna moves to Finland.

	Ron moves to Finland. Aniekan moves to Finland. Lisa moves to Finland. Hugo moves to the USA. Ahmed moves to Finland. Anibal moves to Denmark. David Toborek moves around Europe. Economic downturn influences Ron's startup. Economic downturn influences the firm at which Anibal works. Aniekan thinks that Internet-enabled services overly focus on the needs of developed countries. Thomas moves to the USA. Thomas works as an advisor for the Rosetta Foundation. Twitter focused on reaching every person on a planet. National differences in the adoption of technology. Jaclyn moves to the USA. Kapil moves to Finland.
Case network	No references
	Phase 1: From idea to launch
Startup scene	Oliver recognizes another opportunity. Other people discouraging. Oliver attends meetups to promote the platform. Toni attends startup events.
Internet-enabled markets	Experience of online dating encourages Oliver. Aniekan positions Ziliot against other social media platforms.
International business system	No references
Case network	Frank joins Oliver to develop the idea further. Plans for monetizing. Other people discouraging. Oliver and Frank share roles. Oliver attends meetups to promote the platform. Oliver and Anna meet and discuss plans for Founder2be Oliver and Toni meet and discuss plans for Founder2be
	Phase 2: From launch until team growth
Startup scene	Beta version is launched. Anna writes about Founder2be. First users find each other. Oliver and Frank read the startup literature. Oliver attends meetups. John Greene attends Helsinki Hub event. Contacting major tech blogs with no response. Ziliot tries to gain publicity in blogs. Lisa's expectations for working in a startup. Founder2be mentioned in a blog post by Boost Turku. Kevin participates in entrepreneurial meetups. Kapil finds information on Founder2be at ArcticStartup.

Internet-enabled markets	Beta version is launched. Anna writes about Founder2be. Users provide content and give feedback. John blogs about Founder2be. Lisa learns about Founder2be from a blog. Contacting major tech blogs with no response. Aniekan participates in online discussions to become recognized as an expert in his field. The team analyzes competitors to determine position in the market. Founder2be reaches interesting audience from the perspective of online advertisers. InfluAds is willing to have Founder2be in its network. Kevin analyzes that e-commerce is not sufficiently social. Lauren joins Mashable. Oliver fills in a profile in Mashable. Kapil finds information on Founder2be at ArcticStartup.
International business system	Beta version is launched. Building network of partners. Lisa and Solomon contact potential partners and bloggers internationally. International coverage from The Next Web and Doug Richard's School for Startups. Anibal feeling sympathy for a startup outside the USA. Kevin goes to international business school.
Case network	Anna writes about Founder2be. Ron joins Founder2be among first users. Ron sends feedback to Oliver and Frank. Positive response from first users. Not sufficient to rely on ArcticStartup. Users provide content and give feedback. Improved platform. First users find each other. Building network of partners. John Greene blogs about Founder2be. John finds internship places for students. Lisa and Solomon join Founder2be. Some partners agree on collaboration, many do not respond. Aniekan signs up to find a CTO. Ahmed registers to find collaborators. International coverage from The Next Web and Doug Richard's School for Startups. More users register with the platform

