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Networking by Incubatees

Tie-formation by Founders with Varying Pre-embeddedness

Master's thesis in NTNU School of Entrepreneurship
Supervisor: Lise Aaboen

August 2019

Master's thesis

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Abstract

Becoming *embedded*, -an integrated part of networks in the environment surrounding a startup's target market, has been proven to be a key factor of success. However, when founders embark on new entrepreneurial projects, they bring with them initial embeddedness, which differs from founder to founder. Understanding how founders with different pre-conditions work to become embedded in new networks may enable incubators to provide their incubatees with tailored and practical assistance. However, researchers have found it challenging to find patterns of tie formation activities among incubator participants.

The purpose of this thesis is to investigate how founders with a varying degree of pre-embeddedness create new and develop existing network ties to achieve embeddedness during the startups' early phases. The research framework builds on social network theory, social capital theory, and more specifically, the concepts of embeddedness and pre-embeddedness. We have used an exploratory multiple case research design, where the primary data consists of 24 interviews with 12 startup founders in a private Swedish incubator.

Our findings suggest that industrially pre-embedded founders move faster from the motivational phase to the planning phase of starting a company as their industry networks enable them to validate critical assumptions quickly. As industry contacts mediated by the incubator provided more value to the incubatees in the planning phase, this leads us to suggest that incubators should encourage incubatees to pursue ventures within the industries where the founders are pre-embedded.

The study has several limitations, where the main concern is that the researcher who collected the data also was a participant in the incubator program. Consequently, measures were taken to avoid that preconceptions and assumptions influenced the results.

Sammendrag

Å bli integrert i ulike nettverk i miljøet hvor en oppstartsbedrift har sin målgruppe har vist seg å være en nøkkel til suksess. Entreprenører som setter i gang med nye oppstartsprosjekter kommer fra ulike utgangspunkt – de er sosialt forankret i forskjellige nettverk og i ulik grad. Det å forstå hvordan entreprenører med ulik sosial forankring jobber for å bli integrert i nye nettverk kan gjøre det enklere for inkubatorer å skreddersy hjelpen de gir sine deltakere. Forskere har imidlertid ikke klart å identifisere hva som kjennetegner hvordan deltakere i inkubatorer går frem for å etablere forbindelser og bli sosialt forankret.

Hensikten med denne masteroppgaven er å undersøke hvordan entreprenører med ulik pre-eksisterende sosial forankring går frem i de første fasene av oppstarten for å skape nye og utvikle eksisterende nettverksforbindelser, i den hensikt å bli integrerte i nettverk oppstartsbedriften må være en del av. Rammeverket for analysen er bygd på teoriene om sosiale nettverk, sosial kapital, og mer spesifikt, sosial forankring. For å nå målet har vi brukt en utforskende, kvalitativ metode, hvor primærdata er hentet fra 24 intervjuer med 12 entreprenører fra en privat svensk inkubator.

Vi har funnet at entreprenører med industriell sosial forankring raskere beveger seg fra den motivasjonsdrevne fasen og over i planleggingsfasen, ettersom industrikontakter gjør at de raskt kan validere nøkkelantagelsene sine. Videre fant vi at industrikontaktene inkubatoren introduserte entreprenørene for viste seg å ha større verdi i planleggingsfasen. Denne innsikten gjør at vi anbefaler inkubatorer å oppfordre sine deltakere til å forfølge prosjekter i industrier hvor de allerede har sosial forankring.

Studien har flere begrensninger. Den største er at forskeren som gjennomførte datainnhentingen også var en deltaker i inkubatorprogrammet. Følgelig ble det tatt forholdsregler for å unngå at hans forutinntatthet og antagelser skulle påvirke resultatet.

Acknowledgements

This master's thesis has been written by three master students from NTNU School of Entrepreneurship at the Norwegian University of Science and Technology.

We would like to thank the incubator participants, who gave us hours of their time that could have been spent forming and developing ties, and the incubator for allowing us to research their cohort.

Furthermore, we want to thank our Supervisor Lise Aaboen for holding our hand as we take our first steps into the world of scientific research. Her guidance, feedback and patience has been much obliged.

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1 Introduction

1.1 Introduction

Embeddedness is vital for startups (Larson and Starr, 1993; Hite and Hesterly, 2001; Hoang and Antoncic, 2003; Shaw, Wilson, and Pret, 2016; Uzzi, 1996; Sorenson and Audia, 2000; Hite, 2005). Jack and Anderson (2002) define embeddedness as the nature, depth and extent of an individual's ties into the environment. In previous research on embeddedness, different perspectives, such as the business, entrepreneurial and social network perspectives (Slotte-Kock and Coviello, 2010; Hoang and Antoncic, 2003), have been used to investigate how new venture entrepreneurs create and develop the network the new venture needs. This research has pointed to several benefits of being embedded, such as the increased ability to identify opportunities and acquire knowledge, resources and legitimacy (Jack and Anderson, 2002; Elfring and Hulsink, 2007; Hite, 2005). In turn, this can lead to competitive advantages, such as the reduction in opportunistic behaviour (Kim and Aldrich, 2005), increased innovation performance (Chiu and Lee, 2012; Aaboen and Löfsten, 2015), risk-sharing and economic effectiveness (Uzzi, 1996), without much capital investment (Slotte-Kock and Coviello, 2010).

When founders embark on new entrepreneurial projects, they bring with them an initial embeddedness, which differs from founder to founder. Pre-existing social contacts (Larson and Starr, 1993) and knowledge of the target industry and local community help early-stage firms get established (Shaw, Wilson, and Pret, 2016; Jack and Anderson, 2002). The effect of this is evident for example among immigrant entrepreneurs, whom Portes and Zhou (1996; 1999) found to have lived a long time in their new country before they start an enterprise (Greve and Salaff, 2003). Similarly, Greve and Salaff (2003) point out that US entrepreneurs are older and slightly more educated than employed workers. These groups have built a bigger network to draw resources from and have a better understanding of the local culture, which increases the chance

of success (Hite and Hesterly, 2001; Shaw, Wilson, and Pret, 2016). Hence, researchers argue for the importance of understanding how the knowledge of, and pre-existing social networks in, the target industry or local community affect the process of becoming embedded in them (Hite and Hesterly, 2001; Elfring and Hulsink, 2007; Witt, 2004; Jack and Anderson, 2002).

1.1.1 Previous Studies of Embeddedness

Witt (2004) argue that the neglect of different stating conditions is a significant shortcoming in existing network studies failing to find results that support their hypothesis of tie-formation patterns. Shaw, Wilson, and Pret (2016, p. 219) introduce the term *pre-embeddedness* as a concept for investigating how different starting conditions affect the embedding process, defining pre-embeddedness as

> *"the sum of all cultural, social and symbolic capital accessible to the founding team prior to business startup.*

However, Shaw, Wilson, and Pret only study one case, and this case is also found to have favourable starting conditions. Similarly, most of the other studies that consider the effect of starting conditions on tie-formation patterns only investigate actors that have good conditions; they are already embedded in their target industry or local community (e.g. Jack and Anderson, 2002; Maurer and Ebers, 2006). Thus, researchers recommend studies to explore embedding as experienced by firms with less favourable starting conditions (Jack and Anderson, 2002; Shaw, Wilson, and Pret, 2016).

An exception to this is Elfring and Hulsink's (2007) study of 32 IT-companies in three categories expected to have different amounts of pre-existing embeddedness in the IT-industry: *independent startups*, *spin-offs*, and *incubator-driven companies*. They found patterns for how independent startups and spin-offs develop their networks, but no clear pattern for tie-formation activities among the incubator-driven companies (incubatees) emerged. Shih and Aaboen (2019) also request more studies on incubatees to illuminate networking processes within incubators and their effects on business growth. Furthermore, Shih and Aaboen request more research on privately funded incubators.

Additionally, Shaw, Wilson, and Pret (2016) state that few studies examine the influence of the multiple, combined networks of founding team members on embedding processes. Instead, researchers tend to adopt a holistic

approach to examine networks on a startup level. Greve and Salaff (2003) ask for further explanation of the tie-formation activities that enables startups to transition from one phase to the next. Lastly, most research on tie-formation activities also predates the widespread adoption of social media and even in recent studies of entrepreneurship and embeddedness; we find few references as to how founders use this powerful networking tool.

Understanding the tie-formation and network development patterns of founders with various starting conditions within an incubator can help incubator management adjust their services to the specific needs of not just the startups, but the individual founders as well. Consequently, there is a need to investigate the networking processes of incubatees with team members with less favourable starting conditions (hereby referred to as pre-embeddedness). The following purpose has been outlined to address and shed light on the gaps in the literature, namely the lack of research on the combined networks of founders within a private incubator, with a varying degree of embeddedness, and how these founders work to embed themselves during the startup's early phases and in the age of social media.

1.2 Purpose and Research Questions

The purpose of this thesis is:

> *to investigate how founders with a varying degree of pre-embeddedness create new and develop existing network ties in order to achieve embeddedness during the startups' early phases.*

Our focus will be on the approaches founders use to achieve embeddedness in their target geographical and industrial markets. These approaches will be investigated from a social network perspective and the founder's perspective, enabling us to investigate the multidimensionality of relationships between actors on a founder level.

The purpose has been broken down into two research questions (RQ), where the second research question builds on the first by bringing the differences in pre-embeddedness into the context of incubators. The first RQ is:

> **RQ1:** *How is the pre-embeddedness of founders connected to tie-formation activities in the early phases of a startup?*

This research question aims to investigate the nature of tie-formation activities of founders (i.e. who, why and how founders reach out to new and existing contacts) during the early phases of starting up a company, to better understand how the founder's pre-embeddedness influences these.

Incubators are an important source of network ties and a good context to build networks. Tötterman and Sten (2005) point out that the comprehensive array of skills and individuals the incubator management brings together trough their network to offer startups tailored services adds value by creating a rich business network of otherwise dispersed individuals. Mian (2014) also finds help with networking to be one of the perceived values gained of startups in an incubator. Bøllingtoft and Ulhøi (2005) even argue that interpersonal relations through external ties in relevant industries, can be more important than the formal structure and context of the incubator, such as office space and lecturing events. Although the external network of an incubator is most useful when the incubator management is able to link incubatees with other relevant business actors and service providers (Lyons, 2002), the incubator can guide the networking process, provide feedback and help select useful network contacts (Elfring and Hulsink, 2007). In their study of how incubators mediate networks to incubatees, Shih and Aaboen (2019) found that incubatees need to be proactive in relation to the incubator to gain accesses to its network in a more meaningful way, and that the network horizon of the incubator is highly connected to its ability to mediate ties outside of its close micro-net network. Lyons (2002) found that the most important service offered by incubators for social capital building is the opportunity to network with other incubatees in the same incubator, enabling them to share knowledge, resources and ties; their physical location under the same roof also makes collaboration much more likely (Bøllingtoft and Ulhøi, 2005).

Because the participation in an incubator program provides close access to a wide variety of people, Elfring and Hulsink (2007) argue that one can regard incubatees as 'indirectly' pre-embedded through the incubator. However, a clear pattern of approaches to tie-formation used by incubatees have not been found (Elfring and Hulsink, 2007), leaving the statement unsupported. This leads to the next research question:

> **RQ2:** *How are founders' tie-formation activities connected to the participation in an incubator program?*

This research question aims to investigate the role of the incubator in providing access to, and embedding founders in, target markets. This question

involves actors such as the founders' use of incubator staff and advisers, as well as other cohort members, for feedback and services, but also leads and referrals to new contacts. Based on Elfring and Hulsink (2007) belief is that the people involved in an incubator can act as door openers to networks of knowledge, resources and legitimacy in target markets.

To fulfill the purpose, we have collected from startups that are part of an incubator, which we have given the pseudonym Generat. Generat recruit talent — not startups — and do so among highly motivated young professionals recruited by the criteria of displaying: grit; edge in a given field or discipline; integrity and inner drive. These participants are offered an intensive program where they are expected to find co-founders and start developing a business idea in 8 weeks. After team formation and concept development, the teams present the concepts to the Generat management on an investment day (ID), and the chosen startups get an offer of 110 000 EUR for 12 percent of the company, as well as an offer to continue in Generat's 12-week acceleration program. The participants are recruited from all over the world. Some have no local network, while others have no network in the industry they target. Consequently, the startups in the Generat program hereby referred to as the incubatees or founders, can provide insights on the process of how startups address embedding activities when pre-embeddedness vary.

Data from 7 case startups has been collected through 24 interviews with the founding members expected to be active in the startups embedding activities. Two interviews with every founder were conducted, the second interview two to three months after the first. Data was also gathered from secondary sources, including LinkedIn profiles, startup web pages and articles written by the founders.

Furthermore, as the maturity of startups grow, their tie-formation activities change (Elfring and Hulsink, 2007; Greve and Salaff, 2003; Maurer and Ebers, 2006; Witt, 2004; Reynolds and Miller, 1992). To investigate the development and understand when and why this happens, researchers define different phases characterized by varying goals, tie-formation activities and underlying motivations for seeking embeddedness. Witt (2004) argues that the criteria to measure startups' success must be set in relation to its current phase as the objectives of the startup changes from phase to phase. Hite and Hesterly (2001) look at the evolution of firm networks and use stages to describe the development of a firm. The article investigates how networks shift between the emergence stage and the early growth stage, and finds that networks shift

from being identity-based to calculative, arguing that entrepreneurs begin by using ties they already have, before transitioning into reaching out to a specific set of arms-length contacts thought to enable the further progression of the company. Greve and Salaff (2003) use three phases defined by Wilken (1979) to investigate how networking activities develop with startup maturity. These phases are

1. *The motivational phase*, where entrepreneurs discuss the initial idea and develop their business concept.
2. *The planning phase*, where the founders prepare to set up the firm.
3. *The establishment phase*, where founders start running the firm and focus more narrowly, for instance, on daily activities.

Dividing the network development of startups into Wilken's three phases, Greve and Salaff (2003) found that entrepreneurs talk more to other people while in the planning phase; that ties to family members are used in the same way across phases; that entrepreneurs spend less time maintaining ties in phase 1 than in phases 2 and 3, and that entrepreneurs in phase 2 have the largest network.

This thesis will use Wilken (1979) three phases to make sense of the tie-formation activities performed in the different cases to be studied. Wilken's phases have been chosen because they already have been used in a similar study of new firms tie-formation activities.

This enables our results to deliver a qualitative and exploratory perspective into the reasons for the tie-formation patterns identified in the quantitative study done by Greve and Salaff (2003). This framework aids us to understand the founders' and their startup's activities and to find patterns on how founders with varying pre-embeddedness progress through these phases.

1.3 Contribution

This thesis contributes to the extant research investigating how modern startups with varying degrees of pre-embeddedness (Shaw, Wilson, and Pret, 2016) network to achieve embeddedness in their target markets. By presenting seven examples of how early-stage founding teams, all aiming to gain private investment, use pre-existing networks and form new ties, we expand the pool

of examples available to future research. Exploring the relatively new concept of pre-embeddedness as presented by Shaw, Wilson, and Pret (2016), we make recommendations on different approaches founders can use to create and develop ties. Furthermore, we make recommendations on how incubators should consider the pre-embeddedness of the participants to help them in the embedding process. We encourage researchers to continue to investigate how pre-embeddedness affects the tie formation activities of founders, and we identify and categorize three ways founders use online tie forming activities to mitigate the need for weak ties when seeking embeddedness.

1.4 Structure of This Thesis

This thesis first introduces the theoretical foundation, based on literature from social network theory, social capital theory and embeddedness. Subsequently, we present the methodology along with the research design and how and which cases were selected. Then the method of data acquisition is described and how it is used to contribute to the purpose. The collected data is then described before we present the analysis in light of the existing literature. Next, the main findings of the thesis will be highlighted and discussed. Finally, the conclusion will sum up the main findings and point to managerial implications, and implications and suggestions for further research.

2 Theoretical Foundation

2.1 Social Network Theory

The network approach in research has existed for over 90 years. It was first used in organizational research, but its conceptual origins were sociology, anthropology and role theory (Tichy, Tushman, and Fombrun, 1979; Parkhe, Wasserman, and Ralston, 2006; Jack, 2010). In recent years, studies focusing on networks and relations in and between individuals, groups and organizations have seen a significant increase in number (Hoang and Antoncic, 2003).

There are several definitions of a network. While Hoang and Antoncic (2003, p. 167) provide a general definition of networks as "consisting of a set of actors and some set of relationships between them", Nelson (1988, p. 39) defines networks as "sets of contacts linking several individuals". Networks consist of a mix of dyadic (the tie between two actors), triadic (the mutual linkage between three actors), and multiplex (on a different basis, e.g. both personal and business) ties between members (Johannisson, 1996; Larson, 1992; Hite, 2005). Within network research, the social network theory analyses society as comprising of fluctuating network structures of overlapping relationships which connects individuals, groups and organizations (Vardaman et al., 2012).

Research on social network theory has made important contributions to the research field on new ventures' networks by investigating the *structure of network ties* and the *interactions between these ties*. This has resulted in a broader understanding of how entrepreneurs can overcome their lack of resources, history and legitimacy, known as the *liability of smallness* and the *liability of newness*, by using their personal networks to acquire the necessary knowledge, resources and legitimacy to survive (Witt, 2004; Chetty and Söderqvist, 2013).

By applying social network theory, this study will both investigate how the networks made available through the founders' existing personal network

(i.e. founders' pre-embeddedness) and through Generat influence the tie-formation strategies, as well as how the founders' stated goals affect the network development over time. We start with a presentation of *network structure*, *network content*, and *network governance*, which are characterized as key building blocks in a model that seeks to explain the process of network development during entrepreneurial activity (Hoang and Antoncic, 2003).

2.1.1 Network Structure

This section introduces the concept of *strong and weak ties*, *structural holes* and *cohesive networks*. These are at the core of the debate about network benefits (Uzzi, 1997; Jack, 2005). Since the early work of Granovetter (1973) and Burt (1992) many others have added to the notion of strong and weak ties, and through empirical work researchers have found patterns in different contexts that have been contradictory, which have also led to contradicting theorizing (Hoang and Antoncic, 2003). This section will sum up and present the main findings on social network structure from the social network literature. Later, in section 2.3.1, this will be used as a basis for the discussion on the use of strong and weak ties from the entrepreneurship research.

2.1.2 Strong and Weak Ties

The concept of strong and weak ties, first introduced by Granovetter (1973), describes how the diversity of strong and weak ties impact on the actions of individuals. In general, network ties have been defined to have many characteristics (Jack, 2010): network ties provide a mechanism through which information and resources are drawn from, and exchanged with, the social context (Aldrich, Rosen, and Woodward, 1987; Johannisson, 2000); they provide the vehicle through which an individual learns about the social context, and the social context learns about an individual (Jack and Anderson, 2002); they provide bridges to new and non-redundant information and resources in other social structures and bond the various relationships between nodes together (Granovetter, 1973; Burt, 1992); they provide the key to unlocking and accessing the network content that resides within a network (Anderson, Park, and Jack, 2007); they are both player and structure, but networks are also structures and flows (Kijkuit and Van Den Ende, 2007; McAdam and Marlow, 2007).

Strong ties are described as homogeneous. The information and support gained through strong ties offer multiple benefits: it is cheap; it is more trustworthy because it is richer, more detailed and accurate; it is usually from a continuing relationship, and so in economic terms, it is more reliable (Granovetter, 1985, p. 490). However strong ties are more likely to provide redundant information since the individuals that a person has strong ties to can be anticipated to move in similar, if not the same, social circles (Burt, 1992). Thus, these scholars perceived the homogeneity of strong ties as less beneficial and to be less effective, causing local cohesion but also leading to overall fragmentation (Jack, 2005).

On the other hand, weak ties, which are described as heterogeneous ties, enables both individuals to integrate themselves into communities (Granovetter, 1973) and information to flow between these communities in the network (Burt, 1992). Hence, Jack (2005) points out that the value of weak ties is not related to the weakness of the relationship, but that weak ties allow individuals from one community to connect with other social systems.

Granovetter (1973) introduced the clear dichotomy of ties to build his model, but in reality, tie strength is a continuous measure, ranging from having no relationship, such as two strangers, through passing acquaintances, to having a strong relationship. Granovetter (1983) defined the strength of a tie to be a combination of:

- Frequency of contact
- Emotional intensity
- Degree of intimacy
- Reciprocal commitments.

However, researchers usually only obtain information on selected dimensions on tie strength (Jack, 2010). Marsden and Campbell (1984) developed a measurement model based on three of the four 'tie-strength'-dimensions mentioned above, excluding reciprocal commitments. Their results indicated that emotional intensity appeared to be the best indicator of tie strength. This measure determines strength based on the *closeness* of ties (i.e. close friends are considered to be 'strong', while acquaintances or friends of friends are called 'weak') (Marsden and Campbell, 1984). Accordingly, researchers most often rely on this indicator, but also frequency of contact, which is the most commonly used indicator (Jack, 2005). On the frequency of contact, Granovetter

(1973) argues that compared to weak ties, contact between strong ties occurs at least twice a week. On the other hand, Marsden and Campbell (1984) point out that frequency of contact tends to overestimate the strength of ties between relatives systematically, and that measures should be taken to avoid biases when assessing the strength of such ties. Additionally, evidence suggests that strong ties can be latent or dormant, such as with former colleagues or university friends, until they are re-activated (Jack, 2005).

The discussion on the measurement of tie strength demonstrates how both the strength of ties and the frequency of contact has several dimensions researchers must take into account. In this thesis, we determine tie strength by using the frequency of contact and emotional intensity. Thus, we consider ties to be strong if they are used more than once a week over a period of time and if they are close to the founder. To disclose the true strength of the tie, the informants are asked to describe both the tie content and history of the relationship

2.1.2.1 Structural Holes and Cohesive Networks

The concept of *structural holes*, as developed by Burt (1992), nuances the view of the network structure further. Structural holes are defined as the separation between non-redundant contacts, meaning that contacts are dyadic and have no direct contact with each other. In Fig. 2.1 "YOU" is connected to A and B through weak ties that bridges the structural holes between the networks of the three actors. As long as neither A nor B has contacts in YOU's network, the three are non-redundant to each other. Contrarily, the tie between C and D are an example of redundant contacts for YOU.

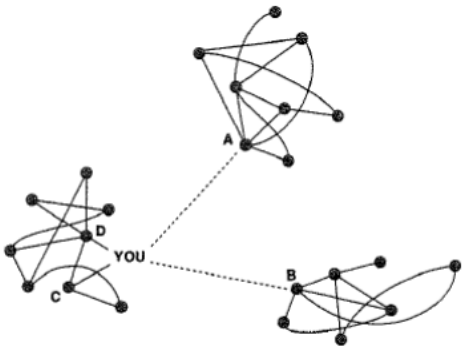

FIGURE 2.1: Structural holes, bridges and cohesive networks from Burt (1992)

Kim and Aldrich (2005) summarize three benefits of bridging a structural hole. Firstly, one can access indirect ties and benefit from the resources and information that circulates in these networks. Secondly, one can take a brokering position and derive the profits of mediating or bringing parties together. Lastly, one can use direct ties to get endorsements to build trust and gain legitimacy for actions among more distant network actors. Additionally, Hansen (1999) argue that weak ties are less costly to maintain.

While Burt (1992) and Granovetter (1973) stress the importance of structural holes and the strength of weak ties, Coleman (1988) emphasize the importance of social cohesion. This second view of network structure refers to networks of 'mutual friends' (Kijkuit and Van Den Ende, 2007). These networks are characterized by a high density and frequency of strong, triadic ties among group members (Hite and Hesterly, 2001). In Fig. 2.1, the network which YOU, C and D are a part of can be characterized as a cohesive network. Coleman (1988) argue that close social networks, such as friends and family, have more resources to draw upon and a more extensive range of actions to choose between. This is because of the inherent obligations, expectations and norms within such networks, which promote trustworthiness and lowers the threat of opportunistic behaviour (Coleman, 1988). Consequently, it is easier to acquire the necessary resources and support for business survival through cohesive networks (Hite and Hesterly, 2001; Kijkuit and Van Den Ende, 2007; Brüderl and Preisendörfer, 1998). However, cohesive networks can also have their drawbacks when expectations and norms become a hindrance to business operations (Jack and Anderson, 2002).

Granovetter (1973) and Burt (1992) both acknowledge the influence strong and weak ties have on the dynamic of networks and the different benefits they provide. Moreover, in a study of extended networks, Uzzi (1996) found a negative effect on survival from very strong or very weak extended networks. Thus, they all argued that a network should consist of a mix of both types of ties (Jack, 2005).

