Entrepreneurship in institutional context: Actor emergence in transitions from wage-employment to entrepreneurship



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A thesis submitted for the degree of
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Abstract

Observing the technical enablers of the new forms of work and the prominent changes in the corporate employment patterns, many argue that we are at the dawn of a new era in the organisation of work. As the proportion of work is increasingly taking place in smaller, distributed units, transitions into entrepreneurship following redundancies are also becoming more common. While entrepreneurship is known to positively influence economic growth and employment, less is known about how entrepreneurial ventures that originate from a corporate redundancy programme obtain viability in the field of entrepreneurship. This thesis seeks to contribute towards an improved understanding of the transitions from wage-employment to entrepreneurship by addressing the question, "How do institutional contexts influence the emergence of entrepreneurial actors that originate from a corporate redundancy programme?"

Empirically, the thesis explores the emergence of around 300 entrepreneurial ventures that originated from the corporate redundancy programme that Nokia ran in Finland as a part of the global restructuring of its operations between 2011 and 2014. By utilising interview and archival data, the thesis studies how the ventures' embeddedness, capital strategies and engagement with the institutional infrastructure of the entrepreneurial system influence their emergence in the sense of them obtaining the authority and capacity to act for themselves in the entrepreneurial field.

The findings contribute towards the theory of entrepreneurship in several ways. The thesis demonstrates that, rather than systems of entrepreneurship forming unitary entities of homogeneous goals, identities and principles, they may, in some cases, split into subsystems. It further elaborates on the multidimensionality of entrepreneurial ventures' embeddedness and demonstrates that entrepreneurial capital may, at times, be restricted by the context. Beyond the contribution to the contextualisation of entrepreneurship, the thesis substantiates the theory of fields in organisational institutionalism. The findings offer a rare view into the separation of institutional infrastructure into subfields and elaborate the periphery of fields as a rich terrain of overlapping social orders, nonisomorphic actors, and heterogeneous positions.

To the entrepreneurs of Nokia

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1. INTRODUCTION

Gerald Davis argues that we are at a branching point in the organisation of labour economics (Davis, 2016a). Observing the many technical enablers of the new forms of work and the prominent changes in corporate employment patterns, Davis puts forward a choice: do we encourage the evolution of the sharing economy towards increased autonomy and democracy of employment, or do we instead allow the emergence of precarious labour markets in which, in Davis' words, "careers evolve into jobs and jobs into tasks" (Davis, 2016a: 139)? Davis' argument highlights the many opportunities that platform capitalism, enabled by current technology and developing artificial intelligence, offers for the organising of work. Davis, however, also underlines that technology alone will not, and should not, guide this development. Rather, societal values, policies and organisational research have a crucial role to play in guiding the development of the framework within which the renewal of our economies and the increasing self-organisation of work takes place. This thesis seeks to contribute towards the development of the new framework of work by enhancing the understanding of how the institutional context may influence the viability of the emerging, alternative structures of work.

1.1 The research topic and its significance

In recognition of the ongoing transition of work from large corporate organisations into smaller, self-organising units (Davis, 2016b; Schwab, 2017), this thesis explores how institutional contexts may influence these transitions. The thesis specifically queries

how institutional context may influence the development of entrepreneurial ventures that originate from a corporate redundancy programme. The European Foundation for the Improvement of Living and Working Conditions defines a redundancy programme as an "organised set of measures offering alternatives to dismissal, assistance in re-employment elsewhere and compensation, whose purpose is to limit the number of dismissals and soften the impact of those which are to take place" (The EMIRE database, 2018). A redundancy programme that supports entrepreneurial entry thus epitomises the transition of work from wage-employment to the alternative forms.

While entrepreneurship has attracted active research interest, much of the scholarship has tended to prioritise the study of growth ventures and has, as such, remained silent about the diversity of the entrepreneurial forms that arise from the re-organisation of work (Baker & Welter, 2017; Nightingale & Coad, 2014; Van Praag & Versloot, 2007). Entrepreneurial policy development has similarly tended to prioritise the advancement of the high growth entrepreneurial model (Global Markets Institute, 2018). Despite the dominance of growth ventures in the policy and academic discourse, micro-ventures are, in absolute numbers, the largest group of enterprises in the OECD countries. They also provide, on average, employment to a third of the workforce in these countries (OECD, 2016). Indeed, in 2015, already 40% of the American active labour force was engaged in alternative work arrangements, including micro-entrepreneurship, self-employment and contracting (U.S. Government Accountability Office, 2015). The new forms of self-organised work and non-growth oriented micro-venturing are thus a reality in the labour markets of today.

With both the size of the organisations reducing and the number and variety of the forms of micro-entrepreneurial ventures increasing (OECD, 2017a), growth is also increasingly a question of improved organising outside the boundaries of any one

organisation. A better understanding of the institutional arrangements that can be employed to support not only the growth ventures but also the viability of the micro-entrepreneurial ones is thus of importance, both for the sake of the advancement of the economy and for the sake of the enhancement of individual and societal wellbeing (Baker & Welter, 2015; Global Markets Institute, 2018).

This thesis contributes towards an improved understanding of the role that the institutional arrangements play in supporting the emergent entrepreneurial forms of work by studying how institutional contexts may influence the emergence of entrepreneurial actors that originate from a corporate redundancy programme. I consider the emergence of an entrepreneurial actor to encompass a venture becoming viable in the sense that it has come to obtain the capacity and authority to act for itself (David, Sine, & Kaehr Serra, 2017; Meyer & Jepperson, 2000). Considering entrepreneurial actors to be, to an extent, constructed by their contexts recognises that the capacity and authority for a venture to act for itself arises through the venture becoming accepted as legitimate by the others actors of its context (Meyer & Rowan, 1977). This acceptance implies that the actor has internalised the social code of the context (Berger & Luckmann, 1966) and the incumbents of the context have come to regard it and its actions as desirable, proper and appropriate (Suchman, 1995). Acceptance by the incumbent actors can be particularly significant to nascent venture emergence as this is known to open access to a broader range of resources that arise within the context, and that may support the development of the venture (Fligstein & McAdam, 2012b).

In exploring the emergence of post-redundancy entrepreneurial actors within their context, I draw on the literature of organisational institutionalism. This literature tradition has been highly influential in theorising how social structures shape organisational actors and their actions. The theoretical core of organisational

institutionalism argues that institutionalised models that arise as an outcome of cultural and institutional forces influence the construction of economic actors (Meyer, 2017). As such, this literature offers a strong conceptual grounding for the inquiry into the role that social contexts may play in supporting the development, viability and longevity of nascent ventures.

1.2 Research question and contribution

In order to advance the understanding of the role that institutional contexts may assume in the emergence of entrepreneurial actors who originate from a corporate redundancy programme, I adopt a research strategy of mixed methods with the primary focus on inductive analysis. This strategy allows the incorporation of multi-level analysis necessary for the exploration of the actor emergence in context (Poteete, Janssen, & Ostrom, 2010). It also avoids the need for complexity-reducing assumptions in a situation in which they would be difficult to justify (Denzin & Lincoln, 2000a), given how irregularly the empirical studies have engaged with the comparative study of institutional contexts within a single geography.

The empirical work of the thesis is structured around three studies that each contribute towards the principal question of *how institutional contexts influence the emergence of entrepreneurial actors that originate from a corporate redundancy programme*. I consider the entrepreneurial context within a framework of a system of entrepreneurship. Systems of entrepreneurship are resource allocation systems that are regulated by country-specific institutional characteristics and oriented towards individual-level opportunity pursuit through new venture creation (Ács, Autio, & Szerb, 2014). I conceptualise the system of entrepreneurship as an institutional field. Institutional theory recognises fields as bounded, dynamic clusters of actors whose

social interactions are guided by the hierarchy and the orienting principles of the collective (Wooten & Hoffman, 2017; Zietsma, Groenewegen, Logue, & Hinings, 2017). Membership or embeddedness within a field assumes both interconnectedness with the other actors of the field and internalisation of the hierarchy and orienting principles of it (DiMaggio & Powell, 1983; Zukin & DiMaggio, 1990). Membership, as well as the hierarchy and orienting principles of a field, are governed by the infrastructure of the field (Greenwood, Raynard, Kodeih, Micelotta, & Lounsbury, 2011; Hinings, Logue, & Zietsma, 2017). Membership grants an actor a position in the field hierarchy (Fligstein & McAdam, 2012a). Different positions within the hierarchy equate with a differential access to the resources or capital of the field (Bourdieu, 1986; Bourdieu & Wacquant, 1992). In the remainder of the thesis, I refer the system of entrepreneurship and the entrepreneurial field interchangeably.

The first empirical chapter initiates the exploration by seeking to understand the role of the institutional infrastructure in entrepreneurial actor emergence. This chapter inquires *how the interaction of post-redundancy ventures with the institutional infrastructure of the entrepreneurial field influences their emergence as viable actors of it*. The multiple comparative case analysis of this study (Stake, 1995, 2000) builds on interview data collected among the founders of nascent ventures that all registered within a single corporate redundancy programme. The analysis further incorporates interview material from some actors of the regional government and archival data from public sources relating both to the ventures of the study and the institutional infrastructure of the national system of entrepreneurship.

The findings of the first study propose the studied ventures be positioned within two interlinked but separate subfields within the institutional field of entrepreneurship. The chapter develops the argument of the field of entrepreneurship separating into two

subfields by exploring the variations in the infrastructure that the entrepreneurs engage with as well as the differences between the goals, identities and orienting principles of the two subfields. The findings contribute towards the theorisation of institutional fields by presenting a rare comparative analysis of the institutional infrastructure across the subfield of the entrepreneurial system. For the scholars of entrepreneurship, the findings foreground the potential separation of entrepreneurial systems into subfields of divergent goals, identities and orienting principles. Finally, for policy audiences, the findings highlight the benefits offered by an entrepreneurial system that enables nascent ventures to adopt alternative identities and organisational templates.

Having considered the variances in the ventures' utilisation of their institutional infrastructure in the first empirical study, the second study continues the investigation by focusing on the variances in the ventures' utilisation of their old and new resources. The study queries *how post-redundancy ventures' strategies of repurposing and recombining previously-accumulated capital with any newly-acquired one influence their emergence as viable actors of the entrepreneurial field.* The study utilises the same interview and archival data as the first one. It similarly adopts a multiple comparative case study design (Stake, 1995, 2000) but this time seeks to explore the patterns among the ventures in their repurposing and recombining of the previously-accumulated human, cultural, social and financial capital with any newly-acquired resources. By seeking to understand the patterns in capital repurposing and recombining, the study aims to probe the influence that the social order of an institution field may have for the portability of previously-accumulated capital into a new context.

The findings propose different institutional fields to offer differential scope for the repurposing and recombining of previously-accumulated capital. The findings further suggest different fields to offer differential scope for variations in the range of capital

engaged in the development of a nascent venture. The findings contribute towards the theorisation of institutional fields by elaborating the boundedness of capital across institutional fields. For the scholarship of entrepreneurial venture development, the findings highlight the significant influence that the division of the system of entrepreneurship into alternative social orders may carry for the resource strategies of entrant ventures. Finally, for the policy audiences, the findings highlight the importance of entrepreneurial policy interventions to consider not only how to support new capital acquisition but also how to better enable the repurposing and recombining of any previously-accumulated resources.

While the first two empirical chapters of the thesis focus on a regional group of ventures to query the role of both the infrastructure engagements and the patterns of capital utilisation in entrepreneurial emergence, the third and final empirical chapter lifts the enquiry up to the national level and seeks to investigate the combinatorial effect of the different dimensions of embeddedness in entrepreneurial actor emergence. This chapter queries *how the different dimensions of embeddedness combine in cases of low viability among post-redundancy entrepreneurial ventures.*

Rather than adopting a question focused on the high growth of the entrepreneurial ventures, as is common in entrepreneurial research, this study explores the different configurations of embeddedness evident among ventures of low growth. The study seeks to understand how variations in the ventures' cognitive, cultural, political and structural embeddedness may combine in cases of slow growth. This study utilises archival data and the set-theoretic fuzzy-set qualitative comparative analysis.

The findings of the study propose the low growth ventures to exhibit an imbalance in the different dimensions of embeddedness rather than an absolute lack of embeddedness. The findings particularly suggest an imbalance in the embeddedness

between the cultural-cognitive and political-structural dimensions to be prominent among the low growth ventures. Finally, the findings demonstrate how embeddedness that arises through short-term imprinting may not adequately embed nascent ventures into their new contexts to make them viable. Rather, true embeddedness may call for longer-term embedding through reciprocal interactions in the field. For the scholarship of organisational institutionalism, the findings support the theorisation of the variations in the peripheral positions of a field. For the literature of entrepreneurship, the study offers new insight into the temporal mechanisms of entrepreneurial emergence. The elaboration of the multi-dimensionality and temporality of embeddedness further offers guidance for entrepreneurial policy development by encouraging a balanced approach to entrepreneurial support, one that recognises the importance of each cognitive, cultural, social and financial support mechanism as well as those of the short-term and the long-term.

Altogether the three empirical chapters of the thesis each contribute towards an improved understanding of the role of institutional contexts in the emergence of entrepreneurial actors who originate from a corporate redundancy programme (Table 1.1). Triangulation by exploring the question of actor emergence with different theoretical lenses, different data sets and different methods, helps to add rigour, breadth and depth to the thesis and reduces the likelihood of misinterpretation of the data (Denzin, 2012; Denzin & Lincoln, 2000b; Poteete et al., 2010).

While the meso-level construct of a field underpins much of the research that is informed by institutional theory (Wooten & Hoffman, 2017), variations across fields have rarely been studied empirically. The scholarship of entrepreneurial organisations has similarly rarely considered the variations within subdivisions of systems of entrepreneurship. Together the three studies of this thesis thus offer promise to

contribute towards both the theorisation of organisational fields and the theory of entrepreneurship. Jointly, the empirical studies of the thesis contribute towards the literature of institutional fields by elaborating on the separation and overlapping of fields. For entrepreneurial scholarship, the thesis substantiates the claims of the importance of the contextualisation of entrepreneurship by highlighting how national systems of entrepreneurship may divide into subsystems of divergent social orders with material consequences. Finally, for policy audiences, the studies of the thesis jointly demonstrate how the design of the systems of entrepreneurship may directly support or constrain the plurality of entrepreneurial forms.

1.3 Approach to the research question

The empirical case of the thesis focuses on the information and communications technology (ICT) sector renewal in Finland where Nokia, once the most prominent ICT sector employer in the country, experienced a sharp downturn in its fortunes following the introduction of smartphones in the early 21st century. The difficulties of Nokia led to large-scale restructuring and downsizing of its operations worldwide. In Finland, Nokia's plight together with the global financial crisis brought about an upheaval in the whole ICT sector with Finnish exports declining by 30% and the GDP by over 8% in 2009 (Maliranta, Mankinen, Suni, & Ylä-Anttila, 2011; Statistics Finland, 2018). In total between 2008 and 2014, the Nokia restructuring accounted for around a third and the ICT sector restructuring for around two-thirds of the Finnish GDP decline (Suni & Vihriälä, 2016). At the same time, the redundancies at Nokia accounted for around 20% and the ICT sector redundancies for around 30% of the employment reduction in Finland (Suni & Vihriälä, 2016).

Several measures were put in place both at the national and at the company level to address the dramatic change of the industry circumstances. At the national level, Finland applied for funding from the European Globalisation Adjustment Fund (EGF) to address the ICT sector restructuring. In 2012 and 2013, this effort specifically targeted a group of 5,400 professionals directly impacted by the Nokia restructuring (Ålander, Sillanpää, & Nevalainen, 2014; Mathias, Williams, & Smith, 2015).

At the company level, Nokia ran an extensive redundancy programme that supported a range of re-employment efforts. As part of the redundancy programme, Nokia offered entrepreneurial accelerator support for those of its laid-off employees who wished to transition into entrepreneurship. The programme was offered in four geographic regions in Finland. Employees were selected to join the programme based on the strength of their business plan. The business plans evaluation by an independent panel reflected the common practice among competitive entrepreneurial accelerator programmes. Around 10% of the redundant employees in Finland joined the programme (Kiuru, Handelberg, & Rannikko, 2013).

Around 500 employees graduated from the Nokia accelerator founding around 400 ventures between late 2011 and early 2014 (Kiuru et al., 2013). Later in 2014, a survey among the ex-Nokia founders found 90% of the companies to remain in active operation (Kiuru et al., 2013). The same study outlined high expectations both in terms of employment and revenue growth, with the average employment offered by a venture anticipated to increase two-fold and the average revenues of a venture nine-fold in two years from 2013 to 2015 (Kiuru et al., 2013). The actual development of employment opportunities and revenues has, however, been significantly lower based on the 2015 and 2016 financial reports of the ventures. Today, the majority of the ventures remain in

the category of micro-ventures of less than 2 million Euro turnover and less than 10 people (Liikanen, 2003).

The empirical data for this thesis was collected from the ventures that originated from the entrepreneurial accelerator that Nokia ran as a part of its redundancy programme. Both interview and archival data were collected (Table 1.1). The interview data collection focused on the founders of the ventures but included also some interviews with managers of a regional economic governance office. 54 interviews were conducted in total, with the majority of these within a single geographic region. Archival data were collected for 336 ventures founded within the Nokia accelerator[1]. The starting point for this data collection was a list shared with me by a regional economic governance office that had collaborated with the Nokia accelerator in the region. The list contained the names of ventures and their respective founders that had graduated from the Nokia accelerator in Finland. Based on the list, I used several different public archival sources, including the Finnish company registry, media reports, company websites and LinkedIn, to build a comprehensive database of the ventures and their founders.

[1] The venture and founder numbers reported vary to an extent between different reports.
A Nokia internal "Official Outplacement programme video" (2015) refers to 1,000 companies worldwide. The programme gives no details of the number of the founders or of the distribution by location.
Kiuru, Handelberg and Rannikko (2013:2) refer to "some 400 companies in Finland set up by around 500 people".
Sucher and Winterberg (2015:1) talk about "1,000 new companies worldwide, over 400 of which were in Finland".
The list obtained for this study from the regional economic governance office in Finland contained the names of 335 ventures, of which three were, in fact, not registered entities. There were, however, a further four ventures that were founded at the same time by the same founders as the Nokia venture but that were not included in the venture list obtained. With the unregistered ventures excluded and the unlisted but registered one included, the total number of the ventures that this study was initiated with came to 336.
The list obtained from the regional economic governance office reported 429 unique founders. This, however, only included the founders who were employed at Nokia at the time of the venture founding. For the study, all of the founders registered in the Finnish company registry were included, in total 541 unique founders.

Table 1.1 Research questions and approach.

Principal question: *How do institutional contexts influence the emergence of entrepreneurial actors that originate from a corporate redundancy programme?*

Study	Focal interest: actor constitution and …	Research question	Data	Approach
i.	institutional infrastructure	How may the interaction of post-redundancy ventures with the institutional infrastructure of the entrepreneurial field influence their emergence as viable actors of it?	Interviews (54), archival data infrastructure & ventures	explorative multiple case study
ii.	capital	How may post-redundancy ventures' strategies of repurposing and recombining previously-accumulated capital with any newly-acquired one influence their emergence as viable actors of the entrepreneurial field?	Interviews (54), archival data of ventures and founders	explorative multiple case study
iii.	embeddedness	How do the different dimensions of embeddedness combine in cases of low viability among post-redundancy entrepreneurial ventures?	Archival data of ventures and founders (336 ventures)	fuzzy-set qualitative comparative analysis

In the rest of the thesis, I refer to the Nokia entrepreneurial accelerator programme as the 'Nokia accelerator' and the founders and ventures graduating from the accelerator as 'ex-Nokia founders' and 'ex-Nokia ventures'. All of the studies of the thesis adopt the ex-Nokia ventures as the actors whose emergence is the focal interest of the research. While the founders of the ventures are intrinsically present in the analysis and, in the case of the smallest of the ventures, represent the venture in its totality, the interest of the thesis is in the ventures becoming viable by realising the capacity and authority to act for themselves within their institutional contexts.

I refer to the ventures as entrepreneurial ones although the majority of them do, by the official definition, fall into the category of micro-entrepreneurship. I avoid the terminology of self-employment as the data collected for the study provides clear evidence of many of the micro-entrepreneurial ventures contracting work from other ventures of their ilk. While these cross-venture engagements are outside the focal interest of this study, they, however, provide incidental evidence of the work being distributed among a network of these micro-entrepreneurial ventures. The terminology of self-employment tends to overlook these dynamics and can prejudice some readers with regards to the ultimate potential that the smallest of the micro-ventures would offer. For comparability across the pool of the studied ventures, they thus all appear in this thesis under the category of entrepreneurship.

Despite the pool of the ex-Nokia ventures originating from a single national geography and a single industry sector, the case strongly reflects a more general trend in professional work transitioning from wage-employment into various entrepreneurial structures through the process of redundancies. Oxford Economics survey among over 5,000 executives and employees in 27 countries found 41% of companies increasingly utilising contingent workers, such as contractors, part-timers and temporary or leased workers (Economics, 2014). 34% of the managers surveyed by Oxford Economics also reported increasingly employing consultant employees (Economics, 2014). Many workers of these various forms of contingent work can be expected to enter these new structures following prior wage-employment. The Financial Times recently reported self-employment since 2000 having been largely fuelled by the over-50s ‘olderpreneurs’ with the share of self-employed seniors particularly high in banking and finance (Cook, February 16, 2017). The UK Office of National Statistics confirms that in September 2016, over-50s accounted for 45% of the self-employed against only 28% of the wage-employed. While the Nokia accelerator reflected the unique socioeconomic

characteristics of Finland and Nokia's unique position in Finnish society, the lessons learned from the developments among the entrepreneurial ventures emanating from the Nokia redundancy programme can offer guidance for a broader understanding of the role of institutional contexts in the constitution of entrepreneurial actors in the now-prominent transitions from wage-employment to entrepreneurship.

1.4 Document outline

The remainder of the thesis is structured as follows. Chapter two outlines the theoretical foundations of the research. I provide a brief summary of the literature of entrepreneurship to outline how the literature has explored the entrepreneurial emergence and the role that context may play in this. The review motivates the adoption of the institutional theory lens for this study. I then outline some of the key concepts of organisational institutionalism that form the theoretical foundation of the thesis. I specifically focus on the development of the concept of institutional fields and discuss how logics, infrastructure, boundaries and agency each relate to the concept of fields. Finally, I discuss the mechanisms that establish actors within institutional fields. I specifically focus on the concepts that render actors as recognised members of their fields, namely legitimacy, embeddedness and capital.