	Phase 3: Towards monetization
Startup scene	Competitors appear – validating the idea – creating culture. Advertisers are not interested in online service provider. Aniekan uses other online platforms for finding partners. David Toborek does not believe in finding a co-founder online. Lauren rejects pitches as she does not find them interesting. Lauren becomes interested in how co-founders meet each other. Jaclyn works in a startup and becomes more interested in the startup scene. Founder2be is funded from savings, or 'bootstrapped'.
Internet-enabled markets	Competitors appear – validating the idea – creating culture. Advertisers are not interested in online service provider. People expect free services online. Paid-for services might get access to major blogs. Difficulties finding more potential users. Oliver and Frank try contacting blogs. Encouraging people to act virally. Encouraging more engaging content. Difficulties in promoting more and better ideas. Launch of paid-for service. Encouraging promotional actions by providing free service. Availability of other services enables only monetizing first contact. Aniekan uses other online platforms for finding partners. Kevin uses other online platforms for finding partners. Kevin reads Oliver's response on Quora. David Toborek reads about Founder2be on a German online forum. David Toborek finds alternative platforms that are available free of charge. Lauren uses a search engine to source information on how to find a co-founder. Kapil uses online alternatives for finding a job.
International business system	Competitors appear – validating the idea – creating culture. Users mostly from USA, Finland, also partly from India. Aniekan builds international team for Ziliot. Kevin wants international collaborators as focus on the US market. Founder2be featured on a German online forum. National differences in entrepreneurial orientation/career choices.
Case network	Other ongoing projects force evaluation on meaningfulness of the project. Users merely checking how the platform works. Oliver living on his savings. Need for money to cover costs. Oliver tries to attract advertisers. Signing a deal with InfluAds. Plans for monetizing the service. Oliver and Frank try contacting blogs. Encouraging people to act virally. Encouraging more engaging content. Difficulties in promoting more and better ideas. Launch of paid-for service.

	Encouraging promotional actions by providing free service. Users send messages. Co-founders consider whether messages could be monetized. Aniekan returns to find new partners. Kevin registers to Founder2be. David Toborek registers to Founder2be. David Toborek submits his idea to Founder2be. Lack of comments from other users to posted ideas. David Toborek criticizes Founder2be's monetization.
	Phase 4: From major tech exposure to change in network development approaches
Startup scene	Lauren refers to Founder2be in her blog post. Wolfgang attends startup meetups. Wolfgang tweets to reach people who might be interested in launching a startup. Oliver hosts a startup event in New York. Feedback from offline event is positive. David San Filippo attends meetups and enjoys listening to pitches. Ian prefers meeting people he knows or who know his friends. Ian prefers signing non-disclosure agreements. David Toborek co-founds a new venture in the Netherlands. Jaclyn attends meetups as she prefers meeting potential co-founders offline. Booming startup scene in New York makes it difficult to collaborate with the best talent.
Internet-enabled markets	Lauren refers to Founder2be in her blog post. Bloggers copy content from Mashable. Facebook add-on to link content with non-users. Improving search engine optimization. Wolfgang tweets to reach people who might be interested in launching a startup. People find Founder2be via Twitter and from referrals in Facebook. Some people tweet about Founder2be. Oliver promotes the event via email and Facebook. Plans for increasing online advertising activity. Attracting bloggers diminished. Hugo uses online alternatives for finding a co-founder. Oliver reacts to Hugo's message on LinkedIn. David San Filippo studies social sites similar to his idea. Ian uses other social media to find partners. Ian is not willing to post idea online. Ian beliefs in first-mover advantages in social networking. Founder2be event tickets available via Eventbrite. Kapil tells Oliver that online market works differently in India than in Europe or the USA.

International business system	Lauren refers to Founder2be in her blog post. Bloggers copy content from Mashable. Oliver hosts a startup event in New York. Other obligations keep Oliver and others in Europe. Collaborative partners become passive. Hugo wants to develop the app in the market's location. David Toborek moves to the Netherlands. Kapil tells Oliver that online market works differently in India than in Europe or the USA.
Case network	Oliver and Frank continue developing the platform. Improving on how to find relevant contacts and ideas. Lauren refers to Founder2be in her blog post. More users find Founder2be. Facebook add-on to link content with non-users. Improving search engine optimization. Wolfgang joins Founder2be. Wolfgang attends startup meetups. Wolfgang tweets to reach people who might be interested in launching a startup. Some people tweet about Founder2be. Viral growth remains limited and the co-founders need to be active in maintaining the discussion. Oliver hosts a startup event in New York. Oliver promotes the event via email and Facebook. Feedback from offline event is positive. Plans for increasing online advertising activity. Time and money needed for advertising. Attracting bloggers diminished. David San Filippo registers to Founder2be. David San Filippo is contacted by several users. Hugo registers to Founder2be. Jaclyn attends Founder2be event in New York. Kapil contacts Oliver to get a paid position in Founder2be.

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