The concepts of structural holes and cohesive networks represent different perspectives on network structure, highlighting different benefits and risks. However, researchers have debated the theory on strong and weak ties within

the entrepreneurship research long after Granovetter, Burt and Coleman's contributions. Based on the theories presented in this section, a more in-depth discussion on the relative importance of strong versus weak ties in entrepreneurship will be presented in section 2.3.1. The next section focuses on the knowledge and resources that are pointed to as resulting benefits from the structures presented in this section. These benefits are described by *social capital theory*.

2.1.3 Network Content

Within the network structure, interpersonal relationships are viewed as the media through which actors gain access to a variety of resources held by other actors (Hoang and Antoncic, 2003). Previously in this thesis, the term 'resources' has been used as a broad term for the network content, namely *social capital*. This concept of resources is available to actors as a function of their location in the network structure (Adler and Kwon, 2002) and can be both tangible resources, such as financial capital (Aldrich, Rosen, and Woodward, 1987), or intangible, such as emotional support (Brüderl and Preisendörfer, 1998), information (Hoang and Antoncic, 2003) or trust (Coleman, 1988). However, having a resource perspective is only one way of defining social capital; the precise meaning of social capital is debated (Cope, Jack, and Rose, 2007). This section presents the research on social capital theory and starts with a closer look at the *definition of social capital*, before the *sources* and some *characteristics of social capital* are presented. The social capital theory forms the basis for understanding entrepreneurial processes and embeddedness, which we will discuss in section 2.2.

2.1.3.1 Definition of Social Capital

Scholars emphasize different aspects to define social capital such as the tangible and intangible assets and resources as the social capital within a network (Adler and Kwon, 2002); the individuals who contributes to a project as the social capital of the project owners (Burt, 1992); more vaguely, as a process, and not a 'thing' (Anderson and Jack, 2002). However, in their review of social capital research, Adler and Kwon (2002, p. 23) synthesized the existing definitions of social capital into the following:

> "Social capital is the goodwill available to individuals or groups. Its source lies in the structure and content of the actor's social relations. Its effects flow from the information, influence, and solidarity it makes available to the actor."

Defining social capital as 'goodwill' is more in line with Anderson and Jack's (2002) view of social capital as not a 'thing', but a willing intent to share information, influence, and solidarity. From this perspective, the source of social capital comes through opportunity, motivation and ability (Elfring and Hulsink, 2007).

2.1.3.2 Sources of Social Capital

As the definition states, the sources of social capital lies in the social structure in which the actor is situated. Thus, to have the opportunity to share social capital, there must be a *recipient* tied to a *donor* (Adler and Kwon, 2002). The networks through which social capital is available were described in the section on network structure (2.1.1). However, social capital theory distinguishes between external *bridging* ties and internal *bonding* ties to be able to study what type of social capital is available through tightly bonded groups and bridged groups (Adler and Kwon, 2002). Through bridging ties, we can study how external actors give the opportunity to leverage their contact's resources (Burt, 1992); through bonding ties, we can study how internal ties create the opportunity to act together (Coleman, 1988).

Secondly, Adler and Kwon (2002) note that donors of social capital must have some form of motivation to share it. However, while Putnam (1993) argue that the donor gets motivation from the trust in a reciprocal action from the receiver on a later stage, Coleman (1988) sees trust as a form of social capital, and not a source. Lastly, the donor must have the ability, that is, possess the requisite expertise or resource, to be a potential source of social capital (Adler and Kwon, 2002).

In this thesis, the level of analysis is on both the founder and the startup level. However, the focus is on how ties are formed and developed through external relations outside of the incubatees; between founders and Generat staff and advisers, and other cohort members; and the founders and people external to Generat. With our chosen focus on external ties, understanding the development of social capital between the founders within an incubatee falls outside of the scope of this thesis. Thus, although bonding social capital such

as norms and trust within a startup are essential factors to success (McAdam and McAdam, 2006), it will not be considered in the theoretical framework. Furthermore, the thesis will regard trust as a mechanism for network governance, as proposed by Hoang and Antoncic (2003). Thus, it regards trust as a source of social capital in as much as it facilitates its flow. A further discussion on the role of trust will be provided in the section on informal governance (2.1.4).

2.1.3.3 Characteristics of Social Capital

Based on the nature of the sources of social capital, specific characteristics are essential for the understanding of tie-formation and development. Firstly, social capital is a long-lived asset that can be accumulated over time by investing in networking activities (Glaeser, Laibson, and Sacerdote, 2002). Furthermore, social capital does not depreciate or diminish with use, but by the absence of use (Glaeser, Laibson, and Sacerdote, 2002). Neither does it become unavailable for other actors, but they can add new ties and strengthen the trust between existing ones (Adler and Kwon, 2002). These characteristics explain how ties can develop from new and weak to relatively strong through interaction, and how lack thereof can cause development in the opposite direction (Bøllingtoft and Ulhøi, 2005).

Secondly, Coleman (1988) argues that social capital is not 'located' within the actors themselves but in their relations. Moreover, Coleman (1988) remarks that social capital can be 'appropriated', meaning that actors can choose how to use their social capital and do so for different purposes. Consequently, to be able to activate or use social capital, both actors must have the motivation and be committed (Burt, 1992). Otherwise, if one actor draws out, the opportunity disappears, and the asset is destroyed.

This section on network content has presented a definition of social capital and described how the available links in a network create the opportunity to source social capital from others, given that the necessary motivation and requisite ability exists. Since this thesis is not concerned with the development of social capital, the theory nevertheless explains how entrepreneurs can access desirable tangible and intangible resources by developing network ties and building social capital (Kim and Aldrich, 2005). Consequently, the search for social capital influences the formation and development of network ties, which is the focus of this thesis. The next section will focus on how actors can

manage their networks through two types of governance mechanisms, that is, *formal* and *informal* network governance.

2.1.4 Network Governance

Thus far, the sections on network structure (2.1.1) and network content (2.1.3) has described the different types of network links, their benefits, as well as why and how these benefits are sought out. This section presents how networks can be managed to facilitate network development (Coviello and Munro, 1997) and enable the effects and resources from social capital to be exchanged (Hoang and Antoncic, 2003). Actors can manage their networks through two sets of governing mechanisms, formal and informal (Lyons, 2002). An understanding of these mechanisms is essential, especially with regards to how entrepreneurs use their existing network and what the formation of new ties requires in terms of trust.

Informal governance includes situations where implicit norms, expectations, and trust govern. On the other hand, some relationships must be formalized and based on contractual relationships to function properly (Lyons, 2002; Bøllingtoft and Ulhøi, 2005). In this thesis, we will focus on informal governance, as our case companies did not use formal mechanisms in the collection period.

2.1.4.1 Informal Governance

The cornerstone of informal governance is trust (Hite, 2005). Trust can be built in several different ways, but typical for all these approaches is that the actors have an understanding and knowledge of the counterpart, which is developed over time (Doney, Cannon, and Mullen, 1998). In other words, trust is based on the shared history of the actors in a relationship have (Hite, 2005). As mentioned, although the relationship between social capital and trust has been interpreted in different ways (see Adler and Kwon, 2002, p. 26), this thesis regards trust as a governing mechanism.

Hite (2005) distinguishes between three types of trust which can govern relationships, *personal goodwill trust*, *personal competency trust* and *social trust*. Personal goodwill trust is based on the personal relationship between network partners who trust each other's goodwill and thus are looking out for each other's best interests. Next, personal competency trust is described as

the knowledge and trust in an actor's ability to perform an expected action correctly. This type is usually built through repeated interactions, which often includes economic exchanges. Lastly, social trust comes as a result of more significant social capital at the network level and is build on information from a third party. Vouching for a friend acts as a critical control mechanism where 'the voucher' puts her reputation on the line if 'the one vouched for' does not comes through. Neergaard (2005) argues that social trust is a mechanism that often is necessary to access networks of indirect ties, where an actor has no personal goodwill or competency trust.

Hite (2005) found that one-layer, or non-multiplex, relationships, where actors in relationships lack multiple types of trust often create problems for each other that could have been prevented with formal governance mechanisms. However, Hite (2005) argues that a combination of different types of trust can function as better protection against opportunistic behaviour, as only one social component can be insufficient as a governance strategy. Thus, in the absence of formal governance mechanisms, actors should work on developing the different types of trust in each other. Only when all three types of trust have been facilitated and developed, a tie can be characterized as fully relationally embedded (Hite, 2005).

This section has presented how actors can govern networks through contracts and similar formal mechanisms, as well as how trust as an informal mechanism can be a door opener and facilitate the development of networks, social capital, and the embeddedness process.

The theories presented in the last three sections have dealt with three aspects of network; structure, content and governance, from general social network theory. Now, the remaining part of this chapter will focus on theories from social network research on entrepreneurship, before we present the theoretical framework for the analysis.

2.2 Embeddedness in Entrepreneurship Research

The last three sections have dealt with the three aspects of network: structure, content and governance. The following sections will draw on the theories and research presented so far and discuss how it has been applied in the context of entrepreneurial research, specifically, on the concepts of embeddedness, and the dynamics and development of networks in early-phase firms. More than

30 years ago, a new research field within entrepreneurship emerged when researchers started to recognize that entrepreneurs were not isolated economic actors but tied to a broader network of actors (Granovetter, 1985; Aldrich and Zimmer, 1986; Hoang and Antoncic, 2003). Since then, scholars have investigated the causes and consequences of embeddedness in the entrepreneurial process (Hoang and Antoncic, 2003). Social network theory is suitable to operationalize embeddedness because the theory analyzes society as a fluctuating network structure of overlapping relationships which connects individuals, groups and organizations (Shaw, Wilson, and Pret, 2016; Hallen and Eisenhardt, 2012). The importance of social networks for the founding and growth of entrepreneurial firms is increasingly acknowledged in the literature (Hite and Hesterly, 2001). Developing a firm from the beginning is strongly affected by social interactions (Carsrud and Johnson, 1989), from which entrepreneurs can draw on social capital (Burt, 1997). As discussed in the section on network content (2.1.3), external network ties provide the opportunity to leverage social capital. Since entrepreneurial firms are characterized as resource-poor entities (Hite, 2003), external network ties represent critical strategic avenues for acquiring necessary external resources, spotting opportunities, and gaining legitimacy (Elfring and Hulsink, 2007; Hite and Hesterly, 2001).

As presented in the thesis' introduction (1.1), embeddedness is identified as the nature, depth and extent of an individual's ties into the environment (Jack and Anderson, 2002). Uzzi (1996) suggests that embeddedness is a logic of exchange where actors do not selfishly pursue immediate gains but concentrate on cultivating long-term cooperative relationships that have both individual and collective level benefits. Obtaining embeddedness in networks where a company wishes to operate, is found to have substantial advantages. Embedded firms have higher survival chances (Uzzi, 1996); better knowledge base, and hence, better innovation performance (Chiu and Lee, 2012; Jack and Anderson, 2002); better access to resources and competitive advantage without significant capital investment (Shaw, Wilson, and Pret, 2016; Ozcan and Eisenhardt, 2009; Slotte-Kock and Coviello, 2010).

Different types of embeddedness and the process to become embedded has been investigated from two main perspectives. This section discusses these *perspectives* and *dimensions* of embeddedness, as well as patterns for how network ties are *formed and developed* to become embedded. The following also includes a discussion on the use of *strong versus weak ties* in entrepreneurship.

2.2.1 Perspectives on Embeddedness

There are two perspectives to understanding embeddedness. One perspective is from the network side, where *structuralists* view a specific environment as an opportunity structure containing a resource pool uniquely suited to an organization that adapts to it or help shape it (Aldrich and Zimmer, 1986). The other perspective is from the agent side, where *process-oriented* researchers focus on how an agent can develop and evolve the network over the venture formation process (Hoang and Antoncic, 2003). Accordingly, Jack et al. (2010, p. 316) rise the question of "whether we can understand networks best by looking at the ties which form the structure of networks or by exploring the interactions between and among these ties." She concludes that research on networks from both perspectives are necessary to understand their complexity.

Jack and Anderson (2002) argue that the network structure sets the conditions for the future, but not deterministically. In broad terms, they argue that becoming embedded is a process of becoming a part of the structure. But in doing so, one enacts on it. It is an interplay of the structure's affects on the entrepreneur and the entrepreneurs affect on the structure (Lechner and Dowling, 2003). Thus, the embedding process involves (Jack and Anderson, 2002, p. 468):

- *understanding* the nature of the structure
- *enacting or reenacting* this structure which forges new ties
- and *maintaining* both the link and the structure

Accordingly, Shaw, Wilson, and Pret (2016) suggest that researchers should pay closer attention to both the context in which economic exchange occurs and the interactions required to facilitate these exchanges, thus taking into account how capital is extracted from the network by specific actions. This can result in novel insights. Employing both perspectives in a study of rural entrepreneurs, Jack and Anderson (2002) found latent opportunities in the network structure that would not have manifested themselves unless an embedded entrepreneur took certain actions; suggesting that an embedded agent can act to seize network opportunities that are otherwise unavailable for non-embedded actors.

In this thesis we employ both perspectives. We are not testing structuration, but use it as a theoretical approach to investigate how entrepreneurs use their

existing personal network and Generat to form ties in the creation and operation of their business (Jack and Anderson, 2002). We regard the entrepreneurs as *agents*; their personal network and Generat staff, advisers and cohort members as *the structure*; and the tie-formation and development process as *the enactment* on this structure. However, to investigate how founders create new and develop existing network ties, we must first develop a concept for how the founders can have knowledge of the structure, can form new and develop existing ties, and govern both the link and the structure (Jack and Anderson, 2002). We start with how entrepreneurs can have knowledge of the network.

2.2.2 Dimensions of Embeddedness

Researchers highlight different dimensions of embeddedness. One such dimension is cultural embeddedness, which is related to the amount of cultural capital possessed by an actor (Zukin and DiMaggio, 1990). Cultural capital is conceptualized by Bourdieu and Richardson (1986) by distinguishing between three types, namely cultural capital that is: *embodied* in a person; *objectifiable* through cultural goods; and *institutionalized* through work and educational experience. Shaw, Wilson, and Pret (2016) interpret the institutionalized cultural capital as knowledge and use this to argue that entrepreneurs' ability to socially embed themselves in a network is affected by their amount of knowledge (i.e. cultural capital) about said network. This applies both to geographical networks, as well as industry networks (Shaw, Wilson, and Pret, 2016).

Jack and Anderson (2002) looked at the geographical embeddedness as determined by the networks, ties and relationships of the entrepreneur in local environments. They found that embeddedness in the local environment played a significant role in entrepreneurial success in rural places. Geographically embedded actors have knowledge of and understand the structure they are in. Thus, they are able and enabled to recognize and realize local opportunities (Jack and Anderson, 2002). Korsgaard, Ferguson, and Gaddefors (2015) nuance the work of Jack and Anderson by arguing that it is not the geographical location of the local network ties, but their socio-material knowledge (i.e. the knowledge about the material, historical and cultural influences on a specific location) that is important for entrepreneurs looking to create opportunities.

Elfring and Hulsink (2007) studied spin-off companies with entrepreneurs who were considered to be *insiders* in the industry. These were found to possess in-depth industry knowledge, which enabled them to acquire the necessary resources from their existing network quickly. Contrarily, independent startups, who were considered to be *outsiders* to the industry and lack an in-depth knowledge of it, were often found to conduct "a frantic search for people who could provide information on new opportunities and on the feasibility of the business plan" (Elfring and Hulsink, 2007, p. 1857).

By defining cultural capital as prior knowledge, this would be possible to acquire through self-taught means, such as reading. However, true knowledge about culture is mainly acquired through social capital, which in turn comes from already existing network ties. This type of embeddedness which concerns the architecture of social structures is called structural embeddedness (Zukin and DiMaggio, 1990). On this view, the amount of pre-existing ties affects the entrepreneur's ability to become embedded (Hallen and Eisenhardt, 2012). This is supported by Hite and Hesterly (2001, p. 283), who refers to Gulati (1995) in concluding that "not all emerging firms are equally endowed in terms of initial network connections and these differences matter as some firms may begin their ventures with a higher endowment of network ties that may be richer in needed, available, and accessible resources." This also applies to individual entrepreneurs (Shaw, Wilson, and Pret, 2016).

The third type of embeddedness is relational embeddedness. The initial representation of this was that a network tie was either considered to be embedded or not (e.g. Granovetter, 1985; Uzzi, 1996). Hite (2003) argued that this representation reduces embedded networks to a homogeneous set of network relationships, and correspondingly, a set of homogeneous strategies and governance mechanisms could be applied to acquire resources. Emerging firms may have little control of the point of network entry, but they can proactively and strategically facilitate both the type and the extent of relational embeddedness through social leveraging (Hite, 2005). As presented in the section on network governance mechanisms (2.1.4), social relationships are multiplex and can be based on and governed by different strategies and mechanisms (Hite, 2005; Uzzi, 1996). Hence, Hite (2003) introduced a new typology to describe the variety of relationally embedded ties. This typology is based on ties forming through either personal or dyadic economic relationships or third party referrals. As mentioned in 2.1.4, these relationships can develop and

take different paths until they hold personal goodwill, competency, and social trust, making them fully embedded (Hite, 2003; 2005). In a similar logic to the influence of existing structural embeddedness, Hite (2005) argues that the unique composition of existing relationally embedded ties may directly influence the evolution of the later network.

Shaw, Wilson, and Pret (2016) use the term symbolic capital for the mechanisms that enable entrepreneurs to generate trust and convince others that their cultural and social capital is legitimate and credible. In this, the authors also include a signalling effect from holding relationships to respective customers, partners and investors, as well as having public recognition, as mechanisms to communicate trust. Thus, not only will the existing network composition in terms of relationally embedded ties affect the embeddedness process, but also in terms of the signalling effect.

From this discussion, we draw the following conclusions. Firstly, cultural capital (i.e. prior knowledge) about the target industry and geographical location is essential for the embedding process, and a distinction should be made between these type of contexts. Secondly, existing relationships in terms of structure and relation, both influence the embedding process. Finally, trust can both influence the embedding process through the signalling effect and function as a mechanism to maintain it through informal governance. Later, in the section on pre-embeddedness (2.3.4.1), we will adapt these constructs to create a theoretical framework.

Although factors that influence the embeddedness process has been identified, researchers exact understanding of the interactions needed to become embedded and acquire the available social capital is still vague (Shaw, Wilson, and Pret, 2016; Jack and Anderson, 2002). Nevertheless, some patterns of tie-formation have been found. Therefore, we will take an in-depth look at tie-formation and development patters. This starts with a historical presentation of the discussion on *strong versus weak ties* before a brief description of different *phases* in the entrepreneurship research lead up to an outlining of a *contingency approach* to network development. Finally, the research on how different pre-conditions affect tie-formation and network development is presented.

2.3 Tie Formation and Network Development

2.3.1 Strong VS Weak Ties

Traditionally, the entrepreneurship literature has emphasized that weak ties are more effective for entrepreneurship (Jack, 2005). The proponents of this view use the point that information tends to circulate more within local clusters (Adler and Kwon, 2002). Thus, access to different clusters through weak ties can provide entrepreneurs with opportunity search benefits (Hansen, 1999; Hoang and Antoncic, 2003), autonomy (Perry-Smith and Shalley, 2003), diverse resources (Aldrich, Rosen, and Woodward, 1987) and information (Granovetter, 1973; Shaw, Wilson, and Pret, 2016). Furthermore, Chell and Baines (2000) argue that it is weak ties who bring in the new resources that enable businesses to grow, and Kijkuit and Van Den Ende (2007) remark that they do so at a low cost in terms of time and effort. Accordingly, Burt (1992) argues that entrepreneurs can access more significant social capital benefits through sparse networks with few redundant ties.

However, especially the access to resources through weak ties is debated. Anderson and Jack (2002) note that the level of trust between the actors significantly influences economic exchanges; particularly if no formal governance mechanism is also used. Bøllingtoft and Ulhøi (2005) point out that because the uncertainty of whether the donor will ever receive a reciprocal benefit, trust will govern over such exchanges. This uncertainty explains why ties in other firms see a risk in the emerging firm's ability to survive (Hite and Hesterly, 2001), to act opportunistically (Uzzi, 1996; Granovetter, 1985), and why weak ties are hesitant with providing in-depth information or access to valuable resources (Uzzi, 1996).

In conjunction with this, Levin and Cross (2004) found that weak ties who are perceived to be trustworthy yield the most useful knowledge. Kijkuit and Van Den Ende (2007) found that relatively weak ties suffice to search for knowledge; strong ties support the actual transfer of knowledge. Close, strong ties have been found to help entrepreneurs with support, justification of choices and problem-solving capabilities (Aldrich, Rosen, and Woodward, 1987; Hansen, 1995; Lechner and Dowling, 2003).

In her study of startup companies in Scotland, Jack (2005) investigated how a startup in the creative industry utilized weak and strong ties to get embedded.

She found little evidence for the use of weak ties, but rather that entrepreneurs relied upon and gained more from the use of their strong ties. She also found that the benefits of these ties were especially relevant and important in the establishment phase (see 2.3.2 for an explanation of the phases) of the firm. Moreover, respondents in the study referred to family, friends and ex-work colleagues as the paramount contacts in their networking activities. She also found that strong ties operated on behalf of the entrepreneur. They became a sort of resource *feeders and seekers* as well as *reputation enhancers* who contacted links in the wider structure and reported back their findings.

Another study supporting the importance of strong ties over weak was done by Brüderl and Preisendörfer (1998). They found that the support of strong ties, measured as support from friends and family, had a positive impact on business survival. The same study also found that weak ties, measured as support from business partners and acquaintances, were a poor predictor of performance. Although these findings are criticized for the problematic definition of weak ties, Hoang and Antoncic (2003) still note that the results for strong ties seem defensible. This point suggests that entrepreneurs benefit from the ready access to resources that strong ties represent.

The different findings have lead researchers to suggest that the debate requires a contingency approach (Hoang and Antoncic, 2003; Hite and Hesterly, 2001). This will be addressed in the section after next about a *contingency approach to network development*, but first, there is a need to review some of the phase models researchers have used to study tie-formation.

2.3.2 Phases of Development

First, it must be noted that researchers use a different set of phases for the initial periods of new venture creation (Greve and Salaff, 2003). Larson and Starr (1993) and Hite and Hesterly (2001) start with an *emergence* phase, which begins just after the founders have decided to start the new venture and transitions into the *early growth* phase. Differently, Greve and Salaff (2003) use the three-phase model of Wilken (1979) presented in the thesis' introduction (1.1), but which we will repeat for the ease of the reader.

1. *The Motivational Phase*, where entrepreneurs discuss the initial idea and develop their business concept.
2. *The Planning Phase*, where the founders prepare to set up the firm.

3. *The Establishment Phase*, where founders start running the firm and focus more narrowly, for instance, on daily activities.

Several other phase models have also been conceptualized such as the; phase models for relational tie development by Hite (2005); Lechner and Dowling's (2003) stage model ranging from fast-growing startups through three IPO stages to become an established firm; models more specifically connected to product development (Kijkuit and Van Den Ende, 2007). However, since the motivational and planning phases of Wilken (1979) are both within the emergence phase and leading up to early growth, this perspectives enables a more in-depth investigation into the early phases. Furthermore, with the explicit inclusion of a phase before idea validation, Wilken's model stands out as especially suitable to be able to investigate the tie-formation activities of founders who have not decided on what business idea to work on and are in the motivational phase. Thus, this thesis adopts this phase model.

2.3.3 Contingency Approach to Network Development

Tie formation and development has been researched from both the relational and structural perspectives. As with embeddedness, relational tie development concerns the formation and development of multiplex ties between individuals (Hite, 2005), while structural research concerns the amount and type of ties formed and the development of the network. Although we acknowledge the importance of the relational development of ties as presented by Hite (2005), we will treat the concept holistically and not go further in detail into the development process from single-level relationships to full relational embeddedness. Instead, in the subsequent paragraphs, we will focus more on theory concerning how the network of the startup develops through the founder's processes and the need for a contingency theory for the use of strong and weak ties.

Previous research has identified three ways for a new contact to enter this network; through personal relationships, dyadic business exchange and third-party referrals (Uzzi, 1996; Hite, 2005; Hallen and Eisenhardt, 2012). As a new venture starts up, its network is practically synonymous with the personal networks of the founders (Hite and Hesterly, 2001; Lechner and Dowling, 2003). However, to separate between the entire network of the individual and the network of the venture, Kijkuit and Van Den Ende (2007) use the term *network of the idea* for the network of ties used to start and develop the new

venture; Greve and Salaff (2003) use the term discussion networks. We will call it the network of the startup or incubatee, which is the sum of all the ties the founders of the incubatee used to develop the venture.