This discussion of the theoretical foundations of the thesis in chapter two covers a wide range of theoretical concepts. This thesis only engages in the development of the conceptualisation of actors' emergence in institutional fields. The broader literature is included in the discussion in order to position the thesis within the rich literature tradition of organisational institutionalism and to guide the development of the research question. Chapter two concludes with a discussion of how the literature has motivated the research question development.

Chapter three discusses the research design adopted for this thesis. The chapter elaborates the interpretive framework that informed the development of the research design. It then explores the chosen research strategy in detail, outlining the reasoning behind the empirical case selection, the data collection strategy and the methods chosen for the analysis of the data. The consideration of the research strategy includes also an ethics discussion. The section on data collection and analysis outlines in detail both the interview and archival data collected for the research. It then discusses the analytic procedures adopted for the each of the three studies of the thesis. The chapter concludes with a discussion of the limitations of the adopted research design.

Chapter four introduces the research context. The first part of this chapter provides a short history of the ICT sector in Finland and outlines the dramatic turn in the fortunes of the sector in the early 2000s. This section also discusses the ICT sector renewal efforts that are still ongoing in Finland. The second part of the chapter then outlines the details of the Nokia redundancy programme and discusses the specifics of the Nokia accelerator. This section includes a short descriptive analysis of the ventures and founders included in the study.

Chapter five introduces the first empirical study of the thesis. This study explores the entrepreneurial actor emergence in the context of institutional infrastructure. The chapter first discusses the elements that have been theorised to form institutional infrastructure. It then discusses the data and methods of the study. The findings section links the infrastructure landscape to the entrepreneurs' experiences using the interview data collected. The findings indicate a variation among the actors of the study in their engagement with the infrastructure. The chapter theorises that the findings imply the positioning of the actors of the study to split between two separate fields. The section concludes with a discussion of the implications of the field separation.

Chapter six explores the entrepreneurial emergence in relation to the founders' resource strategies. The chapter first reminds the reader of the theoretical foundation of the concept of bricolage, why this is of interest in the entrepreneurial context and how it relates to the concept of capital. The main part of the chapter then discusses the interview data analysis and the findings that imply that the entrepreneurs' resource strategies may vary across institutional fields. The chapter concludes with a discussion theorising how the institutional contexts may influence the emergent actors' ability to utilise capital acquired in prior contexts. The conclusions also relate the findings to entrepreneurial practice and offer guidance for the design of entrepreneurial policy interventions.

Chapter seven relates the question of entrepreneurial actor emergence to low growth of nascent ventures. The first section of the chapter discusses the multidimensional nature of embeddedness. The chapter then outlines the implementation of the QCA analysis employed in the study. This main part of the chapter introduces the findings that propose suboptimal entrepreneurial attainment to be associated with imbalances in the different dimensions of embeddedness. The chapter concludes with the discussion of the implication of the findings for the institutional theory and for the entrepreneurial policy development.

Chapter eight concludes the thesis. This chapter summarises the theoretical contributions of the thesis and elaborates on the practical implications that these have for entrepreneurial policy and practice. The chapter discusses the limitations of the thesis and concludes with proposals for future avenues that would support further development of the understanding of how institutional contexts may influence the emergence of entrepreneurial actors who originate from a corporate redundancy programme.

2. THEORETICAL FOUNDATIONS

2.1 Literature overview

In this section I provide an overview of the theoretical foundations of the thesis. The focus of the thesis is the emergence of nascent entrepreneurial ventures as viable actors of their context. This section covers a range of elements of the institutional theory beyond this immediate focus area. This is done to develop the research question and to position the thesis within the landscape of extant work in entrepreneurship and organisational institutionalism. Given the richness of the literature in these two areas, it is not possible to do justice to the breadth of the prior work. Neither is this the intent here. Rather, the chapter is structured to introduce the key theories and some of the empirical research that has informed the development of the research questions for the three studies of this thesis (Table 2.1).

I begin with the literature that theorises the empirical phenomenon of the thesis, namely entrepreneurship. The rich literature tradition of micro-level studies of entrepreneurship has built a solid foundation for the understanding of entrepreneurs, their choices and actions as well as the processes of venture founding. The growing literature in macro-level studies into systems of innovation and entrepreneurship has, however, proposed these to be collective endeavours. Despite the research into the systems of innovation and entrepreneurship attracting increasing research interest, few studies have to date elaborated how the shared meanings that orient entrepreneurial development within a system of entrepreneurship may influence the ventures to become viable actors of these systems.

In order to frame the query into the role of the shared meanings in entrepreneurial development, I turn to the literature of organisational institutionalism. This research tradition offers useful conceptual tools for theorising the development of entrepreneurial actors in their contexts. I first discuss the theorisation of context as a bounded social arena or an institutional field. The concept of an institutional field that builds on the original theorisation of fields in sociology by Bourdieu is one of the central constructs of neo-institutional theory (Wooten & Hoffman, 2017). Fields are of interest in the inquiry of the contextual influences on entrepreneurial development, as they are known to encourage isomorphism. Members within fields are known to share an understanding of the appropriate logics of action. Members and their activities within fields are also known to be subject to the governance mechanisms of the field infrastructure. Field boundaries are known to distinguish members from non-members. Yet, certain conditions within fields are known to offer opportunities for deviant action and agency. The conceptualisation of the entrepreneurial context as an institutional field thus places the nascent venture into a rich and well-theorised setting that offers useful conceptual tools for the inquiry into the role of the context in the development of the venture.

Organisational institutionalism, that considers actors to be, to an extent, constructed by their context, proposes this construction to take place as entrants to a field seek to become legitimate members of it. As part of the effort towards legitimacy, entrants become embedded within the field and acquire field-specific capital that positions them within the field community as recognised actors of it. The theorisation of actor construction within fields thus offers helpful conceptual tools for the consideration of the role that context may assume in ventures developing towards viability. In order to support the development of the research questions for the studies of this thesis, I outline each legitimacy, embeddedness and capital in detail in section 2.4.

I conclude the review of the literature with a discussion regarding how this has guided the development of the research questions for the studies of this thesis. All in all, while the chapter can only hope to skim the rich literature traditions that the thesis engages with, it should provide the reader with an understanding of both the key conceptual tools employed in this research and the questions remaining in the literature, one of which this study hopes to address.

Table 2.1 Structure of the literature review.

Literature framework and the key works	
Entrepreneurship: empirical phenomenon of the research	
	Acs and Audretsch, 1988; Acs, Braunerhjelm, Audretsch and Carlsson, 2009; Birch 1981; Henrekson and Johansson, 2010; Schumpeter, 1934
i. Entrepreneurial actors	Aldrich, 2001; Aldrich and Fiol, 1994; Alvarez and Busenitz, 2001; Gartner, 1985, 1988; Lazear, 2004; Shane and Ventaraman, 2000
ii. Systems of innovation	Acs, Autio and Szerb, 2014; Etzkowitz and Leyesdorff, 2000; Freeman, 1987, 1995; Klepper and Sleeper, 2005; Lundvall, 1988, 2010; Teece, 2007
Systems of entrepreneurship	Autio, Kenney, Mustar, Siefel and Wright, 2014; Dalum, Johnson and Lundvall, 2010; Welter, 2011; Zahra and Wright, 2011
Organisational institutionalism: theoretical foundations of the research	
	Meyer & Rowan, 1977; Selznick, 1957; DiMaggio & Powell , 1983; Scott, 2014; Greenwood, Oliver, Lawrence, Meyer, 2017
Institutional contexts as fields	
i. Fields in sociology	Bourdieu 1968, 2005; Bourdieu and Wacquant 1992
ii. Institutional fields	Davis and Marquis, 2005; DiMaggio and Powell, 1983; Scott, 1991; Wooten and Hoffman 2008, 2017; Zietsma, Groenewegen, Logue & Hinings, 2017
Logics	Frieland and Alford, 1991; Greenwood, Diaz, Li and Lorente, 2010; Lounsbury, 2007; Reay and Hinings, 2009; Thornton and Ocasio 1999, 2012
Infrastructure	Greenwood, Raynard, Kodeih, Micelotta & Lounsbury, 2011; Hamilton &Biggart, 1988; Hinings, Logue, Zietsma, 2017
Boundaries	Gieryn, 1983; Lamont & Molnar, 2002; Lawrence & Suddaby, 2006; Zietsma & Lawrence, 2010; Granqvist & Laurila, 2011
Agency	Battilana, Leca, & Boxenbaum, 2009; Hardy & Maguire, 2017; Lawrence, Suddaby & Leca, 2009, 2011; Smets, Aristidou, & Whittington, 2017
Actor emergence in fields	
i. Legitimacy	Ashford & Gobbs, 1990; Lounsbury & Glynn, 2001; Navis & Glynn, 2010; Suchman, 1995
ii. Embeddedness	Dacin, Ventresca and Beal, 1999; Polanyi, 1944; Zukin and DiMaggio 1991
Structural	Ahuja, 2000; Aral 2016; Burt, 2004; Coleman, 1988; Granovetter, 1974, 1985; Gulati, Nohria and Zaheer 2000; Uzzi 1997, 1999
Cognitive	Gigerenzer, Todd and the ABC research group, 1999; Kahneman, Slovic and Tversky, 1982; March, 1991; Nooteboom, 2000; Simon, 1955; Tversky and Kahneman, 1975
Cultural	Dacin, 1997; DiMaggio, 1997; Dowling and Pfeffer, 1975; Geertz, 1973; Hofstede, 1984; Smircich, 1983; Swindler, 1986
Political	Ferris, Treadway, Perrewe, Brouer, Douglas and Lux, 2007; Jepperson and Meyer, 1991; March and Olsen, 1984; Mintzberg, 1983; Oliver, 1997
iii. Mechanisms Imprinting	Beckman, 2006; Burton, Sorensen and Beckman, 2002; Immelman, 1975; Marquis and Tilcsik, 2013; Stinchcombe, 1965; Tilcsik, 2012, 2014
Embedding	Axelrod, 1981; Gouldner, 1960; Nowak, 2006
iv. Capital	Adler and Kwon, 1990; Bourdieu, 1986; Lin 2002; Lin, Cook and Burt, 2001; Nahapiet and Ghoshal, 1998; Portes, 1998

2.2 Entrepreneurship in context

Schumpeter's early theorising of entrepreneurs as 'agents of creative destruction' makes clear reference to entrepreneurs as engines of change through their continued challenge of the incumbent economic order (Schumpeter, 1934). Indeed, empirical research has shown entrepreneurship to play an active role in job creation (Ács & Mueller, 2008; Autio, Arenius, & Wallenius, 2000; Birch, 1981; Henrekson & Johansson, 2010), in innovation (Ács & Audretsch, 1988; Audretsch & Keilbach, 2008; Wuebker, Acs, & Florida, 2011), in growth (Romer, 1990) and in general economic development (Ács, Audretsch, & Strom, 2009; Van Praag & Versloot, 2007). The viability of post-redundancy entrepreneurial ventures in terms of their survival and longevity can thus be expected to be of both economic and societal importance. In this section, I review the existing literature regarding how individual agency and macro-level systems of innovation and entrepreneurship have been shown to relate to the viability of entrepreneurial ventures.

The remainder of this section is divided into three. I first discuss the literature that explores entrepreneurs as the agents of creative destruction. I then outline the literature that considers entrepreneurship within the context of macro-level systems of innovation and entrepreneurship. I conclude with a discussion regarding how the study of entrepreneurship within its contexts can advance the theory of entrepreneurship.

2.2.1 Agents of creative destruction

The literature of entrepreneurship engages with questions relating to the identification, development and exploitation of opportunities for innovation and new venture creation (Fayolle, 2014). Following the early conceptualisation of entrepreneurs as economic

rebels who orchestrate change through creative destruction of the established economic circulation (Schumpeter, 1934), much of the entrepreneurship research agenda has pivoted around questions of micro-level entrepreneurial dynamics. Questions of entrepreneurial character and ability as well as the enquiry of the processes through which entrepreneurs identify, create and exploit opportunities for creative destruction have largely come to typify this literature (Eckhardt & Shane, 2011; Shane, 2012; Shane & Venkataraman, 2000).

This tradition has contrasted entrepreneurs with professionally employed managers and has shown entrepreneurs to deploy cognitive heuristics more regularly in decision-making (Busenitz & Barney, 1997) as well as favour stronger risk-taking and individualistic action (McGrath, MacMillan, & Scheinberg, 1992). Repeated job changes and broad, even if shallow, experience have both been found to associate with an increased likelihood of entry into entrepreneurship (Åstebro & Thompson, 2011; Lazear, 2002). Similarly, stable personal attributions (Gatewood, Shaver, & Gartner, 1995), higher levels of independence and emotional stability (Baum & Locke, 2004; Brandstätter, 1997) have been shown to link with persistence in entrepreneurship while cognitive abilities with regards to opportunity recognition and resource organisation have been shown to associate with entrepreneurial success (Alvarez & Busenitz, 2001).

Maintaining the micro-level focus, many have argued that not only the personal characteristics or skills but also the entrepreneurial activities matter (Gartner, 1988; Gilbert, McDougall, & Audretsch, 2006; Shaver & Scott, 1991). Among these scholars, entrepreneurship is theorised as the organising of resources of which the entrepreneur has no direct control (Aldrich & Martinez, 2001; Stevenson & Jarillo, 1990). This literature has outlined alternative strategies for the effective management of the entrepreneurial ventures, ranging from intellectual property management (Teece, 1986)

to alternative financing structures (Dahlqvist, Davidsson, & Wiklund, 2000; Lee, Lee, & Pennings, 2001) and lean development models (Blank, 2013).

One of the key streams of the entrepreneurship literature has built on Schumpeter's original postulation of creative destruction as a question of new combinations of prior resources (Baker, Miner, & Eesley, 2003; Garud & Karnøe, 2003; Phillips & Tracey, 2007; Schumpeter, 1934). Bricolage, repurposing of previously-accumulated resources for new purposes is regularly used here to describe the entrepreneurial creation process (Baker & Nelson, 2003). In the broader literature, bricolage has further been recognised to entail not only the combinations of physical resources but also the potential combinations of ideas (Douglas, 1987), repertoires of social practices (Perkmann & Spicer, 2014; Welter, Xheneti, & Smallbone, 2018) and institutions (Cleaver, 2002). In entrepreneurship literature, the recognition of entrepreneurs as bricoleurs of both material and social resources is most clearly reflected in the view of entrepreneurship as a process of organising (Gartner, 1988) or organising emergence (Gartner, 2014). These views implicitly recognise the importance of context, not only in framing the appropriate usage of the resources at hand and in providing access to new resources, but also in making some opportunities and certain ways of addressing the opportunities more salient.

Explicit contextual consideration of the opportunities is, however, rare in this literary tradition that tends to prioritise the agent-opportunity nexus (Alvarez & Barney, 2007; Alvarez, Barney, & Young, 2011). Indeed, some have proposed delineating any environmental antecedents or consequences out of the scope of the entrepreneurial research frame (Shane & Venkataraman, 2000: 219). This is surprising, given that the original interest in the phenomenon of entrepreneurship arose for Schumpeter's observation of the notable influence that the deviation from the 'circular flow of regular

economic life' had for the society (Baumol, 1968). It can thus be argued that, apart from context regularly giving rise to both the material and symbolic resources of entrepreneurship (Aldrich & Martinez, 2001; Aldrich & Martinez, 2011), the true outcomes of entrepreneurship may only be fully understood by observing the economic and social changes that entrepreneurs introduce within their contexts (Geroski, 2003; Hargadon & Douglas, 2001). The contextualisation of entrepreneurial action thus seems critical for better understanding of both the processes and outcomes of entrepreneurship.

2.2.2 Systems of innovation and entrepreneurship

While the scholars of entrepreneurship have tended to prioritise the micro-level view, the researchers of innovation have actively engaged with a variety of frameworks seeking to identify the elements for system designs that better support innovation (Freeman, 1995). Entrepreneurship, particularly the development of growth ventures, is often associated with innovation. As such, innovations systems are commonly equated with entrepreneurial systems, particularly in the practitioner discourse. However, not all entrepreneurs innovate (Autio, Kenney, Mustar, Siegel, & Wright, 2014). Innovation may thus call for different system designs than entrepreneurship would demand (Ács et al., 2014). Recognising this caveat, I do, however, outline below the key theories of innovation systems as these can point the way also for the consideration of entrepreneurship in its context.

The calls for entrepreneurship to be contextualised have highlighted a number of contextual dimensions to be recognised in the analysis (Welter, 2011). While the contextual frameworks vary, the key dimensions of the frameworks tend to be structured around spatial, social, industry, and institutional considerations of the context (Autio et al., 2014; Welter, 2011). The spatial dimension concerns the geographic focus

of the entrepreneurial activity. The social context refers to the networks involved in the venture development. The industry context captures the life cycle of the market and technology as well as the number and nature of organisations involved in the industry. Finally, the institutional context is proposed to capture both the formal and informal institutional elements such as the laws and regulations as well as cultural and societal attitudes and norms.

The theories of innovation in context tend to vary notably in the extent to which they capture the different contextual dimensions outlined above. At the more concentrated end, the literature exploring innovation spinoffs focuses on the dyadic relationship that at most spill over to the local geography (Table 2.2). With the focal interest in the innovation, the literature rarely encompasses institutional considerations beyond the cognitive dimensions. At the opposite end, both the literatures of national innovation systems and ecosystems consider complex webs of network clusters that expand national or even global geographies. These literatures regularly include implicit, even if not always explicit, consideration of both formal and informal institutional dimensions.

An active literature in spinoffs typically considers nascent ventures in association with the parent organisations from which they emerge (Dahl & Sorenson, 2014; Klepper, 2007; Klepper & Sleeper, 2005). Spinoffs have been found to outperform other nascent firms and to influence industry clustering (Wenting, 2008). Research among Taiwanese spinoffs has also indicated that spinoffs can have higher R&D productivity (Yang, Lin, & Li, 2010). The superior performance of the spinoffs is, however, inconclusive. Some have argued that the performance benefits are only evident in cross-industry spinoffs (Daley, Mehrotra, & Sivakumar, 1997).

Table 2.2 Innovation and entrepreneurship in context.

System complexity	Dyadic → Complex systems				
Contextual dimensions					
Spatial	local	local/regional	regional	national	regional/national /global
Social	dyadic	small clusters	large clusters	webs of clusters	
Industry	focal innovation	focal regional economy/ investor community	focal regional economy	focal national economy	focal value proposition
Institutional	informal (cognitive frame)	informal (normative, cognitive, cultural)	formal (regulatory), informal (normative, cognitive, cultural)	formal (regulatory), informal (normative, cognitive, cultural)	formal (regulatory), informal (normative, cognitive, cultural)
Literature					
	Spinoffs	**Support organisations**	**Regional systems**	**National systems**	**Ecosystems**
Innovation	*Klepper, 2005, 2007; Dahl, 2014; Walter, 2006*		*Cooke, Uranga, & Etxebarria, 1997; Doloreux, 2002; Fleming, King, & Juda, 2007*	*Filippetti, & Archibugi, 2011; Freeman, 1995; Lundvall, 2010a, 2010b*	*Adner, 2006, 2017; Autio & Thomas, 2014; Jackson, 2011; Nambisan & Baron, 2013*
			Etzkowitz & Leydesdorff, 2000		
Entrepreneurship		*Cohen & Hochberg, 2014; Dempwolf, Auer & D'Ippolito, 2014. Pauwels, Clarysse, Wright & Van Hove, 2016.*			*Acs, Autio, & Szerb, 2014; Feld, 2012; Stam, 2015*

Academic collaboration in innovation has similarly been found to be contingent on contextual factors (Perkmann, Tartari, McKelvey, Autio, Broström, D'Este, Fini, Geuna, Grimaldi, & Hughes, 2013). Among academic spinoffs, for example, the practices and performance of the spinoffs have been shown to be contingent on the history of the university, (O'shea, Allen, Chevalier, & Roche, 2005), the local culture (Chiesa & Piccaluga, 2000) and the spinoff's ability to develop inter-organisational relationships (Walter, Auer, & Ritter, 2006). These findings would imply that even in the case of spinoffs, the performance and longevity of nascent ventures is moderated by factors that lie beyond any single dyadic connection or indeed the immediate context of the venture.

Beyond the spinoff literature, recent studies into innovation and entrepreneurship have explored these in local contexts in relation to the entrepreneurial support organisations. Entrepreneurial support organisations refer to a wide range of startup assistance organisations whose primary objective is to encourage innovation and development of startups (Cohen & Hochberg, 2014; Dempwolf, Auer, & D'Ippolito, 2014). Prior research has shown substantial variation both in the type and quantity of innovation emerging from the different categories of assistance organisations (Barbero, Casillas, Wright, & Garcia, 2014). Recent research has focused on entrepreneurial accelerators that have been categorised as a distinct form of assistance organisation based on their selection processes, support packages, funding structures, alumni relations and their chosen strategic focus (Pauwels, Clarysse, Wright, & Van Hove, 2016).

Among the category of accelerators, independent types have been distinguished based on variations in the strategic objectives of the accelerators. Corporate accelerators have, for example, been shown to reflect the innovation objectives of the corporate stakeholders while social accelerators have been associated with the primary objective

of economic growth or social entrepreneurship (Dempwolf et al., 2014; Pauwels et al., 2016). Hybrid forms that combine alternative discrete objectives have also been identified although rarely researched.

Moving beyond the local context, research exploring regional and national systems of innovation has considered the different roles that a broad range of actors may adopt in stimulating innovation and entrepreneurship. The origins of the concept of systems of innovation lie with Friedrich List who, already in 1856, argued for the need of public policy to support infant industries (List, 1856). Subsequently, the literature of the national systems of innovation has offered rich outlines of how the differences in the coordinated effort of incumbent industry, R&D labs, policymakers, educators, research institutes and business services associate with differential outcomes in innovation across nation states (Filippetti & Archibugi, 2011; Fleming, King, & Juda, 2007a; Muller & Zenker, 2001; Nelson, 1993).

The literature of the systems of innovation and entrepreneurship recognises that a coordinated effort by a range of heterogeneous economic actors may support more sustained innovation and growth than entrepreneurial activities that are induced solely by individuals or individual companies (Ács et al., 2014; Freeman, 1987, 1995; Lundvall & Freeman, 1988; Stam, 2015). The reference to ‘a system’ stresses not only the presence of heterogeneous actors but also the dynamic social interaction between them, thus recognising both the economic structures and the institutional setup within which the process of innovation takes place (Cooke, Uranga, & Etxebarria, 1997; Doloreux, 2002; Lundvall, 2010).