Research on network development has found a connection between tie-formation and resource needs within startups (Aldrich, Rosen, and Woodward, 1987; Hite and Hesterly, 2001; Shaw, Wilson, and Pret, 2016). In accordance with the theory on strong and weak ties, startups have been found to rely heavily on strong, embedded ties from cohesive networks who are more willing to provide support when uncertainty is high in the emergence phases of development (Aldrich, Rosen, and Woodward, 1987; Jack, 2005; Hite and Hesterly, 2001). Even in the motivational phase, before entrepreneurs start their new venture, they have been found to rely heavily on close, trusted ties. Greve and Salaff (2003) explain this with the entrepreneurs wish to protect the business idea. Hite and Hesterly (2001) use the term *identity based* for this initial set of ties because they are used more because of who they are, rather than for a specific economic function.

Hite and Hesterly (2001) also argue that the early network development is more *path-dependent*, meaning that it is more based on chance and prior history and that the environment may resist intentional management because of a lack of trust (Larson and Starr, 1993). (Lorenzoni and Ornati (1988) use a similar term for this phenomenon, but characterize the network development as *unplanned*.) Other factors that contribute to this path-dependence are, for example, existing, embedded contacts that have an adverse interest or influence on the startup, and whom founder's find it difficult to sever relationships with (Hite and Hesterly, 2001). This phenomenon is what Uzzi (1997) describes as *over-embeddedness*. Another factor is the startup's limited awareness of available resources and opportunities during emergence (Hite and Hesterly, 2001). Both these factors reduce the adaptability and flexibility of the network and support the theory on path-dependence.

Then, as the startup develops towards growth, new resource requirements emerge that can not be covered by the startups existing, cohesive network (Aldrich, Rosen, and Woodward, 1987). Thus, the entrepreneur starts growing the network (Greve and Salaff, 2003), exploiting structural holes by contacting weaker ties that can fulfill a more specific purpose and function, but also expect more in terms of economic benefits (Aldrich, Rosen, and Woodward, 1987; Hite and Hesterly, 2001). The network mix of embedded and arm's length ties holds the necessary resources for early growth and makes

out what Hite and Hesterly (2001) describe as a *calculative* network. Since the startup has gained some traction and reputation, it is less path-dependent and more capable of intentionally managing the network (Hite and Hesterly, 2001). However, Hite and Hesterly (2001) remark that as management capabilities vary, so will the transition from path-dependence to intentionally managed networks. Once the necessary resources to grow have been found and entrepreneurs enter the *establishment* phase, they have been found to reduce their social network to meaningful, helpful members, and spend less time networking (Greve and Salaff, 2003).

However, this contingency approach, where startups go from strong ties towards weak, have been disputed by the findings of others (e.g. Shaw, Wilson, and Pret, 2016). Lechner and Dowling (2003) argue that in order to overcome the liability of newness in the initial phase and go from a path-dependant approach to intentionally manage its network, startups have been found to rely on reputation networks that transfer legitimacy. These networks often consist of a majority of weak ties, since startups need to approach weak ties if strong ties cannot provide it (Lechner and Dowling, 2003). Nevertheless, Lechner and Dowling (2003) note that every firm has an individual, relational mix based on their pre-conditions and that this changes with the development of the firm. The phases Lechner and Dowling (2003) and Shaw, Wilson, and Pret (2016) use are not comparable to the ones of Larson and Starr (1993) and Hite and Hesterly (2001), Jack (2010, p. 130) simply remarks that "networks take different forms with features depending on the needs of the individual and his/her venture at any given time." These needs differ in accordance with the startup's circumstances or 'conditions' (Lechner and Dowling, 2003).

2.3.4 Conditions for Network Development

One study that examined the different needs of startups was done by Elfring and Hulsink (2007). As presented in section 2.2.2, the authors investigated the tie-formation and network development patterns of startups based on their relative pre-existing embeddedness in an industry, differentiating between insiders, outsiders and incubatees. They were able to find patterns of tie-formation and network development among insiders and outsiders but found it hard to conclude on how the incubatees sought embeddedness. The patterns are listed in table 2.1.

Actor	Approach	Pattern
Insiders (incremental)	Network Evolution	While pursuing incremental innovation, insiders quickly validate and acquire necessary resources from an existing network of strong ties. They only turn to weak ties when the strong ties can not provide the necessary information or resources. Unless forced to, insider entrepreneurs are generally bad at forming new weak ties.
Insiders (radical)	Network Renewal	While pursuing radical innovation, insiders use more from of a mix of strong and weak ties to gather information and resources. The approach is more determined than outsider's approaches.
Outsiders	Network Revolution	Frantic search for new ties. Relies on finding key industry actors who can help. The dominant networking activity is the exploration of weak ties and the formation of ties to new contacts. Ties are dropped once found unfruitful. Old strong ties helps with gaining access to required resources.
Incubatees		Considered as 'indirect' insiders in that they profit from the incubator's network ties in the industry. No clear pattern of approach.

TABLE 2.1: Patterns of network development among industry insiders and outsiders by Elfring and Hulsink (2007)

As Elfring and Hulsink (2007) expected the tie-formation activities to vary based on the startups' initial embeddedness but found no conclusive answers in relation to businesses within incubators, we wish to narrow the scope and look only at startups within an incubator. Consequently, as all of the cases investigated in this thesis fall into one of the founder condition definitions of Elfring and Hulsink (2007), a finer set of concepts to address the pre-conditions of a founding team is needed. Such a concept is provided by Shaw, Wilson, and Pret (2016) and presented in the following section.

2.3.4.1 Pre-embeddedness

In the section on types of embeddedness (2.2.2), three conditions were presented that affect the entrepreneur's ability to embed themselves, namely cultural, social and symbolic capital. Shaw, Wilson, and Pret (2016) stress the importance of investigating the influence of the amount of these capitals founders bring with them into the process of establishing a firm, their *pre-embeddedness*.

Shaw, Wilson, and Pret (2016, p. 220) defines this as "the sum of all cultural, social and symbolic capital accessible to the founding team prior to business startup". The paper builds on earlier work done within the field, including that of Greve and Salaff (2003), Jack (2010), Elfring and Hulsink (2007), Hoang and Antoncic (2003), and Hite (2005) and "develop a conceptual model that illustrates the interplay between pre-embeddedness, networking and embedding activities, and the ongoing outcomes of these processes" (Shaw, Wilson, and Pret, 2016, p. 220).

Shaw, Wilson, and Pret (2016) found that startups benefit from the complementary knowledge, personal networks, and prior reputations (i.e. the cultural, social, and symbolic capital) of all the founding team. Furthermore, a strong pre-embeddedness can 1) facilitate and eases a startup's entry into an industry, and 2) is an indicator of the startup's potential success. Thus, they argue that entrepreneurs will benefit from establishing new firms within locations and industries in which they possess a significant degree of pre-embeddedness.

As presented in section 2.2.2, the cultural capital is related to knowledge from prior experience, including prior work experience and educational qualifications; social capital is related to the network of the entrepreneurs; symbolic capital is related to any trust generating traits that enable the founders to convey to others that they possess economic, cultural and social capital (Shaw, Wilson, and Pret, 2016).

Shaw, Wilson, and Pret's (2016) adoption of a single-case design, inhibits the generalizability of their findings. In their study, the case is found to have high pre-embeddedness in the target industry. As their conceptual model is still quite young, it has not yet been applied to look at how varying pre-embeddedness affects networking and embedding activities. However, as it builds on well-applied concepts from capital theory, embeddedness and social network theory, it is found to be adequate to use Shaw, Wilson, and Pret (2016) definition of pre-embeddedness to address the pre-existing sum of social, cultural and symbolic capital available to a startup team before embarking on an entrepreneurial journey.

2.4 Summary

Through the presentation of different theories, this chapter has outlined important concepts of social network theory. First, the concept of strong and weak ties lay the foundation for network structure through the bridging of structural holes and bonding of cohesive clusters (Granovetter, 1973; Burt, 1992; Coleman, 1988). Within these networks, entrepreneurs have the opportunity to access and acquire network content such as information, resources and legitimacy through social capital made available by motivated and able donors (Adler and Kwon, 2002). For the effect of social capital to flow and facilitate network development, entrepreneurs can use different governance mechanisms ranging from formal contracts to informal mechanisms such as trust-based on personal relationships, competence and third party referrals (Hoang and Antoncic, 2003). Then, research on embeddedness in entrepreneurship was introduced, and the two perspectives of structuralists and process-oriented researchers (Hoang and Antoncic, 2003), as well as different dimensions of embeddedness were described; industrial and geographical (Jack and Anderson, 2002; Elfring and Hulsink, 2007); cultural, social, and symbolic (Shaw, Wilson, and Pret, 2016). Next, tie-formation and network development patterns were discussed through 1) a historical presentation of the discussion on strong versus weak ties (Jack, 2005) and 2) the discussion of contingency from an identity based and path-dependant network in the emergence phase to a calculated and intentionally managed network as entrepreneurs require new resources in the early growth phase (Hite and Hesterly, 2001). By investigating the development through the lens of Wilken's (1979) phases, we can get a deeper understanding of this transition within the emergence phase. Lastly, we presented the importance of considering pre-embeddedness (Shaw, Wilson, and Pret, 2016) and provided an in-depth description of the network development patterns of startups with different industry pre-embeddedness (Elfring and Hulsink, 2007), which will prove valuable as a comparison to the findings of this thesis.

Based on these theories, we have constructed the theoretical framework in Figure 2.2, which will be used in the analysis of the data. A description of the main variables are outlined in the next section.

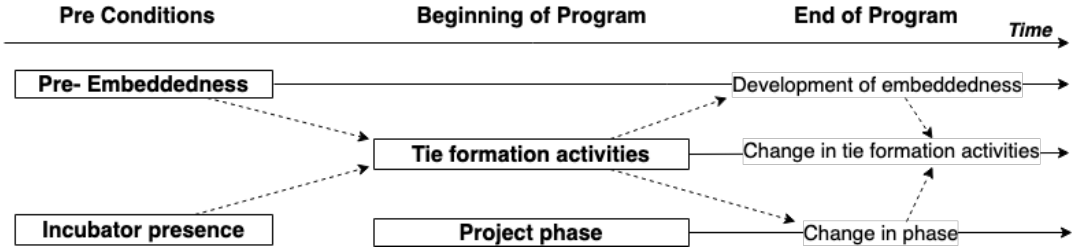

FIGURE 2.2: Research Framework

2.5 Research Framework

The framework consists of a set of two pre-conditions; the pre-embeddedness of the founder, including the existing knowledge and network within a geographical location or industry; the ties made directly available through the participation in an incubator. Based on the extant literature within the field presented in this chapter, we expect pre-embeddedness, incubator presence, and startup phase to affect the tie-formation activities of the startup. These activities are then expected to change the embeddedness and the phase of the startup over time, again affecting the tie-formation activities that the startups perform to achieve progress.

By considering these pre-conditions, we can investigate how the network structure influences the tie-formation activities towards strong and weak, direct and indirect, and local and non-local actors. Furthermore, by collecting data from the beginning and towards the end of the program, we can investigate how the tie-formation activities are connected to changes in both the development phases and the level of embeddedness in the target industry or geographical location, and in turn, how these changes influence tie-formation activities.

In the next chapter, we will refer back to the research framework in the section on data analysis (3.5) while outlining how we differentiate between the different amounts of pre-embeddedness, strong from weak ties, direct from indirect, the use of incubator staff and cohort, as well as which phases the founders are in. This enables us to answer the purpose of the study, which is to investigate how founders with a varying degree of pre-embeddedness create new and develop existing network ties in order to achieve embeddedness during the startups' early phases.

3 Method

This chapter describes the research methodology that was used to fulfill the purpose of this thesis, which is to investigate how founders within an incubator and with varying degrees of pre-embeddedness create new and develop existing network ties in order to achieve embeddedness during the startups' early phases. The chapter begins with a presentation of the research design for a multiple case study with an abductive approach, as presented by Tjora (2018). Within this section, an overview of the step-wise methodology is described, before the methodology of each step is further described in detail. Thus, this chapter includes the case selection criteria, the tools for data collection and analysis, and reflections on limitations in terms of trustworthiness.

3.1 Research Design

This thesis aims to explore how founders with varying pre-embeddedness use their existing networks and create new ones to become embedded. This calls for a qualitative research approach (Tjora, 2013), which is suitable when the purpose is to gain new insight and better understand a phenomenon within a new context and over a given time (Dubois and Gadde, 2002). The case study approach is especially appropriate when the research question is a 'how' question, about a contemporary event which is out of the investigators' control (Yin, 2014), and when the focus is on understanding dynamics over time (Eisenhardt and Graebner, 2007). Within entrepreneurship studies, case studies are particularly useful when exploring the dynamics between entrepreneurship and networks according to Shaw, Wilson, and Pret (2016) who cites Hallen and Eisenhardt (2012), Jack et al. (2010), and Lechner and Dowling (2003).

Consequently, this study is based on an exploratory multiple-case design, where a "case" is defined as the focal network of individual founders, meaning the network of contacts that have provided information, input or leads related to the startup project. Therefore, contacts with whom the informants

had mentioned the startup just to catch up, but who had not provided information, inputs or leads, were not included. The founders are also divided into their respective startups, taking into account how they might supplement each other's tie-formation and network development strategies. Thus, our perspective is an adaptation of the focal firm perspective of Tikkanen (1998, p. 113-114), who defined the focal network as "all those network features that might have relevance to the focal firm and the focal study".

Initially, we focused on investigating pre-embeddedness with a level of analysis on the startup level. However, we pivoted to an embedded case analysis came as a consequence of discovering that tie-formation and network development strategies vary just as much among founders within a startup, as between the startups themselves. This realization will be elaborated on in section 3.2.1. The embedded case analysis approach allows for a broader focus of the case (Shih and Aaboen, 2019) and a broader exploration of research questions (Eisenhardt and Graebner, 2007). Additionally, Kim and Aldrich (2005) argue that because most social network theories have been developed with individual relationships in mind, the researchers require full network data at the individual level. The choice of a multiple-case study, as opposed to a single-case study, strengthens the findings through triangulation and reduce the criticism around the findings as the number of cases increases (Yin, 2014).

3.1.1 Methodology

This study seeks to refine the theories on pre-embeddedness developed by Elfring and Hulsink (2007) and Shaw, Wilson, and Pret (2016) by also investigating non-embedded entrepreneurs and focusing specifically on incubatees. Therefore, we adopt an abductive approach called step-wise deductive-inductive (SDI), which is developed by Tjora (2018). Abductive approaches are more suitable for theory development, rather than theory generation, since it "builds more on refinement of existing theories than on inventing new ones" (Dubois and Gadde, 2002, p. 559). The goal of SDI is to find generalizable aspects in the findings that apply to the population and not limited to the sample of cases (Tjora, 2018).

Figure 3.1 illustrates the abductive approach used in this study. **Step 1** was to conduct interviews based on the research questions synthesized by a defined research gap. **Step 2:** The initial coding of these interviews revealed it was necessary reframe the theoretical framework to be able to make sense

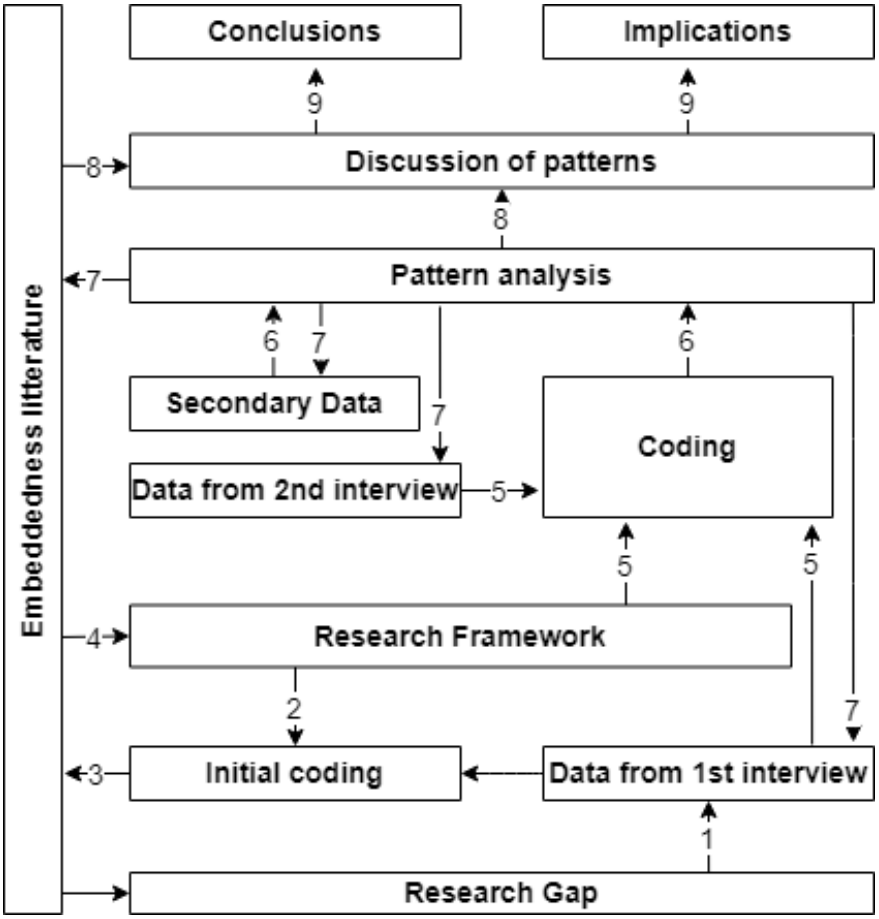

FIGURE 3.1: Illustration of how the research has been conducted

of the data. This lead to **step 3**: Comparing our coded data to the embeddedness literature. **Step 4** was to readjust our research framework based on this comparison. **Step 5** involved conducting new interviews enabling us to follow cases over time, as well as asking supplementary questions to gather additional data necessary after re-framing the research framework. This new data and the data from our first interview were coded according to our new research framework. In **step 6**, the coded data was analyzed to look for patterns. We then went back to the interviews and secondary data sources to look for rationales and information that could explain or contradict the tie-formation patterns that were identified in **step 7**. **Step 8** was to discuss how patterns found in separate the founder's approaches may relate to each other, and to the extant literature. In **step 9**, we presented our conclusions, contributions and implications based on the analysis.

3.2 Case Selection

3.2.1 Selecting the Cases

The cases were selected from the teams participating in Generat's program. In the program's beginning, founders are expected to explore ideas and form teams with the other cohort members. By selecting cases from this group and at an early phase of the program, we were ensured access to founders in newly formed teams and were able to interview founders who were still exploring ideas and that had not yet committed to a project. After eight weeks at Generat, founding teams pitch their projects at Investment Day, where selected teams are offered 110000 EUR for 12 percent equity by Generat. The selected teams may continue to the second phase of the program where startups are expected to acquire additional investor funding and market acceptance.

Limiting the population from which the research sample is drawn to the teams participating in Generat's program also helps control for extraneous variation (Eisenhardt, 1989), such as program management, which has proven to have a significant role in mediating contacts (Shih and Aaboen, 2019). Additionally, some logistical constraints (Koivu and Hinze, 2017) affected the selection of Generat teams as a population. One of the researchers was participating in the program himself and thus had a pre-existing connection to both the program management and the program participants. The access to the incubator made the study feasible within the time and economical constrains of the researchers. The pros, cons and implications of one of the researchers partaking in the program are discussed in 3.6.

The original selection of cases was based on the replication logic of Yin (2014), who propose that findings are only considered to be robust when they are found in similar or slightly altered replicated studies. Accordingly, cases were selected because they were expected to either produce similar results, known as literal replication, or contrasting or deviating (Koivu and Hinze, 2017) results, but for predictable reasons, known as theoretical replication.

The theoretical sampling stands in contrast to statistical sampling, where cases are chosen randomly, which is common in statistical analysis (Hallen and Eisenhardt, 2012). However, since the purpose of this thesis is theory refinement and with the limited number of cases, random sampling is neither necessary nor preferable (Eisenhardt, 1989). Instead, Pettigrew (1988) argues that

"it makes [more] sense to choose cases such as extreme situations or polar types in which the process of interest is 'transparently observable'" (as cited in Eisenhardt, 1989, p. 537). Cases were thus chosen for their theory-refining reasons.

With replication in mind, the cases were initially selected to fit into either of two groups. The first group consisted of startups with either Swedish members or members who had lived in Sweden long enough to establish a geographical network of contacts, before Generat. The second group consisted of startups where the members were neither from nor had they lived in Sweden for a significant amount of time. These sets of startups can be considered polar types (Eisenhardt and Graebner, 2007). We hoped this could shed light on our research questions from different angles and lead to more apparent pattern recognition. However, after conducting some of the interviews, we realized two things. Our initial screening to address what founders were geographically embedded had not been thorough enough, and we found that only a few teams actually had no team members with any pre-embeddedness concerning Sweden. Secondly, we found a varying degree of pre-embeddedness to the geographical network, but also to the industrial network startups were targeting. Thus, we decided to dissolve our juxtaposition of startups that were pre-embedded and not pre-embedded in relation to Sweden, and include a coarse specter of pre-embeddedness in the spatial and industry dimensions. This allowed us to conduct an exploratory study and investigate the combined focal networks of the individual co-founders with a varying degree of pre-embeddedness.

The case teams were contacted via Slack and asked to participate in the study. This resulted in the selection of twelve informants from seven teams. The teams are assigned the following pseudonyms for anonymity: Alpha, Bravo, Charlie, Delta, Echo, Foxtrot and Golf.

3.3 Case Introduction

In total, twelve founders in seven startups were interviewed during the spring of 2019. Following under is a brief introduction of each of the startups and the accompanying founders. The introduction includes the basic idea behind the startup, how it came into existence, a short history of the founders and their skills, experience and expertise.

3.3.1 Alpha

Alpha is building a platform where people that know or want to learn more about artificial intelligence can form teams and collaborate with experts on building solutions for private or public organisations. Hence, Alpha educates AI enthusiasts, allowing them to work on real-world problems while still managing to deliver AI models to customers. An example of a problem Alpha has solved is to use machine learning to spot roof edges of houses in rural areas from satellite photos to calculate the area of roof surfaces with the potential for solar cells.

Alpha was started in the fall of 2018 by A-1. A-2 joined Alpha late 2018, and A-3 joined through Generat in January 2019. Alpha did not receive funding from Generat on ID.

3.3.1.1 Co-founder A-1

A-1 started development of the idea when building an AI-software for a solar client. A-1 found that outsourcing and collaboration worked well within developing AI algorithms and thus decided to put this collaboration in a system where enthusiasts within AI could collaborate to create a real-world working project. A-1 holds a M.Sc of science in Technology Innovation and has published ten research papers on AI artificial intelligence. A-1 has built six tech startups where one had a multi-million dollar exit and is a mentor and public speaker on artificial intelligence and entrepreneurship. A-1 also writes articles online. A-1 grew up in India, Studied in England and the Netherlands, and A-1's previous startups were in the UK. A-1 had not lived in Sweden before joining Generat-program.

A-1 was reluctant to share the entire contact list with the researchers. Firstly, A-1's opinion was that being in the Generat program had yielded only one or two interesting contacts. Secondly, the founders own network was argued to be too big to sum up systematically. See section 3.6.1 for a description of how the interviewer handled this reluctance.

> "So, last one and a half years, I have gotten at least 4000 contacts. Of those 4000 [...] 500-600 I have met face to face lets say. [...] 10 percent out of 4000. And then I will say another 20-30 percent are people who have connected with me after the talk. Often when

> I speak, I get a lot of LinkedIn connections. I don't meet them necessarily, but they connect with me. That is 2000 contacts."
>
> *A-1 Explaining why mentioning all ties was out of the question.*

In the interview, A-1 goes on to explain how the rest of the contacts are people that seek to connect after reading A-1s articles online, or they reach out because of other reasons. When asked to provide a list of contacts directly related to Alpha, A-1 provides eight names in the first interview and four more in the second interview.

3.3.1.2 Co-founder A-2

After finishing a B.Sc in finance in Germany and a M.Sc in Management of Innovation in the Netherlands the fall of 2018, A-2 applied to the Generat program in Stockholm. A-2 had no prior experience from the AI industry before joining Alpha and the Co-Founder had not lived in Sweden before. A-2s role in Alpha is marketing and community building. After ID, A-2 moved to Mexico to join a new incubator program.