Several conceptual frameworks of innovation systems have been proposed to account for the different dynamics of the systems. The scholars of research systems have, for example, promoted common agenda building in the system (Rip & Van der Meulen,

1996) while others have highlighted the importance of establishing the nation's capacity for innovation (Furman, Porter, & Stern, 2002). The literature proposing a framework referred to as Mode 2 has focused on the importance of transdisciplinary knowledge creation in innovation systems (Gibbons, Limoges, Nowotny, Schwartzman, Scott, & Trow, 1994). The analytical model of the Triple Helix has influentially encouraged a focus on the linkages between innovation and the dynamic interaction between universities, industries and the government (Etzkowitz, 2008; Etzkowitz & Leydesdorff, 2000; Leydesdorff & Etzkowitz, 1996). Importantly for the consideration of entrepreneurial ventures, despite the analytic frameworks varying in their respective weightings of the different elements of the innovation systems, each argues for the cumulative and collaborative nature of innovation.

The collaborative dynamic of innovation is most strongly present in the work of the scholars who conceptualise innovation systems as ecosystems (Adner, 2006, 2017; Nambisan & Baron, 2013). The concept of ecosystems is generally employed in the literature to discuss organising beyond the traditional boundaries of a firm (Gulati, Puranam, & Tushman, 2012; Iansiti & Levien, 2004b; Moore, 1993, 2006). As networked forms of organising (Autio & Thomas, 2014; Iansiti & Levien, 2004a), ecosystems highlight how the competitive resources regularly arise within the environment of a company rather than within the company itself (Adner, 2006; Gawer & Cusumano, 2014; Teece, 2007).

Beyond the theorisation of ecosystems as strategic structures (Adner, 2017), recent scholarship has increasingly stressed their social dimension (Jacobides, Cennamo, & Gawer, 2018; Thomas & Autio, 2014). These accounts recognise that ecosystems are dynamic constellations of heterogeneous organisations that may associate with different paradigms (Carayannis & Campbell, 2009; Jackson, 2011). Indeed, ecosystems may

evince competition among the paradigms of the organisations, as the organisations seek to shape the collective to closer reflect their chosen paradigm (Dattée, Alexy, & Autio, forthcoming; Singer, 2006; Teece, 1986; 2007). Yet, ecosystems are known to be held together not only by the interconnectivity between the actors but also by the logic of collective value creation that is shared by the heterogeneous actors independent of their paradigm (Jacobides et al., 2018; Thomas & Autio, 2014). In recognition of the shared processes and rules of ecosystems, some have proposed ecosystems to be conceptualised as institutional fields (Thomas & Autio, 2014).

2.2.3 Summary: entrepreneurship in context

While much of the entrepreneurship literature has considered the development of entrepreneurial ventures as an individual endeavour, the innovation systems literature has actively acknowledged innovation as a collective exercise. As such, the innovation literature provides a helpful outline of the actors and their respective roles in a system of innovation. Understanding of entrepreneurship within its context, however, calls for not only the appreciation of the heterogeneous actors and their roles in the entrepreneurial system but also the awareness of the social order among them (Welter, 2011; Zahra & Wright, 2011). Dalum, Johnson and Lundvall (2010) encourage mindfulness in 'institutional borrowing' of innovation systems between nations. Their caution underlines the need for the designers of systems of innovation and entrepreneurship to be cognisant of the institutional characteristics of the context.

The conceptualisation of entrepreneurial ecosystems as institutional fields acknowledges the institutional characteristics of the system of entrepreneurship. This can be particularly beneficial for the development of the understanding of entrepreneurship in its context, as the construct of fields encourages recognition of firstly, the heterogeneity of the actors of the ecosystem, secondly, the complementarity

of their roles and, thirdly, the common meaning system shared among them (Thomas & Autio, 2014; Zietsma et al., 2017). Acknowledging the presence of a shared meaning system as the glue of an ecosystem encourages the recognition that, while ecosystems may reflect each other structurally, their meaning systems may differ fundamentally. This is an important distinction as entrepreneurial ecosystems are commonly equated with innovation ecosystems. Yet, few entrepreneurial ventures are innovative (Henrekson & Sanandaji, 2014).

Given that not all entrepreneurs are innovators, a meaning system tuned to producing innovation may not be as well suited for supporting entrepreneurship in all its forms. This may be specifically the case in situations in which the entry into entrepreneurship is triggered by redundancy from wage-employment. While the corporate spinoff literature has outlined how the context of a parent organisation may support and constrain the development of an innovation spinoff, few studies have considered how context may influence the development of nascent ventures that exit a corporation without a previously developed innovative idea. Further study of the role that the institutional context, in terms of the shared meaning system, may play in entrepreneurial development can help to improve both the theorisation of entrepreneurship and support the design of enhanced policy instruments for entrepreneurial growth.

In the next section, I put forward a conceptual framework that positions nascent ventures within the context of a community of shared meanings. This supports further development of the inquiry into how context may influence the development of nascent ventures into viable entrepreneurial actors.

2.3 Context as institutional fields

In order to explore how the context may influence the development of post-redundancy entrepreneurial ventures, I turn to the literature of organisational institutionalism. The core argument of this scholarly tradition proposes actors' development to rely on institutionalised models that reflect the cultural and institutional forces of the context (Meyer, 2017).

Organisational theory, in general, has put forward a number of alternative conceptualisations of context. Context has, at times, been theorised as markets (Thornton, 2004; White, 2002), games (Scharpf, 1991), sectors (Scott & Meyer, 1991), networks (Powell, 2003 (1979); Powell, White, Koput, & Owen-Smith, 2005), systems (Marion, 1999; Stern & Barley, 1996), and domains (Padgett & Powell, 2012; White, 2008). In institutional theory, the conceptualisation of social arenas that assume a shared social order has built on the theorisation of these as fields (Bourdieu, 2005; Bourdieu & Wacquant, 1992). The literature has intermittently referred to these as organisational fields (DiMaggio & Powell, 1983; Powell & DiMaggio, 2012; Wooten & Hoffman, 2008), institutional fields (Davis & Marquis, 2005; Lawrence, Hardy, & Phillips, 2002; Zietsma et al., 2017), and occasionally, strategic action fields (Fligstein & McAdam, 2007; 2012b). In this review, I focus on the most prominent theorisations of the organisational communities: the sociological concept of fields proposed by Bourdieu (Bourdieu, 1985, 2005; Bourdieu & Wacquant, 1992) and the conceptualisation of fields proposed by DiMaggio and Powell (1983) that forms one of the core constructs of the neo-institutional theory.

2.3.1 Bourdieu's concept of fields

Bourdieu proposes that social actors develop in fields. Bourdieu defines fields as "networks or configurations of objective relations between positions […] [located] in the structure of the distribution of species of power (or capital) whose possession commands access to the specific profits that are at stake in the field" (Bourdieu & Wacquant, 1992: 97). The rich definition highlights several of the key elements of Bourdieu's theorisation of fields. Fields form around interactions. An actor in a field holds a single position within the field at any one time. The position implies not only positioning within a network structure of the interactions but also positioning within a hierarchy. The hierarchy associates with power differentials. A position of power opens up access to profits. Profits are field-specific and reflect a common understanding of the purpose of the field or the shared objectives of the field.

While fields have in subsequent theorising been associated with isomorphism and inertia, Bourdieu's original construct is loaded with tension and dynamism. Indeed, his choice of terminology in French, 'le champ' is used to describe a battlefield or a field in physics (Thomson, 2014). Indeed, electromagnetic fields are sometimes used as a metaphor for Bourdieu fields, as this helps to conjure the image of a field of internal forces, which determine the regularities of the field. A battlefield may, however, be a more accurate image, as, despite the force of the field encouraging regularities in interactions and enforcing actor positions, Bourdieu saw fields as spaces of conflict and contestation.

The contestation is inherent in the recognition of fields as hierarchical and the distribution of profits as unequal (Bourdieu, 1986). As such, while Bourdieu stressed that it is only possible for an actor to hold a single position in a field at any one time, he did not consider the positions fixed (Bourdieu & Wacquant, 1992). Rather, he saw the

actors of a field as "active and knowing agents endowed with a practical sense that is an acquired system of preferences, of principles, of vision and […] schemes of action" (Bourdieu, 1988; Thomson, 2014: 72). This description captures the dual nature of the actors of a field. While active in schemes of action and possibly jockeying for an improved position and a change of the field, the actor is also a knowing agent endowed with the understanding of the shared vision and the appropriate preferences and principles to be applied in the realisation of this.

It is indeed the internalisation of the shared preferences, propensities and needs by the actors of the field that holds the field together for Bourdieu. For him, a field is not a designable system (Bourdieu & Wacquant, 1992) but rather a complex 'cosmos' that reflects not only a shared economic common sense but also shared methods and a shared moral view of the world (Bourdieu, 2005: 10). Immersion in a field thus implies that both the economic actor and the actions of the actor are rooted in the system of shared beliefs and values. As such, the observable regularities within the field both reproduce and are reproduced by a reasoning that is learned through repeated interactions rather than any exogenous laws of rationality or design. For Bourdieu, a field is not reducible either to the isolated actors or to the quasi-mechanical logics of it. Indeed, given the endogenous, longitudinal generation of the dispositions of a field, the generated logics intimately reflect the history of the field and are, as such, inseparable from its constitution (Bourdieu, 2005: 10).

Despite the strong definitional boundaries provided by Bourdieu in his elaboration of the concept of fields, the construct is not without challenges. As previously mentioned, subsequent theorising has often prioritised the reproductive nature of fields, thus leading to the criticism that the concept encourages social arenas to be conceptualised as too deterministic or static (Thomson, 2014). Beyond this criticism, the somewhat vague

theorisation by Bourdieu of the boundaries of fields and the inter-field connections may well lie behind the broad adoption, in empirical research, of the alternative, more observably bounded conceptualisations of social spaces, such as sectors, networks or systems. Institutional theory has sought to address some of these concerns and has indeed evinced active scholarly engagement with the concept of institutional fields.

2.3.2 Institutional fields

Institutional theory offers a helpful framework for considering how context may influence the development of nascent ventures, as this literature tradition explores how both reciprocated typifications of habitual actions and interpretations that have taken a rule-like status (Berger & Luckmann, 1966: 72) influence organisational action (Greenwood, Oliver, Lawrence, & Meyer, 2017; Powell & DiMaggio, 2012; Selznick, 1948). One of the core tenets of institutional theory is the observation that, unlike the accounts of the neo-classic economics of homo economicus as a rational, profit-maximisation-oriented operator would imply, much of organisational action is, in fact, symbolic (DiMaggio & Powell, 1983; Meyer & Rowan, 1977). Institutional theory recognises that the rule-like reciprocated typifications of habitual actions may at times be supported by the rule of law and at other times by public opinion (Meyer & Rowan, 1977; Mizruchi & Fein, 1999; Scott, 2014). They may also be simply taken for granted (Meyer & Rowan, 1977; Scott, 2014). Based on the different supportive mechanisms, the literature has come to refer to the regulative, normative and cultural-cognitive symbolic systems (Scott, 2014).

Institutionalised rules give rise to normative obligations that are often taken as facts of social life (Meyer & Rowan, 1977). As such, they encourage isomorphism (Boxenbaum & Jonsson, 2017). Each of the regulative, normative and cultural-cognitive symbolic

systems manifest in different symbolic carriers and rely on different mechanisms of isomorphism (Scott, 2014). The regulative social rules manifest in laws and regulations and rely on coercive isomorphism. The normative rules, on the other hand, manifest in the symbolic systems of values, expectations or standards and rely on the mechanisms of normative isomorphism. Finally, the cultural-cognitive symbolic system, contingent on mimetic isomorphism, evinces in categories, schemas and frames. Institutional theory thus relates the regulative activities, such as monitoring and sanctioning, not just with the relational systems of governance but also with the symbolic systems that maintain the appropriate habitual actions (Scott, 2014). Roles and routines, as normative activities, are similarly associated with both the relational authority systems and with the symbolic systems of values and standards (Scott, 2014). Finally, predispositions and scripts are seen to reflect not only the relational system of identities and structural isomorphism but also the symbolic systems of categories, schemas and typifications (Scott, 2014).

Fields form one of the core constructs of the theorisation of organisational institutionalism, as it is in fields that the symbolic systems are shared, internalised, enacted and enforced (DiMaggio & Powell, 1983; Zietsma et al., 2017). The early definitions of fields referred to them as aggregates of organisations - producers, suppliers, customers and regulators - that constitute a recognised area of institutional life (DiMaggio & Powell, 1983: 148). Subsequent theorising has explicated the definition further to capture the richness of the organisation of fields in more detail and tends to refer to them as bounded, dynamic clusters of actors whose social interactions are guided by the orienting principles and hierarchy of the collective (Zietsma et al., 2017).

Conceptually institutional fields largely resemble the sociological construct outlined by Bourdieu. Both form around interconnections. The aggregates of organisations that form institutional fields specifically emerge around real actors of an economic area, both organisations and individuals, and manifest themselves in connectedness. (Greenwood & Suddaby, 2006; Scott, 2014). Both reflect a hierarchy of actors. Institutional fields are specifically seen to structure around patterns of domination and coalition (DiMaggio & Powell, 1983). Both are held together by a shared meaning system. Institutional fields specifically exhibit shared orienting principles as well as shared symbolic and material practices (Scott, 1991; 2014; Wooten & Hoffman, 2008). The two do vary, however, in their primary focus. While Bourdieu's account prioritises the questions of positions within a field, the scholars of institutional theory, particularly in the early stages of neo-institutionalism have tended to engage with the challenge of isomorphism whether in exploring stability (Hasselbladh & Kallinikos, 2000; Selznick, 1996) or the mechanisms that enable reconciliation of the conflicts within fields (Battilana & Lee, 2014; Pache & Santos, 2013b). In the rest of the thesis, I refer to fields and institutional fields interchangeably.

While there is little in the institutional literature that would suggest that institutional fields are not subject to similar contestation to that identified by Bourdieu in his conceptualisation of social arenas, the theorisation of institutional fields has tended to prioritise a view of fields as formations of and for stability (Zietsma et al., 2017). Beyond the common goal, shared meaning, and the frequent and fateful interaction (Scott, 1995:50), actors within institutional fields are commonly theorised as identifying with a shared identity (DiMaggio & Powell, 1983; Glynn & Abzug, 2002). Particularly the early literature of neo-institutional theory tended to foreground the isomorphic forces that fields impose on their members (Dacin, 1997; Davis & Greve, 1997; Deephouse, 1996; Galaskiewicz & Wasserman, 1989). Recent scholarship of

organisational institutionalism has, in contrast, prioritised the exploration of change and complexity in fields (see for example Greenwood & Suddaby, 2006; Pache & Santos, 2013a).

Given the criticism of the implied inherent stability of institutional fields, an alternative conceptualisation of strategic action fields has been proposed to provide a more dynamic conceptualisation of fields (Fligstein & McAdam, 2012b). While the construct of the strategic action fields largely resembles that of institutional fields, this literature more actively foregrounds the tension in fields by arguing that the order of fields is not a question of peaceful consensus but rather one of convenience ad interim, as strategic actors seek to sustain the cooperation of others (Fligstein & McAdam, 2012b). As such, strategic action fields are theorised to experience constant micro-level change. The spark for major restructuring is also considered to be constantly present despite its ignition potentially requiring external stimulus. The basic premise of strategic action fields is to a notable extent aligned with the concept of institutional fields (Holm, 1995). Indeed, much of the literature of institutional field combines elements highlighted by the theory of strategic action fields (Zietsma et al., 2017). Many of the more dynamic aspects foregrounded by the concept of strategic action fields are also present in recent accounts of institutional change and institutional complexity, albeit discussed with different conceptual constructs.

In this thesis, I adopt the core definition of institutional fields but I do also bring in some elements from the outline of the strategic action fields that complement the understanding of the concept. I specifically rely on the concept of fields as embedded in a complex web of fields. I will discuss this in more detail as part of the review of the boundaries of fields. Prior to that I will, however, discuss the logics and the

infrastructure of the fields, as these key elements of fields orient the actors, their actions, and, as such, the actors development within the fields.

i. Logics of fields

Fields are known to influence the development of the actors within them by orienting the actors and their actions via the logic of the community. Institutional logics, as sets of material practices and symbolic constructions (Friedland & Alford, 1991: 248), are seen to constitute the principles of action within a field (Thornton, 2004: 2). Logics organise time and space and provide meaning to the social reality of the actors within the fields (Thornton & Ocasio, 1999, 2008). They connect institution to actions and, as such, provide a link between the macro-level structures of a field and the micro-level processes within them (Thornton & Ocasio, 2008). While logics are symbolically grounded, they are politically defined and organisationally structured (Friedland & Alford, 1991). As such, logics influence the appropriateness of action within a field, making both some problems and some solutions more available than others (Thornton, 2004; Thornton & Ocasio, 1999). In both the symbolic and the material forms, logics render certain courses of action legitimate, leading to the alternative paths potentially associating with detrimental consequences (Greenwood, Díaz, Li, & Lorente, 2010).

Following on from the observation that the majority of the institutions of the contemporary society are both interdependent and contradictory (Friedland & Alford, 1991), much of the theorisation of institutional logics has centred on complexity (Greenwood et al., 2011; Lee & Lounsbury, 2015; McPherson & Sauder, 2013) and conflicts of competing logics (Morrill, Zald, & Rao, 2003; Thornton & Ocasio, 2008). Conflicts have been shown to be both triggers for change (Hoffman, 1999; Lounsbury, 2007; Smets, Morris, & Greenwood, 2012) and resources for resistance (Lee &

Lounsbury, 2015). Hybrid forms of organising (Besharov & Smith, 2014; Pache & Santos, 2010; Reay & Hinings, 2009) and multilevel action (Purdy & Gray, 2009) have both been shown to support conflict resolution. The relative importance of different logics has also been shown to change over time (Thornton, 2002). While this work has paid respect to the observation that organisational fields are always subject to multiple logics (Fligstein & McAdam, 2012b; Friedland & Alford, 1991), the work is also characterised by an implied expectation of there being an 'equilibrium of logics' that is both desirable and achievable.

For the initial theorists of both fields (Bourdieu, 2005) and logics (Friedland & Alford, 1991), conflict is, however, not a temporary phenomenon but rather a permanent characteristic of fields. As aggregates of heterogeneous actors of differential status and influence, fields by default exhibit contestation and competition both within and across them (Zietsma et al., 2017). The extent to which the dynamics of conflict are part of the regular functioning of a field can vary depending on the type of the field in question. In fields that form around issues rather than markets or technologies, the contestation of logics has been proposed to be more of a norm than an exception (Hoffman, 1999; Zietsma et al., 2017: 400). Fields that form for the purpose of economic exchange have, on the other hand, been observed to regularly stabilise around a set shared meanings and practices (Akemu, Whiteman, & Kennedy, 2016; Granqvist & Laurila, 2011).

In an attempt to focus the keen theorisation of institutional logics, Thornton and Ocasio (2008) encourage the recognition of the meta-theoretical assumptions of the institutional logics approach. They remind the scholars of institutional logics about the society being an inter-institutional system in which logics of both material and cultural foundations co-exist. As such, they encourage acknowledgement of the multiplicity of levels and the historical contingency of logics (Thornton & Ocasio, 2008). Their account stresses the

importance of recognising the heterogeneity of expectations and propensities across different sectors of the society at different points in time. These meta-theoretical assumptions of institutional logics remind a researcher engaging with the inquiry into post-redundancy venture development within its context to be cognisant of the temporal and spatial separation between the logic of the field from which the ventures originate and that of the field in which the ventures seek to acquire actorhood.

ii. Infrastructure of fields

The development of the actors within fields is known to be oriented not only through the logics of the field but also through the institutional infrastructure of it. While the theorisation of the inner workings of institutional fields has largely focused on logics, the constitution and continuation of fields are known to rely on more than just these socially constructed, historical patterns of material practices, assumptions and beliefs (Hinings et al., 2017). The theory of the strategic action fields specifically foregrounds the importance of governance units in overseeing the field member compliance with the field logics (Fligstein & McAdam, 2012b). Field governance units are, in these accounts, seen as crucial in securing the smooth functioning of the interactions within the field (Fligstein & McAdam, 2012b).

While institutional voids, as social arenas that are lacking in the institutional arrangements to support the institutions of a field, have been studied particularly in the context of underdeveloped economies (Mair & Marti, 2009; Mair, Marti, & Ventresca, 2012; McKague, Zietsma, & Oliver, 2015), institutional theory, in general, has been criticised for the lack of a common framework for the analysis of the governance of fields (Greenwood et al., 2011; Zietsma et al., 2017). Recent scholarship has, however, highlighted institutional infrastructure as a potentially beneficial framework for the

study of institutional arrangements of governance within fields. The framework of institutional infrastructure has been proposed not only to capture the formal rules, structures and standards of governance that enable and constrain activities in fields but also the informal norms, meanings and status hierarchies that underpin the social order in them (Greenwood et al., 2011; Hinings et al., 2017: 168, 179).

The concept of institutional infrastructure originates from political economics where it has been conceptualised as "the set of political, legal and cultural institutions that form the backdrop for economic activity and governance, enabling (or constraining) its smooth operation" (Boettke, 1994; Hinings et al., 2017: 166). While the political economics view has considered the institutional infrastructure at the level of nations, the infrastructure lens has also been utilised to understand the governance of more local contexts, for example, neighbourhoods (Temkin & Rohe, 1998) and the educational sector (Smylie & Crowson, 1996).

In organisational institutionalism, institutional infrastructure has been defined broadly as the set of institutions that prevail in the field (Hinings et al., 2017: 167) or as the set of actors and structures that have a role in judging, governing or organising other actors of the field (Greenwood et al., 2011; Hinings et al., 2017). A range of heterogeneous elements, including actors, symbols and events, have been theorised to form the infrastructure of a field (Hinings et al., 2017). Regulatory actors, such as regional, national or industry regulators, are included by default (for example, Marquis & Huang, 2009). Similarly, normative governance actors, such as collective interest organisations or informal governance bodies, have been counted in (for example, Fligstein, 1996). At the more symbolic end, both category labels and status differentiators, such as awards or rankings have been seen to contribute towards the infrastructure of a field (for example, Anand & Peterson, 2000). Organisational templates and norms, in general,

have similarly been included (for example Stinchcombe, 1965). Finally, both relational channels and field configuring events have been considered to form parts of the infrastructure (for example, Davis & Greve, 1997).

The elements identified to form the infrastructure of a field influence both the formation and continuation of the interactions of the field. They exert influence on the creation, prioritisation and perpetuation of the goal and the orienting principles of the field. They provide the means for a wide range of commonplace administrative and oversight activities within fields. As such, they render the interests and values of the field collective and enable their enactment (Greenwood, Hinings, & Suddaby, 2002). Infrastructure elements may act as the medium for judging and sanctioning of the activities and actors of the field (King & Lenox, 2000). Further, they may provide the means by which the membership and status within the field get determined (Wedlin, 2006). All in all, institutional infrastructure can be expected to assume a notable role in enabling and directing the emergence of nascent actors within a field.

The different elements of the infrastructure do not exist in isolation. Rather, coherent linkages between them can help to reinforce their authority (Anand & Watson, 2004; Bell, Filatotchev, & Aguilera, 2014). Equally, disjointed or contradictory infrastructure elements can correspond to an institutional void (Mair et al., 2012). Comparative studies into fields link the developmental status of the field to the elaboration and coherence of the infrastructure (Hinings et al., 2017). Established fields are considered to exhibit coherent infrastructure with unitary logic and high elaboration of the varied formal and informal elements. At the opposite end, fragmented fields are seen to evince both a plurality of conflicting logics and low elaboration of the infrastructure elements. Between the two extremes, fields with a unitary logic of high coherence but a low elaboration of the infrastructure elements are theorised to be aligning, while fields with

conflicting logics despite highly elaborated infrastructure elements are proposed to be contested (Hinings et al., 2017).

The framework of the institutional infrastructure enables researchers who engage in the study of entrepreneurial actor development in its context to traverse through the inner workings of a field. Yet, this framework offers little guidance with regards to where the boundaries of a field lie or how conflicting infrastructure elements may be deemed to form part of the governance of a single field. The literature on field boundaries offers some guidance for this.

iii. Boundaries of fields

Beyond the logics and the infrastructure, fields are known to orient the development of actors within them through the maintenance of the boundaries of the field. In organisational institutionalism, a field is a meso-level construct that gathers organisational actors, individuals or organisations, into a collective that operates below the macro-level of the society. The concept foregrounds bounded communities whose members interact more frequently and fatefully with one another than with actors outside of the field (Scott, 1995:50). Institutional theory also recognises that the frequent and fateful interaction of the members of a field is underpinned by a shared meaning system that relies on a shared goal and shared orienting principles of action (Zietsma et al., 2017). The boundary of a field is thus reflected both in the thinning of the social network structure and the decreasing similitude of the practices and preferences at the edge of the field. Most notably, the boundary is evident in the field members' acknowledgement of an actor residing either within or out of the field community (Lawrence, 1999).

The field actors' efforts to create, maintain and disrupt the field boundaries are considered as actions of practice or of strategy and are, as such, referred to as boundary work (Gieryn, 1983; 1999). In empirical research, boundary work has prominently been studied in relation to professional fields (Abbott, 1988; Lawrence, 1999). In this context, material and epistemic resources have been found to be deployed in the boundary work (Bechky, 2003; Burri, 2008). Professionals have also been found to employ different framing strategies in the creation and maintenance of the boundaries of their profession (Bucher, Chreim, Langley, & Reay, 2016).

Boundary objects (Bechky, 2003; Latour, 1987; Star & Griesemer, 1989) and boundary organisations (Guston, 1999) have both been found to carry the potential to facilitate contesting parties across boundaries and to accommodate potentially conflicting interests (O'Mahony & Bechky, 2008). Boundary objects, such as repositories, ideal types, machines or design drawings, for example, have, in fact, been shown both to ease problem-solving across boundaries and to reinforce boundaries by legitimising the work of the groups who manage the objects. Boundary organisations, on the other hand, have been associated with the boundary object creation, with the coordination of the parties across the boundary and with the bridging of the separate social worlds (Guston, 2001; Miller, 2001). In the case of entrepreneurship, the different types of support organisations, such as accelerators or incubators may be theorised as boundary organisations of the entrepreneurial field.

Beyond organisational institutionalism, the concepts of boundary and bounded communities are actively researched among the scholars of social networks. Social network theory recognises bounded communities as clusters (Centola, 2010; Coleman, Katz, & Menzel, 1966) and studies any weakly connected spaces around these as structural holes (Burt, 2002; 2009; Simmel, 1908). While much of the social network

scholarship prioritises the exploration of the structural dynamics of clusters and the holes around these, there is an implicit recognition of the clusters forming around shared goals and practices.

This implicit acknowledgement of the structures reflecting differences in the goals and practices is particularly present in studies that explore alternative brokering strategies across the structural holes. The alternative brokering strategies, such as the tertius gaudens separation strategy (Burt, 2004) or the tertius iungens connecting strategy (Obstfeld, 2005), highlight how linkages across clusters or field boundaries regularly involve bridging across worlds that are separated both by the structure and by divergent logics (Zaheer & Soda, 2009). Collaborating across the structural hole or the field boundary thus regularly calls for intentional action on behalf of the bridging actor (Baker & Obstfeld, 1999). The studies into brokering across structural network holes underscore how both maintaining the separation and connecting across the divide are effortful, strategic activities that, as such, may offer unique opportunities for the actors at the boundary (Quintane & Carnabuci, 2016). While connecting across the boundary has been shown to stimulate innovation and collaboration (Fleming, Mingo, & Chen, 2007b; Obstfeld & Ventresca, 2015), maintenance of the separation, as demonstrated by the boundary literature in organisational institutionalism, can at times deliver strategic advantages both for the actors at the bridging positions (Burt, 2004, 2005) and the members of the field at large (Burri, 2008; Zietsma & Lawrence, 2010).

The social network studies offer a valuable reminder of the network clusters or fields not existing in isolation but rather as parts of a large web of more or less interconnected fields (Brass, Galaskiewicz, Greve, & Tsai, 2004). Indeed, the theory of strategic action fields makes explicit the embeddedness of fields in a complex web of overlapping and interconnected fields (Fligstein & McAdam, 2012b). Despite the differences in

nomenclature, the view of the embedded strategic action fields largely aligns with the implicit positioning of institutional fields within the larger societal setting (DiMaggio, 1986).

Institutional theory has tended to prioritise the study of the inner workings of fields. As such, the cosmos outside of the focal field has received notably less attention. Some scholars have theorised that the spaces in between fields offer opportunities for dispute resolution and experimentation (Rao, Morrill, & Zald, 2000). These interstitial spaces have also been considered to allow actors from different fields to interact informally, free of the constraints imposed on them by their fields (Furnari, 2014). Akin to the brokering actors in the social network literature, institutional theorists have also identified actors with simultaneous roles in separate fields (Powell, Packalen, & Whittington, 2012). Amphibious actors like these can be highly influential in importing resources across separate fields (Powell & Sandholtz, 2012). Inter-field resource dependence has further been theorised to relate to the likelihood of institutional change (Furnari, 2016). Indeed, the boundaries of fields have been shown to be subject to erosion and blurring (Scott, Ruef, Mendel, & Caronna, 2000). The merging of previously separated fields that is sometimes referred to as network folding has been proposed to give rise to innovation and emergence of new social spaces (Padgett & Powell, 2012).

Given the relative rarity of the studies into the embeddedness of fields in a web of other fields, much of the theorisation of the field boundaries have foregrounded the actors of the fields. Variations in the robustness of field boundaries have, for example, been shown to associate with different forms of the embedded agency (Zietsma & Lawrence, 2010). Fields with intact boundaries have been related with the habitual agency while fields with contested boundaries have been found to evince practical agency (Zietsma &

Lawrence, 2010). Crucially for the inquiry into actor development within fields, different positions within a field have been shown to relate to differential scope for the agency.

iv. Agency in fields

While fields are known to orient the development of actors within them, the literature does not consider the actors as automatons. Rather, different circumstances within fields have been theorised to offer differential scope for the agency (Beckert, 1999). Much of the recent institutional scholarship has been motivated by the paradox of the embedded agency (Cardinale, 2018; Hirsch & Lounsbury, 1997; Seo & Creed, 2002; Thornton, Ocasio, & Lounsbury, 2012). The paradox foregrounds the question of how actors, whose actions are oriented by the shared goals and logics of a field and whose actions are monitored and sanctioned by the institutional infrastructure of the field, may deviate from the shared orienting principles and instigate change within the field.

A number of alternative theorisations concerning embedded agency have been proposed. The practices of actors in institution creation, maintenance and disruption have been related to the run-of-the-mill change of institutions (Lawrence, Suddaby, & Leca, 2009, 2011). The daily practice of work that encourages improvisation has similarly been shown to bring about change (Smets, Aristidou, & Whittington, 2017; Smets et al., 2012). At the more unexpected end of institution and field change, institutional entrepreneurs have been proposed to act as the instigators of change (DiMaggio, 1988; Fligstein, 1997; Maguire, Hardy, & Lawrence, 2004).

In the accounts of institutional entrepreneurship, the politics of the agency have been seen as complementary to institutionalisation (DiMaggio, 1988)[1]. Specific actors with an interest in particular institutional arrangements and the ability to leverage the resources of the field for their own purposes have been identified as the institutional entrepreneurs (Hardy & Maguire, 2017). In some accounts, institutional entrepreneurship has specifically been seen to arise from the ability of the institutional entrepreneurs to raise the resources within the field owing to their social skill in motivating cooperation within the field through the provision of a common meaning and identity (Fligstein, 1997). In other accounts, institutional entrepreneurship has been attributed more to the institutional entrepreneurs' ability to identify an opportunity to realise their own interests with the resources that they have access to (DiMaggio, 1988; Henfridsson & Yoo, 2013).

While organisational institutionalism has thus linked agency, at least to an extent, to the institutional entrepreneurs' abilities and skills (Hardy & Maguire, 2017), a notable number of empirical studies have operationalised institutional entrepreneurship as a question of the actors' positions within the field (Greenwood & Suddaby, 2006; Rao, Monin, & Durand, 2003). Indeed, this approach aligns more faithfully with the social constructivist origins of organisational institutionalism as it recognises the institutional entrepreneurs as much as products of their context as of their own skill (Battilana, Leca, & Boxenbaum, 2009). The accounts that attribute institutional entrepreneurship to the

[1] Institutional entrepreneurship refers to the activity that is intended to change the institutions or the field in which they are observed (Battilana et al., 2009). Institutional entrepreneurship is thus conceptually different to the entrepreneurial activities discussed by the literature of entrepreneurship and innovation that tends to explore how new businesses get founded and developed. This thesis studies entrepreneurship not as the engine of institutional change but rather as a method of earning one's livelihood. Whether the entrepreneurs of this thesis end up introducing institutional change is out of the scope of this study.

positions of the entrepreneurs tend to consider the positions in a dichotomy of centre-elite or periphery-marginality.

The accounts that relate agency and institutional entrepreneurship within the field to the field positions recognise a variation not only in the social network positions of the actors of the field (Lazega, Quintane, & Casenaz, 2017) but also in their interests (Beckert, 1999). In a reflection of the divergent interests and power positions, the theory of strategic action fields considers the fields' actors as incumbents and challengers (Fligstein & McAdam, 2012b). Incumbents are, in the theorisation of strategic action fields, considered to wield disproportionate influence on the field; partially due to the rules of the field favouring the incumbents, partially due to the meaning system legitimating their privileged position and partially due to the incumbents largely controlling the infrastructure of the field (Fligstein & McAdam, 2012b). While the challengers of this conceptualisation of fields are seen to occupy less privileged positions and to have the scope to imagine an alternative vision for the field, they are, however, considered not to be in active opposition (Fligstein & McAdam, 2012b).

In empirical studies into institutional change, the elite actors at the centre of the field networks and with access to a broad range of the field resources are often considered to act as the guardians of the extant order (Hensmans, 2003; Zald & Lounsbury, 2010). Their primary position has, however, also been shown to empower them to innovate and introduce change as part of their efforts to maintain their position (Boxenbaum & Battilana, 2005; Garud, Jain, & Kumaraswamy, 2002). Marginal positions in the periphery of the fields, while clearly lacking in the access to the resources, have on the other hand, been shown to allow more scope for deviant action that may ultimately disrupt the whole field (Ansari & Phillips, 2011; Leblebici, Salancik, Copay, & King, 1991; Quirke, 2013). Peripheral positions have also been shown to offer opportunities

for change through the reshaping of the field boundaries (Santos & Eisenhardt, 2009). For the study of entrepreneurial development in the context of institutional fields, the literature of field boundaries and agency in relation to the positions within the fields highlights the importance of considering not only the institutional context but also the questions of how the ventures relate to the field in order to become recognised members of it.

2.3.3 Summary: context as institutional fields

The motivation of this thesis is to explore the influence that the institutional context may assume in the development of post-redundancy entrepreneurial ventures. The concept of fields offers a helpful framework for this inquiry, as it positions the emergent ventures within a bounded social context of interconnections and of a social code. Both of these can be expected to influence the choices and actions of the venture, as it strives to secure resources and legitimacy.

Organisational institutionalism provides a powerful account of the isomorphic forces that accord certain choices and courses of action available and taken for granted while rendering others inappropriate and invisible. The literature also provides a helpful framework that outlines how each of the logics, the infrastructure and the boundary of a field orient the development of actors within it. The theorisation of agency within fields, however, proposes that all fields and all positions within them are not the same. Different positions within fields may at different times offer disparate scope for deviance and agency. As such, the isomorphic pressures can be expected to vary across fields, across field positions and across times. This points to an interesting source of potential variation in the influence that the context may have on the development of nascent ventures in entrepreneurial fields. In order to explore closer the variation in the

developmental impact of the context across different field positions, it is first important to consider how the entrants to a field come to adopt their positions in the field.

2.4 Actor emergence in fields

The concept of institutional fields offers a helpful starting point for the study of the influence that the institutional context may have for the development of post-redundancy entrepreneurial ventures. The field is known to orient the development of actors as they engage with the other actors of the field. In engaging with the members and the infrastructure of the field, an actor is known not only to develop the interconnections to the other actors of the field but also to internalise the goals, the orienting principles and the hierarchy of the field. As such, the role that the actor assumes in the field is constructed in the interactions that the actor has within the field.

The actor coming to take on a recognised role within the field is sometimes, in the institutional literature, referred to as actor construction (Meyer, 2017). Others have used the terminology of emergence (O'Mahony, 2002; Padgett & Powell, 2012). While the old institutional theory employed the terminology of emergence for the coming about of new institutions (Selznick, 1996), the term has since been adopted also for the rise of new organisational forms (O'Mahony, 2002) as well as the advent of new organisations and markets (Padgett & Powell, 2012). In each of the different uses, emergence is understood to signify the coming about of something new from the patterns of interaction and adaptation that form as responses to the context (Selznick, 1996). In this thesis, I adopt the terminology of emergence as this closely reflects the desire of the thesis to explore the influence of context in nascent ventures becoming viable in the sense that they come to obtain the capacity and authority to act for themselves (David et al., 2017; Meyer & Jepperson, 2000).

Empirical studies into emergence are relatively rare in the extant literature (Boxenbaum & Jonsson, 2017; Padgett & Powell, 2012). Related concepts of legitimacy, embeddedness and capital have, however, been researched broadly. In the remainder of the chapter, I first briefly outline how field actors emerge through their pursuit of legitimacy. I then discuss how emergence relates to embeddedness and the mechanisms through which actors have been theorised to emerge. I close with an outline of the linkages between emergence and capital. Once again, the purpose of this brief review is to position the concept of emergence within the extant literature and to support the development of the research questions of the studies of this thesis.

2.4.1 Legitimacy

The concept of legitimacy encourages a researcher who seeks to understand how context may influence the emergence of entrepreneurial actors to consider the history of the venture and its founders. The concept of legitimacy arises from the observation that organisations regularly structure their operations to adhere to the cultural environments in which they operate (Suchman, 1995). While legitimacy constrains the behavioural choices of organisations (Dowling & Pfeffer, 1975), the congruence between the organisations and their environments encourages stability and comprehensibility (Meyer & Rowan, 1977). Questions of legitimacy are thus of particular salience for nascent organisations, as external legitimacy has been shown to relate to resource access (Lounsbury & Glynn, 2001) and organisational survival (Suchman, 1995).

The definition of legitimacy as "a generalised perception or assumption that the actions of an entity are desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs, and definitions" (Suchman, 1995: 574) highlights several key elements of it. Firstly, legitimacy reflects the reaction of the context to the

actor (Suchman, 1995). As such, while legitimacy is created subjectively, it is possessed objectively (Aldrich & Fiol, 1994). In the case of nascent venture development, the developmental options available for the venture may thus not only be determined by the founders of the venture but also by the objective legitimacy that the venture comes to possess.

Secondly, legitimacy arises from the collective assessment. As such, it is socially constructed, independent of any individual actor within the collective and bound to the system in which it arises (Suchman, 1995). Organisations can and do adopt different strategies of legitimation (Lounsbury & Glynn, 2001; Petkova, 2016). The foundations of legitimacy within a context may also change (Navis & Glynn, 2010; Suddaby & Greenwood, 2005). Legitimacy is, however, always ultimately grounded on the collective identity and collective action (Suchman, 1995; Zuckerman, 1999). As such, the legitimation of nascent entrepreneurial actors may be intrinsically related to them becoming recognised members of their fields.

Lastly, the processes of legitimation underpin the recreation of the social order of the context by encouraging replication (Suchman, 1995). As such, legitimation not only takes time, it is also sensitive to the history of events (Drori & Honig, 2013). The literature of legitimacy thus reminds that, in the case of post-redundancy ventures, the legitimation of the ventures in the new context is not only a temporal affair but may also be influenced in unexpected ways by the history of the founders in wage-employment.

2.4.2 Embeddedness

The concept of embeddedness encourages further consideration of the temporal and spatial separation between the prior context of the post-redundancy ventures and the new context in which they seek to adopt their position. The concept specifically

highlights the multiple dimensions along which alignment is required for a field entrant to emerge as a proper, recognised actor of the field. The concept of embeddedness originates from the observation of all economic activity being submerged in a social order that is guided by the authority of laws and customs (Polanyi, 1944: 64, 70). The empirical study of embeddedness has largely focused on its structural manifestations as actors' embeddedness within a social network (Granovetter, 1985; Hess, 2004). Submersion within a social order, however, implies not only adoption of a position within a network of social connections but also the engagement with the orienting principles that guide the interaction within the network (Granovetter, 2017).

Four dimensions of embeddedness have been proposed to highlight the multidimensionality of the concept, namely cognitive, cultural, political and structural (Zukin and DiMaggio, 1990) (Table 2.3). While empirical research has seldom studied the four dimensions in concert, each has attracted interest from a range of scholarly fields. In the following, I will briefly discuss the conceptual foundations of each of the dimensions separately.

Table 2.3 Definitions of the four dimensions of embeddedness.

Dimensions	
Cognitive	
Explicit knowledge. Internalisation of the structured regularities of mental processes prominent in the field.	*Dacin, Ventresca & Beal, 1999; DiMaggio, 1994; Zukin & DiMaggio, 1990*
Cultural	
Tacit knowledge, behaviours. Internalisation and embodiment of the shared rule systems, beliefs, ideologies, and taken for granted assumptions of the field.	*Bourdieu, 1986; Dacin, Ventresca & Beal, 1999; DiMaggio, 1994; Zukin & DiMaggio, 1990; Merton, 1957*
Political	
Contextual diplomacy, multimodality. Internalisation of the hierarchies and processes of power within field.	*Dacin, Ventresca & Beal, 1999; Zukin & DiMaggio, 1990*
Structural	
Social connections. Situatedness within a pattern of ongoing interpersonal relations.	*Dacin, Ventresca & Beal, 1999; Padgett & Powell, 2014; Zukin & DiMaggio, 1990*
Consitutive elements	
Cognitive	
Schemas. Generic, abstracted knowledge structures constructed based on experience and organised to support adaptive efficiency.	*Fiske & Linville, 1980*
*Heuristic*s. Cognitive principles that reduce complex tasks to simple judgemental operations usually by omitting part of the information.	*Kahneman & Tversky, 1974*
Satisficing. Search for an optimal solution is stopped once a minimally-satisfactory solution is found.	*Simon, 1955*
Cultural	
Constitutive forms/collective cognition. Categories, scripts or notions of techniques (how actors define their interests).	*DiMaggio, 1994, 1997; Vergne & Wry, 2014*
Regulative forms/preferred forms of behaviour. Norms, values and routines.	*DiMaggio, 1997; Scott, 1991*
Political	
Power. Authority, the ability to bring about the desired outcomes, derives from the context.	*Salancik & Pfeffer, 1977; Pfeffer & Salancik, 2003*
Hierarchy. Status ordering of the actors within the social context.	*Hillman & Wan, 2005; Fligstein, 1996*
Governance. Organisational forms as response to the context.	*Jepperson & Meyer, 1991; Merton, 1904; Selznick, 1949, 1957*
Structural	
Strength of ties. Weak versus strong ties: frequency and closeness of contact.	*Aral, 2011, 2016; Granovetter, 1973, 1974; Hansen, 1999; Uzzi 1997; Wasserman & Faust, 1994*
Clusters. Network sub-segments formed through triangular closure.	*Coleman, 1988; Coleman et al., 1966; Davis, 1991; Jackson, 2010; Moody, 2004*
Structural holes. Gaps in between network sub-segments.	*Baker & Obstfeld, 1999; Burt, 2002; 2004; 2009; Gargiulo & Benassi, 2000; Obstfeld, 2005*

i. Cognitive

Cognitive embeddedness proposes that actors emerge through the internalisation of the cognitive schemata of the field. Cognitive embeddedness has been defined as "the ways in which the structured regularities of mental processes limit the exercise of economic reasoning" (Zukin & DiMaggio, 1990: 15-16). The definition links embeddedness with the bounded rationality of individuals. It emphasises how embeddedness within a particular context is associated with mental models that are likely to repeat themselves independent of possible changes in the context. While classical economic theory largely adopts a model of the synoptic rationality of economic actors, organisational scholars broadly build on the conceptualisation of bounded rationality with regards to both individuals and their organisations (Simon, 1955). Bounded rationality recognises the fallibility of human cognition due to the proven tendency of mental models to rely on cognitive heuristics (Kahneman, Slovic, & Tversky, 1982; Tversky & Kahneman, 1974) and satisficing (Simon, 1955).

Bounded rationality and cognitive heuristics underline the tendency of human cognition, consciously or unconsciously, to fall for simple and efficient decision rules that ignore some of the information at hand (Kahneman et al., 1982; Tversky & Kahneman, 1974). Heuristics, such as availability - estimating a frequency of an event based on the ease with which a relevant instance comes to one's mind (Tversky & Kahneman, 1973) - or representativeness - categorising items based on the similarity of their salient features (Kahneman & Tversky, 1972) -, have been shown to play a prominent role specifically in situations of complexity and incomplete information.

Satisficing similarly acts as a cognitive strategy to manage complexity. Herbert Simon, who is often considered to be the first to use the terminology of bounded rationality, showed that rather than exploring all of the possible alternatives in order to identify the

optimal solution for a decision to be made, economic actors regularly abandon the search for the optimal solution once an alternative that satisfies certain acceptability criteria is found (Simon, 1955). Simon observed, that "decision makers can satisfice either by finding optimum solutions for a simplified world or by finding satisfactory solutions for a more realistic world" (Simon, 1992: 350). Both satisficing and cognitive heuristics, in general, are argued to reflect the evolutionary development of efficient cognitive processing - both in terms of time and energy (Gigerenzer & Gaissmaier, 2011; Gigerenzer, Todd, & Group, 1999). While they are thus in many ways necessary mechanisms of survival, they do have the potential to expose decision makes to systematic biases and can substantially influence organisational outcomes.