3.3.1.3 Co-founder A-3

A-3's M.Sc in data science is from Ukraine. The Co-founder has five years of working experience as a data scientist in Ukraine, the last two years commuting between Boston, Sweden and Ukraine. A-3 knows Russian, Ukrainian, English, Japanese, and Polish, but not Swedish. At Alpha, A-3 organizes the projects that live on the platform, making sure experts and enthusiasts communicate correctly, and that work gets done.

3.3.2 Bravo

Bravo is a startup working with a digital service within social interactions around literature. The company has global ambitions and communicates in English online. From an early stage, the focus of the startup has been on product development, customer growth and investor funding. The goal is first to generate a user base of book lovers, and then reach out to potential B2B customers. The startup was founded by B-1's co-founder, B-2, in late 2018, and an early prototype was already made when the Generat program started in

January 2019. B-1 joined the B-2 in the startup and stepped in as CEO after meeting them at Generat. Bravo secured funding at the ID.

3.3.2.1 Co-founder B-1

B-1 is the CEO of Bravo, and the only person in the startup interviewed. B-1 is born and raised in urban Sweden and speak both Swedish, English and Arabic fluently.

B-1's education is within business development, marketing and media management. B-1 has used this education to gain work experience on market entry and expansion in the US. More specifically, B-1 has worked as an associate at a public, Swedish initiative in Chicago to help Swedish companies enter new markets; as head of sales and marketing for a innovation consultancy company with offices in New York and Stockholm; and as a marketing manager at the Swedish-American chamber of commerce in Los Angeles, USA. Additionally, B-1 held a position as a PR specialist for a major consumer-targeted app within podcast distribution. B-1 has three years of working experience from USA (two years post M.Sc) and two years of working experience in Stockholm post degree. As B-1 explains, the position in LA provided the opportunity to build network relations in the USA.

> I worked with helping Swedish businesses come to LA, but not on the business side, more on the network side. Helping them find, you know, good networks and groups of people to connect with.
>
> *B-1 on prior experience.*

B-1 has also been volunteering for a non-profit organization working to end world hunger and as a tutor for homeless young people while in the USA. The informant talked about attending conferences on equality and working on building a network for women and minorities.

B-2 was not interviewed. B-2 works with the technical development of the service and was by the researchers selected not to be directly relevant. Reflections about this choice can be found in section 3.6.1.

3.3.3 Charlie

Charlie is building a solution where they fly a drone over the power grid, acquiring updated video and pictures of its conditions to predict when and

where it needs repairs and maintenance, using machine learning directly to interpret the footage, and data analytics for the prediction algorithms. Charlie consists of three co-founders. They all met through the Generat program before Christmas of 2018. Two of the Co-founders were interviewed. The startup was granted funding by Generat at ID.

3.3.3.1 Co-founder C-1

C-1, is the CEO of the company and holds a degree in industrial economics, business and computer science. With 20 years of working experience, ten years in startups, and ten years as a contractor for a big company, C-1 reports having a vast network both in the startup community and in "all of the big enterprises in Stockholm". Except for one year of exchange studies in the US, the CEO of Charlie has lived in Stockholm, Sweden.

3.3.3.2 Co-founder C-2

C-2 is the CMO of Charlie. C-2 holds a diploma in marketing from the UK. Originally from Sri Lanka, C-2 has worked with marketing in Copenhagen before moving to Stockholm five years prior to joining the Generat program. Most of C-2's work experience comes from B2C marketing, with a focus on growth hacking strategies, using unorthodox marketing methods to yield high-value results for a limited cost.

3.3.4 Delta

Delta is building a marketplace to buy and sell unique materials that have been produced for research purposes. These materials are usually both timely and costly to produce and often become obsolete when the research project has finished. Since researchers generally have little awareness of other research projects in need of the same material, it is just thrown away after use. Hence, by creating a marketplace for these types of products, Delta is aiming to reduce the cost of acquiring research project materials for researchers all around the world, which enables them to get easier approval for their desired project. Thus, Delta's business model is a two-sided platform, where researchers are both buyers and sellers. Delta consists of two co-founders who met through the Generat program. Delta was offered funding at the ID but decided not to accept it. Delta was the first case company to be interviewed.

3.3.4.1 Co-founder D-1

D-1 is a researcher within biochemistry who saw the potential for this type of marketplace while writing a PhD. After fighting for the resources and approval to conduct research, D-1 experienced that other researchers had produced and were running tests on the same material. Reflecting on this type of resource waste, D-1 brought up the idea after being accepted to the Generat program. D-1 is not from Sweden, but after six years of living there, the founder has built a significant network, especially in the university community.

3.3.4.2 Co-founder D-2

D-2 is a software developer from a Nordic country and has worked as a freelancer in countries in Southeast Asia, the Middle East, the US and Europe, but not in Sweden. Consequently, D-2's network is marginal locally in Sweden. At the beginning of the Generat program, D-2 joined D-1 in co-founding Delta and assumed the role as a CTO in charge of building the digital marketplace.

Although we have tried to schedule a second interview with D-2 within our data collection period, D-2 has either rescheduled our appointments or ignored our requests. Thus, we have been unsuccessful in collecting the second round of data from D-2. Based on information from D-1, since the first interview, D-2 has been developing the platform for Delta, as well as working freelance for other startups at Generat. As far as D-1 knew, D-2 had not been in contact with any new contacts during the development phase. Both D-1 and D-2 decided to abandon the project after ID.

3.3.5 Echo

Echo is an outdoor clothing company targeting women with functional, yet "chic and feminine" clothing. As of May 2019, Echo has not yet launched any products, but aim to market and deliver directly to customers through their own web-shop. The idea behind Echo was E-1's, who brought it to the Generat program and founded the company together with E-2 in January 2019. The company received funding at the ID.

3.3.5.1 Co-founder E-1

E-1 is the CEO of the company. Graduating with an M.Sc in marketing and strategy from a Swedish university, E-1 has worked with marketing and strategy for both startups and established companies since, both in Sweden and Sri Lanka. E-1 had accumulated eight years of working experience with B2C marketing strategy before joining Generat. As with other founders interviewed, E-1 also emphasizes growth hacking as a primary skill. E-1 has worked with helping Swedish companies find a foothold in Southeast Asian markets. E-1 started working at Generat as an Interim Marketing Manager the fall of 2018, before joining the program in January 2019.

3.3.5.2 Co-founder E-2

E-2 is the COO and CFO of Echo. With a M.Sc in finance from a Finnish university, E-2 was employed within corporate finance in a major Scandinavian bank. Within the seven years of employment in the bank, E-2 was promoted from analyst, to associate, to associate director, ending the employment at the bank to join Generat in January 2019. E-2 emphasizes experience with investment banking as prior experience relevant to Echo. E-2 has working experience from Finland and knows English, Finnish and Swedish. E-2 has lived in Sweden one year prior to being admitted to Generat.

3.3.6 Foxtrot

Foxtrot is more of an opportunity study than a startup and revolves around one person, F-1. F-1 did not have any business idea before joining Generat and explored six different ideas before ID. One of the ideas revolved around encouraging young adults to save money, another about merging insurances, the third on a recruitment platform. The fourth idea was on preparing supply ships for the offshore oil industry, and the fifth was building industrial applications for heavy industry. The sixth idea and the one F-1 was working on at the time of the second interview, was an AI-driven search algorithm for lawyers to simplify looking up legal documents. F-1 worked with F-2 when investigating the three first ideas. F-2 has not been interviewed. At the time of the ID, F-1 was working alone. Neither of the projects was pitched. F-1 consequently did not receive any funding.

3.3.6.1 Co-founder F-1

F-1 holds a M.Sc in entrepreneurship and business development and a bachelors in mechanical engineering from a Norwegian university. F-1 has worked over six years with technology commercialization, mostly related to hardware and industrial applications before joining the Generat program. F-1s work experience is mainly from research-related innovation projects in Norway. F-1 was interviewed on February 3rd and April 26th. Because the data collected focused mostly on the projects that F-1 was currently working on, it was clear that additional information was needed to look at the process as a whole. An additional interview was conducted on June 11th to gather more data on how F-1 worked to validate and de-validate ideas.

3.3.7 Golf

Golf is a startup that enables hotels, restaurants, and other companies with available space to rent it out to companies in need of short term retail space, either for pop-up stores, galleries, showrooms or offices. The strategy of Golf is to gain a foothold in Stockholm before expanding to other Nordic and European cities. Golf is founded by G-1 and G-2. The founders met through Generat and started working on Golf in January 2019. Only G-1 has been interviewed. Golf received funding from Generat at the ID.

3.3.7.1 Co-founder G-1

G-1 is the CEO of Golf. With a M.Sc in business economics and finance from the UK, G-1 ventured into a career starting as a Junior Associate in a UK investment firm. G-1 has since worked as a business consultant and Venture Capital Associate. With five years of working experience in January 2018, G-1 decided to found a company. G-1 reports to still work on this in parallel with Golf. Before moving to the UK for studies, G-1 lived in South Africa and Greece. The Co-founder had no prior working experience from Sweden before joining the Generat program.

The twelve founders spanning seven startups mentioned above provide the researchers with varying and nuanced perspectives. Twelve founders enable the researchers to capture a spectrum of varying degrees of industrial and geographical pre-embeddedness, enabling comparisons to be made between both

similar cases and opposite cases. The selection includes teams where none of the founders have lived in Sweden, such as Alpha and Foxtrot, to teams where all members have lived in Sweden for a significant time, such as Bravo and Charlie. Similarly, several teams consists of founders where one has high pre-embeddedness, while the other has practically none, such as Bravo and Delta. This strengthens the researchers ability to identify and understand patterns in tie forming activities between founders with varying pre-embeddedness while also being within the practical, economical and temporal constraints of this masters thesis.

3.4 Data Collection

The main source of data was provided through semi-structured interviews with the selected cases. Additionally, secondary data was collected to contextualize the interviews. This data has been collected from Generat's website, the case companies' websites, personal websites, LinkedIn, social media and news articles.

Initially, the interview guide was designed to focus on the organizational level, corresponding with our initial plan of studying the focal firm. Therefore, we began the interviews with only asking questions regarding this level, as stressed by Yin (2014). Pivoting to a more exploratory approach, we found it necessary to look at both the founders and the startups as a whole (Shih and Aaboen, 2019). The interview guide was thus changed to include questions that would give the researchers insights into the perceived value of ties, such as asking about what information was received, if it was a valuable tie, and what was the motivation behind following up some ties and not others. We also found that evaluating the importance of ties was something several founders did unprompted. By changing the interview protocol, we aimed to achieve a better understanding of the patterns of how founders strategized around their tie-formation activities.

Generat is an intensive program, and founders are expected to go from no idea and no team to investment-ready business plan and a team established in eight weeks. Two interviews with each founder were conducted with an interval of two to three months to capture how the network of the founders developed over time. The interview dates are displayed in table 3.1.

	A1	A2	A3	B1	C1	C2
I1	28.02	26.02	01.03	11.02	14.02	12.02
I2	21.04	07.05	11.04	11.04	10.05	18.05
	D1	D2	E1	E2	F1	G1
I1	13.02	13.02	14.02	14.02	02.03	12.02
I2	18.05		11.04	10.04	26.04	09.04
I3					11.06	

TABLE 3.1: Dates of the interviews conducted with the twelve founders during the spring of 2019

After the interviews, the informants were sent an excel sheet of their network, so that they could verify the collected data from their interview, make remarks or add missing links. This increases the credibility of the study, as will be discussed in section 3.6.1.

3.4.1 Conducting the Interviews

The interviews were conducted in accordance with an interview guide containing the main topics to be talked about. For the first interview in February the interviewees were first presented with a form of consent concerning, among other aspects, privacy and data security of the data collected, and then introduced to the background for the research project and their rights as an informant. When the formal interview started, the informants were first asked to provide a contextual background including their name, age, educational background as well as work experience. For instance, The first interview with B-1 on the 26th of February, 2019, lasting for 51 minutes started like this:

> **INTERVIEWER:** OK, so we are live. This interview is about your network of contacts that you have used, but we can start off with you saying a little bit about yourself; name, age and background?
> **INFORMANT:** Yeah, sure. My name is [B1] and I'm [age], and I live in Stockholm. I recently moved back from Chicago.
>
> *The beginning of the first interview with B-1*

The interviewer followed up with asking B-1 about the stay in Chicago, its duration and purpose, before following up with more questions to get a broad understanding of B-1s education and working experience.

After learning more about the informant's background and working experience, as well as where they were from and how long they had been in Sweden, the interviewer changed the topic to the startup case in question. Asking the founder to provide a short presentation of their startup idea and team, as well as their market ambition and what target market they envisioned for the product, for example locally in Sweden, somewhere else, or globally from the get-go.

In the interview with C-2, the following row of questions was asked in this part of the interview:

> **INTERVIEWER:** All right. So, can you tell me about the idea and the startup you are working on? *Informant elaborates on the startup idea.*
> **INTERVIEWER:** And your team? *Informant presents the team.*
> **INTERVIEWER:** How long have you been working on the idea? *Informant explains that they have been working together since November.*
> **INTERVIEWER:** Who's idea is it? *Informant says that everyone contributed.*
> **INTERVIEWER:** Do I understand it correctly if all you three have been working on it since November, or? *Informant approves.*
> **INTERVIEWER:** Ok, so did you know each other before [Generat]? *Informant elaborates on how the team met.*
> **INTERVIEWER:** But you got introduced in November? *Informant explains how they were able to meet early because C-2 had a position at Generat.*
> **INTERVIEWER:** Ok, so then I understand more how the team came about. When did [C-3] get into the team then? *Informant replies.*
> **INTERVIEWER:** But this was after the program had started? *Informant denies and elaborates.*
> *Row of questions resulting in a good overview of Charlie's startup and idea*

Following the initial questions about the founder and the startup, the informants were asked to go through their contacts and list all the people they had reached out in relation to the idea and startup. The informants were specifically instructed to go through their email, LinkedIn, Facebook contacts, WhatsApp, or preferred means of communication to make sure the contacts were

not just drawn from their memory.

After the informants finished listing their contacts, the list was brought up on a screen for all to see. We then went through the list one by one to establish how the informants knew the contact; what role the contact had; the frequency of contact both before and after the informant started working on the startup idea; who, if any, had mediated the relationship; why the contact was reached out to and what was discussed; and if the contact had provided any new leads to new contact. Additionally, the current location of the contact was established be able to map the contact network geographically. During this part of the interview, the informants frequently remembered new contacts who the informants had been in contact with through other people or for other reasons just forgotten to list. These were added to the list and mapped as well.

When the relationships of all the contacts on the list had been mapped out, the informants were asked to list anyone else they had talked to, but not necessarily reached out to themselves, that they felt should be on the list. These were then added to the list and mapped out. Often, these were people in the cohort or Generat system that they met by the coffee machine or through program events.

In the second interview, the informants were asked to give an update on the startup idea and business concept, before the interviewer went through the list of contacts from the first interview to establish how the frequency of contact had been since last time, if any roles or reasons to reach out had changed, or if new contacts had been mediated. Next, the informants were instructed to go through their lists of contacts again and list any new contacts they had reached out to since last time, after which these contacts were mapped out as in the first interview.

3.4.2 Interview Format

For the first three interviews, two of the researchers were present. This allowed the researchers to divide the task of interviewing such that one would be in charge of leading the conversation, while the other kept an eye on the interview guide to make sure that nothing was missed, accordance with Eisenhardt (1989). Eisenhardt also argues that multiple investigators enhance the confidence in the findings, as the case is viewed from different perspectives

and increases the likelihood of surprising findings. After the first three interviews, the second researcher had had training in conducting the interviews and conducted the rest of the interviews himself.

The first interview was conducted as a test interview, after which the interview guide was updated. Hence, to be able to include the interview in the study, a follow-up interview was conducted with the test informants to collect the missing data from the updated guide. In total, 14 interviews were conducted, where two of them were done with two interviewees at the same time to save time for the informants. Interviewing two at the same time took a longer time, but made it possible for the interviewees to complement each others' networks.

Every interview was taped with a dictaphone. After which the audio recordings were uploaded to Microsoft OneDrive for storage, transcribed and plotted in the spreadsheet.

3.5 Data Analysis

The gathered data material consisted of the transcribed interviews, the spreadsheets plotted and explained by the informants as well as additional information gathered from Generat's web page, the web pages of the startups, and the founders' LinkedIn profiles. This was analyzed based on the research framework described in 2.2.

To define the founders geographical and industrial pre-embeddedness and the startup phase, the two first parts of the interview: about the founder and the startup in general are used. We determine the pre-embeddedness based on prior experience from living and learning about the geographical culture, and gaining a local network; working and learning about the industry culture, and gaining an industry network. It is important not to use data regarding the founders tie-formation activities to define pre-embeddedness and startup-phase, as we want to look at how the pre-conditions could shed light on the tie-formation activities. Letting one define the other would render such comparison useless. To evaluate the pre-embeddedness, we used the terms; *high*, *substantial*, *some*, *low* or *none*. These are only used as indicators and are always followed by our argumentation for why this is the case. An example is this text describing D-1s geographical pre-embeddedness in our analysis-spreadsheet: *Some geographical pre-embeddedness. Worked in Sweden for six years.*

Contact source	Direct /indirect	Definition
Individual	Direct	A pre-existing contact from the informant's network.
Generat	Direct	Contact is a member of the Generat staff.
Cohort	Direct	Contact is a member of the Generat cohort.
Cold-call	Direct	Contact identified online and contacted without mediation or pre-existing relations.
Individual	Indirect	Contact mediated through a contact from the informant's pre-existing network
Generat	Indirect	Contact mediated through a member of the Generat staff.
Cohort	Indirect	Contact mediated through a member of the Generat cohort.
Cold-call	Indirect	Contact mediated by a cold-call or contact that contacted the informant after finding out about the informant without the mediation of a common tie.

TABLE 3.2: Different tie classifications to understand the origin and development of ties reported by the informants.

Ties are labeled with several labels. As mentioned in 3.4.1, the initial plotting was done in collaboration with the informants during the interviews. Each tie was then characterized by the researchers after the interview. The contact source was divided into *individual*, *cohort*, *Generat*, and *cold-call*, and all contacts were labeled as direct or indirect.

Direct ties meaning that the contact itself was the contact source, i.e. a contact in the founder's pre-existing network or, in the case of cold-calls, the initial cold-called contact. On the other hand, indirect meant another contact source mediated the tie. This led to defining the eight categories listed in Table 3.2

This definition enabled the researchers to go get a comprehensive overview of the amounts of direct and mediated (indirect) ties. An example of a labeled tie is the row of E1-2 (the second tie reported by founder E-1). In our spreadsheet, we had this information about the tie: **Number:** *E1-2* **Name:** *[E1-2]*, **Contact source:** *Individual*, **Direct/indirect:** *Direct*, **Geography:** *Sweden*, **Contact frequency at first interview:** *Less than 2 times a week.* **Tie strength:** *Dormant Strong.* **Contact frequency at second interview:** *Less than 2 times a week*, **Tie strength at second interview:** *Dormant Strong.* **Role:** *Founder of fashion company.* **How do they know each other:** *Old colleague known since 2007*, **Frequency of contact before Generat:** *Meet every 6 months, Talk on social media every month.* **How often during Generat (first interview):** *3 times.* **Did the contact mediate connections to any new leads(int. 1):** *[E1-15]*, **Why did**

they talk about Echo?: *Marketing and brand value.* **Contact intensity after first interview:** *2-3 times.* **Leads (int. 2):** *none.*

Of these, the founder provided the data on: *Name*, *Geography*, *Role*, *How do they know each other*, *Frequency of contact before Generat*, *Frequency of contact while in the program*, *Did the contact mediate connections to any new leads*, and *Why did they talk about the startup*. Based on this, the ties were analyzed and coded as the categories presented above, as well as strong or weak.

To define the ties as either strong or weak, we used contact frequency and emotional intensity as presented in section 2.1.1. If the contact frequency was 2 or more times per week, the ties were categorized as strong. Additionally, ties that were categorized as strong if they were: Family members and people that informants described as good friends, old colleagues, or otherwise were reported to share a history which made them highly trustworthy. If the contact frequency was low, ties could also be labeled as dormant strong ties based on emotional intensity. As we asked the informants about the contact frequency both at the first and the second interview, we were able to map changes in tie strength.

To look for patterns in tie-formation activities and network development across all the founders, a spreadsheet was created where all 8 tie categories were summarized for all founders, both for the first and second interview individually. This allowed us to see if several founders progressed in similar ways. When patterns were found, such as with C-2 and E-2's sudden shift from almost no cold-calls (direct) in the first interview, to predominantly reporting to use cold-calls in the second interview, the researchers went back to the transcribed interviews to read about why the informant chose this strategy. For example, A-2 explains in the interview how testing the assumptions on what organizations would be a right fit with the startup, and that that was the reason A-2 called several AI-companies.

We also divided founders between those with high and those with low industrial pre-embeddedness, and we compared those with high geographical pre-embeddedness to those with low to look for any patterns. When we found such patterns, we went back to the interviews to look for data that could support or contradict these patterns.

3.6 Reflections and Limitations

As a judge of the quality of the research in this study, we use the concept of trustworthiness as presented by Guba and Lincoln (1989) and Erlandson et al. (1993) and discuss the thesis' *credibility*, *transferability*, *dependability* and *confirmability* (as cited in Halldórsson and Aastrup, 2003).

3.6.1 Credibility

Halldórsson and Aastrup (2003) refer to credibility as the truth-value of the study. Hence, they argue that the credibility is determined by whether or not the researcher can create a matching representation of the informant's construct.

To increase the credibility of the research, the informants were included in the data collection both by bringing the collection form on screen for everyone to see, as well as allowing the informants to review and suggest corrections to the collected data, as suggested by Halldórsson and Aastrup (2003) However, the informant's have not been presented the study's findings, which could have increased the credibility further.

One challenge to credibility is that three founders refused to give us access to all of their ties, A-1 and F-1 expressed that it would be too many to list, G-1 said that most ties were unfruitful and unimportant, and thus would be hard to remember and useless to track. After explaining why all contacts that the founders had talked about the idea with would be valuable for our investigation, we still were unable to make these founders commit to sharing all ties.

In these three cases, we had to rely on the informants' ability to summarize the ties they had made, decreasing the resolution of our data and limiting our ability to explore patterns in their tie-formation that may not have been obvious to the founders and researchers the time of the interview. We did, however, find that the interviews with A-1, F-1 and G-1 provided interesting perspectives and the interviews were thus included in the analysis.

On the startup level, another challenge to credibility is the fact that not all co-founders in Bravo, Charlie, Foxtrot, and Gold were interviewed. This reduces the credibility of the tie-formation and network development patterns on a

startup level for these cases. However, insight into the informants networking patterns are valuable on a founder level and they were thus included in the study. To increase credibility, we have included a description of the co-founders who were not interviewed to provide a perspective of the founders' contexts.

3.6.2 Transferability

Transferability is parallel to the notion of external validity, i.e. the ability to generalize results or transfer them from one context to another (Halldórsson and Aastrup, 2003). Although being able to generalize a theory can be a challenge with the limited amount of cases chosen in this study (Eisenhardt and Graebner, 2007), a range of cases with a varying degree of pre-embeddedness from very high to non-existent have been selected to avoid describing a very idiosyncratic phenomenon (Eisenhardt, 1989). Their contexts for establishment are different. To increase transferability, both the selection process and the case companies and co-founders have been described in detail. This is suggested by Erlandson et al. (1993), who assert that while external validity measures attempt to ensure the finding of results from independent variables that are equivalent across contexts, transferability depends on similarities between contexts and that it can be increased by rich descriptions of the interrelationship and intricacies of the context being studied (as cited in Halldórsson and Aastrup, 2003).

3.6.3 Dependability

The notion of dependability is parallel to reliability (Halldórsson and Aastrup, 2003). Conventionally, a study is reliable only if its operations are repeated with different but similar cases and produces the same results (Yin, 2014). In this study, the methodology of the data collection has been described through presentations of the interview guide, how the interviews were conducted, and how this data has been analyzed, to enable *trackability* (Halldórsson and Aastrup, 2003). This concept is used to ensure that the methodology and changes in this can be publicly inspectable (Halldórsson and Aastrup, 2003). Furthermore, we have described changes in the research design from a study based on replication logic to an exploratory approach in detail.

3.6.4 Confirmability

Confirmability refers to the neutrality of the results from the researcher's bias and whether the results can be confirmed by the data itself (Halldórsson and Aastrup, 2003).