James March's 1991 article regarding bounded rationality in the context of an organisation's innovation strategy has been highly influential in demonstrating some of the implication of bounded rationality in the organisational context (March, 1991). March puts forward a model of learning that makes out how individual beliefs, independent of their accuracy, become stored in an organisational code of procedures, rules, and norms. Mimicking the code, while critical for the socialisation of individuals to the organisation, perpetuates the beliefs built into the code. While quick learning of the organisational code may be beneficial for an individual actor in legitimising them within the organisation, this can be detrimental to broader organisational learning. The pitfalls of quick learning arise not only due to the possible diffusion of inaccurate beliefs, but also, more importantly, due to the quick assimilation of the learner potentially depriving the organisation of possible discordant knowledge and beliefs of the learner (March, 1991). In March's scenario, the organisational code can be considered as a collectively shared heuristic, a social cognition, that while oiling the wheels of exploitative innovation within the organisation can lead to substantial blind spots with regards to explorative innovation.

In organisational research, the heuristics and biases of cognition have been associated, among others, with variations in decision making practices of managers and entrepreneurs (Busenitz & Barney, 1997), with the dynamic capabilities of firms (Zahra & George, 2002) and with the development of industry structures (Porac, Thomas, Wilson, Paton, & Kanfer, 1995; Zajac & Bazerman, 1991). While much of the earlier literature focused on how similar cognitive models encourage homogeneity and separation, recent research has considered how heterogeneous cognitive schemata may enable learning and innovation (Nooteboom, 2000; Wuyts, Colombo, Dutta, & Nooteboom, 2005). A measure of cognitive distance that aims to capture the separation between respective schemata has been used to show how both extreme closeness and separation can be detrimental for innovative collaboration (Nooteboom, Van Haverbeke, Duysters, Gilsing, & van den Oord, 2007).

Many cognitive schemata reflect social processes and shared cognitive categories (Abrahamson & Fombrun, 1994; DiMaggio, 1997). Given the social nature of the schemata, the literature varies in its handling of the boundary between the micro-level cognitive processes and shared social understandings of the meso-level. The separation between culture and cognition can be similarly problematic with some arguing for the inclusion of the cognitive aspects of culture, including values and affect, as an integral part of cognition (Dequech, 2003). This view is supported by the recognition that cognitive models guide the selective perception of the reality as well as its interpersonal negotiation (Garud & Rappa, 1994). In their short introduction of the four modes of embeddedness, Zukin and DiMaggio imply a typology according to which cognitive embeddedness is considered as a micro-level process while the shared, collective mental schemata are included as elements of cultural embeddedness (DiMaggio, 1997; Zukin & DiMaggio, 1990). This view does not deny the grounding of the cognitive schemata in broader collective conceptions (Dacin, Ventresca, & Beal, 1999; Fiske & Linville,

1980) but it explicitly recognises that the organisation of knowledge in the long-term memory relies on personal experiences (Agarwal, Echambadi, Franco, & Sarkar, 2004; Ellis, Aharonson, Drori, & Shapira, 2016; Tilcsik, 2012). Recall, as such, can reflect highly idiosyncratic pathways (Ignatow, 2007). This view highlights the inclusion of values and affect in culture and underlines the irreducibility of culture to cognition (DiMaggio, 1997).

ii. Cultural

Cultural embeddedness proposes actors to emerge as they internalise the collective cultural practices of a field. Cultural embeddedness is referred to as the adoption of shared "beliefs, ideologies, taken for granted assumptions, or formal rule systems" in economic action (Zukin & DiMaggio, 1990: 17). In the broader literature of cultural sociology, both substantive and affective elements are regularly, albeit at varying degrees, seen to constitute culture (Kroeber & Parsons, 1958; Lamont, 2000). While the literature of cultural sociology contains notable variation in the way that culture has been approached, many of the accounts concur with the view that culture imposes symbolic systems into the organisation of social life (Lamont, Pendergrass, & Pachucki, 2001; Smircich, 1983; Wuthnow & Witten, 1988).

Cultural embeddedness, similarly to cognitive embeddedness, bounds purely rational economic action. The etymological origins of the word 'culture' as the cultivation of, originally the soil but later also the mind, faculties and manners (Anon., 2009), highlight the legitimating role of culture in human behaviour. Legitimacy is, in organisational research, typically defined as congruence with the social norms (Suchman, 1995; Vergne & Wry, 2014) or conformity with the mental schemata (Hannan, Pólos, & Carroll, 2007; Hargadon & Douglas, 2001; Rosa, Porac, Runser-

Spanjol, & Saxon, 1999). Lack of legitimacy can be costly for economic action in terms of resource acquisition, especially in situations of uncertainty (Zuckerman, 1999) or at the early stages of life (Stinchcombe, 1965). Conformity with cultural expectations is thus considered rational even if this view drastically departs from the efficient market view of economics (Eberhart, Eesley, & Eisenhardt, 2014; Lounsbury & Glynn, 2001). Indeed, Swidler refers to culture as a tool-kit of behavioural repertoires that enable the construction of the strategies of action (Swidler, 1986).

Cultural embeddedness and the legitimacy arising from it are not universal but rather specific to a particular social group of shared ideas, customs and social behaviours (Geertz, 1973; Meyer & Höllerer, 2010). March's account of the interplay of individual and social cognition highlights rationality as an ongoing and situated process (Karnøe & Nygaard, 1999; March, 1994b). The boundaries of rationality do not arise only from the efficiency-driven cognitive processes of the human mind but also from the logic of appropriateness of the context in which decisions are made. The logic of appropriateness, while reflecting aggregates of individuals' beliefs, exists independent of any individual actor (DiMaggio, 1997). Berger and Luckmann take the argument of contextual rationality further, arguing that, as any social order is a product of human activity, the objective reality is by necessity a product of social construction (Berger & Luckmann, 1966). Rather than the principles of appropriateness residing in the structures of a social order, the logic of appropriateness arises as individual actors engage with the social structure and, as part of this engagement, superimpose a system of reasoning on the social order. In this account, culture arises from social interaction in which shared meanings are objectified as external to any one actor and internalised as a given logic of appropriateness (Berger & Luckmann, 1966). Culture as rationalised beliefs thus gets embodied in social practice as well as in material form (De Vaujany & Vaast, 2013).

DiMaggio separates the elements of the logic of appropriateness into institutive and regulatory ones (DiMaggio, 1997). Categories and scripts, as the institutive forms of the logic, are collective cognitive schemata (Vergne & Wry, 2014), and, as such, closely related to cognitive embeddedness discussed in the previous section. Norms and values, on the other hand, act as the regulatory forms of the logic of appropriateness promoting certain forms of behaviour over others (Dowling & Pfeffer, 1975; Hechavarria & Reynolds, 2009). Both the institutive and regulatory forms of culture structure the world and serve to both simplify information processing and legitimise organisational action (Dacin et al., 1999; Gamson & Modigliani, 1989; Kennedy & Fiss, 2013; Meyer & Höllerer, 2010). Empirical research has shown how categories support the construction of social identity (Creed, Scully, & Austin, 2002), enable new market creation (Navis & Glynn, 2010) and structure competitive fields (Cattani, Porac, & Thomas, 2017; Porac & Thomas, 1990). Observation of norms and values have, on the other hand, been associated both with organisational routines, for example, managerial discourse (Barley & Kunda, 1992) or disclosure practices (Marquis, Toffel, & Zhou, 2016), and with the general performance of firms (Hong & Kacperczyk, 2009).

In organisational theory, the influence of culture on organisational action has been studied within companies (Barney, 1986; Schein, 2010), across nations (Hofstede, 1984; Lee & Peterson, 2001; Thomas & Mueller, 2000) and, perhaps most influentially, within organisational fields (DiMaggio & Powell, 1983; Greenwood, Oliver, Suddaby, & Sahlin-Andersson, 2008; Scott, 2014). As discussed earlier in section 2.3, the literature on organisational institutionalism has specifically focused on how shared symbolic meanings turn into rationalised rule-systems or institutions (Meyer & Rowan, 1977) and how isomorphism in organisational structures arises from the broad assimilation of these rule-systems through mimetic processes (DiMaggio & Powell, 1983).

iii. Political

Political embeddedness proposes that field actors emerge through their internalisation of the hierarchies of the field. Political embeddedness is regularly referred to as the observance and understanding of the broader societal structures of status and power (Zukin & DiMaggio, 1990). By definition, politics deals with "the activities associated with the governance of a country or area" or "the principles relating to or inherent in a sphere or activity, especially when concerned with power and status" (Anon., 2009). The dictionary definition highlights three important aspects to consider in the context of economic activity. Firstly, all economic activity is subject to governance structures that are beyond the immediate control of the actors. Secondly, the governance structures or principles of action reflect a hierarchical social order and the beliefs and interests of those in the positions of power. Finally, considering the dictionary proposed synonyms of politics - manipulation, control and manoeuvring (Anon., 2009) -, politics does not refer solely to the understanding of the explicit governance structures but also the ability to navigate the implicit hierarchical social order.

Some argue that modern organisations, rather than being products of private actors and their interests, are, in fact, creatures of public authority (Jepperson & Meyer, 1991: 206). This argument closely reflects the origins of organisational institutionalism in the recognition of organisational forms as responses to the rational-legal contexts of their time (Merton, 1940; Selznick, 1948, 1957). The earlier discussion of institutional infrastructure of fields highlighted the importance of the governance structures of fields in membership selection, in practice diffusion and in controlling and sanctioning actors and action within fields (Hinings et al., 2017). Infrastructure was proposed to provide the mean through which the incumbents or central actors of the field maintain the order of the field and orient the actors within it (Hinings et al., 2017). As such, infrastructure was deemed to influence actor emergence within a field. Equally, closeness to the

infrastructure and possible control of some of it can be considered as true embeddedness within the social order of the field (Zukin & DiMaggio, 1990).

Beyond organisational institutionalism linking politics to the organisational forms and institutionalised patterns of action (Friedland & Alford, 1991; Marquis & Huang, 2009; Scott, 2014), both the scholars of organisational ecology and strategy have associated politics with the survival of firms. Organisational ecology has highlighted the expected and unexpected consequences that public policy can have for firm creation (Choi & Phan, 2006), competition (Dobbin & Dowd, 1997) and for inter-organisational collaboration (Barnett & Carroll, 1993). In the strategy literature, some have proposed the integration of the resource-based view with the institutional view in order to underline how a firm's ability to generate economic rents from resources is largely a question of management of the political and cultural context from which resources arise (Hoskisson, Eden, Lau, & Wright, 2000; Oliver, 1997). The conceptualisation of political skill as giving rise to resource access is also prominent in the leadership literature that has linked leaders' political ability in terms of social astuteness and interpersonal influence (Ferris, Treadway, Kolodinsky, Hochwarter, Kacmar, Douglas, & Frink, 2005) with leader effectiveness (Butcher & Clarke, 1999; Douglas & Ammeter, 2004) and superior team performance (Ahearn, Ferris, Hochwarter, Douglas, & Ammeter, 2004; Ferris, Perrewé, Daniels, Lawong, & Holmes, 2017; Ferris et al., 2005).

Although political embeddedness has, in the empirical literature, regularly been operationalised as 'ongoing structural relations to state and its actors' (Luo, 2001; Michelson, 2007: 356; Okhmatovskiy, 2010; Sun, Mellahi, & Thun, 2010), this can be considered a rather narrow reading of the concept. Political embeddedness should not be confused as being equal to structural embeddedness in terms of referring only to the

social connections to actors in governance positions. Neither should it be limited to the interaction with the actors of the state alone (Welch & Wilkinson, 2004). A broader reading of the concept recognises political embeddedness as implying the awareness of both the hierarchal social order and the possibly conflicting interests of the powerful actors of the institutional context (Hamilton & Biggart, 1988; Meyer, Scott, Rowan, & Deal, 1985). Beyond awareness, a broader reading of political embeddedness also acknowledges the importance of the ability of an actor to navigate the hierarchal social order in order to enhance one's objectives (Boli & Thomas, 1997; Ferris, Treadway, Perrewé, Brouer, Douglas, & Lux, 2007; March & Olsen, 1984). At times, the process of navigation enabled by political embeddedness may indeed be of more significance than the outcome of the process (March & Olsen, 1984: 742; Mintzberg, 1983; Olsen, 1970). For the case of entrepreneurial actor emergence within the field of the entrepreneurial system, the concept of political embeddedness underscores the importance of considering entrant ventures' engagement with the infrastructure elements of the system.

iv. Structural

Structural embeddedness proposes that actors emerge through them adopting positions within the closely-connected interaction network of the field. Structural embeddedness refers to the situatedness of an actor within a pattern of ongoing interpersonal relations (Zukin & DiMaggio, 1990: 18). While it is broadly recognised that the structure of the social network of an actor co-evolves with the actor entering and exiting different communities and being affiliated to some of these, embeddedness is often, in the extant literature, equated with structural embeddedness (Krippner & Alvarez, 2007). Any encounter between two actors, who in the literature are typically referred to as an ego

and an alter, is considered to establish a tie with potential for future exchange of resources. In a similar vein, networks of ties, which represent interactions between a number of independent actors, are considered to enable a flow of resources well beyond the direct contacts of any one actor in the network.

While largely indifferent to any cognitive, cultural or political dimensions of the interaction at the tie level, the literature of structural embeddedness has, however, problematised the question of the quality of a tie (Granovetter, 1973, 1983). In this tradition, the resource potential of a tie has been associated with the intensity of the connection between an ego and an alter. The ties of regular, close interaction are considered to be strong and those of infrequent, distance contact to be weak (Wasserman & Faust, 1994). Somewhat counter-intuitively, the literature has shown that strong ties do not provide superior access to resources in all circumstances (Granovetter, 1974; Marsden & Gorman, 2001). Given that strong ties are characterised by a high frequency of interaction and tend to exist between actors within tight groups, in which all members are closely connected to each other, strong ties have been shown to be subject to substantial redundancy (Granovetter, 1973, 1974). Because of this, weak ties have been shown to offer higher use-value, for example, in the acquisition of new information (Marsden & Gorman, 2001). The findings regarding the use-value of the weak ties have, however, not been repeatable in all circumstances. Rather, the context has been shown to mediate the value of weak ties (Aral & Van Alstyne, 2011; Bian & Ang, 1997; Bruggeman, 2016; Korpi, 2001; Yamagishi, Cook, & Watabe, 1998). Situations of uncertainty have, for example, been shown to call for strong ties that tend to be characterised by trust (Brass et al., 2004; Tsai & Ghoshal, 1998) and are known to facilitate collaboration, integrative agreements and economies of time (Uzzi, 1996; Uzzi, 1997).

Any resource flows between an alter and an ego do regularly reflect not only the conventions and practices between the two interacting parties but also the broader network structures within which the two are positioned (Simmel, 1908). The literature of structural embeddedness has thus explored both the role that network clusters (Jackson, 2010) and the gaps in between them (Gargiulo & Benassi, 2000; Walker, Kogut, & Shan, 1997) have in enabling economic action. Research into network clusters, in which ties between internal parties are more prominent than those with external ones, has shown clusters to be associated with shared attitudes, norms and trust (Coleman, 1988), and to support both collaboration (Davis, 1991; Moody, 2004) and innovation (Fleming et al., 2007a). Evidence from as broad fields as contagion studies and organisational research has shown that clusters, as strongly interconnected structures, offer a fertile ground for diffusion (Centola, 2010; Coleman et al., 1966; Greve, Kim, & Teh, 2016; Rice & Aydin, 1991), thanks to the many alternative routes of propagation within the structure (Centola & Macy, 2007).

Cohesive clusters can, however, similarly to strong ties, be associated with redundancy and inertia (Schilling & Phelps, 2007). Due to this, gaps in the network - the so-called structural holes - have been argued to offer unique opportunities for brokering between the disconnected sections of the network (Burt, 2002, 2004; 2009). Different brokerage strategies from the maintenance of the separation (Burt, 2004, 2005) to the connection of the disunited parties (Baker & Obstfeld, 1999; Obstfeld, 2005) have been proposed for increased innovation and competitive benefits.

Among all the dimensions of embeddedness, the scholars of entrepreneurship have engaged most actively with structural embeddedness. Indeed, an active stream of studies has elaborated the importance of social networks for entrepreneurial action (Stam, Arzlanian, & Elfring, 2014). Social ties have been shown to be associated not

only with entrepreneurial innovation (Ahuja, 2000; Audia, Freeman, & Reynolds, 2006) but also with performance (Havnes & Senneseth, 2001; Uzzi, 1999) and survival (Watson, 2007). Entrepreneurs have been shown to prioritise strong ties (Ruef, Aldrich, & Carter, 2003), which have been linked with both improved resources access and softer support mechanisms, such as mentoring (Jack, Deakopolou Dodd, & Anderson, 2004). Weak ties have, on the other hand, been associated with faster maturation and time to market (Davidsson & Honig, 2003). Studies into network structures have similarly reported some contradicting findings. A recent meta-study has confirmed that weak ties, structural holes and network diversity each positively relate to entrepreneurial performance (Stam et al., 2014). The literature also contains ample examples of the criticality of the support that the shared social norms of cohesive networks provide to nascent ventures (Hite & Hesterly, 2001; Shan, Walker, & Kogut, 1994). Hite and Hesterley (2001) have aimed to consolidate some of these divergent views by highlighting how the different stages of new ventures are likely to give rise to different types of resource demands. As such, the divergent findings of the studies into entrepreneurial networks and the proposal of the conflicting findings reflecting different states of entrepreneurial development encourage closer exploration of the nascent ventures position and emergence not only within a social network of a field but within the social order of it.

v. Capital

Embeddedness is known to relate closely to the concept of capital. While legitimacy is considered to reflect the perception of the actors as desirable, proper and appropriate and embeddedness their internalisation of the goals, orienting principles and hierarchies

of the field, capital is seen to reflect the actors' position in the social order of the field. This arises through embeddedness.

Capital is accumulated labour that, as such, relates to power and may exist in a number of different forms (Bourdieu, 1986). The build-up of capital in any of its forms takes investment in both time and human effort. Once built up, any form of capital can be used for the acquisition of new human effort (Bourdieu, 1986). The literature outlines a range of different forms of capital. Beyond the common category of human labour in monetary form or as economic or financial capital, the literature recognises, at least, human (Becker, 1962, 1994; Schultz, 1961), intellectual (Nahapiet & Ghoshal, 1998; Subramaniam & Youndt, 2005), cultural (Bourdieu, 1986; Lamont & Lareau, 1988; Throsby, 1999), symbolic (Bourdieu, 1986; Burri, 2008; De Clercq & Voronov, 2009), social (Bourdieu, 1986; Lin, 2002) and relational capital (Capello & Faggian, 2005; Kale, Singh, & Perlmutter, 2000).

The categories of capital closely tie in with the different dimensions of embeddedness (Table 2.4). Human capital and the closely linked intellectual capital, as accumulated knowledge and skills, closely relate to cognitive embeddedness (Pennings & Wezel, 2007; Schultz, 1961). Cultural, and the closely related symbolic capital, as the understanding of the behaviours, preferences and symbolic systems that signal the membership within a group, equally closely relate to cultural embeddedness (Bourdieu, 1986; Lamont & Lareau, 1988). Finally, social capital and the closely related relational capital are commonly studied in relation to structural embeddedness (Bourdieu, 1986; Lin, 2002).

While the literature of capital sometimes implicitly considers capital to carry universal use-value, its close linkage to embeddedness would propose otherwise. Embeddedness in a field is underpinned by trust and reciprocity among the members of the field

(Granovetter, 2017) (see Table 2.5 that summarises the inertial elements of embeddedness discussed earlier in this section). Any capital that arises as a result of embeddedness shares also the underlying commitment to trust and reciprocity. As such, while the possession of capital relates to power and may provide more scope for action, it may also carry with it an obligation towards the field. This obligation may limit the portability of the capital across different social contexts. Indeed, the original concept of capital proposed capital to exist and function only in relation to the social context in which it arises (Bourdieu, 1986; Bourdieu & Wacquant, 1992). As such, while capital has the capacity to expand and is, in the right circumstances, convertible from one form to another, both its potential for expansion and conversion may be bound by the context (Bourdieu, 1986; Bourdieu & Wacquant, 1992).

Table 2.4 Forms of capital and the dimensions of embeddedness.

Associated capital	
Cognitive	
Human capital. Education, skills and knowledge as a form of capital, that, is in substantial part a product of deliberate investment.	*Becker, 1962; Pennings, Lee & Van Witteloostuijn, 1998; Schultz, 1961*
Cultural	
Cultural capital. Formal knowledge, preferences and behaviours that signal affiliation with a group.	*Bourdieu, 1986; Lamont & Lareau, 1988*
Political	
Political capital. Ability to navigate and utilise the structures of the political order; embeddedness in social relationships and in political institutions.	*Nee & Opper 2010, Siegel, 2007*
Structural	
Social capital. Actual and potential resources and obligations that arise from the membership in a group.	*Bourdieu, 1986*
Associated benefits	
Cognitive	
Eases cognitive processing, particularly in situations of complexity and uncertainty.	*Gigerenzer & Gaissmaier, 2011; Gigerenzer, Todd & Group, 1999; Kahneman & Tversky,1979 Tversky & Kahneman, 1974;*
Simplifies decision making.	*Simon, 1955*
Legitimation. Legacy arising from common frame of reference.	*Davis & Greve, 1997; March, 1991*
Cultural	
Ensures availability of appropriate behavioural repertoires that enable construction of social identity and strategic action.	*Creed, Scully & Austin, 2002; Hechavarria & Reynolds, 2009; Swindler, 1986*
Improves knowledge transfer and knowledge acquisition; especially in the case of tacit knowledge.	*Augier & Teece, 1999; Strang & Meyer, 1993*
Legitimation. Legitimacy arising from moral endorsement associated with conformance with appropriate behaviours.	*Dowling & Pfeffer, 1975; 2010; Hong & Kacperczyk, 2009; Stinchcombe, 1965; Zuckermann, 1999*
Political	
Matthew effect.	*Guthrie, 1997; Podolny, 1993*
Enables recognition and navigation of contradictory characters and interests of social actors.	*Padegtt & Ansell, 1993*
Legitimation. Legitimacy arising from the hierarchical position, ability to exercise power.	*Padegtt & Ansell, 1993*
Structural	
Access to resources across the network.	*Coleman 1988; Uzzi, 1997, 1999*
Opportunities created by different connecting strategies.	*Baker & Obstfeld, 1999; Burt, 2002; 2004; 2009; Obstfeld, 2005*
Legitimation. Legitimacy arising from the structural position within a network.	*Uzzi, 1997, 1999*

Table 2.5 Inertial forces of the dimensions of embeddedness.

Associated disadvantages	
Cognitive	
Can introduce blind spots into search and decision making.	*Tripsas & Gavetti, 2000; Zajac & Bazerman, 1991*
Can reduce organisational exploration and learning.	*March, 1991, 2005; Nooteboom, 2000; Wuyts et al., 2005*
Reduction in adaptive capacity can associate with reduced competitive advantage.	*Denzau & North, 1994; Zahra & George, 2002*
Return on investment. Continued investment in human capital can lead to diminishing returns.	*Hitt, Bierman, Shimizu & Kochhar, 2001*
Cultural	
Formalisation of routines can lead to inertia and inability to change.	*Hannan & Freeman, 1984; Stinchcombe, 1965*
Can give rise to institutional impediments to market efficiency, e.g. institutional criteria for social and economic fitness, normative constraints on strategic choice.	*Oliver, 1991, 1996*
Can lead to difficulty in traversing different domains.	*Meyer, Mudampi & Narula, 2011*
Return on investment. Processes of commensuration may lead to cultural conformity being unnoticed and investment in the cultural capital thus carrying low return.	*Zuckerman, 1999*
Political	
Can expose actors to manipulation by political actors.	*Jacobson, Lenway & Ring 1993*
Governance by a number of different authorities can reduce legitimacy.	*Meyer & Scott 1983*
Can associate with discrimination and resource exclusion.	*Siegel, 2007*
Return on investment. Can prove a liability at times of political change.	*Guthrie, 1997; Siegel, 2007; Sun, Mellahi & Thun, 2010*
Structural	
May introduce constraints on public behaviours.	*Krackhardt, 1999*
Rigid structure may hinder collaboration.	*Burt, 1992*
Cohesive networks may lead to lack of flexibility.	*Gargiulio & Benassi, 2000; Romo and Schwartz, 1995*
Investment on redundant ties can carry low return.	*Burt, 2004, 2005; Granovetter, 1974*

Embeddedness may thus both give rise to several of the different forms of capital and determine the use-value of them. Neither the build-up (Smith, Smith, & Shaw, 2017) nor the consumption of capital (Barnes, Kalberg, Pan, & Leung, 2016) is indifferent to the contextual boundaries. As such, the emergence of nascent ventures as viable actors of the entrepreneurial field can be expected reflect not only in their embeddedness but also in the development of the different forms of their capital.

2.4.3 Mechanisms of emergence

Legitimacy and embeddedness both speak about the emergence of a recognised, viable actor in a field. Legitimacy explicitly considers the assessment of the actor by the collective of its context. Embeddedness, on the other hand, foregrounds the subjective change in the emergent actor by this internalising the cognitive schemas, the cultural practices and the political hierarchies of the field while also developing the social connections within it. The external recognition of actors' appropriateness is more implicit in the account of embeddedness. It is, however, at the core the concept.

Both legitimacy and embeddedness can thus only arise in the interaction of an actor with the context. Two separate mechanisms through which legitimacy and embeddedness may arise in actors' interactions within the context have been proposed in the literature: the early-life, punctuated mechanism of imprinting and the slower, long-term mechanism of embedding.

i. Imprinting

The mechanism of imprinting proposes that new actors emerge in the early stages of their entry into a new field. Imprinting refers to a mechanism through which a transient engagement with a new context instigates a long-lasting impact on the actor. The terminology, which refers to the persistence of the early-life learning, originates from the behavioural patterns of trust and imitation observed among young animals and their carers (Anon., 2009). Similar long-lasting behavioural patterns have been observed among organisations that continue to reflect the societal characteristics of the time of their founding independent of any possible changes in the context of their operation (Johnson, 2007; Stinchcombe, 1965).

Like zoologists, organisational theorists have similarly found the early-life imprints to be of a particularly sticky nature (Boeker, 1987, 1988; Dimov & Martin de Holan, 2008). The adopted behavioural patterns have been shown to exhibit a tendency to persist well beyond the founding period independent of their subsequent utility (Marquis, 2003; Tilcsik, 2012). In the early stages, the adoption of the characteristics that reflect the societal setting supports the legitimacy claims of a nascent organisation and can thus be considered a rational strategy for survival (Beckman & Burton, 2008; Burton, Sørensen, & Beckman, 2002). The later maintenance of the same properties in a changed societal context can, however, appear to be less so. The lack of updating of the early-stage characteristics has in the literature come to be seen largely as an outcome of inertial forces introduced by imprinting (Boeker, 1989; Mitchelmore, 2016).

In the animal world, the period of imprinting has been shown to take place during a so-called sensitivity period (Immelmann, 1975). The sensitivity period occurs during the early stage of a young animal's life and is characterised by specific openness to external influences (Immelmann, 1975). Organisational theorists have, however, proposed that in the organisational context the sensitivity period may not, in fact, be a once-in-a-lifetime, early-life event but rather organisations and individuals may experience several sensitivity periods at times of change. As a recurring mechanism, imprinting may thus be triggered at any stage of an actor's life (Marquis & Tilcsik, 2013) by a change whose magnitude demands a level of reinvention or the emergence of an actor of a new context (Marquis & Tilcsik, 2013).

While imprinting was originally theorised as a mechanism through which society influences organisations (Stinchcombe, 1965), subsequent research has observed similar pattern also between organisations and individuals (Mathias et al., 2015; Tilcsik, 2014). Recent theorising has not only considered imprinting as a mechanism that connects both

macro settings to meso outcomes (Sullivan, Tang, & Marquis, 2014) and meso settings to micro outcomes (Tilcsik, 2014) but also as a mechanism that can operate in the opposite direction, linking micro settings to meso outcomes (Ahuja, Soda, & Zaheer, 2012; Beckman, 2006; Eisenhardt & Schoonhoven, 1990; McEvily, Jaffee, & Tortoriello, 2012). In entrepreneurial contexts, for example, founders (Burton et al., 2002; Ellis et al., 2016), as well as the societal settings (Benner & Tripsas, 2012), have been found to imprint nascent ventures.

Despite the differences in the levels of analysis, imprinting is, in all accounts, associated firstly with an actor that is positioned in a new setting, secondly, with a sensitivity period, and thirdly with an external influence that introduces long-lasting patterns of behaviour. In the context of institutional fields and actor emergence within them, imprinting clearly presents one of the possible mechanisms that transfer the knowledge of the social order of the context to a newcomer.

ii. Embedding

In contrast to the short-term punctuated model of emergence proposed by imprinting, embedding is suggested as a longitudinal, interaction-by-interaction process of actor emergence. Organisational institutionalism recognises institutions as reciprocated typifications of habitual actions or interpretations that have taken a rule-like status (Berger & Luckmann, 1966: 72). Fields reflect the set rules and appropriate behaviours associated with these reciprocated typifications of habitual actions. As such, reciprocity is a key element of field formation and continuation and subsequently also of membership control, particularly of new member affiliation.

The etymological origins of reciprocity relate it both to the movement of backwards and forwards and to the exchange of equivalent or corresponding gifts (Anon., 2009). Indeed, reciprocity is known to play a significant role in social group formation both because of the backwards and forwards, give-and-take, action among the members of the group and because of the value considerations implicit in this continued exchange (Gouldner, 1960). Reciprocal interaction establishes clear patterns of rights and obligations. It structures the roles of the group members, supports the formation of differentiated status duties and thus solidifies the affiliations with the group (Gouldner, 1960). It further contributes towards the stability of established social systems by providing a mechanism that ensures the internalisation of the moral obligation of giving to those from whom one has received (Gouldner, 1960). Empirical studies have identified reciprocity as one of the key mechanisms that activates cooperation (Axelrod & Hamilton, 1981) and opens up access to the community resources (Baldassarri, 2015; Plickert, Cote, & Wellman, 2007).

Embedding within an institutional field takes place during the continued exchanges that an actor engages in with the members of the field. Indeed, studies into structural embeddedness regularly operationalise it with a measure of the frequency of connections or exchanges between the interaction parties. Reciprocal connections within the field are likely not only to embedded the actor in a social network but also, over time, in the understanding of the shared goals, orienting principles and hierarchies of the field (Klerkx & Leeuwis, 2009). As such, each of the four dimensions of embeddedness can be expected to develop over time as the actor engages in reciprocal interactions within the field. For the consideration of nascent ventures emergence as viable actors of the entrepreneurial field, the two mechanisms of emergence propose two notably different temporal routes to viability.

2.4.4 Summary: actor emergence in fields

This thesis seeks to explore the influence that context may assume in the development of post-redundancy entrepreneurial ventures. Conceptualising the entrepreneurial context as an institutional field offers a helpful framework for exploring the forces of the context that may influence the development of the ventures within the context. Further, organisational institutionalism offers useful theorisation of the processes and mechanisms through which viable actors in institutional fields emerge.

The literature provides rich outlines of how legitimacy, embeddedness and capital that arises from embeddedness each support the emergence of actors in fields. Two separate temporal mechanisms, one a short-term and another a long-term one, have also been elaborated in the literatures of imprinting and embedding. Few of the studies have, however, considered the separation between the social orders of the fields from which the entrant originate and that in which they seek legitimacy, embeddedness and new capital. As such, the theory offers little guidance for the elaboration of the impact that the history of the entrants may have for their emergence. The conceptual tools of the literature, however, offer a strong starting point for closer exploration of this.

2.5 Finding the research question

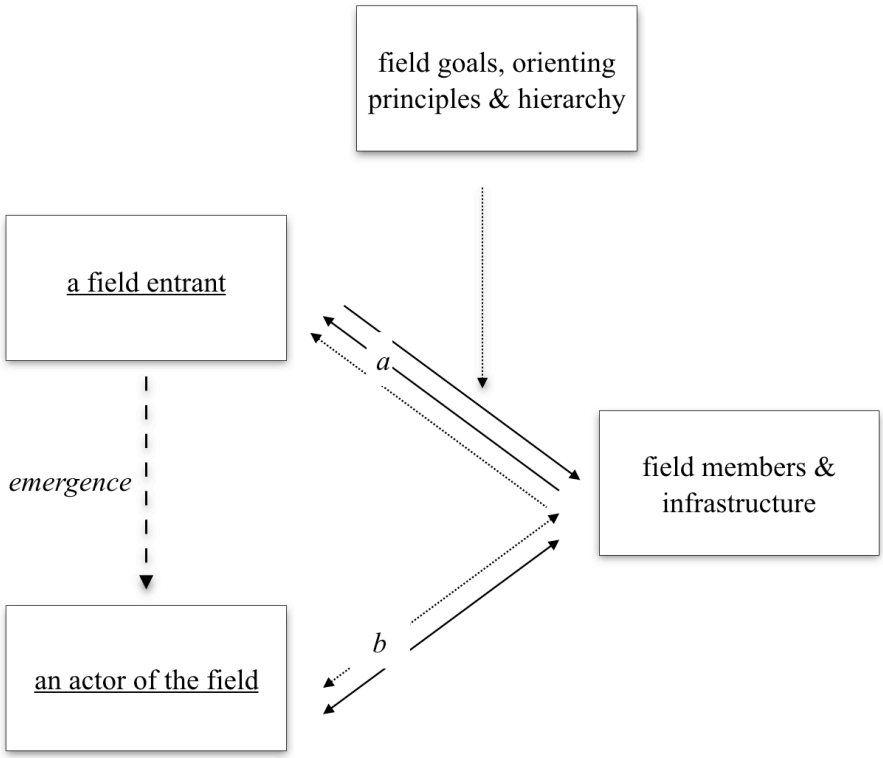
This thesis was motivated by the desire to understand how context may influence the development of post-redundancy entrepreneurial ventures. While the literature of entrepreneurship has explored the micro-level precedents of entrepreneurial development, context is largely absent in these accounts. In contrast, innovation literature offers a range of alternative conceptualisations of innovation in context, each of which recognises innovation as a collective endeavour. Post-redundancy entrepreneurial ventures may not, however, be innovation-oriented and may thus not be

legitimate entrants into a system of innovation. In order to account for the potential variation in the goals of the ventures and the potential discord that this might introduce in the ventures' alignment with the entrepreneurial context, I turned to the literature of organisational institutionalism. Organisational institutionalism considers collectives of actors, whose regular interconnections are guided by shared goals, orienting principles and hierarchies of institutional fields. Fields are known to impose an isomorphic pressure on the actors of the field. This theoretical framework reflected well the puzzle of the post-redundancy entrepreneurial development in context. The research question of the thesis thus became:

> *How do institutional contexts influence the emergence of entrepreneurial actors that originate from a corporate redundancy programme?*

Padgett and Powell have observed that "in the short run, actors make relations; in the long run, relations make actors" (Padgett & Powell, 2012: 2). Scott has further elaborated this to state that "in the short run, actor create and modify meanings; in the long run meanings create actors, both organisational and individual identities" (Scott, 2014: 223). Both of these observations encouraged me to consider how the entrant ventures engage with the field. Fields form around interactions. As such, ventures enter the entrepreneurial field by interacting with the incumbent actors of the field as observed by Padgett and Powell (Figure 2.1 – interaction a). The initial interactions in a field imprint the entrant with the goals, orienting principles and hierarchies of the field. The initial interactions are not reciprocal and not all of them may be repeated.

Figure 2.1 Actor emergence in the context of institutional fields.



a. In the short run, entrants make connections, create and modify meanings. This engagement imprints entrants.
b. In the long run, connections and meanings make actors. Entrants become embedded and acquire capital; that is, they emerge as viable actors of the field.
In interactions a and b, solid lines indicate actor interaction. Dotted lines indicate the transfer of the meanings and identities through imprinting in interaction a, and through embedding in interaction b. Both interactions are mediated by the goals, orienting principles and hierarchies of the field.

The incumbent actors of the field include not just members of the field but also actors who have assumed an infrastructure role within the field, such as governance or collective interest organisations. The infrastructure of the field is known to monitor access to the field, support the diffusion of the practices of the field and provide means for the status control of the members of the field. As such, the infrastructure of the field can be expected to adopt a notable role in constraining or supporting the emergence of an entrant actor in the field. Extant literature has, however, rarely empirically studied

the role of the infrastructure in field actor emergence. I thus chose for the first empirical study of the thesis to focus on the interaction between the entrant and the infrastructure of the field. The research question of the first study of the thesis thus became:

> *How may the interaction of post-redundancy ventures with the institutional infrastructure of the entrepreneurial field influence their emergence as viable actors of it?*

Following the initial period of imprinting, a pattern of repeated interactions is expected to emerge. These repeated interactions rely on reciprocity and, if continued, will ultimately embed the entrant cognitively, culturally, politically and structurally (Figure 2.1, interaction b). Given the reciprocal nature of these longer-term interactions, the capital of the entrant actor becomes of more notable importance. While entrants at an early stage of embedding may already have acquired new capital in the new field, they are likely also to rely on capital they have previously accumulated in their prior field. While capital has been broadly studied in the academia, the portability of it across field boundaries has received less attention. As such, I chose the second empirical study of this thesis to explore the strategies of repurposing and recombining of the entrants' prior capital with any newly-acquired ones. The second study of this thesis thus focused on the research question of:

> *How may post-redundancy ventures' strategies of repurposing and recombining previously-accumulated capital with any newly-acquired one influence their emergence as viable actors of the entrepreneurial field?*

Actor emergence in a field involves temporal complexity in both the short-term imprinting and the long-term embedding acting as the mechanisms through which new actors of a field may emerge. Further, emergence as a viable actor in a field implies the actor having become embedded along the four separate dimensions of cognitive,

cultural, political and structural embeddedness. While each of the dimensions and both of the mechanisms of emergence have received research interest, few studies have considered how these may combine in cases of actor emergence. I thus decided to focus the third study of the thesis on the combinatorial effect of the dimensions of embeddedness and the mechanism of emergence. Given the richness of the extant accounts of entrepreneurial growth and success, I decided to focus this final question of the thesis on the cases in which the viability of venture was challenged. The third empirical study of this thesis was thus guided by the question of

> *How do the different dimensions of embeddedness combine in cases of low viability among post-redundancy entrepreneurial ventures?*

The next section outlines the research design that was developed to ensure the research questions of the thesis were approached appropriately.

3. RESEARCH DESIGN

3.1 Introduction

This chapter outlines the research design adopted for this thesis. In the different sections of the chapter, I reflect on the reasons for the design choices that I made and discuss the limitations that were introduced by them. I first outline the interpretive framework that informed the design. I then discuss the research strategy and explain the data collection and analysis procedures in more detail. I conclude with reflections on the limitations that the chosen research design introduced into the project.

3.2 Interpretive framework

While striving for rigour and objectivity, any research project is by default grounded in the world-view of the researcher. Not only do the basic beliefs of researchers make certain questions more salient for them, but they also shape the researchers' interpretive framework (Bateson, 1972; Denzin & Lincoln, 1994). Given that different research paradigms share different understandings of the correct procedures of research as well as of the appropriate practices of quality evaluation, consistency of the interpretive framework is the first requirement for any research project (Denzin & Lincoln, 1994; Easterby-Smith, Golden-Biddle, & Locke, 2008). The consistency of the interpretive framework also calls for transparency and self-reflexivity in terms of the researcher acknowledging the world-view, values and subjective biases that may have influenced the research. In the interests of transparency, rigour, and reflection, I thus begin the

discussion of the research design by outlining the ontological, epistemological and methodological stances that have informed this study.

3.2.1 Ontological and epistemological presuppositions

The basic beliefs of the researcher with regards to the nature of reality - the ontological stance - and to the relationship between the researcher and knowledge of the reality - the epistemological stance – tend to influence the approach and design of a research project even before any question formulation has been initiated. Together, the ontological and epistemological presuppositions also influence the researcher's methodological stance - the understanding of the processes through which knowledge of the world can be gained - and, as such, make certain methodological choices more available than others. Altogether the ontological, epistemological and methodological presuppositions form an interpretive framework that shapes any research project from its initiation to its completion (Denzin & Lincoln, 1994).

The development of the research question for this thesis, *how institutional contexts influence the emergence of entrepreneurial actors that originate from a corporate redundancy programme* has been informed by a constructivist interpretive framework. Constructivism considers reality as socially constructed and, as such, relative (Berger & Luckmann, 1966). Constructivists believe that social order is an ongoing human production. As such, multiple realities can exist in parallel. In this thesis, the theorisation of the economy as consisting of a number of nested fields reflects the notion of multiple bounded realities.

Recognising reality as socially constructed and knowledge as spatially and temporally bounded directs social constructivist research towards interpretive, subjectivist epistemology (Lincoln, 1990). Given the basic premise of the ontology that there is no

single ultimate reality and thus no single ultimate truth, constructivists focus on the exploration of the bounded construction of meaning in social collectives. Research informed by the constructivist stance does not seek to identify generalisable mechanisms of causality but rather to develop ideographic knowledge or pattern theories that acknowledge the temporal and spatial boundaries of knowledge (Lincoln, 1990). Social constructivism encourages direct interaction between the researcher and the research subjects in the reflection of the interpretivist philosophical foundations of social constructivism. Interpretivism considers human action as inherently meaningful, implying that actions incorporate intentional content (Schwandt, 2000). In order to understand the actions of a research subject, the researcher thus needs to discern this intentional content.

Philosophical stances vary in their supposition of how far it is possible for the researcher to understand the subjective meaning of the research subject's actions in an objective fashion. While phenomenological sociologists argue that it is possible for a researcher to participate in the knowledge creation of a research project as a disinterested observer (Schultz, 1962; Schwandt, 2000), the radical constructivists posit that knowledge is always co-created between the researcher and the subject and, as such, cannot be objective, disinterested, apolitical or exclusive of the affective experiences of the researcher (Schwandt, 2000). Given the contested nature of the interactive engagement of the researcher with the phenomenon of the study, the methodological choices and the ethical considerations of the research project are of particular importance in studies adopting a social constructivist interpretive framework. I will next turn my attention to these topics and will also, as a part of the methodological considerations, discuss the empirical case selection of this study.

3.2.2 Methodology

For intellectual and philosophical consistency, the methodological choices of a study do, by necessity, need to build on the ontological and epistemological beliefs that inform the research. In this case, the relativist ontological and the interpretive, subjectivist epistemological framing of the study proposed qualitative methodology as the most appropriate for the research. Indeed, qualitative methods seemed most congruent also with the research question of *how institutional contexts influence the emergence of entrepreneurial actors that originate from a corporate redundancy programme?*

Qualitative methods encourage discovery in areas in which the extant theory may not provide strong enough grounding for hypothesis development (Janesick, 1994). In this case, the framing of the study proposed that the economy consists of a number of spatially and temporally bounded fields, each one of which may evince not only different kinds of activities but also different orienting principles of appropriateness. While the literature of organisational institutionalism offers rich insight into the inner workings of fields, the actor emergence in fields has not been theorised to an equal extent. Given both the social constructivist grounding of the research question and the difficulty of any hypothesis development based on the extant literature, it would not have, in this instance, been logically feasible to consider a research design that would have relied on the testing of hypotheses proposed by the literature.

Further, qualitative methods encourage exploration of the research subjects in their natural environments and, as such, integrate contextual considerations into the study (Guba & Lincoln, 1994; Lincoln, 1990). Given the motivation of the study to understand how the research subjects became viable actors of their new contexts,

selection of methods that both recognised the importance of and allowed for the integration of contextual factors in the study was imperative.

Finally, qualitative methods are designed to capture realities holistically and enable enquiry of meaning and purpose, thus aligning with the interpretive epistemological framing of the research (Guba & Lincoln, 1994; Lincoln, 1990; Stake, 1994). Once again, given the basic motivation of the study to understand actor emergence in context, qualitative methods did not only align logically and philosophically with the interpretive frame of the study but also offered the most potent toolset for inquiring the topic of interest.

To allow for the exploration of meaning, qualitative studies regularly apply methods that are dialectic, thus involving direct discussion with the research subjects, and hermeneutic, thus calling for the interpretation of the research subjects' experiences by the researcher (Cresswell, 2014; Guba & Lincoln, 1994). In order to gain an appropriate understanding of the research subjects' experiences and the context within which they have taken place, qualitative research regularly necessitates the researcher to stay in the research setting and to invest time in exploring the phenomenon. Methods such as observation, interviewing or archival analysis can each be utilised to build a more comprehensive picture of the phenomenon under study. In practice, high-quality qualitative research regularly involves the application of multiple methods as well as the inquiry of multiple viewpoints and multiple data sources (Cresswell, 2014; Poteete et al., 2010). I will next discuss the strategy adopted for this research to ensure the application of appropriate data collection and analysis methods, given the philosophical foundations and theoretical motivation of the study.