Koivu and Hinze (2017) argue that the human element cannot be incorporated with methodological rigor and as Rowley (2002) points out, the accuracy of this documentation process depends to a large extent on the competence and experience of the researcher. Seeing as this is the first study conducted by the researchers, this is a weakness to the study. Additionally, one of the researchers, the main interviewer, was a part of Generat's incubation program during the data collection, thus, having a 'position in the field' (Anteby, 2008) as a fellow cohort member. This is stated clearly so that the master thesis can be read with this in mind (Anteby, 2008).

We have found it valuable with inside knowledge of the Generat program. Firstly, it has been valuable when selecting and reaching out to the informants. We believe that the fact that one of the researchers was partaking in the program was crucial to be able to gain access to such a large percentage of a quite limited population. Secondly, it has been valuable when interviewing informants because the interviewer was already immersed and had a good pre-understanding of the environment in which the informants operate, the terms and language they use, events they refer to etc. (Jack, 2010). Thirdly, when mapping out the network the informants use, knowledge of the contacts available at Generat and in the cohort has enabled us to ask relevant and informed follow up questions, which has enabled us to dig deeper than would have been possible as complete outsiders. However, the data collection might have been affected by the pre-existing knowledge that the main interviewer had about the interviewees or that assumptions might not have been mapped thoroughly enough through the formal interview (Pratt, 2009).

Additionally, one can argue that because one of the researchers and the informants at one point were attempting to gain funding from Generat, there were large incentives to please the incubator. This is a type of courtesy bias (Ciccarelli et al., 2010), which twists opinions towards socially acceptable answers, rather than truthful ones. To mitigate this and distance the study from the decision-makers, only incubator participants were interviewed, and the informants were assured of their privacy and data security through the form of consent.

Several different measures have been taken to mitigate any potential bias. The two researchers without any prior relation to Generat have developed the interview guide, and while all researchers have been involved in the analysis, the primary responsibility has been with the ones that did not partake in the program. The interview guide has been reviewed by an independent reviewer (i.e. the researchers' supervisor) as suggested by Ven and Poole (1990). We have also chosen to include quotes when presenting and analyzing the data, enabling the data to speak for itself (Pratt, 2009).

4 Case Study Descriptions

This chapter presents the data gathered from the sources described in chapter 3. The aim is to provide an overview of the strategies used by the selected cases to create and utilize networks to become embedded. The data presented in this chapter builds the foundation for the analysis in chapter 5, where the analytic framework will be used to analyze the data.

4.1 Alpha

A-2 was recruited to take care of marketing, and after the initial project for the solar client turned out to be a success, A-2 set out to build a network of developers other places in the world than in India. Until they both were admitted to Generat, A-1 was working from Poland and A-2 from Germany. At the time of the first interviews, they had been working from the same location for six weeks.

> I have spoken to around three hundred about the idea [...] To understand both potential customers, but also technical people because we have this two-sided markets; we have organizations, and we have also the AI-talent. So I spoke to both parties to understand; *"what do organization think about this, and what does AI talent think about this."* And then through this approach, the idea evolved. At the same time [A-1] has been giving about forty talks, where [A-1] also shared the idea and the solar use case in India.
>
> *A-2 summarizing Alphas network building before they were admitted to Generat.*

Sharing their goal and project through talks and when possible elsewhere enabled Alpha to gain feedback from potential customers, and at the same time, build a base of potential developers for future projects. At this time, Alpha did not know the specifics of how their project with the Indian customer could be generalized to become a scalable platform, and before they were admitted to

Generat, they defined themselves as in an exploration phase. As A-2 explains, reaching out and talking to people became the way Alpha tested their initial assumptions on who could be the customers and users of their service.

> We had assumptions on who are the right organizations. We had assumptions [about] who are the right people in the AI field to talk to, but we had to test it. So I was testing this.
>
> *A-2 on how networking became a key activity to verify hypotheses.*

Before the ID, the team worked on recruiting developers and projects providers to the platform. Within the second week of Generat, A-3 was recruited to join the team. With several years of working experience as a data scientist in Ukraine, A-3 started recruiting more junior developers to contribute to the platform. The goal of Alpha is to be able to recruit developers from all over the world, but as A-3 states, in the early phases, they chose to exploit their existing networks.

> [Our developers are] mainly from Ukraine and India, Because I have a lot of contacts in Ukraine, and because [A-1] is from India. [...] because we are working on pilot projects, we go for the contacts that are easier to reach.
>
> *A-3 on how to use existing networks to build a platform.*

Except for connecting A-1 with A-3, A-1 reported that there were few positives with joining the Generat program. The contacts A-1 reports to have talked to from Generat were all business- and pitch-coaches witch A-1 felt provided very little to the company.

> If you just want my honest opinion, it has been a waste of time. Working on the pitch and things like that. I would rather work on the business.
>
> *A-1 on what value Generat had brought to the company. Feb 21st*

For A-1 and A-3, Generat only provided one lead that corresponded with the types of contacts that Alpha was interested in reaching out to, namely developers and project providers. This one contact was a Norwegian CEO that knew one of the mentors at Generat. This CEO became a valuable resource for A-1, and they spoke twice a week initially, and 1-2 times per month after the first few months.

All of the other contacts reported by A-1 and A-3 before the ID were individual contacts, found either through prior work relations, friendships or through pitching the project at conferences.

A-2 is the only Co-founder without prior industry experience and with little programming knowledge. The way A-2 connected with people was very different from how A-1 and A-3 worked. A-2 relied heavily on contacts sourced directly from Generat and its cohort. A-2 actively built networks, followed up leads from cohort and Generat members, and cold-called people found interesting to the project. This resulted in 12 of the 20 reported contacts at the first interview being Swedish, despite A-2 having no prior network in the country. The other contacts were from USA, Kenya, Belgium, India, Ethiopia and Norway. Two of the contacts A-2 reached out to early on were cold calls to people building networks around artificial intelligence. A-2 followed up these conversations more than two times a week in the beginning months before stepping down the dialogue frequency to biweekly chats.

Except for A-3 living partly in Stockholm because of work for two and a half years, none of the founders of Alpha had any prior experience from Sweden. A-1's network of contacts built through speeches and online presence provided the team with some connections in Sweden. After doing a talk in Barcelona, A-1 got in touch with a representative from a big Swedish bank, and they set up a meeting to discuss how the bank could get involved in Alpha. This meeting gave A-1 a new set of contacts in the bank. These contacts were not followed up.

In broad terms, A-1 reported to share the startup's agenda through talks and articles and sifted the received requests to connect and network-connections these talks and articles provided for valuable contacts. A-3 exploited the existing industry network, predominantly reaching out to people in places where A-3 already had a network. A-2 spent a lot of time forming network connections, working hard to strengthen them in the same way he connected with A-1 nine months earlier.

4.2 Bravo

By the first interview, B-1 had just recently committed to Bravo. At the beginning of the Generat program, B-1 researched other projects in parallel to Bravo, one of which was a mental health project. Consequently, B-1 had reached out

to different contacts about the different projects. At interview 1, B-1 reported having reached out to 22 people. Of these, a total of 12 ties were related to Bravo, four were related to the mental health project, and three ties were talked to for more general business purposes or other projects. Furthermore, B-1 used three of the 22 ties, a Generat mentor (B1-2), a cohort member in case Alpha (A-1), and a best friend, to bounce of several ideas and discuss what project to go for at Generat.

Before committing to Bravo, B-1 had talked and reached out to a range of different people, a colleague, two businesswomen, a doctor, and a cohort member. Six months prior to Generat, B-1 met one of the businesswomen (B1-1), an investor, at a conference. B-1 was at the conference because of interest for female and minority equality. When the investor heard B-1 had been admitted to Generat, she contacted B-1, and they picked up their conversation. At the first interview, talks were general and unspecific, but B-1 viewed B1-1 as a potential future investor to Bravo.

Similarly, the second businesswoman (B1-21), the CEO of a creative agency, first met B-1 by coincidence in a coffee shop. They both felt a good energy from each other and decided to keep in touch. Thus, B-1 reached out to talk to her about the mental health project and discuss employee happiness. The doctor was also a tie that came out of randomness when B-1 had a checkup after an earlier incident.

> And so since we had so much time and they were observing me, I decided to pitch my idea to her [...] and got some general feedback.
>
> *B-1 on how an unrelated doctor became a contact.*

B-1 started interview 1 by stating that reaching out to people was not a prioritized task at the moment. Instead, the team reportedly focused on the development of a prototype.

> I think that is going to be the next phase where we start reaching out to a lot of people. Right now, we are more trying to build the actual product. So it is not as aggressive.
>
> *B-1 on not prioritizing tie-formation.*

Yet, about one week before the first interview, B-1 posted on Facebook to get in touch with avid readers who were willing to be interviewed about their reading habits. Approximately 15 people responded to this post, and B-1 talked to five of these, two former friends and three former colleagues, two of whom

B-1 had not been in touch with since they worked together. Also, just an hour before the first interview, B-1 sent out a survey to all of Generat and all of B-1's contacts on Facebook and LinkedIn. When the interview started, B-1 had already received 12 answers.

The other ties B-1 talked to about Bravo were all reached out to on B-1's own initiative. These were two advisers at Generat (B1-3 and B1-4), from whom B-1 wanted general feedback on the idea and technical input on the product; two close family members, two friends and a colleague of B-2 (B1-11), who were all considered to be potential users; and one new contact (B1-5), whom B-1 saw had posted a book review on LinkedIn and decided to cold call.

> I thought "why don't I reach out to her and talk to her about, you know, how would she feel about influencing people [at her workplace] to read more?"
>
> *B-1 on cold calling*

The family members and friends, as well as two of the Facebook respondents were also asked to download the product and give feedback. All of these were contacts B-1 knew well on a personal level.

Overall, most of B-1's contacts were personal and known directly. Except for one, all of these contacts were living in or grew up in Sweden. Three of the contacts at the first interview were not in any direct relation to B-1 but were made available through handshakes made by other people in the cohort at Generat. Two of these contacts came from A-1, whom B-1 used often talked to, to bounce ideas or discuss possibilities and opportunities. A-1 mediated contact to a fellow cohort and team member, A-3, as well as a contact working within the sphere of mental health in Poland. Both of these used to discuss the mental health project. The last contact was the colleague of B-2, B1-11, who was an avid reader. Several other contacts also produced leads and suggested people B-1 should get in contact with for different reasons, but B-1 had not reached out to any of these by interview 1.

By the second interview, three activities were reported to be important for Bravo by B-1, namely *user research*, *finding and onboarding investors* and *growth hacking*. The latter term, in relation to digital services, is characterized as a low-cost and innovative alternative to traditional marketing and includes utilizing social media campaigns and viral content instead of newspaper and television adds (Jaring et al., 2015).

Since the first interview, B-1 had reached out to 21 new contacts as well as kept in touch with 13 of the contacts reported in Interview 1. One of the contacts B-1 stayed in touch with was A-1, although not as frequent as was reported at the first interview. The dialogue went from mostly face to face contact to less frequent LinkedIn-discussions, and from providing B-1 with people to contact, the discussion was reported to be more general at the second interview.

All of the six contacts B-1 contacted more than one time per week were still in touch with B-1 at the second interview. In addition to A-1, these were two relatives, two friends and one colleague. All because of their feedback as potential users of the service. The rest of the contacts that B-1 kept in touch with were two mentors from Generat; two friends; B-5; the new contacts from LinkedIn who were all seen as potential users; B1-1, the potential investor; and A-3. These had been contacted between one and four times between interview 1 and interview 2.

At interview 1, the contacts reported were mainly personal and directly connected to B-1. At interview 2, this had changed. Of the 21 new contacts, B-1 had no prior relation to 18 connections. Again, in order to reach out to potential users, B-1 had posted to friends and family on Facebook and asked to be forwarded to anyone between 18-25 that might be interested in testing the app. This led to five formerly unknown contacts within the target audience group, three of which B-1 reached out to and interviewed. B-1 also formed ties to ten new contacts who joined a focus group for Bravo. One of these provided such good feedback that B-1 followed up the conversation to learn more.

Additionally, just like the founder had done with B1-5, B-1 identified two new contacts because they shared book recommendations on LinkedIn. B-1 connected and video interviewed both of them. These were referred to as *power users* because they gave both user feedback, read a lot and share recommendations. B-1 described how targeting these was important because influential users who dared to share recommendations would enrich the platform content and make it more attractive for new users. B-1 reported that they both use the Bravo app now.

Bravo also had a specific focus on forming ties with investors. This was an outspoken focus from the beginning because they saw a need to take on a bigger investment than Generat provided. When Bravo was turned down at the ID, the search for investors intensified. In the end, Bravo received funding from Generat after another team turned down Generat's offer to invest. Bravo accepted but also continued to search for other investors. This was done by

making a list of people the team members thought could be meaningful to talk to and would like to reach out to. This list included a column where the relationship or connection one had to this person was listed.

Furthermore, B-2's significant other, who works as a chief marketing executive (CMO) at a large new venture, had mediated a couple of ties; Generat's lawyer had mediated one potential investor; a friend of a friend mediated contact to another investor, which resulted in a connection to this investor's investment manager; and B-1's father had provided the contact information to a third potential investor. Cold calling and emailing investors was also something both B-1 and B-2 focused on. They often tried to contact the same investors through different channels with the hopes of at least one message being read.

> We have reached out to the same people a lot of times, and then by accident, we see one of our messages have been read.
>
> *B-1 about Bravo's approach to investors*

A significant part of the ties B-1 reached out to were in some way related to the founder's passion for the rights of women and minorities. Just as B-1 met B1-1 at a conference on minority women, B-1 approached two panelists at large Swedish conference in April. One of these was characterized as a potential investor (B1-28), while the other, the founder of a gender bias platform (B1-29), turned out to be an avid reader and writer, with whom B-1 kept in touch. Additionally, B-1 has envisioned Bravo as an app for youth in suburban and disadvantageous neighbourhoods to give them a better reading experience. Consequently, a couple of ties has been made to youth centers.

4.3 Charlie

The idea to start Charlie was born when C-1, C-2 and C-3 met for lunch on November 2018. They were all Stockholm based already but did not know each other. They all knew they had been admitted to Generat, and they were looking for interesting ideas to work on. C-2 worked for Generat doing marketing at the time, and connected with C-1 through an interview C-2 was doing for an article for Generat's web page. At lunch, they talked about their strengths in terms of prior experience and interests. C-1 had several drone-related idea; this matched well with C-3s experience from drones, machine learning and autonomous vehicles.

After discussing several ideas they started investigating. In November and December, they researched the feasibility of several ideas before deciding on aerial inspection of power grids. This idea matched C-1's prior experience from utility companies. It did not match C-2's prior experience with B2C growth hacking. However, C-2 explains that C-1 and C-2 had a good match on a personal level and even when they discarded the first idea they were researching, they stuck together and found a new one. For C-2, a good team was more important than an idea where C-2 could contribute with prior experience and network.

When starting the Generat program in January, the team had thus already found each other and settled on the idea they were working on. One of the partners of Generat became a valuable contact for Charlie. Early on C-2, started talking with him daily, and he gave C-2 over 60 contacts that could potentially help them. Only five of the contacts replied when C-2 reached out, but these became valuable connections for C-2. They were all working within the utility industry or with aerial inspections. C-2 followed up these contacts, and they became weekly touchpoints for C-2 during the whole Generat program. The contacts C-2 got from Generat enabled quick learning and hypothesis testing. These were supplemented with cold calls made to potential customers and people in the cohort and Generat directly.

At the second interview, C-2 reported having changed strategy. Only a few numbers of new ties mediated through Generat and the Cohort were found, and cold-calls became more important. C-2 reported having cold-called around 40 ties. These were investors or actors within machine learning, power grids or drone sales.

> I mean, it's a snowball effect. For example, when we are looking at drone vendors, we are googling and then we just call them up. And you know, they start connecting us to people.
>
> *C-2 on Cold calling and snowballing contacts*

One of the coaches Generat provided Charlie was reported to be very valuable to the company. C-2 explains that he would be available at every single crossroad, helping out whenever the Charlie team was stuck and did not know how to proceed. He was not reported to mediate new contacts for Charlie but helped the company on business development and the entrepreneurial process.

One contact that the company got through a coach at Generat, an expert and potential investor (C1-21) from the US utility industry enabled Charlie to test their hypothesis early by asking him what he thought of their product and strategies. Over time, the information C1-21 could provide, became less interesting as Charlie's network in Sweden grew, and the team became more informed. C1-21 kept contacting Charlie asking for updates, and over time, communication became more and more some a weekly status update. The team saw C1-21 as a potential future investor and found time to keep him in the loop even though he did not provide much immediate value to the development of the company.

Charlie's strategy was to first reach out to the local market, before expanding to other countries with long distances of power lines to inspect. C-1 explains that this was the "textbook approach"

> I will start with the Swedish market, that is basically what I have been taught at business school to do, and if it works, then I can expand globally.
>
> *C-1 on business expansion strategy.*

.

As C-1 had prior experience from local utility companies in Sweden, one could have expected to see outreach to former colleagues. However, this was not the case. Although 49 of the 55 contacts C-1 reported to have talked to were from Sweden, only four were from C-1s personal network. The rest were predominantly sourced through Generat or by cold calling.

LinkedIn was used to identify customers by googling a potential customers profile and look at who was in its network. Having an interesting value proposition for power grid owners, C-1 could then reach out to them via LinkedIn chat or phone and schedule a meeting. This strategy turned out to be very fruitful for Charlie, and they established weekly contact with three of the five biggest power line owners in Sweden within two months, as well as several smaller ones.

Early on, Generat was a valuable mediator of contacts, giving Charlie access to potential investors, competition and other companies in the value chain they were aiming to enter. During the program, Charlie's outreach became more pinpointed, focusing mostly on customer relations and product development.

At this point, Generat's network became less interesting, and Charlie found most of the contacts by snowballing and googling.

Just after the ID, Charlie got a call from a senior manager (C2-49) in a big Swedish power line company. Charlie had tried to reach him for a while, both by getting help from the wife of a friend of C-2 working in the company, and by cold-calling people in the company to try to find the right decision maker to talk to.

> He called us directly, and he said, *"Hey, I'm the man, just speak to me!"* [...] He sounded really annoyed actually.
>
> *C-2 on the first of many conversations with C2-49.*

All though he sounded annoyed the first time he reached out to Charlie, he turned out to be a valuable contact eager to help the company.

> He gives us a lot of information and insights if we want to improve. He's there for us all the time.
>
> *C-2 on the value of C2-49.*

This contact provided Charlie with both concept validation and industry insights, and became important for defining Charlies' strategy moving forward.

4.4 Delta

As described in Chapter 3, D-1 came up with the idea of building a marketplace for research materials and co-founded Delta, together with D-2 after the Generat program started. Thus, at the beginning of the period, they reported that their main focus was on idea validation. Additionally, Delta formed ties to get general business-advise and input on the technical solution.

To verify the idea, D-1 reached out to a total of 25 people. D-1 almost exclusively contacted existing ties. Twenty-two contacts were university researchers, but D-1 also verified the idea from industrial companies' perspective through three contacts. All of the contacts were also characterized as former colleagues, except one old friend and one conference acquaintance. They were primarily located in Sweden, but also Germany, Spain, the UK, India, and Iceland. Only one contact from D-1's personal network provided a lead to another person, but Delta did not follow up.

While the majority of these contacts were reached out to during the period before the ID, only three ties were used after the ID. D-1 explained the change in outreach with a lacking need for more validation from the market until the product was in a shape where people could use it. The three contacts Delta used were used because they represented their own research field, namely biochemistry, polymer chemistry and organic chemistry and were trusted friends of D-1. Thus, they could give feedback on the minimum viable product (MVP) without scaring away potential users.

> We practically grouped out three potential sort of use cases and we picked these three people because they are working in different fields, so they could help out with the product development. Like, it was hands on and great feedback because they are very close to me so I could nag them [...] You can not make a sheet MVP with this product because if you are losing users, that is a big loss for the company, because there are not so many users. [...] That was why we focused on having a MVP which was actually kind of working [first].
>
> D-1 on the importance of trusted industrial contacts.

D-1 also explained the change in network outreach with a lack of motivation. By the second interview, D-1 reported that the startup was not going anywhere anymore, even though they were offered funding from Generat. D-1 did not like the role of managing a company and wanted to have more of a role as a scientific expert.

Consequently, D-1 had decided to only work partially on Delta and slowed down the pace while looking for a new CEO. However, D-1 did not report to have contacted anyone in this search.

D-2 also reached out to people to validate the idea, but with another approach than D-1. D-2 had only one industry contact, an ex-significant other, who was talked to twice and who suggested two new leads that were not used. However, while D-1 contacted specific people D-1 knew would provide the sought out information, D-2 more randomly reached out to people who might have insight on the idea. This can be illustrated with how D-2 explains why D2-4, a connection from Thailand who was a hedgefund CEO, was contacted.

> I do not know. He does a lot of business, so I thought he might have some insight or know anyone. [...] He did not.

D-2 on tie-formation

On the other hand, D-2 reached out to validate the idea from more of a technical perspective and reached out to seven contacts for this purpose. This group includes one data security expert, two cloud-computing consultants, and back-end and front-end developers. Two of these were only contacted once, four were contacted twice and one, a former colleague and computer designer (D2-9), was used more than once a week. D2-9 also reached out to contacts in Deltas network and discussed several aspects of the idea with these contacts, both on the technical, business and product side, hoping that they maybe had some useful insight.

Half of the contacts D-2 used for these purposes were from D-2's home country. The rest were contacts D-2 had acquainted while freelancing, and who were from the US, Sweden, Iran and Thailand.

The next group of contacts Delta formed ties to were business advisers. D-2 already knew some of the advisers at Generat, D2-12, D2-17 and D2-10. D-1 and D-2 met several advisers together. Two of them were randomly at Generat. These who provided a lead to a CEO of a software company (D1-11), with whom Delta had lunch with. The contact gave advise on the technical side as well as the business side. This was the only mediated contact Delta chose to reach out to. The advisers were predominantly only talked to once except D1-3, who Delta kept in touch with throughout the period. Additionally, all of the advisers either had networks in Sweden or Norway.

Lastly, Delta also formed ties to three cohort members who contributed with specific tasks such as fixing the business model, coming up with a company name and designing Delta's logo. All of these three were from Sweden. D-1 reported to have talked to several other cohort members through organized activities at Generat or at the coffee machine, but they were not reached out to specifically, nor had they provided any valuable feedback.

4.5 Echo

E-1 and E-2 met each other through the Generat program in January 2019. Within a few weeks of knowing each other, they started working on Echo, an outdoor clothing brand for women with functional yet stylish clothing.

Echo is planning to launch directly into all of the Nordic countries, and plan to sell their products directly to consumers through their web page. Marketing will happen through influencers and Instagram and Facebook -ads.

> We feel secure that we can pull off marketing in the Nordic countries. It's about content marketing, contacting influencers to collaborate with, finding brands to collaborate with, and building up a brand.
>
> *E-1 On the prioritized tasks of Echo early in the development process.*

The team seemed confident that they already had their marketing strategy, market, customer and image defined at the first interview. E-1 had reached out to a broad network of prior colleagues within marketing and design. These personal ties made up the majority of contacts E-1 reported at the first interview alone (22/41) E-1 had also cold-called fashion designers and investors known to invest in outdoor brands, sharing Echos idea to gather feedback to further shape their idea. At the second interview, however, only one new personal contact was reported, indicating that E-1 exploited most of the direct contacts in the network early, before relying more on indirect contacts through Generat and through snowballing as the company continued to develop.

E-1 also spread the word through groups on LinkedIn, this resulted in a few, but valuable contacts to reach out. One fashion designer became very interested in the project. After talking sporadically with the designer for some time, the designer started helping Echo and worked with them for five weeks. Another contact E-1 got trough sharing the startup's goal of creating a new brand on social media was a product designer for an international company. Echo talked to her three times, and she taught E-1 a lot about how to develop a textile product.

> It's an app where you can post, like, ask questions or what you might have, and then the community can reply. So I posted like "Hi, I'm working on this brand, anyone who knows anything?" And there was a lot of people who replied and said they could help out.
>
> *E-1 On how Echo got help from closed forums online.*

While E-1 reported a big personal network to benefit from, E-2 had a different

starting point. With no strong network in Stockholm nor within B2C marketing, E-2 chose to connect with personal friends from Finland that were imagined to be potential future customers. E-1 also talked to connections that Echo got through Generat. These five were two investors interested in fashion, two contacts within e-commerce and one unspecified contact. This changed drastically as the company developed.

A few weeks before the ID, E-2 became responsible for researching and setting up a production line. Generat provided the team with an industry mentor (E2-30) with senior experience from two world-leading outdoor hiking and fashion brands. E2-30 gave E-2 leads to other Swedish contacts that could help with setting up production lines, as well as a set of Latvian manufacturing companies. E2-28, a managing director of a Finnish textile company also gave E-2 contacts in Latvia. Another person that helped Echo with manufacturing contacts was E2-10, a Finnish manufacturing agent that E-2 was put in contact with through a friend from university.

Both E2-10, E2-28 and E2-30 quickly became important contacts for Echo, and they had multiple discussions with E-2 weekly. To supplement the production companies that were suggested by Echos three resources on manufacturing, E-2 googled, and cold-called a set of other suppliers to figure out what would be the right production line for Echo. In total 38 Latvian contacts were made, 24 of these were cold calls, the rest were mediated through E2-10, E2-28 and E2-30.

While production over time became the focus for E-2, E-1 was responsible for the design and expression of the clothes as well as deciding on a more specific marketing strategy. E-1 did not reach out to as many contacts as E-2 after the division of responsibility. Instead, E-1 followed up on the contacts that they already had formed, in addition to reaching out to Swedish designers for famous brands. At the second interview, E-1 was asked to go through the list from interview one and elaborate on if, and how often they had been in touch with the old contacts since interview one. The contacts E-1 still followed up were predominantly designers. The rest had been dropped.

With the Nordics as their target market and access to both their own, and Generats network in the region, most of Echos contacts also were from Sweden or Finland. Exceptions include a polish fashion designer E-1 found in a LinkedIn group, a CEO of a Norwegian startup making direct B2C sales online, a Sri-Lankan friend of E-1 that helped with naming the startup, an investor from the Netherlands mediated through Generat, and the list of Latvian suppliers.

4.6 Foxtrot

As mentioned in chapter 3, F-1 worked on six different concepts during the Generat program. There were two main phases where ideas were worked on in parallel, three of the ideas were investigated with a potential co-founder (F-2), and three were investigated alone. F-1 said that it had never been a problem to find good ideas to work on, the reason F-1 joined Generat was to find a good founding team. For the period where F-1 worked with F-2, software ideas were investigated, these were; a service to encourage financial saving in the form of pension, optimization of personal insurances in terms of coverage and cost, and a recruitment platform based on better personality science and testing as well as with a twist in the business model. All of these have both a B2C and a B2B element. F-1 explains that these ideas were chosen because they were within areas that were interesting to both F-1 and F-2. After the two potential co-founders chose to part ways, F-1 turned towards ideas without B2C aspects. Norway and Scandinavia were reported to be beachhead markets for all of F-1s ideas. This corresponds well with the network used by F-1 to explore the ideas.

> I have done a bit of B2C before, but it is not what I think is the most fun cases in the world. I like better to work with bigger technologies, bigger problems. That was the drive that brought me to go in a more industrial direction, and here, I have a lot bigger network too.
>
> *F-1 On how the scope of ideas changed after parting ways with F-2*

F-1 estimates to have reached out to between 120 to 200 persons in the early weeks of idea exploration but find it hard to mention all of them because of time constraints and because contacts that did not provide valuable information were found hard to remember. This high number includes talks with friends where ideas were mentioned, cold calls where no one picked up, family, former colleagues as well as talks with cohort and staff at Generat. When asked to emphasize contacts that F-1 remembers, and that were important for validating and developing the startup ideas F-1 worked on, 42 contacts were mentioned, where 26 are from the first interview, and 16 are new at the second interview.

> When you have called as many people as I have, you can't list them all. 1: It takes a lot of time and 2: many of the conversations were

> fruitless, I would get nothing out of them. Many times in social situations, for example, I would talk to my friends about my ideas, but I would not think whether I was validating or devalidating my ideas at that time, Its more like: "by the way, I am working on this, what do you think, is it cool?"
>
> *F-1 On what contacts are hard to remember*

F-1 explained how network contacts were used to validate the viability of the ideas that were being researched. The main trend was that a lack of contacts or information from them was not the factor that made F-1 discard current ideas and continue to pursue others. The causes explained to be critical for choosing to discard the three first ideas, the ones with a B2C-aspect, were that they were selected as a compromise of areas of interest between F-1 and F-2. This aligns well with F-1s underlying motivation for joining Generat being finding a founding team, as opposed to having the ambition to find the perfect idea. When F-1 chose not to work with F-2 however, the idea-compromise was not longer necessary, and F-1 discarded the ideas from the collaboration. F-1 explains that there was no motivation to continue working on the ideas.

For the last three ideas, the ones targeted towards companies and that F-1 pursued alone, two were projects already started by someone, and F-1 found them through close network contacts, and one was a personal idea. F-1 has a friend that has developed a platform for automating the process of approving cargo for offshore shipping. The company was already set up, and they were looking into how F-1 could join the team to provide the startup with business development resources and backing from Generat. This exploration started two weeks before the ID and F-1 explains that the team did not have the time to figure out the necessary details before ID. The idea of developing software for the offshore oil industry was validated through network contacts in the industry. F-1 contacted a friend from university working in the industry as well as decision makers in two big companies in the industry that F-1 sourced through network developed from prior working experience developing technology solutions in the industry. F-1 reports that both of the big companies were interested in the solution, and the problem was that F-1 was not able to build a tech team suitable to execute the idea in the short time that was left before ID.

The idea of an AI-driven search algorithm to help lawyers lookup legal documents was also sourced through F-1s network. The company was already

set up, and one of the founders was a friend of F-1. Although not having explored the idea enough to present it as a case on ID, F-1 continued working on the project for three weeks after finishing the Generat program. The reason F-1 decided not to pursue the project further was due to team dynamics within the founding team.

In hindsight, F-1 reported a reluctance to commit to a project and a team that did not feel right. Moreover, although F-1's impression was that many of the ideas that were explored during the Generat-program could be viable business ideas, none were ideas F-1 could imagine working on for a longer period. When asked about why F-1 did not present at ID, the answer was:

> It would be silly to just jump on a semi-good idea alone and present it. When you are committing five to ten years of your life to a project, things need to be in place, and they just weren't for me.
>
> *F-1 On why none of the projects that were validated as good business ideas were presented at ID.*

Most of the people F-1 contacted were from Norway, and more than half of the contacts reported by F-1 in the initial interview were reported to be good friends or close business contacts. Across the projects F-1 worked on, the interviewee seemed to have reached valuable decision makers quite quickly, and a lack of network has not seemed to be any hindrance for the development of the ideas F-1 was investigating. However, unable to find a co-founder, and unwilling to embark on a project alone, F-1 ended up without a project ready to pitch and left Generat after the eight first weeks.

4.7 Golf

The founders of Golf met each other through the Generat program. At an early stage, they got together, and G-1 explains that connecting the dots on their prior experiences made him able to synthesize and present the idea more or less as it turned out to be.

> ...it was literally just me saying, Hey, guys, this is an idea. This is the market. This is the brand, this is the people, this is how we're going to do it. This is who I am going to contact.
>
> *G-1 on how the idea of Golf was born.*

G-1 focused on talking to people that were felt to have a clear understanding of the idea and the context. Hence, they could give quality feedback. Early calls were done to validate the concept, and because of the experience within the team, a small number of calls, in addition to researching competitors and substitutes lead the team to conclude that they had found a viable business model at an early stage. By looking towards companies with similar concepts other places in the world, and having identified that owners of retail space are looking to sublet retail space short term Golf was enabled to focus on building and developing instead of reaching out to a vast number of contacts.

> The model has been validated, and the marketplace has been set. And basically, I have understood the revenue model, the cost structure, the go-to-market strategy and the channels where we are trying to communicate to the people, potentially also the demand side and the supply side.
>
> *G-1 On what has been learned within two months working on Golf.*

G-1 provided a list of 10 contacts in the first interview and 30 more in the second interview. As the team found the concept and knowledge necessary to develop Golf already available within the startup, Golf focused on development in the early phase and quickly moved on to sales and marketing the working product to its first customers.

G-1 started pitching the idea to three members of the Generat staff early. These had industry experience and were reported by G-1 to give valuable feedback, leads, and contacts. One of these contacts was an investor. Three other investors were also contacted; they were found through G-1s existing network. One contact was a hotel director, who was contacted with the purpose to explore the pain points of potential customers. In an early phase, G-1s outreach is found to be pinpointed to a few strategic contacts. G-1's goal was to get the last pieces of the puzzle in place. For instance, it was uncertain if the concept would be interesting for investors. After contacting four of them and getting their feedback, G-1 was certain that Golf would be a potential startup for investors to invest in. The certainty in G-1s outreach can be seen in the way the informant describes how a member of the Generat staff was approached the first time they spoke about the idea.

> I said, Look, this is the concept. This is the market, this is the team, this is what I'm going to build and put together. This is my go to market strategy. This is how I am monetizing. This is my cost

> model. This is how I am dealing with insurance. And this is the service I am offering. So it is a two sided market. And the conversation we had around that was; *Who do you know, that could add value to helping me scale.*
>
> *G-1 On how Generat staff was approached.*

Specific and detailed questions enabled G-1 to get valuable information from contacts effectively. From the contacts in the Generat staff, they were directly forwarded to investors within the real estate market within a few weeks on working on Golf. This specificity was an elaborate strategy from G-1. Instead of opening the idea or hypothesis for discussion, G-1 would present what the current problems that Golf was facing were, and ask for suggestions on solutions to these problems.

> When I engage with contacts, I engage them when I have something solid, that they can actually understand. They can touch, they can feel, they can get, you know, so it's not like just a discussion point. Because I find that when you do try and contact people, you need to be more engaging and effective, so that you can actually have a tangible result and post meeting.
>
> *G-1 On having tangible questions before reaching out to contacts*

Being specific and goal-oriented in the first meetings with potential business partners and customers was explained by G-1 as a way to build trust and a good relationship. G-1 explained that "airy conversations" were not off the table, but that it was believed that those belonged to a later stage in a relationship between a startup and their business contacts.

At the first interview, it was important for G-1 to build relationships with investors slowly. First starting with figuring out what they were looking for and establishing trust. G-1 was reluctant to share much about the idea before Golf felt ready that they had the answers they needed and a solid pitch deck to back up their idea. G-1's plan with the four investors that were contacted early was not only to validate hypotheses but to build relations that could lead to future investments. The follow-up strategy for the investors was to leave them as long as Golf did not have the traction needed to be seen as an attractive investment case. At the second interview with G-1, the four investors had not been reached out to again, but there were plans for reaching out to them. Although a partnership and investment was the goal, G-1 felt that constant

contact could wear out the investor's patience, and hence it was preferred to 'stay off the radar'.

At the second interview, after Golf had received funding from Generat, G-1 reported that 31 new contacts had been reached out to. Of them, 20 were categorized as not relevant, and the contacts were not followed up. The reason for this was explained to be the wrong timing. The contacts were judged to be potentially valuable in the future, but not at this moment. These contacts consisted of people that could help build the service, including coders and designers as well as people that were seen as potential candidates for the advisory board of the company. Between the first and the second interview, Golf had set up an advisory board. This board consisted of six people with senior experience within fields relevant for Golf. Four of these were sourced through G-2's network, and two through the networks of Generat Staff.

5 Case Study Analysis

This chapter builds on the case descriptions presented in Chapter 4. The cases will be analyzed individually by utilizing the theoretical framework presented in Chapter 2. After defining the founder's and startup's pre-embeddedness, and the phase of the startup, an analysis of their tie-formation activities will be performed case by case. This will be followed by a cross case analysis comparing multiple founders, their activities and their pre-embeddedness, emphasizing any prominent trends and findings related to the research questions.

5.1 Alpha

5.1.1 Geographical Pre-embeddedness

Alpha has close to no geographical pre-embeddedness. A-3 reports to have between two and three years of working experience travelling between Ukraine, Sweden and the US. However, A-3 did not report to having developed any local network in Sweden. Neither A-1 nor A-2 reported to have any prior working experience from Sweden. None of the founders know Swedish. The little amount of working experience A-3 has from Sweden is the only geographically pre-embedded Alpha has, leading to the conclusion stated at the top of this subsection.

5.1.2 Industrial Pre-embeddedness

The industrial pre-embeddedness in Alpha varies within the team but is in general found to be very high. The industry they are seeking embeddedness in is data analysis and more specifically within applied artificial intelligence. A-1 stands out with what can be seen as a scalable networking model. Not only does A-1 have ten years of working experience with artificial intelligence, but by becoming a resource within the field, doing talks and writing articles

online about industry-relevant topics, A-1 reports to have generated 4000 contacts the last two years. This provides the founder with the opportunity to cherry-pick connections to exploit, seemingly without having to build initial trust as the connections already see A-1 as a resource in the industry. A-1's experience and knowledge, along with A-1's eagerness to self-brand and share this knowledge, provide the founder with high amounts of both social, symbolic and cultural capital. A-3 has five years of working experience doing data analysis and is hence also found to be embedded in the industry. A-3 lacks the symbolic capital found in A-1 but has both social and cultural capital through work experience and a professional network. A-2 has little working experience and stands out in the team as the person with the least amount of both geographical and industrial embeddedness.

5.1.3 Startup Phase

Alpha had been running pilots for around four months prior to being admitted to the Generat program. Two of the founding members were admitted together, and A-3 was included in the team within the first weeks of the program. The activities reported being most important for Alpha were to build the product and to reach out to the necessary developers to be able to provide their product to the businesses that request their services.

According to Wilken (1979), three phases, Alpha should be placed somewhere between the planning and establishment phases. Where the planning phase includes finding the necessary knowledge and resources, and the establishment phase includes running the business. We see Alpha doing both. On the one hand, they are already delivering a product to paying customers. On the other, they are constantly growing, looking for investments and new contributors.

During the Generat program, the team continued to set up test projects with interesting partners; one was with NASA through a contact A-1 made at a talk in Zurich. Alpha did not receive funding from Generat at the ID, and although seemingly having a head start on other companies started by cohort members, the activities reported to be important for the companies did not change and continued to be to grow the user base and develop the platform. Based on this, there is no data to support that Alpha changed phases within the data collection period; the startup remained between the planning and the establishment phase.

5.1.4 Alpha's Tie-Formation Activities

The tie-formation activities are found to vary substantially from founder to founder. As an insider trying to build the first worldwide AI community, A-1 could be expected to use the *network renewal* approach (Elfring and Hulsink, 2007), relying on a mix of strong and weak ties that could mediate new ties. However, A-1's approach is somewhat different, and there is a difference between how A-1's network is grown and how it is used. While the expansion of the network is through talks and articles enabling A-1 to broadcast 'one-way' monologues to a large audience and make contacts reach out to the founder, the follow up when A-1 chooses to establish a dialogue is close, frequent and value-bringing. From a vast network of weak ties, A-1 identifies a few attractive candidates that match the current needs of Alpha and follow them up, quickly turning them into strong ties that provide Alpha with both new opportunities, contacts and information. Some of these ties are forwarded to A-2 and A-3 to follow up. One example of this is the Swiss NASA-contact that A-3 has kept in touch with.

A-3 was industrially pre-embedded and has been found to use the *network evolution* approach in accordance with Elfring and Hulsink (2007). A-3's responsibility was to grow the network of AI enthusiasts and junior developers that Alpha relies on to deliver its product. A-3 solved this by reaching out to existing ties in Ukraine where A-3 had worked with data analysis. In addition to this, A-3 reached out to a varied group of people sourced predominantly from the startup's own pre-existing network. These contacts were from the USA, Israel and Ukraine. A-3 reached out to and kept in touch with many of the contacts several times a week. Thus, A-3 displays a pattern of forming few and strong ties sourced from the personal network in the beginning. After, A-3 reached out to developers in order to build the user base of the platform outside the founder's personal network. These were mediated through strong and weak ties in A-3's existing network in Ukraine.

A-2's approach was found to be a *network revolution* approach, as was expected based on the founder's lack of pre-embeddedness. None of the ties originates from A-2's existing personal network. No one from university, school, friends or others has been contacted. All ties are cold-calls or Generat cohort and staff. A-2 started to use the Generat staff and the Generat Cohort directly from day one. A-2 gets few referrals to new contacts through ties, and almost all of the early ties are direct as opposed to mediated. Cohort members and Generat

staff are frequently used, but primarily for business feedback. Some are used enough to be developed into strong ties quickly. In addition to this, A-2 establish seven ties through cold calls, three of which became strong ties. A-2 found them on LinkedIn when looking for experienced seniors in the industry, and asked them to function as mentors. These contacts helped A-2 one to several times a week with challenges related to the development of Alpha. While they gave A-2 industry contacts, they did not lead to new ties.

After eight weeks at Generat, A-2 moved to Mexico to join an incubator there. At this point, A-2 had joined A-1 in writing articles on behalf of Alpha and in general around topics related to artificial intelligence. This resulted in three people reaching out to A-2. Other than that, A-2's tie-formations predominantly stayed the same, continuing to reach out to cohort members and staff, and through cold-calling based on specific searches on LinkedIn. No new strong ties were reported to emerge after the first three weeks of the program, and a few of the strong ties A-2 formed early on, became less valuable, and were contacted less frequently with time and were therefore defined as going from being strong to weak.

A-2's networking approach is also found to be towards industry contacts, and not because of their geographical location. Thus, A-2's lacking geographical embeddedness in Sweden had little impact on the tie-formation approach. Most of A-2's early contacts were related to the incubator and therefore were Swedish and later Mexican, but these were primarily used to get new contacts or business advise. There seems to be no geographical limit to what contacts A-2 cold calls. Kenya, India, USA, Belgium, Ethiopia and Norway are examples of countries A-2 reached out to people in. A-2 does not have any barrier for reaching out to people who are from countries other than Germany and Sweden, and some of these even turn into strong ties through conversations with A-2. By reaching out with a specific project and a goal within a field where the contacts have knowledge seems enough for A-2 to build the necessary trust despite having no common ties nor any geographical embeddedness in common.

5.1.5 The Role of Generat Staff and Cohort

While the Generat cohort and staff proved valuable from an early stage in terms of business feedback and concept development. Few ties were formed

through the mediation of Generat at this stage. Towards the end of the program, Generat mediated a few contacts to Alpha, where one was reported to be valuable for the startup, indicating that Generat had practically no influence on the network development of the startup. This gives us no evidence of the incubator making Alpha an 'indirect' insider (Elfring and Hulsink, 2007) or helping Alpha become embedded, neither in the industry nor geographically.

5.2 Bravo

5.2.1 Geographical Pre-embeddedness

Bravo has good geographical pre-embeddedness in Sweden. This is where B-1 grew up, was educated, and has working experience. Additionally, based on B-1's four years of working experience with networking from Chicago and Los Angeles, B-1 is considered to be somewhat geographically pre-embedded in the US.

5.2.2 Industrial Pre-embeddedness

Bravo is considered to be somewhat pre-embedded in the B2C app industry. This is based on B-1's work experience for the podcast distribution app. However, Bravo is not considered to be pre-embedded in the book publishing industry. It is an outspoken strategy by Bravo not to focus on reaching out to publishers, as they believe that it is more important to build a foundation of avid users of their service.

5.2.3 Startup Phase

Initially, B-1 and Bravo were found to be in the motivational phase. During the program, Bravo moved into the planning phase. In the beginning, B-1 investigated several ideas in parallel and was not fully committed to Bravo; there was no product and no customers. Once B-1 committed, the primary activities of Bravo concerned user research and testing, product development and the search for investors, which are activities associated with the planning phase. The search for investors remained a key activity throughout the period, even

after Bravo received funding from Generat, and the team continued to focus on user research and testing but also started to work on user growth. Based on this, Bravo can be argued to be in both the planning and establishment phase as they are both seeking knowledge and resources and delivering a product to users.

5.2.4 Bravo's Tie-Formation Activities

B-1 was found to form ties with a similar approach to what is seen in the contingency model (Hite and Hesterly, 2001), but not an approach consistent with Elfring and Hulsink (2007). Instead, a range of different approaches was used depending on the task at hand. B-1's tie-formation activities are centered around the prioritized tasks, namely user research and testing, growth, business development, and finding investment.

In the beginning, B-1 was investigating two different potential ideas where Bravo was one, and the other was linked to mental health. For the mental health project, B-1 is considered to have no pre-embeddedness and was found to have a very *path dependent* approach, where contacts relied on chance meetings and personal contacts. Although they are considered weak ties or new contacts, common for these are that B-1 knew they had a passion for the subject and could provide insight as subject matter experts.

B-1'a approach to user feedback is found to be *network evolution*. When B-1 started researching for Bravo, B-1 found ties through publishing posts on social media and contacted a selected few friends, instead of contacting people directly. Moreover, B-1 did not follow up on leads that were given for the Bravo case in the beginning. This can be related to the statement that Bravo was not actively reaching out to people as long as the product was unfinished. However, a possible explanation for the different approaches for the two projects is that while B-1 was searching for opportunities for the mental health project, the tie-formation activities for Bravo were connected to identifying potential users. Another finding is that Bravo only relied on close family members and friends considered as strong ties to test and give feedback on the unfinished product. This indicates that personal goodwill had importance on how these ties were used. In turn, this can explain why the interviewed contacts with weaker ties were not asked to test the product. Once the product was finished, Bravo continued to rely on social media to get in touch with potential users. B-1 kept in touch with the ties interested in the Bravo App

from the early phase but did not continue to focus on getting friends to join the platform. Instead, B-1 asked the network to be put in contact with friends of friends and other indirect contacts. This, and the specific targeting of the so-called power users and the establishment of a focus group, also illustrates how Bravo went from primarily using personal and strong ties to weak and indirect ties.

B-1's approach to investors and power users is more similar to the *network revolution*. Bravo specifically targeted, and cold contacted power users and potential investors. While Bravo's efforts to find power users seem calculated and strategic, identifying specific people through their outspoken interest in books online, their efforts to source investors appear more random and frantic; there seems to be no filter to what investors Bravo choose to target. Both of these groups of people have been new contacts that B-1 have had to form ties to because of the lack of such ties in B-1's existing network. The only investor B-1 knew from before is B1-1, with whom B-1 only talked twice and only briefly during the data collection period. The difference between the two groups is that while the power users were targeted through social media, the investors usually were mediated by a common contact, relying on social capital and social trust (Hite, 2005). Bravo has not tried to approach people in the publishing industry, which could have given them legitimacy, partnerships or potential investments. This reluctance matches the findings of Elfring and Hulsink (2007) for outsider entrepreneurs, although, in Bravo's case this was an outspoken strategy where Bravo first wanted to build a user base big enough to show value to these actors.

The last way B-1 was found to form ties was within a local network of people with an engagement for women, minorities and less fortunate youth. B-1 had no prior strong ties with anyone in the network, which appears to be sparse and unestablished. Nevertheless, B-1 managed to continuously find ties from the network through sharing Bravo's, and B-1's personal agenda. This network, which is unrelated to the networks where Bravo aim to become embedded, enabled B-1 to find contacts who could contribute in different ways, both as regular and power users, as well as potential investors. What these have in common is a shared agenda and a wish to see others in their network succeed. Just being a part of this network seems to have given B-1 the required trust to source valuable resources and knowledge from a vast network of contacts outside of B-1's personal network.

5.2.5 The Role of Generat Staff and Cohort

Generat had a small role in B-1's tie-formation activity through A-1 (from Alpha) and one investor being mediated contact to through a Generat staff member. However, all of these were either dropped or only talked to once, indicating that Generat has had an insignificant role in B-1's network development, showing no evidence of making B-1 an 'indirect' insider (Elfring and Hulsink, 2007). On the other hand, several Generat members of staff and cohort were used more frequently for business feedback, proving their value for this. However, this use of Generat contacts has several times been based on chance, indicating that the use has been path-dependent.

5.3 Charlie

5.3.1 Geographical Pre-embeddedness

Charlies geographical pre-embeddedness is considered to be high. C-1 and C-3 have education from Sweden, and all of the three founders have working experience from Sweden. C-2 has worked in Sweden for five years. Sweden is seen as one of several markets reported to be interesting for Charlie, the other being other countries with large distances and long power grids. Their strategy is to build and grow in Sweden before expanding into other markets.