3.3 Research strategy

Qualitative research designs can utilise a number of different strategies involving a diverse range of data collection and analysis methods. In this study, I opted for a multiple case study strategy and applied both explorative multicase analysis and qualitative comparative analysis (QCA) in studying the collected interview and archival data. The following sections discuss both the empirical case and research strategy selection processes in more detail.

3.3.1 Empirical case selection and data strategy

The first critical aspect of the data strategy in qualitative research is to ensure that the empirical case selected for the study enables the inquiry of the phenomenon that is the focal concern of the research project (Stake, 2000). This study was motivated by the desire to understand better the phenomenon of post-redundancy entrepreneurship. The motivation largely arose from my observation of the prominence of the phenomenon in Finland at the time when Nokia, one of the most powerful economic players and largest employers in Finland, went through a significant restructuring of its operations. The restructuring project at Nokia involved an exceptional number of permanent layoffs worldwide (Nokia, 2015). In Finland, the total number of the industry layoffs was further increased by many of Nokia's subcontractors having to restructure their operations at the same time due to the reduced business opportunities available to them through their partnership with Nokia. The ICT sector in Finland thus offered a potentially fruitful focal area for the empirical data collection.

Finland is regularly listed among the most innovative countries among the developed economies (Dutta, Lanvin, & Wunsch-Vincent, 2016, 2018) and exhibits a dynamic environment for startup entrepreneurship (OECD, 2017a). Indeed, enhancing the

opportunities for entrepreneurship is one of the key objectives of the current government (Government Strategy Secretariat, 2018). Given Nokia's prominence in the ICT-sector at the time of the downsizing and the large scale of the redundancies, Nokia specifically chose to run an entrepreneurial accelerator programme that encouraged its laid-off personnel to consider entrepreneurial startups as an employment option following their redundancy. This programme exemplified work moving out of large corporate structures into smaller, more fragmented self-organising units. As such, it offered a promising context for the empirical work of this study.

In order to better understand the suitability of the Nokia programme for the study of the phenomenon of post-redundancy entrepreneurship, I first contacted Nokia. I also made contact with a regional economic governance office that was involved in the support of startup entrepreneurship in one of the regions that was particularly severely hit by the Nokia redundancies. I conducted some early stage exploratory interviews with these contacts and found that a large number of ventures had been registered within the Nokia accelerator programme during its operation. I also established that the programme had, by the time of my exploratory interviews, been concluded. Both the indications of the relatively large number of ventures of the programme and its spatial and temporal boundedness made the case attractive for the thesis research. The boundedness of the programme was welcome news as it ensured that the programme constituted an empirical instance of the phenomenon of interest. Furthermore, it was possible to identify the majority of the startup companies that had emerged from the programme during its duration.

If the first critical aspect of the empirical case selection in qualitative research is to ensure that the selected case enables the inquiry of the phenomenon that is the focal concern of the research project, the second is to determine the sampling strategy within

the chosen empirical case (Flick, 2007). The early stage interviews with the Nokia management and the regional economic governance office confirmed 335 entrepreneurial ventures to have been registered within the programme during its duration between late 2011 and early 2014. The number of the reported ventures diverged to an extent from the ones put forward by a prior Aalto University study that referred to "some 400 companies in Finland" (Kiuru et al., 2013) and by a Harvard Business School case study that spoke about "1,000 new companies worldwide, of which 400 in Finland" (Sucher & Winterberg, 2015). Indeed, internal Nokia documentation referred to 1,000 companies worldwide (Nokia, 2015). All in all, while it seemed that the interview contacts' list of 335 ventures might not have captured the programme in its totality, it, however, proposed to represent an absolute majority of the ventures founded within the programme in Finland. While the status of the companies was unknown to the interview contacts at the time of the interviews, it was clear that each one of the ventures constituted a potential empirical case for the thesis.

Following the initial interviews with the managers of Nokia and regional economic governance office, I was fortunate to gain access to a list of the names of the 335 companies through the interviewees. While the obtained list contained no further information of the ventures beyond the names of the companies, their Nokia-employed founders and a brief description of their areas of business, it was nevertheless clear that the list offered the potential for substantial data collection around the programme and its ventures. A search through the Finnish company registry confirmed that three of the ventures in the initial list that I had obtained had not, in fact, been registered. Four ventures that did not appear in the original list had, however, been founded at the time of the accelerator programme by founders included in the list. I incorporate these four into the list. This brought the final number of the ventures available for study to 336.

The company registry records reported the founders of these to include 544 unique individuals.

Given the notable number of the ventures in the programme, it was reasonable to expect there to be observable variation in their adopted pathways. I thus decided to focus the research inquiry solely on the case of post-redundancy entrepreneurship rather than considering comparative designs that would have contrasted the Nokia ventures against businesses founded outside a corporate accelerator programme. I similarly decided to focus my data collection on the ex-Nokia ventures alone rather than seeking any other corporate accelerator programmes for further data collection.

Having decided to build the research design around the Nokia accelerator programme ventures, the next question to consider was how to sample within the pool of the 336 ventures. While both the number of ventures and the number of founders was large for a typical qualitative research project, I was keen to keep as many of the ventures and founders within the study as possible for completeness' sake.

In deciding the sampling strategy, I also had to contemplate the most appropriate level of analysis. The research question of the role of institutional fields in entrepreneurial actor emergence opened up the possibility to sample either on the micro-level of the individual founders or on the meso-level of the ventures. Given the motivation of the study to inform entrepreneurial policy and, as such, to understand the dynamics that support or constrain venture development, I chose the ventures as the research subjects. Due to the small size of the ventures and the strong presence of the founders in them, I, however, decided to collect data on the individual founder level and to aggregate this to the venture level. This ensured that I did not need to limit the sample based on the number of the founders but could rather keep all of the ventures in the study and make the analysis comparable across all of them.

Choosing the ventures as the actors to be studied ensured a holistic approach to the exploration of the objects of the research. The large number of the ventures and the even larger number of the founders did, however, present a challenge in terms of data collection. It was clear that it would not be possible to utilise observations or even interviews for data collection across all of the ventures. I thus initiated the data collection utilising archival data methods and built a unique database of all of the ventures by gathering an equal set of data for each of the 544 founders and the 336 ventures (Table 3.1).

While the archival dataset gave a good overview of the journeys and the status of the ventures, it was important to engage directly with the ventures in their natural settings in order to gain a better understanding of the meaning-making that the founders and the ventures engaged in during the emergence of the venture. At the second stage of the data collection, I thus chose to collect interview data from a subset of the ventures. I decided against observational data collection due to the small size and ad-hoc nature of many of the ventures. Rather than focusing only on ventures that operated around a team working in a shared location, I was keen to capture both operational and discontinued ventures, both single-founder and team-structured ventures as well as both ventures with distributed and those with co-located teams. Given the diversity of the venture circumstances, forms and team structures, data collection through interviews seemed most suitable for the broadest data access.

Table 3.1 Phasing of the data collection.

phase	**Set-up** **I**	**Pilot** **II**	**Interview 1** **III**	**Archival** **IV**	**Interview 2** **V**
	April-June'15	June-August'15	September'15-March'16	March'16-August'17	August'17-August'18
Interviews					
	4	5	18		27
Interviewees					
	i. Nokia contacts ii. Regional economic governance office	i. Venture founders ii. Regional economic governance office	i. Venture founders ii. Regional economic governance office & university i. Nokia contacts		i. Venture founders ii. Regional economic governance office & university
Archival data					
	i. Venture registration data			i. Founder data ii. Extended venture data iii. Media data	i. Interview ventures business plans ii. Founder ego network data iii. Founder tax return data iv. Infrastructure data

The interviews, as a data collection method, gave me the possibility for a broad data access. It was, however, not feasible to collect interview data from all of the ventures. The pool of the ventures split into four based on the geographical areas in which Nokia had employed the founders. In the majority of the cases, the ventures had also been registered in the same geographical region. This split the total pool naturally into smaller subgroups of 140, 90, 69 and 37 companies. The largest group represented ventures in the capital area while the other three were located each in its own provincial region in Finland. I decided to sample the interview data in one of the regional subgroups.

The regional groups did not differ substantially from each other in the characteristics of the ventures. I thus chose to focus on the mid-sized on of these. Focusing on only one of the regions enabled a holistic approach to the interviews in terms of aiming to capture as many of the ventures of the region as possible. This sampling strategy also had the additional benefit of ensuring that all of the ventures within the interview sample were navigating within the same regional system of entrepreneurship.

The interviews proceeded in three distinct phases (Table 3.1). At the pilot and first interview phases, I used random sampling within the chosen region to select a batch of ventures for the interviews. At the second and more comprehensive interview phase, I transitioned to using theoretical sampling to respond to the themes arising from the data and to ensure that I had an adequate number of ventures in each of the tentative theoretical groupings emerging from the data to reach saturation (Flick, 2007; Glaser & Strauss, 2017). At each phase, I included some ventures in which I interviewed several of the founders. During the interviews I also aimed to collect other supportive data, such as the business plans that the venture founders had prepared and presented for the Nokia accelerator panel and venture founder ego-network data.

In addition to the venture founders, I interviewed several managers of the regional economic governance office that was involved in the startup venture support in the chosen region. I also included four ventures from the other regions in the final interview phase, in order to identify any conspicuous variation between the regions. The overall response rate among the ventures that were invited to participate was very good, with only one venture of the 40 sampled declining the invitation to join the research. In addition to the one decline, no contact could be established with three others. Altogether, I conducted 54 interviews between August 2015 and August 2018 (Table 3.2).

Table 3.2 Interviews conducted.

#	PHASE	Role	Region	Duration	Topic
1	I. Set-up	Governance office	A	90	Initial meeting
2	I. Set-up	Governance office	A		-"-
3	I. Set-up	Nokia	A	45	Management interview
4	I. Set-up	Governance office	A	30	Initial interview
5	II. Pilot	Venture	A	110	Pilot interview
6	II. Pilot	Governance office	A	60	Review meeting
7	II. Pilot	Venture	A	95	Pilot interview
8	II. Pilot	Venture	A	95	Pilot interview
9	II. Pilot	Venture	A	115	Pilot interview
10	III. Interviews (1)	Venture	A	200	Pilot interview
11	III. Interviews (1)	Venture	A	200	Pilot interview
12	III. Interviews (1)	Venture	A	65	Pilot interview
13	III. Interviews (1)	Venture	A	90	Founder interview
14	III. Interviews (1)	Venture	A	64	Founder interview
15	III. Interviews (1)	Venture	A	76	Founder interview
16	III. Interviews (1)	Governance office	A	45	Incubator interview
17	III. Interviews (1)	Governance office	A	60	Incubator interview
18	III. Interviews (1)	Regiona university	A	60	Research review
19	III. Interviews (1)	Nokia	A	60	Management interview
20	III. Interviews (1)	Venture	A	52	Founder interview
21	III. Interviews (1)	Venture	A	80	Founder interview
22	III. Interviews (1)	Venture	B	60	Founder interview
23	III. Interviews (1)	Venture	B	60	Founder interview
24	III. Interviews (1)	Venture	A	90	Founder interview
25	III. Interviews (1)	Venture	A	70	Founder interview
26	III. Interviews (1)	Venture	A	65	Founder interview
27	III. Interviews (1)	Venture	A	84	Founder interview
28	V. Interviews (2)	Venture	A	75	Founder interview
29	V. Interviews (2)	Venture	A	90	Founder interview
30	V. Interviews (2)	Venture	A	65	Founder interview
31	V. Interviews (2)	Venture	A	90	Founder interview
32	V. Interviews (2)	Venture	A	70	Founder interview
33	V. Interviews (2)	Venture	A	70	Founder interview
34	V. Interviews (2)	Venture	A	60	Founder interview
35	V. Interviews (2)	Venture	A	65	Founder interview
36	V. Interviews (2)	Venture	A	85	Founder interview
37	V. Interviews (2)	Venture	A	80	Founder interview
38	V. Interviews (2)	Regional university	A	70	Regional ecomony study
39	V. Interviews (2)	Governance office	A	120	Incubator interview

#	PHASE	Role	Region	Duration	Topic
40	V. Interviews (2)	Venture	A	45	Founder interview
41	V. Interviews (2)	Venture	A	70	Founder interview
42	V. Interviews (2)	Venture	A	50	Founder interview
43	V. Interviews (2)	Venture	A	135	Founder interview
44	V. Interviews (2)	Venture	A	64	Founder interview
45	V. Interviews (2)	Venture	A	85	Founder interview
46	V. Interviews (2)	Venture	A	75	Founder interview
47	V. Interviews (2)	Venture	A	65	Founder interview
48	V. Interviews (2)	Governance office	A	95	Incubator interview
49	V. Interviews (2)	Venture	C	46	Founder interview
50	V. Interviews (2)	Venture	C	60	Founder interview
51	V. Interviews (2)	Venture	C	75	Founder interview
52	V. Interviews (2)	Governance office	A	90	Incubator meeting
53	V. Interviews (2)	Governance office	A		-"-
54	V. Interviews (2)	Venture	A	120	Founder interview

3.3.2 The strategy of inquiry and methods

The phenomenon of interest in this research, that is the emergence of post-redundancy ventures as viable entrepreneurial actors of their field, entails both temporal and spatial dimensions in terms of the founders of the ventures transitioning from one field to another and the ventures then becoming constituted or emerging over time in the new field. At the time of the study, the ventures of the Nokia programme were 3-5 years into their existence. The research strategy thus had to encompass methods for exploration of both the venture histories and their current circumstances. Further, the methods selected had to enable the study of the large number of the independent but related ventures within the programme.

It is worth noting that, while the programme in its totality did present an interesting research object, the question of this study firmly focused the research into the individual ventures within the programme. The distributed nature, together with the temporality of the phenomenon, made some common qualitative research strategies, for example ethnography, less well suited to the study (Creswell, 2003). A multiple case study

strategy, however, aligned both with the empirical phenomenon and with the constructivist interpretive framework (Stake, 1995). Further, given the theoretical aspirations of a thesis research, the multiple cases study strategy offered a solid starting point for theory development (Eisenhardt, 1989; Flyvbjerg, 2006; Glaser & Strauss, 2017).

The quality of case studies is sometimes attributed to five basic building blocks of the study: theoretical sampling, triangulation, analytical pattern matching, analytical generalisation and iteration (Pauwels & Matthyssens, 2004). For theoretical sampling and data triangulation the research first needs to consider what constitutes a case in the study in question (Ragin & Becker, 1992; Yin, 2009). In this study, I defined the ventures as the cases under study. As I collected data both at the individual founder and at the venture level, the venture cases could, to an extent, be considered as embedded cases studies with the founder cases embedded within the venture cases. This strategy ensured that the data collection and the theorisation could focus on the emergence of the ventures in the entrepreneurial space. As I explained in the previous chapter, I initially collected data for the whole programme and subsequently moved towards theoretical sampling within a region based on the early findings of the study.

While case study strategies are common in qualitative research, there still exists disagreement with regards to the exact quality standards expected of case-based research (Easterby-Smith et al., 2008; Welch & Piekkari, 2017). While the opinions differ with regards to the exact procedures commonly expected from case research (Bartlett & Vavrus, 2017; Eisenhardt, 1989), there is consensus on good case research engaging in a systematic and nuanced inquiry of the phenomenon under study (Easterby-Smith et al., 2008; Tracy, 2010). As such, multiple data sources and multiple methods are commonly utilised in case studies (Flick, 2008; Stake, 2000). The use of

multiple data sources and methods reflects the relativist ontology of the constructivist paradigm but does also implicitly recognise that no method measures complex social phenomenon perfectly (Brewer & Hunter, 2006). Multiple methods together with multiple sources of data do not only ensure thick description, multivocality and intimate knowledge of the cases under study but also can be an integral element to assure the quality of the research work (Flick, 2008; Tracy, 2010).

Multiple data and method application are regularly referred to as triangulation in the qualitative research literature (Flick, 2008). Triangulation can take place at the level of data (multiple data sources, one method), method (multiple methods, one data source), researcher (multiple investigators, single data source and method), and theory (multiple theoretical lenses, single data source and method) (Denzin, 1970). In this case, I introduced data triangulation both by collecting different types of data and by collecting data from multiple actors within a single venture case. The boundary between mixed-methods research and triangulation has, at times, been blurred, and triangulation has as a result come under criticism as part of the overall dispute of incommensurability of mixed methods (Denzin, 2012). In this study, while I chose to utilise multiple methods to add rigour, breadth and depth to the findings of the research, the methods were chosen based on their shared philosophical foundations. This avoided potential problems of method incommensurability.

In the first two empirical studies, I adopted an exploratory multiple case study approach that utilised inductive pattern matching and replication logic in the analysis of interview and archival data (Stake, 2000; Yin, 2009). In the third empirical study, I adopted a set-theoretic logic and analysed archival data that had been collected from several different data sources with the qualitative comparative analysis (QCA) approach (Ragin, 2000; 2008). While the three studies of the thesis were all designed to contribute towards the

overall research question of how the institutional system of entrepreneurship may influence the emergence of entrant ventures as viable actors of it, they, however, each also addressed a separate research question and utilised slightly different data as well as methods. As such, they all formed separate, smaller research projects. In the remainder of the thesis, I thus refer to them as individual studies.

The adopted triangulation practice strongly reflects the approach of the qualitative researcher as a bricoleur (Denzin & Lincoln, 2000b; Lévi-Strauss, 1966; Weinstein & Weinstein, 1991). Interpretive bricolage connects not only the research participants' worldview into a reflexive 'montage' but also recognises the role that, by necessity, the researcher plays in the process of knowledge creation (Denzin & Lincoln, 2000b). While the deep engagement with the phenomenon through extensive and personal data collection allows the close interrogation of the data and the emergence of the theory from the empirical materials collected, they also make the researcher's personal history, biases and ideological preferences inextricable from the final product (Walsham, 1995). As discussed in the previous section, some schools of thought consider the presence of the researchers' own world-view as an intrinsic, even necessary, element for the knowledge creation, while others attempt a clearer separation of the researcher from the research setting. In either case, awareness of the researchers' values and biases and reflection of their role in the conclusions of the study is a minimum requirement for the quality of the research (Easterby-Smith et al., 2008; Tracy, 2010). In this case, I employed research diaries and careful ethical processes to ensure self-reflexivity, transparency and adherence to an ethical code of conduct during the study. I will next discuss the ethical practices adopted for the study.

3.4 Ethics

In qualitative research that is informed by the constructivist paradigm, there is an explicit recognition of the results of the study emerging from the interaction of the research phenomenon and the researcher. As such, in these research projects, there is also an explicit recognition of the interconnectedness of facts and values. The acknowledgement of values as intrinsic to the research project raises many ethical questions regarding the design of the research and the conduct of the researcher (Guba, 1990).

The ethical principles of high-quality qualitative research are sometimes categorised under four key area, namely procedural, situational, relational and existing ethics (Tracy, 2010). In this categorisation, procedural ethics refer to the institutional rules related to the ethical practices that are imposed on the research project by the institutional context in which the research is conducted. Procedural ethics thus commonly refer to the approvals required for a project from an institutional ethics review board and research participant information and consent procedures.

For this study, I submitted three separate ethics board approval applications. One for the pilot phase, a second one once the research design for the full study had been agreed, and a third, an extension application, when the data collection was agreed to be extended to cover some ego-network data collection from the venture founders. Each of these applications was reviewed and approved by the Oxford University Saïd Business School Departmental Research Ethics Committee. To ensure adherence in ethics procedures, I also shared a research information form with all of the participants that I invited to participate in the interviews of the study. The information sheet outlined the background and data management practices of the study. It also explained the right of the research subjects to withdraw from the study at any point of the study and listed the

procedure and contacts for any complaints. For details of the participant information form please refer to the Appendix 1.

After the early stage set-up meetings with Nokia and the regional economic governance office managers, all interviewees were asked to sign a consent form. Prior to starting any of the interviews, I reviewed the consent form with the interviewees and ensured that they both understood how the collected data would be used and the voluntary nature of their participation. No interview proceeded without the consent form having been agreed and signed by the participant. For details of the consent form, please refer to the Appendix 2.

As a part of the procedural ethics considerations, a careful data management practice was put in place. All of the companies and founders were assigned an alphanumeric code and only these codes were used in working with the data. A single, password protected file with the coding key was maintained. All data files were protected by secure passwords and stored on encrypted hard drives. None of the private data was shared beyond my thesis supervisors. As part of the consent forms, approval was sought and gained for storage of the data and usage by me in potential future research projects.

Situational ethics refers to the conduct of the researcher in the field (Tracy, 2010). Interviewing is interaction and as such, calls for the researcher to recognise the different ethical considerations that arise in the encounters with the research subjects (Fontana & Frey, 1994). In this study, the main situational ethics questions arose in relation to the location of the interviews. While I aimed to meet with the interviewees at the offices of their venture, this was not in all cases possible due to the venture not having an office or the interviewee being employed in another company. In cases in which the venture office was not an option for the interview location, I sought to arrange a private, quiet location instead. I regularly used meeting spaces at the regional university or public

library. Telephone interviews introduced different situational ethics questions. The lack of personal presence and usage of body language for communication meant that I aimed to allow for more time during these interviews for the interview set-up, interviewee contemplation and wrap-up.

Relational ethics refers to the researchers' awareness of their influence on the lives of their research subjects (Tracy, 2010). This was a particularly salient area of ethical considerations for me, given my prior professional background as a senior manager at Nokia. I had joined Nokia first as a graduate software engineer in Finland and had subsequently worked in a number of different technical and managerial roles in Japan and in the United Kingdom. In 2011, I was in charge of a business unit of a fully owned subsidiary of Nokia in Japan that was being closed down. As a part of the closure of the business unit, I was also responsible for the outplacement programme of the 50-strong local team. I was not, at any point, involved in the restructuring or the Nokia outplacement programme in Finland. I was, however, intimately familiar both with the circumstances that lead to the restructuring at Nokia and with the consequences this had at the level of an individual employee.

I recognise that my background made it potentially easier for me to establish a rapport with my interviewees. I regularly shared similar early-career experiences with my interviewees and had first-hand experience also of the time of Nokia's difficulties. While these experiences helped in establishing an atmosphere of trust at the interview situations, I was acutely aware, throughout the study, of the ethical questions associated with this trust. I thus did my best to ensure that my personal experiences did not colour the conversation in any way or make it difficult for the interviewees to express or share their personal opinions and experiences. While clearly being keen to collect any data that interviewees were happy to share with me, I also carefully reflected on whether my

background in any way influenced the access to the data. On all occasions, I aimed to express genuine respect towards the interviewees. As a positive feedback during the study, some of the interviewees commented on their willingness to join the study having arisen from the genuine interest and respect evident in the study invitation. As an instrumental part of the relational ethics consideration, I agreed to share the final thesis with the interviewees.