5.3.2 Industrial Pre-embeddedness

Charlie has an existing, but varying degree of industrial pre-embeddedness, where C-1 and C-3 are found to have some industrial pre-embeddedness in non-overlapping parts of the networks reported being important for Charlie. C-2 has no industrial pre-embeddedness. Charlie reports to be interested in contacts within utilities, aerial inspection and with drone manufacturing. These represent close actors in the value chain, where Charlie aims to establish the company. C-3 has worked with drones, machine learning and autonomous vehicles before, but has no industry experience within utilities. C-1 has worked for several of the utility companies Charlie seeks to establish contact within the power grid industry, but has not worked directly with power grid inspections, C-1 and C-3 are hence found to have some industrial pre-embeddedness in the shape of accumulated social and cultural capital. C-2

has no industrial experience from any business related to the networks where Charlie report to seek inclusion. So, Charlie is hence found not to have any industrial pre-embeddedness.

5.3.3 Startup Phase

Charlie remained in the planning phase for the duration of the Generat program. At the start of the program in January, Charlie had already formed its team and decided upon the idea. The team had investigated other ideas but pivoted to power grid inspection as this idea was seen as most promising. In January the team had identified a need, but they were yet to establish contact with customers, and they had not estimated their market size. This puts Charlie at the beginning of the planning phase, where the startup starts acquiring information, new skills, resources, and business relations (Greve and Salaff, 2003). During the program, Charlie reports seeking more specific contacts, focusing on getting in touch with potential first customers and manufacturers. This still puts Charlie in the planning phase, but as the next subchapters will show, did change their tie-formation activities.

5.3.4 Charlie's Tie-Formation Activities

Based on the industry pre-embeddedness of the founders, C-1 was expected to use a *network evolution* approach, while C-2 was expected to use *network revolution* (Elfring and Hulsink, 2007). However, both C-1 and C-2 were found to use the *network revolution* approach, relying on indirect ties through Generat staff and cold calls, and developing the ones found to be useful to strong ties. While C-2 was considered to have no industry pre-embeddedness, C-1 was, but only four of C-1's 56 ties were pre-existing ties. Both for C-1 and C-2, indirect ties through the industry networks of Generat staff made up a substantial amount of the early connections the founders made. In addition, C-1 and C-2 made 28 and eight cold calls respectively, before the first interview. C-2 reports that among the 60 contacts that were contacted after suggestions from Generat staff, only 6 responded. These were nurtured, and four of these went from weak to strong ties for C-2 during the program. Two of these contacts were within the utility industry, one within the aerial inspection and one within drone operations. The cold calling strategy was, however, reported to demand some persistence. Some of the contacts the team reached out to

through cold calls and LinkedIn messages did not answer, and some of those who did were not positive. Despite the reasonably low success rate when contacting people, the volume of accessible contacts identified with online tools was reported to make the exercise worthwhile.

As C-1 and C-2 mainly relied on indirect ties mediated by Generat or found through cold calls, their geographical and industrial pre-embeddedness proved to have little influence on their network development. This is although C-1 was found to be both geographically and industrially pre-embedded. However, through their tie-formation activities, they managed to develop their network and embed themselves within the utility and aerial inspection industry networks.

5.3.5 The Role of Generat Staff and Cohort

Charlie's extensive use of Generat staff to mediate contacts within the utility industry is an example where Generat staff managed to make the incubatee and 'indirect' insider (Elfring and Hulsink, 2007). Their role functioned as a key actor, connecting Charlie with four people early on that quickly grew into strong ties. Charlie kept many of the strong ties mediated through Generat but also transitioned into relying more heavily on cold calls found on LinkedIn and elsewhere online in the later weeks of the program. This corresponds with a transition in Charlie's priorities from general probing of the market to more specifically looking into contact with specific potential customers and with product development. This is in line with the *contingency approach*, moving from *identity-based* to a *calculative network* (Hite and Hesterly, 2001).

Nevertheless, Generat has been found to have a strong influence on Charlie's tie-formation and network development towards becoming embedded in the networks necessary for Charlie to build their business.

5.4 Delta

5.4.1 Geographical pre-embeddedness

Delta is considered to have some geographical pre-embeddedness in Sweden because of D-1's six years of working experience there. Both of the team members were born and educated in other European countries. D-2 has no working

experience from Sweden.

5.4.2 Industrial Pre-embeddedness

Delta has a high level of pre-embeddedness within its supply chain network, namely research chemists through D-1's six years of working experience in the industry. Since chemists are both the customers and suppliers of this two-sided marketplace, Delta is considered to be pre-embedded on both sides. While valuable for building Deltas product, D-2's experience within IT consultancy is not found to be relevant for the networks where Delta seek to become embedded.

5.4.3 Startup Phase

Delta started in the motivational phase and quickly moved into the planning phase. In the beginning, Delta aimed to gather the knowledge needed to build the platform. After verifying that their product would deliver value to their target customers, Delta transitioned to the planning phase. Development of an MVP of the product began, but both D-1 and D-2 reported to lack motivation for the project and ended the collaboration with each other. As lack of motivation was the reason to abandon the project, one could argue that the project never left the motivational phase, the reported core activities of the project, however, indicate that Delta moved from motivational to planning phase before being abandoned. The lack of motivation was not reported to be related to the viability of Delta, but to committing to a project that did not align with the founder's ambitions.

5.4.4 Delta's Tie-Formation Activities

Delta's tie-formation activities have revolved around their objectives of idea validation, product development and testing. D-1 had a high industry pre-embeddedness and were thus expected to use a *network evolution* (Elfring and Hulsink, 2007) and an *identity-based* approach (Hite and Hesterly, 2001), this was found to be true. To validate the idea, D-1 leveraged high cultural and social capital within a cohesive network in the target industry, quickly verifying a market need and target potential customers.

D-2's approach differs. D-2 also relied on direct contacts early, but where D-1 had industry-specific contacts to reach out to, D-2's use of contacts was in a broad spectre of industries, all from D-2's pre-existing network. Also, D-2 report that little was gained from reaching out to pre-existing contacts in the early weeks. When working with validating the idea, D-2's tie-formation approach is highly path-dependent. The approach is not considered as *network revolution* (Elfring and Hulsink, 2007), as could be expected, it is considered as highly *identity-based* (Hite and Hesterly, 2001).

Later, to build the platform, D-2 reached out to an existing technical network of former colleagues, who were mainly strong and dormant strong ties, to map out the possibilities for the technical solution. This approach to tie-formation was also *identity-based* and identified as the *network evolution* approach by Elfring and Hulsink (2007).

To test the platform, Delta relied heavily on three of D-1's strong ties. These used to be colleagues of D-1, and the argument for choosing this small and strongly connected group of test users was by D-1 explained to be that they could be bothered with questions about the user experience, and would accept a sub-optimal and sometimes non-functioning product without leaving. This way, D-1 found that it was possible to test and build without losing potential future customers in the quite limited market Delta operated within.

Regarding the influence of geographical pre-embeddedness, although D-1's network of researchers consists of seven different nationalities, all except two have worked at Stockholm University and been locally embedded. However, these were reached out to for industry-specific reasons, and not because of their geographical location. Thus, there is no indication that D-1 tried to become embedded locally or that the geographical pre-embeddedness was of significance.

5.4.5 The Role of Generat Staff and Cohort

Delta used Generat staff and cohort to assist on tasks related to business development. A few contacts were also mediated through Generat, but most of these were described as chance meetings and dropped after talking once or twice. Thus, we find that Generat did not play any significant role in Deltas tie-formation activities before the founders decided to abandon the idea.

5.5 Echo

5.5.1 Geographical Pre-embeddedness

Echo as a whole is found to be well pre-embedded geographically. E-1 is Swedish and has worked and studied in Sweden. E-2 has lived one year in Sweden and thus have a limited geographical pre-embeddedness in the country.

5.5.2 Industrial Pre-embeddedness

The industrial pre-embeddedness is found to vary within the team, but to be substantial overall. Echo is developing an outdoor apparel company and thus seeks to obtain embeddedness within the fashion industry. Key contacts Echo wished to reach out to were manufacturers, designers, and marketers. E-1's whole career has been within marketing, both in established marketing firms and in startups. With an emphasis on the marketing-part, E-1 is thus found to have pre-embeddedness in this industry, and somewhat pre-embedded in the fashion industry. E-2 have studied and worked with finance, including seven years in investment banking. For the actions of attracting investments, E-2's experience is relevant, but for the product and market side of Echo, E-2 had no industrial pre-embeddedness.

5.5.3 Startup Phase

Echo started Generat in the planning phase, and while they moved towards the establishment phase after ID, they are defined as staying in the planning phase for the whole duration of the Generat program. E-1 was already committed to the idea behind Echo prior to the Generat program and reports to have verified the business idea before being admitted. The core activities reported to be important in the early weeks were to identify people that could help Echo develop and build their products and brand. After ID Echos reported needs had become more specific. Echo went from exploring possibilities to looking for specific industry partners. E-1 reported that Echo was working on finding and hiring fitting manufacturers, designers and influencers. Their goal was to position Echo for a launch in the Scandinavian countries.

5.5.4 Echo's Tie-Formation Activities

E-1's approach is identified as what Elfring and Hulsink (2007) define as *network renewal*, where the founder relies on a mix of strong ties to get new ties and information. Before the ID, E-1 reached out to a large number of dormant strong ties, strong ties and weak ties, all of them located in Sweden. The contacts from E-1's pre-existing network are mostly within marketing, design, or fashion. E-1 also forms five ties to fashion designers through cold calling. E-1 also meets relevant people through networking events whom are added to the network and proves valuable later on. After the idea had been verified, some weak ties were turned into strong ties, while others are dropped. The focus also shifts to a more *intentionally managed* and *calculated* network (Hite and Hesterly, 2001), focusing on finding key people, such as designers and on key activities such as product development.

E-2's approach is identified as *network renewal* and *path-dependent*, which is somewhat unexpected as E-2 is considered not to be pre-embedded in the industry. The informant contacted mainly pre-existing strong and weak ties from the country where E-2 had worked within banking and people met through the Generat program. The pre-existing ties E-2 reached out to were friends and former colleagues, which mediated seven new contacts. Some were contacted because they were seen as potential customers, others because of their business experience. Only a few of them worked with fashion or marketing.

After the ID, the tie-formation strategies of E-2 changed to a *network revolution* when trying to find manufacturers. An industry neither of the founders have any embeddedness in. For E-2 this meant going from reaching out to contacts at Generat or from pre-existing network to making large amounts of cold calls. E-2 finds three actors who can be considered as key actors and who become very central in the COO tie-formation activities (Elfring and Hulsink, 2007). These functioned as *feeders and seekers* as defined by (Jack, 2005) because they found and supplied relevant ties the textile production in Latvia. However, the approach was still *path-dependent*, as tie-formation with the manufacturers seemed based on chance.

While E-1 was pre-embedded geographically in Sweden, E-2 was not. However, there is no evidence of E-1 benefiting from the pre-existing network based on their geographical location, but rather their industry expertise, which is in line with how Korsgaard, Ferguson, and Gaddefors (2015) argue that it is the function, not the location that is important.

5.5.5 The Role of Generat Staff and Cohort

Generat played a significant role in both E-1 and E-2's tie-formation activities. After an initial *identity-based* period, relying on pre-existing strong ties, and direct ties to Generat Cohort and Staff, Generat staff mediated ties to industry seniors that became valuable sources of new ties for Echo. E-2 followed up most of these new ties and began a *calculative* approach using Generat and the new industry mentors as mediators. This strategy enabled Echo to reach out to a high volume of specific contacts necessary for developing the product and establishing a value chain. They also provided business feedback. E-2 kept in touch with several ties and developed strong ties from the extended Generat network, indicating that Generat highly influenced E-2's network development and that they functioned as an 'indirect' insider (Elfring and Hulsink, 2007) for E-2, compensating for E-2's lacking industrial and geographical pre-embeddedness in both Sweden and Latvia.

5.6 Foxtrot

5.6.1 Geographical Pre-embeddedness

F-1 has no geographical embeddedness. F-1 has neither studied nor worked in Sweden.

5.6.2 Industrial pre-embeddedness

F-1's industrial pre-embeddedness varies from idea to idea where a general shift can be found between the first three and the last three projects. Within the first three ideas, including the idea of motivating young people to save for pension (1.), the idea of optimizing personal insurances (2.), and in the recruitment platform idea (3.), no prior relevant working experience or education was found in relevant industries. For the last three projects, F-1 looked for ideas in areas where the competence F-1 had acquired through earlier experience could be relevant. Thus for idea number four and five; preparing supply ships (4.) and building heavy industry applications (5.), F-1 was industrially pre-embedded through prior working experience within these fields. For idea number six, building and AI-driven algorithms for lawyers (6.), F-1 was found

to be slightly pre-embedded. The founder reported to having worked indirectly with lawyers and multiple law firms, but not to have worked directly with law.

5.6.3 Startup Phase

F-1 was never found to move out of the motivational phase while in Generat. In the second interview, where F-1 talked about progress made after Generat, activities related to product development and sales to customers was reported. As the sixth idea, revolving around AI algorithms for lawyers, F-1 joined an existing team that had been working on the project for a longer period. This enabled F-1 to quickly move from a motivational phase to a planning phase after Generat.

5.6.4 Foxtrot's Tie-Formation Activities

The industry and the business idea varies between F-1's projects, making it hard to define any expected networking approach overall. However, we see that the approach F-1 uses in the five first startups is similar to what Elfring and Hulsink (2007) defines as *network evolution*, where the entrepreneurs rely heavily on existing ties. This was not expected for the first three cases. For the final project in the legal business, the tie-formation approach is more similar to *network renewal*, where many new indirect weak ties are formed through existing strong ties.

F-1 reached out to pre-existing strong and weak ties. Half of the pre-existing ties reported by F-1 were classmates from university. The remaining consisted of former colleagues, friends and family. Some of F-1's friends from university took a role as *feeders and seekers* (Jack, 2005) reportedly enabling F-1 to quickly reach relevant ties in various industries depending on F-1's current area. F-1 worked with many different concepts and thus used the close, entrepreneurial friends as advisers throughout the time in Generat.

Most of F-1's ties came from pre-existing networks in Norway. F-1's activities vary within projects, but can predominantly be seen as *path-dependent* and *identity based* (Jack, 2005), as F-1 mostly utilizes existing networks and ties mediated through strong ties instead of forming new ties and performing cold calls. As mentioned above the exception is the last project, where F-1 worked with an existing founding team on developing and selling a tool for lawyers.

I this case, F-1 was found to cold-call potential customers. The more *intentionally managed* approach found in the last project can be understood in the light of this project being in a later startup phase (Jack, 2005), thus requiring a different tie-formation strategy.

5.6.5 The Role of Generat Staff and Cohort

For two of the cases that F-1 undertook work on; the pension saving case (1.) and the recruitment platform case (3.), Generat staff contributed with several of the relevant contacts that F-1 used, making F-1 an 'indirect' insider (Elfring and Hulsink, 2007). However, seeing as the cases F-1 worked on had such a small time span, and most contacts were dropped when the cases were dropped, we do not have enough data to say if Generat helped F-1's network develop.

The pension funding case originated from an event hosted at Generat in collaboration with a bank. Meeting through an event at Generat was found to build some initial symbolic capital F-1 could use to gain access to key people in the bank. For the recruiting case, the Generat staff was reported to provide highly relevant contacts in a young company in Norway within high-tech software. However, after these contacts were provided from Generat staff, F-1 reported that the help from Generat started to decrease. F-1 expressed that there was a feeling of lacking, decreased and inadequate support from the incubator staff for a more significant part of the time spent as a participant there, this may have affected the tie-formation patterns F-1 used in the later cases.

5.7 Golf

5.7.1 Geographical Pre-embeddedness

Golf entails significant geographical pre-embeddedness, but within the team, it varies. G-2 grew up and has both studied and worked in Sweden. G-1 has worked, lived and studied in Greece, South-Africa and England, but never in Scandinavia. While the team as a whole is found to be pre-embedded, G-1, the only founder interviewed is not.

5.7.2 Industrial Pre-embeddedness

Industrially, Golf is well pre-embedded. G-1 has worked with real estate and venture capital and is thus found to have significant industry pre-embeddedness. G-2 has already founded a marketing firm and has worked with marketing for global sports and luxury brands, pre-embedding the team in this industry.

5.7.3 Startup Phase

Golf started off with a short motivational phase, moving quickly into the planning phase. G-1 and G-2 found each other in the early weeks of the Generat program. Based on their past experiences and network, they ideated on projects where they both could contribute, resulting in them coming up with the idea of Golf quite early. As similar concepts in other markets exist, G-1 expressed little doubt towards whether or not the product would work when built, and G-1 reports that they started building the product immediately. This resulted in a short motivational phase where the team worked on shaping the concept and presenting it to investors to get initial feedback, before moving into the planning phase shown by how the founders prioritize to build the product and start identifying their initial customers.

5.7.4 Golf's Tie-Formation Activities

Because of existing industrial pre-embeddedness and G-1's incremental innovation height where an existing, proven business concept is introduced to a new market, G-1 was expected to have a *network evolution* approach to tie-formation. However, G-1 almost solely relied on weak ties and is thus not identified as any of Elfring and Hulsink's (2007) approaches. On the other hand, G-1 leveraged highly specific, targeted industry ties, indicating that G-1 almost immediately transitioned to a 'calculative' network (Hite and Hesterly, 2001).

As mentioned in section 4.7, G-1 reported having a clear understanding and strategy for what actions to undertake and what contacts to get from an early stage. This clear understanding was reported to come from G-1's experience from a venture capital firm where the founder read hundreds of pitch decks (documents that startups provide to investors with key information about the startup and their plans for growth). G-1 reported that discussions with four

investors gave the founder the information needed to be sure that Golf had a concept that investors would be interested in at a later stage in development.

Although these investors were reported to be important to follow up, G-1's seemingly elaborate approach to relation-building differs from what can be found in the other cases. G-1 emphasized multiple times in the interviews how ties were left alone over long periods, and only contacted when G-1 had specific questions or information to provide. G-1 elaborately maintains a low contact frequency in fear of *overusing* important contacts. The conclusions and progress that Golf makes based on insights gained by communicating with these ties indicate that significant knowledge has been transferred, a sign that the ties function as expected from strong ties by Kijkuit and Van Den Ende (2007).

Of the around 30 contacts G-1 reports to have been in touch with after ID, only ten were by the founder categorized as worthy of following up at this time. The rest were categorized as not to be fitting at this time, but potentially valuable later. These 30 were predominantly contacts G-1 were mediated to through G-2, through Generat, or Golf's advisory board. Only a few contacts reported after ID were from G-1's pre-existing network. G-1 was not asked why this was the case, however, as Golf focused on the Swedish market, and G-1 lacked ties in the local area (geographic pre-embeddedness), the founder's industrial pre-embeddedness may have only provided relevant cultural and symbolic capital.

5.7.5 The Role of Generat Staff and Cohort

For G-1, Generat had a significant influence on both tie-formation and network development by mediating new contacts, especially local ties. This also increased over time. Three of the ten contacts G-1 reported to have talked to before ID were Generat staff. Two more were mediated through Generat staff and cohort. After ID, Generat mediated half of the ties reported by G-1, and four more were mediated through cohort members. Based on this, we find that Generat has provided highly valuable contacts for G-1 both directly through staff and cohort members, and indirectly through mediation to the extended Generat network. Thus, Generat is found to have made 'G-1' and 'indirect' insider, both geographically and industrially (Elfring and Hulsink, 2007).

5.8 Cross Case Analysis

We have now analyzed the tie-formation activities of the individual founders and startups. Before discussing our analysis in Chapter 6 we will perform a cross case analysis were we search for and seek to understand cross case patterns related to our two research questions.

5.8.1 RQ1

This RQ aims to investigate how the pre-embeddedness of founders is connected to tie-formation activities in the early phases of a startup.

The findings support the networking patters described by Elfring and Hulsink (2007) in regards to industrial pre-embeddedness. Entrepreneurs who are considered insiders to an industry, such as A-3, B-1, D-1, F-1 (when working on projects where industrially pre-embedded) and D-2, adopt the network evolution approach, relying heavily on strong ties in the emergence phase and focusing more on weak ties when the strong ties become insufficient. Next, A-1, who was also considered an insider, but had developed a more radical service, relied on a vast network of diverse contacts and utilized a mix of strong and weak ties, characteristic for the network renewal approach. Lastly, entrepreneurs who were considered outsiders to an industry, such as A-2, C-1, and C-2 relied heavily on cold contacting and key insiders who could mediate new ties, corresponding well with the network revolution approach (Elfring and Hulsink, 2007).

However, this study also found that founders have a varying degree of pre-embeddedness in the different startup-related networks they pursue embeddedness in. Accordingly, they apply several of Elfring and Hulsink's (2007) approaches simultaneously. One example is B-1, who used the network evolution approach for user research but had to resort to network revolution to approach investors because of a lacking pre-embeddedness in investor networks. Similarly, for the material platform that Delta is making, D-2's approach to the technical solution is identified as network renewal, while the approach to idea validation is identified as network revolution.

Founders predominantly reported to reach out to their existing network early. Preexisting personal and professional ties, as well as Generat cohort and staff, were contacted first, while cold calling, snowballing and online searches for

potential ties would follow as the startup developed. This trend corresponds with the findings of Hite and Hesterly (2001), Johannisson (2000), Lechner, Dowling, and Welpe (2006), and Greve and Salaff (2003) and the contingency approach. This trend could be found in founders B-1, D-2, E-1, E-2, F-1, G-1. Exceptions in the data related to this tie-formation pattern were always possible to explain with the limited time frame of the study, as some startups had already moved from the motivational to the planning phase, or never got to the planning phase.

In all, founders with high amounts of industrial pre-embeddedness reported to more easily get hold of the information and contacts they needed in the startups' motivational phase. They knew whom to contact and were often already connected with them. This enabled the founders to more quickly transition into the planning phase (Greve and Salaff, 2003). This was true for A-1, A-3, D-1, D-2 (when working with tech) and E-1. The opposite was also true for our cases. Founders with low industrial pre-embeddedness reported having a hard time reaching out to get initial feedback and spent more time on validating ideas and moving from the motivational to the planning phase. This was found in E-2, D-2 (when working with business) C-1 and C-2.

With regards to geographical pre-embeddedness, we found no tie-formation and networking development patterns. Both E-1, B-1, C-1 and C-2 were found both to be geographically pre-embedded and chose ideas where Swedish industry and customers would be relevant. While E-1 and B-1 predominantly used their pre-existing, Swedish networks to gain information and to form ties. C-1 and C-2 relied more on indirect contacts mediated through Generat and cold calls. Furthermore, G-1 was the only founder without a local pre-embeddedness who chose a startup concept with Sweden as a target market. To mitigated this lack of embeddedness, G-1 used Generat as a mediator to local ties. Additionally, G-1 found a co-founder with high industrial and geographical embeddedness. The other founders with little or no geographical pre-embeddedness in Sweden were found to work on ideas that enabled them to form ties to networks where they already were geographically and industrially pre-embedded. This includes A-1, A-3, and F-1. Finally, two founders, E-2 and D-2, worked on startup concepts where they lacked both geographical and Industrial pre-embeddedness. To mitigate this, they contacted their personal networks from where they had geographical pre-embeddedness in the early phases. This strategy was reported not as not very fruitful by the founders.

This analysis indicates that most founders with industrial pre-embeddedness, found ways to gain value from industry ties regardless of their geographical location. Calls, emails, video conversations and social media was used by founders to communicate actively with industry contacts outside of Sweden. We will follow up on this in section 6.1.2.1. Founders with neither geographical nor industry pre-embeddedness, predominantly chose to still rely on ties from where they were geographically pre-embedded in the motivational phase while deploying different strategies such as cold calling and Generat tie mediation in the planning phase. Consequently, we find that geographical pre-embeddedness seems to be subordinate to industrial pre-embeddedness in that its value in terms of enabling effective tie-formation activities appears limited without also being industrially pre-embedded. These findings are in support of Korsgaard, Ferguson, and Gaddefors (2015), who claim that it is not the geographical location of the network, but the socio-material knowledge founders can draw from the network that is important. Furthermore, we find that founders mitigated their lack of pre-embeddedness by being mediated to ties through the incubator; and by choosing to work on startup concepts that enable founders to utilize ties in the places where they already have a pre-embeddedness.

5.8.2 RQ2

This RQ aims to investigate how founders' tie-formation activities are connected to the participation in an incubator program.

This study finds that incubators are able to mitigate both lacking industry embeddedness and geographical embeddedness. This is done by assuming the role of business advisers, giving feedback on the concept, suggesting leads, and mediating contact to industry actors, both in specific geographical locations and non-specific locations.

A-2, B-1, D-2 and F-1 formed ties to some actors in their target market, but most were both formed and dropped early on. The rest were based on infrequent contact. This indicates that these founders were never fully developed into embedded actors. Considering how these ties were formed and how they lacked practical relevance for the founders' needs, the approach is more similar to a *path-dependent* and *identity-based* tie-formation approach (Jack, 2005). Often, the ties were formed based on chance meetings with visitors at Generat, or because they were believed to provide guidance, rather than resources.

Only A-1, A-3, and D-1 were found having a *calculative* approach overall, but these were already industrially pre-embedded and intentionally managed their pre-existing networks. Consequently, they had no need to be mediated.

With regards to the founders' pre-embeddedness, there is no pattern as to which founders the incubator could help with the tie-formation activity or not. The amount of ties formed and developed varies considerably from founder to founder, regardless of pre-embeddedness. Both Charlie, Echo, Golf, and to some extent Foxtrot, all of which have a varying degree of both industrial and geographical pre-embeddedness, were found to be fed with many ties that they activated and developed to become embedded in their network. Consequently, this supports Elfring and Hulsink's (2007) claim that incubators can make outsiders into 'indirect' insiders. Although E-2 and C-2, who lacked industry pre-embeddedness, as well as G-1, who lacked geographical pre-embeddedness, were mediated the most towards these markets, C-1 and E-1, who were pre-embedded, also received relatively many leads through Generat's mediation. These findings suggest that incubators can bring much value to industry insiders also by mediating contact to key actors in the startups' target industry or geographical location.

The lacking connection between pre-embeddedness and help from incubator participation leads us to suggest that other influencing factors may influence what makes incubators help startups form ties. One such factor could be the level of innovation the startup is pursuing, as investigated by (Elfring and Hulsink, 2007). Whether a startup pursues incremental or radical innovation most certainly influence the incubators chance of being able to provide relevant and specific help or contacts. Accordingly, Generat's mix of industry embeddedness among its staff and mentors is another factor that could explain the difference, but which we have not considered in our analysis. In the next chapter, we will discuss the analysis' findings, patterns and lack thereof further in light of the extant literature.

6 Discussion

Following the analysis of founders tie-formation activities in Chapter 5, This chapter will discuss what was discovered and relate the patterns identified in the analysis to extant literature within the field, building the foundation for the conclusions that will be presented in Chapter 7.

6.1 RQ1

This research question aims to investigate the nature of tie-formation activities of early-stage startups to understand better how the startup's pre-embeddedness are connected with these.

In broad terms, our findings support those of Shaw, Wilson, and Pret (2016) in stating that entrepreneurs will benefit from locating new businesses within industries and locations in which they possess a large degree of pre-embeddedness in the form of cultural, social and symbolic capital (Shaw, Wilson, and Pret, 2016, p. 233). However, by separating the industrial from the geographical dimension of pre-embeddedness. Our findings suggest that geographical pre-embeddedness seems to be subordinate to industrial pre-embeddedness in that its value in terms of enabling effective tie-formation activities appears limited without also being industrially pre-embedded. While finding that founders who were industrially pre-embedded seemed to move from the motivational phase to the planning phase more quickly. The same was not found to be true for founders with high amounts of geographical pre-embeddedness.

In regards to the geographic pre-embeddedness, our results contradict the findings of Jack and Anderson (2002) and Korsgaard, Ferguson, and Gaddefors (2015), emphasizing that entrepreneurs gained significant benefits from being locally embedded. We found no evidence that suggested that locally embedded founders had significant benefits over non-locals. We have two leading suggestions for why our findings differ from that of Jack and Anderson (2002) and Korsgaard, Ferguson, and Gaddefors (2015). Firstly, both

Jack and Anderson (2002) and Korsgaard, Ferguson, and Gaddefors (2015) study local businesses in a rural area with seemingly local ambitions. The goal of the entrepreneurs in our population, the Generat cohort, is to create businesses that are susceptible to capital investments from Generat, and thus need to have an element of scalability to them, inhibiting founders from creating a single store, a design agency or another local firm. We theorize that this difference may affect startups' need for local embeddedness. Given the local nature and ambitions of the cases studied by Jack and Anderson (2002) and Korsgaard, Ferguson, and Gaddefors (2015), the researchers may have missed the opportunity to include cases where founders without embeddedness in the area in which they are located choose to work on startup ideas that enable them to mediate this lack of embeddedness by reaching out to networks where they have geographic embeddedness.

Secondly, our data show how founders deployed effective strategies to mitigate any drawback a lacking geographical pre-embeddedness could have caused. One example is Alpha: By choosing to work on an idea with no geographical restrictions, Alpha and their global online collaboration platform for AI development was able to use any contacts from where they were geographically embedded as opposed to using contacts from where they were geographically situated. Another example is how founders without geographical embeddedness mitigated this by teaming up with a co-founder that was geographically embedded. This was found in Echo, Charlie, and Golf.

A third example is how online tie-formation activities were used to mitigate a lack of network ties in the local area. Jack and Anderson (2002) predate online social networks, and Korsgaard, Ferguson, and Gaddefors (2015) do not take them into account. We find several examples of founders that obtain local industrial embeddedness without the mediation of local weak ties by leveraging online social networks as well as their cultural and symbolic capital as elaborated on in section 6.1.2.1.

While conducting the study, we encountered two weaknesses in our research framework. Firstly, while using the concept of phases on founders as opposed to on startups, and secondly, our findings suggest that the theory of the strength of weak ties may be challenged by novel opportunities for tie-formation online. These two findings will be elaborated upon in the two following sections before continuing with a discussion of RQ 2.

6.1.1 One Startup, Varying Phases

Wilken's (1979) three phases describe what tie-formation activities can be expected to be used by entrepreneurs based on the maturity of the company. Our data suggest that a single startup may be in multiple phases at the same time because of varying geographical and industrial (pre-)embeddedness among members of the founding team. While Greve and Salaff (2003) use Wilken's (1979) phases to look at changes in tie-formation activities in entrepreneurs on an individual level, Elfring and Hulsink (2007) refer to the findings of Greve and Salaff (2003) when designing their research framework to be used on a startup level. We identified several startups where the founders were in different phases, and we found that this difference could be explained by the founders' difference in industrial pre-embeddedness. Possibly, this indicates that the individual founder's industrial pre-embeddedness can be used to explain variances in tie-formation activities that an organizational level approach fails to shed light on.

Echo is one example, where E-1 and the startup as a whole can be seen as in the planning phase, but where E-2 for the first month to a large degree formed ties in a way associated with the motivational phase. E-2 had no prior embeddedness, neither geographically nor industrially, while E-1 was found to be pre-embedded both geographically and industrially.

Another example is Alpha. A-1 is heavily pre-embedded in the industry and Alpha has a working product and paying customers before being admitted to Generat. As stated in chapter 5, Alpha as a whole is found to be somewhere between the planning and establishment phase. However, A-2's tie-formation activities are found to more closely resemble those of a project in its motivational phase, as A-2 relies heavily on close contacts, either from cohort or Generat staff or from the personal network.

A third example can be found in Delta where D-1 is heavily embedded industrially and well embedded geographically, and where D-2 has no pre-embeddedness in Sweden nor in Delta's target industry. Both D-1 and D-2 contact the same type of contacts, focusing on personal and professional ties established before joining Generat. However, there is a difference. D-1 reports having an elaborate plan on whom to contact and why to contact them, defining three potential use cases for Delta, identifying contacts valuable for each one, and contacting them specifically before deciding upon one use case to

pursue. D-1's pre-embeddedness seems to enable the founder to build necessary business relations typical for the planning phase, but without forming many new ties. D-2's tie-formation activities appear more random. D-2's goal is to map out the possibilities for the technical solution, but there is no clear strategy on whom to contact, and little was reported to come out of the ties D-2 talked to. The efforts seem more in line with what can be expected in the motivational phase, where a circle of close contacts (Greve and Salaff, 2003) is used to gain motivation for pursuing the idea.

These three examples show how entrepreneurs within the same startup may be seen as situated in different startup phases despite working together closely. When defining the phase of a startup based on the core activities expressed by the founders, the maturity of a potential product and whether or not the startup currently has users or customers, we find that the pre-embeddedness of the founders within the startup team may affect whether the individual founders perform tie-formation activities expected in the defined phase of the startup as a whole. Founders with high industrial pre-embeddedness seem to be able to move from the motivational phase to the planning phase more quickly, as their existing social (industry network) and cultural (industry experience) capital enable them to quickly verify initial hypothesis and gain the certainty needed to develop. Shaw, Wilson, and Pret (2016, p. 231) define pre-embeddedness as a *firm-level construct that provides an indicator of the potential success of a new business.* While the success of the startup is inherently connected to the firm-level, not the individual founders, we find that pre-embeddedness is only loosely related to the tie-formation patterns of a startup as a whole, and more closely related to the tie-formation activities of the individual founders. This suggests that the construct "pre-embeddedness" may be better for predicting the success of founders interested in creating a startup, than an existing startup as a whole.

6.1.2 Online Tie Formation

Exploiting online fora and platforms to identify and select contacts, convey trust and connect with selected ties have by multiple cases been used to gain access to a network without having any pre-embeddedness. This way of forming ties was mostly found in the planning phase, where some confidence in the idea and the solution was established, well-aligned with Wilken's (1979) three phases. By some founders (A-2, C-1, C-2, E-2) cold calls and messages

to contacts identified through LinkedIn were used in addition to ties mediated through the existing network and Generat. For other founders (E-1, B-1), cold-calling and messaging functioned as the primary way for the founder to reach out and form ties. Three of the founders mention *growth hacking* as of their areas of expertise. A low-cost and innovative alternative to traditional marketing and includes utilizing social media campaigns and viral content instead of newspaper and television adds (Jaring et al., 2015).

6.1.2.1 Online Tie-Formation Activities

Three main ways of forming ties online were found. An *exploratory approach*, a *calling approach*, and a *self-branding approach*.

In the *exploratory approach*, founders searched for people, job titles or companies on Google and LinkedIn. They would contact those they found to be relevant and snowball from there. As this method sometimes has a low success rate, both Bravo and Charlie reported to reach out to key people they needed to connect with through multiple channels and often by several founders. This lead to both Bravo and Charlie forming ties with key industry insiders (Elfring and Hulsink, 2007). Both startups managed to cultivate these ties into strong ties with time. This strategy was found to enable founders to bridge structural holes without the mediation of any weak ties. Instead of leveraging social capital, like with weak ties, the founders were found to rely on cultural and symbolic capital to make themselves interesting for potential contacts online, before reaching out to them directly. This was done by reaching out through LinkedIn where the founders were able to showcase their prior experience and current venture, and through writing personal messages to the people whom the founders were seeking.

The *calling approach*, where founders post a message in an open or closed group where they share their problem and ask for help. This approach was found to be used both by Bravo and Echo. Sometimes, the group was industry or topic related, like with Bravo and an online forum for book readers. However, with Echo, the calls for help were posted in a group where the founder shared an agenda with the rest of the members unrelated to the geographical and industrial network Echo was aiming to enter. By actively sharing their goal and current challenge in industry-related groups or groups where the founders were embedded, the startups were able to access new ties and bridge structural holes without mediation.

In the *self-branding approach*, founders broadcast themselves online in a way that conveys a lot of trust and symbolic capital (Shaw, Wilson, and Pret, 2016) to an audience. Both A-1 and A-2 were found to write articles about Alphas agenda and AI in general. Besides, A-1 has been doing talks on AI for several years. Because of this, both founders have access to an extensive network of people that have reached out to them to connect on LinkedIn. A-1 and A-2 explain how they source contacts from this group of supporters whenever needed. By building symbolic capital through broadcasting cultural capital, founders were found to achieve a broad, yet highly specific social capital, again, without mediation.

The three examples above show how online tie-formation activities enable founders to translate cultural capital in the form of knowledge, new ideas and questions about their growing startup, and symbolic capital in the form of early traction, LinkedIn track record, and their place in Generat incubator, into social capital in the form of new ties. While Kim and Aldrich (2005) state that direct ties are needed to bridge structural holes, online tie-formation activities seem to negate this need for common ties as both the search for new ties, and the ability to convey competency trust (Shaw, 2006) to new ties is possible through online platforms.

6.2 RQ2

Based on the insights from the cross-case analysis and the discussion of RQ1, we now discuss how the participation in the Generat program had an influence on the founder's tie-formation activities. What role did the incubator play in the process of developing the different founders' towards industrial and geographical embeddedness?

Our findings from the cross-case analysis suggest that the help startups receive from incubators in the process of embedding themselves in their target industry or geographical market is more contingent on a specific need, rather than pre-embeddedness.

By taking the business idea and the maturity of the startups into consideration, we found that the startups who received most help in developing their network and in the embedding process were the ones who were able to communicate a specific need. For example, C-2 was mediated to and developed ties with key actors in the aerial inspection industry; G-1 received much help

developing ties to the local real estate network; E-2 was mediated to key actors in the manufacturing industry located explicitly in Latvia. All of these were found to be in the planning phase.

On the other hand, B-1, D-2, and F-1 were found to be in either the motivational phase or the early planning phase. Delta felt like they had the necessary contacts already in D-1's network. Also, although Alpha already had a customer, A-2 reported to be still trying to figure out what their concept was throughout the data collection period. Thus, their needs were not as specific as the former group.

These findings are in support of Shih and Aaboen's (2019, p. 11) claim that incubator firms need to be able to communicate a need and actually seek help to benefit from the incubator's network and mediation. Although Generat's staff and mentors were used throughout the data collection period, our findings suggest that incubator mediation is more effective after the motivational phase and once the co-founders have entered the planning phase. On the other hand, cohort members were used to seek advise and find new contacts in the early phases, but less later on, and did not produce very relevant contacts. Thus, Lyons' (2002) claim that the opportunity to network with other incubatees is the most important service incubators can offer can be valid for the motivational phase but seems less relevant for the planning phase in regards of network mediation.

This discussion shows that participation in an incubator program can help all types of founders achieve embeddedness. However, the startups that have validated their idea and have started to plan for product development and establishment are helped more by the incubator. This is regardless of the founders' pre-embeddedness, as we found that 'insiders' and 'outsiders' are not binary representations, but a dimension, in which incubator influence can contribute with contacts to make founders more 'insiders' wherever it is needed.

The purpose of this thesis was to investigate how founders with a varying degree of pre-embeddedness create new and develop existing network ties in order to achieve embeddedness in the startups' early phases.

Shaw, Wilson, and Pret (2016, p. 233) recommends *studying embedding as experienced by firms [where founders lack pre-embeddedness]* and concludes by suggesting that *when establishing their firms, entrepreneurs will benefit from locating*

new businesses within industries and locations in which they possess a large degree of pre-embeddedness.

By investigating how founders with varying degrees of pre-embeddedness form ties, we nuance Shaw, Wilson, and Pret's (2016) conclusion by finding that the industrial pre-embeddedness seem more important than the geographical as industrially pre-embedded founders seem to move from the motivational phase to the planning phase more quickly. Thus, we suggest that incubators recommend founders to pursue business ideas in industries where at least parts of the founding team have industrial pre-embeddedness.

7 Conclusion

This thesis has explored how incubatees in a Swedish incubator form ties in light of the founders geographical and industrial pre-embeddedness and in light of the startup's phase. This chapter will conclude the findings of the thesis based on the analysis in Chapter 6 and present the theoretical and practical implications of these findings.

Concerning RQ1, the founders pre-embeddedness is found to be connected to the tie-formation activities in its early phases in a positive way. This thesis found that pre-embedded founders were able to access knowledge and develop ties in their pre-existing networks, without spending time forming new ties. This enables them to move out of the motivational phase of the startup and into the planning-phase more quickly. This thesis also found patterns associated with different startup-phases existing within a single startup at a single point in time. This may indicate that tie-formation patterns found in startup founders in the startup's early phases are more affected by the founders pre-embeddedness than by the actual progress and phase of the startup as a whole.

With regards to the formation of new ties, we have found three online tie-formation approaches, namely the *exploratory*, the *calling*, and the *self-branding* approaches. These approaches were used to find and access new contacts when the existing network could not provide the necessary information or resource. However, these approaches were used regardless of the founders' pre-embeddedness.

In terms of RQ2, we have provided an understanding of how incubators can play a role in helping founders become embedded in their geographical and industrial target networks. For example, we have found that incubators can help both founders and startups become 'indirect' insiders in both the geographical and industrial target network, regardless of their pre-embeddedness. Moreover, we have found that incubators influence founders' tie-formation and network development to a varying degree, but that there is no pattern connected to how the founders are pre-embedded. However, the founders

who benefited and received the most help with the embedding process through the incubator program, all managed to validate their idea and transition to the planning phase quickly. Thus, we speculate that the difference between those who benefited and those who did not are their awareness of specific needs and their ability to communicate these needs.

By studying 1) how the pre-embeddedness of a founder is connected to tie-formation activities in the early startup phases and (2) how the participation in an incubator program is connected to tie-formation activities, the two research questions and the chosen method for this thesis, has enabled us to fulfill the purpose of the study: *To investigate how founders within an incubator and with a varying degree of pre-embeddedness create new and develop existing network ties in order to achieve embeddedness in the startups' early phases*.

To the authors' knowledge, no previous articles have used pre-embeddedness as a concept except for when its forerunners Shaw, Wilson, and Pret (2016) presented the concept and used it to analyze tie-formation strategies in their single case study of one well pre-embedded startup. By including the concept of pre-embeddedness in our analysis of multiple cases with varying degrees of pre-embeddedness, we found it possible to explain variations in tie-formation activities that previously have been hard for researchers to comprehend (Elfring and Hulsink, 2007). We find the concept of pre-embeddedness as an answer to the call from several researchers requesting research to be done to understand how the knowledge of, and pre-existing social networks in, the target industry or local community affect a startups' process of becoming embedded (Hite and Hesterly, 2001; Elfring and Hulsink, 2007; Witt, 2004; Jack and Anderson, 2002).

7.1 Implications

7.1.1 Implications for Researchers

The findings of this thesis suggest that researchers should be aware of using concepts like pre-embeddedness and tie-formation patterns, both primary based on social network theory, when investigating tie-formation patterns on the startup level. We find that social networks and embeddedness of founders vary greatly within startups. These variations to have two implications. Firstly,

the variations may make it inaccurate to use one founders' tie-formation patterns to define and understand the tie-formation patterns of the startup as a whole. This was done by Elfring and Hulsink (2007), and in its conclusion, the article mentioned above emphasizes how they could not find patterns of tie-formation in incubated companies. Secondly, initially, this thesis attempted to assess both the pre-embeddedness, and the sum of tie-formation strategies deployed by multiple founders within a startup as a whole. We found that this made it hard to make sense of the data, resulting in us changing focal from a startup level to a founder level. By doing so, we were able to identify patterns in how pre-embeddedness affects tie-formation patterns and how it affected how quickly founders moved from the motivational phase to the planning phase. To summarize: We find pre-embeddedness and tie-formation patterns as good concepts when used to investigate how individuals or multiple founders in a team work to obtain embeddedness. However, the concepts do not seem to provide the accuracy needed to understand how startups as a whole work to obtain embeddedness, neither when the tie-formation patterns of one founder is used to understand how a startup evolves, nor if one attempts to use the sum of ties formed by multiple founders. We find that multiple strategies are deployed within a single team because of the varying degree of pre-embeddedness among the founders.

We also suggest that researchers investigating the tie-formation activities of startups after the age of online social networks should be aware that these online networks may be used to mitigate the need for pre-existing weak ties in a network to obtain embeddedness as stated by Granovetter (1983).

7.1.2 Practical Implications

Achieving embeddedness is essential for startups. From this study, we have provided insights on how founders with a varying degree of pre-embeddedness create new and develop existing ties to achieve embeddedness in their target industry. Following this, we have suggested some practical implications for both founders and incubators.

Founders should be aware of the difficulties of embedding themselves in an industry where they are considered to be outsiders. By acknowledging this, founders can deploy different strategies to mitigate this hindrance. The goal for these strategies is to find and connect with key insiders who can provide access to the network, and start making the startup known to actors within

the network. We have described three strategies that can be used to find and form ties online. However, these approaches can be both time-consuming and ineffective for new startups. Finding key insiders through already available networks have proven more effective. Therefore, we recommend founders to use incubator staff and mentors actively, and, if possible, personal networks to find key insiders, as these relationships enable the founders to build knowledge, trust and commitment in the network (Johanson and Vahlne, 2009). At the same time, we stress the importance of being specific in communicating the startup's needs, enabling incubators to provide relevant help and contacts.

Nevertheless, the most effective way to mitigate the challenges non-embedded founders face is to find co-founders who are industry insiders. Thus, we recommend that non-embedded founders actively seek to find new co-founders or team members with contacts in the target industry, who can assume the role of door openers and provide access to insider actors.

Since incubator mediation is most effective once the startups have transitioned into the planning phase, incubator management must consider measures that enable startups to validate their idea and start planning for establishment quickly. This thesis finds that founders with industrial pre-embeddedness move from the motivational phase to the planning phase more quickly. A measure incubators could implement to be able to provide better networking assistance to their incubatees is to encourage them to pursue ideas in industries where at least parts of the founding team have pre-embeddedness.

Finally, we acknowledge that the study focuses on how incubators can help founders achieve embeddedness. Incubator management must be aware of possible adverse effects of recruiting highly pre-embedded actors, as these tend to stay within their comfortable network and not explore external opportunities to this (Elfring and Hulsink, 2007). Furthermore, founders with high pre-embeddedness tend to neglect the importance of incubator mediation and consider it irrelevant, as they believe they already have the necessary contacts. Incubator management should follow up on highly pre-embedded founders, although they might not actively seek advice, to challenge their approaches to go outside of their comfort zone, as well as show that they can provide access to necessary business networks such as investors.

7.2 Limitations

As mentioned in Chapter 3, one of the authors of this thesis also partook in the Generat program. This provided the researchers with insights that enabled a better understanding of the data gathered, but made the study prone to biases. The data collection might have been affected by the pre-existing knowledge the main interviewer had about the interviewees, or by assumptions that might not have been mapped thoroughly enough through the formal interview (Pratt, 2009). Measures were put in place to ensure this would not affect the findings of this thesis. For example, to ensure that this bias did not manifest itself in the analysis, the two remaining authors conducted the transcribing, coding and analysis of the data.

Furthermore, a reluctance was found in some informants to share their complete list of contacts. When systematically asking about all the ties the founders had formed, informants said it felt too personal, like a waste of time, and unnecessary to share all of them. These founders were asked to name the most important ties and were asked general questions about the rest. While the researchers found this an efficient way to gain data where it was otherwise unobtainable, one cannot disregard that it may have skewed the reported tie-formation patterns of some of the informants in one way or another. This has decreased the resolution of our data and limited our ability to explore patterns in the founders' tie-formation and may have made Generat actors seem more valuable than in reality.

Additionally, founders who were interviewed together for efficiency were less prone to recall bias and could help each other remember the specifics about contacts. On the other hand, this did not allow the founders to come to their individual conclusions, providing a less nuanced picture of mutual contacts. This is the first study conducted by the researchers. This may also have affected the results, as mentioned in section 3.6.4.

7.3 Recommendations for Further Research

Based on our findings, we recommend further research to be done on exponential tie-formation activities enabled by social media. Three of our informants mentioned growth-hacking (the act of quickly and cheaply growing a companies network and user base) as one of their core skills, and we found

three different strategies to form ties and develop networks using social networks (see section 6.1.2.1. Investigating how startups use these new tools to mitigate the need for geographical and industrial pre-embeddedness may shed light on how founders lacking one or the other can effectively compensate for this lack.

This thesis looked at how founders with varying pre-embeddedness in seven startups formed ties to become embedded in their target industries. Finding that the founders pre-embeddedness is related to 1: The pace of the startup progress, where our industrially pre-embedded founders progressed quicker from the motivational phase to the planning phase, and 2: to the tie-formation patterns deployed by founders to achieve embeddedness. To the authors' knowledge, this is the second article that uses pre-embeddedness as a concept. It proved challenging to use the concept of pre-embeddedness on a startup level. Its definition is based on capital theory rendering it more fit to look at individuals than organizations. Furthermore, because tie-formation patterns and pre-embeddedness vary greatly within startups, it makes little sense to look at the embeddedness of a startup as a whole. We did, however, find pre-embeddedness a valuable concept when investigating the tie-formation patterns on an individual founder level. We encourage other researchers to continue using the concept of pre-embeddedness when looking at tie-formation patterns in founders as our research indicates that this concept enables researchers to understand better the processes and variables involved in creating successful companies.

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Networking by Incubatees

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