Finally, existing ethics concerns the practices that researchers adopt in writing up, publishing and sharing their results (Tracy, 2010). In this study, I had a strong motivation to understand, and subsequently highlight the role that context may play in making, or breaking, entrepreneurs. As such, I was keen to hear a multiplicity of entrepreneurial stories in order to understand the alternative pathways to entrepreneurship and, based on this, to support the development of entrepreneurial assistance programmes to address the issues of a broader entrepreneurial audience. I accept that this objective calls for the propagation of the findings through different media and beyond the academic audience. As such, I am cognisant of the need to reflect on the ways in which the research findings may be misread or distorted by the different audiences (Fine, Weis, Weseen, & Wong, 2000) and to actively work towards a just treatment of all of the research subjects of this study,

Research informed by a relativist epistemology and a naturalistic methodology regularly needs to balance potentially contradictory ethical demands in faithfully representing multiple, possibly conflicting realities of the research subjects by utilising their word-for-word natural language quotations and, at the same time, maintaining their privacy and anonymity (Lincoln & Guba, 1989). Recognition of the ethical considerations is thus of importance at each stage of the research. While careful and considerate research design can help to alleviate some of the ethical concerns, data collection and analysis

practices are of equal importance. In the next section, I will discuss the procedures of this research, to outline how I attempted to ensure not only rigorous and honest results but also their production through thorough ethical practices.

3.5 Data collection and analysis

As is typical for qualitative research (Denzin & Lincoln, 2000b), this project is characterised by the utilisation of multiple qualitative methods. Data were collected from several different sources utilising different data collection methods and analysed using multiple analysis methods. The multiple data sources, as well as the different collection and analysis methods, were chosen to strengthen the rigour, breadth and depth of the findings. Triangulation, in terms of the exploration of the phenomenon under study through multiple datasets and multiple methods, enables comparison and contrasting of the emergent findings and, as such, encourages the development of well-supported research claims (Eisenhardt, 1989; Flick, 2007). Triangulation is regularly considered an integral part of a systematic qualitative research project (Denzin, 2012; Flick, 2008). In the following, I will first outline the data collected for this project. As part of this, I will also discuss the collection methods utilised. I will then turn my attention to the data analysis practices employed.

3.5.1 Data collection procedures

The data collection for this project proceeded in several stages and involved a number of different sources and collection methods. At each stage, data collection was motivated by the desire to deepen and broaden the understanding of how entrepreneurial ventures, whose founders had been embedded for an extended period in a corporate context, come to emerge as viable actors in the entrepreneurial context.

Given that the starting point of the research was the list of the ventures that had been founded within the Nokia corporate outplacement programme in Finland, I first sought to collect some basic parameters of these companies in order to gain a feel for the range of the ventures within the pool. The first stage of the data collection thus involved archival data collection from the Finland company registry. The company registry is a public database that contains basic registration information for all of the companies registered in Finland. Data provided includes, among others, information about the registration status of the business, e.g. founding year, current status, employment registration status, information about the type of the business, e.g. Finnish equivalent of the standard industry classification code and a short description of the nature of the business, as well as information about the ownership and management structure, e.g. CEO, board members and share capital. The registry also holds annual data on the key financial indicators of the businesses. While all of the data is public, not all of it is provided for free. I only accessed the free data in the registry.

Several commercial services provide an extended view into the Finnish company registry data. Finnish business press, that is Kauppalehti and Taloustieto, offer free access to the financial information of the company registry. Similarly, Asiakastieto, a commercial company information service, provides a free, extended view into the ownership and management structures of the companies in the registry. As such, I utilised all the above four services to collect all free public data concerning the companies included in the Nokia venture pool.

In addition to the registration data, in the first instance, I collected information about any government innovation funding received by the ventures and the business press rankings awarded to the ventures. As with the registration data, this additional information also relied on public data archives. The information regarding the

government innovation funding came from the Finnish Funding Agency for Innovation, the TEKES database[1]. The information about the business press rankings came from Kauppalehti that compiles an annual ranking list of all Finnish businesses as well as from the "strongest of Finland" list compiled by Asiakastieto. Table 3.3 lists all of the data items collected for each of the ventures from the public data archives.

Table 3.3 Archival data collected.

	Data source	Collection phase
1	List of ventures and their founders from the economic agency	I
2	Nokia interviews	I, III
3	Regional economic agency interviews	I, II, III, V
3	Finnish Company Registry (free data only)	I
4	Kauppalehti company registry (Yrityshaku)	I
5	Taloussanomat company registry (Yritystiedot)	I
6	Suomen Asiakastieto company registry	I
7	TEKES award database	I
8	Kauppalehti "The Best of Finland" annual business ranking	I
9	Suomen Asiakastieto "The Strongest of Finland" awards	I
10	Founder interviews	II, III, V
11	LinkedIn	IV
12	Venture websites	IV
13	Venture press releases	IV
14	UK Companies House company registry	IV
15	Bloomberg company registry	IV
16	Company websites (for prior employers)	IV
17	Educational institution websites (for educational institutions)	IV
18	Finland Statistics	IV
19	Finnish tax registry	V
20	Infrastructure information - actor web pages	V

The most important element of the first archival data collection round was to validate the initial list of the Nokia accelerator companies. Only three of the companies in the initial list were found not to have been registered. As such, 336 legal entities could be

[1] Tekes, the Finnish Funding Agency for Innovation was merged with the Finnish Trade Promotion Organization (Finpro) in the beginning of 2018. The new organisation encompassing both Tekes and Finpro is Business Finland.

identified as the starting point for the research project. A further four of these were, however, found to have been registered abroad, two in Estonia, one in France and one in Canada. The four non-Finnish companies were excluded from the study both on theoretical and practical grounds. Theoretically, the emergence of the foreign ventures could be expected to differ from the rest of the venture pool in Finland due to variations in national cultures. In practice, systematic collection of an equal dataset of the four ventures also proved very challenging. Because of both of these reasons and in order to ensure clarity in the theorisation of the project findings, I chose to focus solely on the ventures that had been registered in Finland. It should be noted that this choice in no way reflects the internationalisation aspirations of the ventures in the pool but solely their legal status as having been registered and having their head offices in Finland.

In a few cases, the Nokia accelerator programme involved ventures in which the entry into entrepreneurship took place via a purchase of an existing business. 15 businesses in the initial list were identified to represent cases of entry-by-purchase. While the founders did in these cases, without a doubt, have to constitute themselves in their new roles as entrepreneurs, the ventures did not go through the process at the time of the founder redundancy from Nokia. Given these were not cases of new venture emergence, I excluded the 15 entry-by-purchase instances from the study. All in all, this meant that I dropped 22 ventures from the initial list that I had acquired and focused my further data collection and analysis on the remaining 317 ventures.

Beyond validating the initial list acquired, the first phase archival data collection gave a rough feel for the range of the companies in the pool in terms of their industry, geography, and operational status. The archival data could not, however, inform me about the developmental paths that the ventures had adopted as part of their emergence

within the entrepreneurial field. Because of this, before collecting any further archival data, I chose to run a set of pilot interviews.

Based on the archival data collected, I decided to initially focus the interviews on a single city. As explained earlier in section 3.3.1, I selected one of the provincial cities as the tentative focus of all interview data collection. Based on the archival data, the venture pools in each of the four geographic regions involved in the Nokia accelerator programme reflected similar characteristics. Given that the theoretical interest of the study was to understand nascent ventures in their contexts, the selection of only one of the regions for deeper data collection made it possible for me to gain a more holistic understanding of the regional context and ensure that the collected data reflected venture pathways within a shared setting.

The pilot interviews confirmed that even the smaller regional set of ventures reflected a wide range of venture pathways as indicated by the archival data. The semi-structured pilot interview schedule built on the protocol employed at the Stanford Project on Emerging Companies in the early 21st-century (Baron & Hannan, 2002). It sought to establish whether there was variation in how the venture founders considered the contextual factors to have influenced the developmental paths of their ventures. The pilot interviews covered a range of topics from the influence that the Nokia history, the founders' industry experience and their broader networking practices had had on the development of the venture. The initial analysis of the interviews confirmed notable variation not only in how the founders saw their venture to be positioned within the entrepreneurial context but also in how they utilised contextual resources for the advancement of the venture (for more details on the interview protocol, please see Appendix 4).

Based on the pilot interviews, the interview schedule was cut down to focus more specifically on the contextual factors of the venture's journeys. 18 interviews were then conducted during the six-month period between September 2015 and March 2016. An early analysis was conducted on these interviews.

The early analysis of the first batch of interviews suggested that the ventures were navigating complex contextual landscapes in seeking legitimation following their emergence from the redundancy programme. They were also adopting a diversity of routes within the landscape. As my desire was to keep the total pool of ventures included in the study, I decided to return to the analysis of the national dataset based on the early pointers provided by the first interviews. The intent was to expand the national data, analyse this for the contextual navigation adopted by all of the ventures and, based on this analysis, to return one more time to the field for more data collection. The scheduling of the archival data analysis ahead of the last interview round was intended to offer an opportunity to both fine-tune the interview schedule once more and to guide the interview sampling in order to better support the theory development.

In the fourth phase of the study, I thus embarked on more archival data collection. Firstly, I extended the earlier archival database of the ventures by compiling the information from the ventures websites and any press releases issued by them. I then further extended the dataset by collating the founders' professional biographies. The starting point for the founder biographic data collection was the professional social networking service LinkedIn. I studied the public professional biographies of all the founders that were registered with each of the 317 ventures in my list of the Nokia accelerator startups. In many cases, the registered founders included individuals who had joined the venture founding team from outside Nokia. I did not differentiate

between the Nokia laid-off founders and the others. Rather, I collected full biographic data for all of the 512 unique founders registered with the 317 ventures.

LinkedIn has recently become a more common source of data for academic research. It is not without problems, however. Firstly, LinkedIn operates stringent privacy rules and rightly protects its users from any batch scraping of their data. Subscribers of the Premium package of LinkedIn, do, however, have visibility on an extended network of their own contacts. In this case, I benefitted from my own extended employment history in telecommunications, as my personal network expanded relatively far and, as such, the ex-Nokia employee pool was, in the majority of cases, within LinkedIn's limit of three steps removed from my personal network. I was thus able to manually view the biographies of the venture founders within my pool without having to resort to any questionable scraping strategies.

Beyond access questions, the quality of the LinkedIn data can in some cases be questionable. Firstly, all the data in LinkedIn is self-reported and, as such, entries can be patchy and selective. Given that any offline CVs would typically also be self-reported this quality problem was to some extent inherent to the type of data. Given LinkedIn's prominence as a professional networking tool, it could, however, be considered to offer one of the most reliable sources of public biographical data available today. It is used broadly for various purposes in business contexts, such as recruitment and business development, is open and subject to regular peer verification mechanisms.

The second problem relating to the data quality arose largely from the broad usage of LinkedIn. While LinkedIn has been widely adopted by professionals, there is little standardisation of the data entries between their LinkedIn profiles. Similar work roles can thus, for example, appear in many different forms in the LinkedIn biographies. To standardise the venture founders' biographies in the Nokia accelerator venture dataset, I

mapped all of the biographical data to standard industry, company, socio-economic and occupational codes. I used public company registry databases to standardise the coding of the founders' prior employees. Finnish companies were coded based on the industry codes of the Finnish Company Registry. Foreign companies were coded either based on their registration data in the UK Companies House registry (UK based companies) or by the information available at the Bloomberg company search (companies based outside Finland and UK)[1]. I regularly referred to the websites of the companies in question to seek clarification and to ensure correct mapping of the company data. I then coded the employment roles based on the categories of Finland Statistics (Tilastokeskus). Each role was coded both based on its socio-economic and occupational category. The final database contained, among others, 2,630 role descriptions coded into 16 socio-economic and 130 occupational groups. The database also included 1,877 companies of prior employment coded into 293 industrial codes.

I similarly mapped all educational data to the Finland Statistics national classifications of education including the subject area, institution type and level of education. As with the employment data, I regularly consulted the websites of educational institutions in question to ensure correct coding. The final database included 872 degree descriptions coded into 38 educational subject categories and 13 educational level categories. For more detail of the coding schemes used, please refer to the Appendix 3.

The first four stages of the study resulted in a substantial unique dataset that contained comprehensive company and founder information for all of the 317 companies in the Nokia accelerator venture pool and further interview data for a small subset of these. I nevertheless chose to run one more interview round to complement the data with a

[1] The Finnish companies' industry codes reflect the Finland Statistics Industry or TOL codes. The international companies' industry codes, on the other hand, reflected the international standard industry or SIC codes. While the Finland Statistics industrial codes are not exactly the same as the international SIC codes, they nevertheless closely reflect each other.

further set of interviews. The purpose of these interviews was, firstly, to sample theoretically among the pool based on the initial findings of the study and secondly, to further fine-tune the interview protocol to inquire about the salient questions arising from the initial analysis.

The second interview phase was conducted between August 2017 and August 2018. This interview phase added a further 27 interviews into the interview data pool and included also some interviews conducted in another region to check for any conspicuous variation between the regions. Four of the interviews during this phase were conducted with the managers of the regional economic office to assess their reaction to the initial findings.

Throughout the research, the majority of the interviews were conducted in person, if possible at the offices of the venture. Both the interviews conducted in person and those done on the phone followed the same protocol that got more focused on the latter phases of the research (Appendix 4). During the interviews, I made notes to myself regarding the setting and the observable behaviour of the interviewee. Apart from some of the early interviews with the Nokia and the regional economic governance office managers, I recorded all of the interviews. The interviews were semi-structured and varied between 45 minutes and two and a half hours in length, with the average interview lasting around an hour. Following the interviews, I personally transcribed all of the tapes. In some of the cases, I used a computer-based transcription service happyscribe.com to produce the first draft of the transcript that I then checked and corrected manually.

All of the interviews apart from two were conducted in Finnish. With the two non-Finnish interviews, English was used instead. The interview protocol and the coding

scheme for analysis were developed for both languages in parallel[1]. Throughout the interviews, transcription and coding, constant comparison between the languages was done to ensure the original meaning was not lost in translation. For the purposes of the ultimate publication of the research, a professional translator is expected to translate five of the interview transcripts, in full, from Finnish to English. For the rest of the interviews, only the coded sections and quotes have been translated. All of the transcribed interviews, as well as all of the archival materials related to the interviewed ventures, were imported to the research programme MAXQDA for software-supported data analysis.

During the final stage of data collection, I expanded the archival database one last time. Tax data was collected from the public Tax Office database in Finland. While this data collection was motivated by a project out of the scope of the thesis research, the data could also be used to further support the analysis of this study. I also expanded the archival dataset by collecting information of all of the infrastructure actors identified by the interviewees of both of the interview phases.

To summarise, the data collection in several phases and from a number of different sources was designed both to ensure the richness of the empirical data and to enable a theory development process guided by the thick data (Kelle, 2013). While multiple data sources and the inclusion of all of the ventures in the Nokia accelerator pool could help to address some of the concerns regarding the quality and multi-vocality of the data, rich data on its own does not guarantee either the quality of the findings or indeed the creation of any distinct value by the theorisation. The process of data analysis plays an equally critical role in ensuring the solid outcomes of the research project. I will next discuss the analysis procedures applied in this study to outline the reasons behind the

[1] The exact coding schemes of the two comparative case studies of the thesis are discussed in more detail in with the case studies in chapters five and six.

choices made, and why these were believed to result in the best outcome from this research project.

3.5.2 Data analysis procedures

Given the large volume of data collected in a typical qualitative research project, as was the case also in this thesis, the analysis regularly involves not only several steps but also iteration and movement back and forth between the data and the emergent theory (Miles & Huberman, 1994). In this case, I employed two separate qualitative analysis methods for the analysis of the data. While the analysis of each of the three studies progressed as independent enquiries, they naturally also informed each other as the iterative development of the theory progressed. As such, the temporal ordering of the three studies as presented in this account does not fully reflect the development of the analyses, as the iterative progression of the thesis work looped through both the interview and the archival dataset several times.

i. The explorative multiple case study analyses

For the first two empirical studies, that utilised the interview data together with a range of archival data, I adopted an inductive pattern matching and replication logic (Miles & Huberman, 1994). The preparation for the analysis work initiated right at the start of the thesis project. Firstly, I maintained a careful database of all data items collected. The database listed all of the venture cases, their embedded founder cases and indicated against each one of these the data items collected for them. Further, the database gathered for each of the data items some basic parameters, such as the type of the data, the date of collection, size information and so on. Given the large number of the

ventures and founders involved in the study, the database was a key tool for ensuring not only the safety of the data but also rigour and consistency in the data collection and its analysis. For each of the interviewed ventures, I also maintained a separate contact log that listed all the contact events by type and contact person. Given that the arrangement of the interviews usually took place over several contact events made through several different media, the log was a similarly important tool in ensuring professional management of the interviews.

The interviews were recorded and transcribed by me as explained in section 3.5.1. Both the recordings and the transcriptions were imported into the research programme MAXQDA for the analysis. The objective of the analysis was to search for cross-case patterns (Stake, 2000). As such, I conducted some within-case analysis by compiling together all the data collected for each of the 36 ventures and preparing short summaries of the ventures' chosen paths as evinced by their data (Eisenhardt, 1989). The main focus of the analysis was, however, in the cross-case analysis. In developing the cross-case analysis, I used theoretical coding practice that proceeded from descriptive codes to interpretive and pattern codes (Miles & Huberman, 1994). Each of the stages involved several iterations through the data. In the first instance, for example, I ran through the data addressing separate descriptive codes at each round. In this way, the data was ultimately coded, among others, according to the contextual references such as industry, startup and Nokia and according to resource references such as monies, social contacts and education. The interpretive codes then sought to elevate the descriptive codes to a more conceptual level and categorise them, for example, according to the field from which a resource arose and according to the category of capital that the resource related to.

It is important to note that, unlike in the pure grounded theory development, in case study research the interpretive coding dimensions can be informed by prior theory (Eisenhardt, 1989; Urquhart, 2007). Thus in the first study, for example, I deliberately searched for all references that could relate to the actor engaging with the institutional infrastructure (Hinings et al., 2017). Similarly, in the second study, I sought out all references to resources and categorised them according to the type of capital that they represented (Bourdieu, 1986). The theoretical contribution of the case studies thus arose at the third stage of coding, the explanatory coding, during which the patterns within the interview pool emerged. At this stage, it was possible to identify patterns between and across the ventures of the study in a way that implied a presence of separate subgroups within the study pool. The development of conceptual, exploratory codes enabled clarification of the boundaries between these subgroups and identification of their alternative infrastructure engagements and capital strategies. Chapters five and six outline these two studies in full and discuss the findings in detail.

ii. The qualitative comparative analysis

For the third empirical study, that utilised the entire archival dataset of the 317 ventures, I adopted a set-theoretic logic and the qualitative comparative method for the analysis. Beyond qualitative comparative analysis (QCA) allowing for the systematic exploration of larger datasets than other qualitative analysis methods, the method selection was supported by the study building on the theoretical foundation of embeddedness as multidimensional. The qualitative comparative analysis was particularly well suited for the analysis of multidimensionality of embeddedness as it focuses on the exploration of combinations of causal attributes. QCA is often referred to as a diversity-oriented method due to its ability to support the study into causal configurations of significant complexity. In my case, QCA allowed for the exploration of each of the dimensions of

embeddedness together with their temporal mechanisms. Further, the utilisation of the fuzzy-set method ensured that the gradation in embeddedness could be recognised without the need to simplify the separation into binary measures.

The foundations of QCA lie in Mill's methods of experimental enquiry and specifically on his comparative method of difference and method of agreement (Mill, 1843). QCA involves examination of the presence and absence of causes and outcomes in order to establish patterns of causation. Patterns of causation are considered in terms of conjunctions (Thiem, Baumgartner, & Bol, 2016) recognising that a single attribute may be a so-called INUS condition: "insufficient but necessary part of a condition which is itself unnecessary but sufficient for the cause" (Mackie, 1965: 245; Schneider & Wagemann, 2012). As such, QCA supports the consideration of the complexity of social reality in acknowledging causal asymmetry and equifinality alongside conjunctural causation (Berg-Schlosser, De Meur, Rihoux, & Ragin, 2009; Thomann & Maggetti). The recognition of causal asymmetry highlights how the attributes relating to an outcome may vary substantially from those explaining the lack of an outcome. Equifinality, on the other hand, acknowledges that several different, mutually non-exclusive combinations of causal attributes may independently produce the outcome.

QCA is a case-oriented method (Berg-Schlosser et al., 2009). Singular entities of social phenomena are purposefully selected as being similar enough to allow meaningful comparison (1987; Ragin & Becker, 1992). In order to gain an understanding of the complex configurations of the attributes of each of the cases under study, the researcher is typically expected to actively and holistically engage with each case. While theory often guides the case and attribute selection of a QCA analysis, these may also emerge inductively as a result of the researcher moving back and forth between theory and the data. Given the purposeful sampling, the closeness of the researcher with each of the

cases under study and the iterative nature of the analysis, QCA is considered a qualitative method (Ragin, 1987). QCA, however, adopts formal, systematic tools for comparison of the cases (Rihoux, 2013). The rules and formal logic of the Boolean algebra are used for the logical reduction of the possible combinations of attributes associated with an outcome. This ensures parsimony in the explanation while at the same time avoiding idiosyncrasy of the explanations (Berg-Schlosser et al., 2009). As a research technique, QCA has been shown to be equally suitable for small-N and large-N case research (Greckhamer, Misangyi, & Fiss, 2013). Large-N QCA analysis has, in recent years, gained popularity despite these research projects often lacking in the intimacy with the qualitative dimensions of each of the cases under study (Thomann & Maggetti). With the increase in the large-N studies, some have argued for more focus on the common foundations of set-theoretic and statistical methods (Paine, 2016). It is, however, important to recognise the fundamentally divergent starting points of the two (Thiem et al., 2016). In relying on the Boolean algebra and conjunctural causation, QCA does not assume either permanence or uniformity of causality. Additivity, unit homogeneity or causal symmetry are similarly not assumed (Berg-Schlosser et al., 2009).

For the purposes of external validity, it is recommended that the scope conditions of any QCA study are carefully focused on the context in which the causal relations are proposed to apply (Thomann & Maggetti, 2017). In this case, I chose to centre specifically on the emergence of actors in the entrepreneurial field. The relatively large number of cases available in this study and the focus on the variations among cases that all emerged from the same meso-level economic structure, helped to address some of the concerns regarding generalisability of the results.

While the Boolean algebra as a formal method is based on 'fully in' or 'fully out' set-memberships, it is possible to apply the same formal logic to partial membership measures associated with quasi-necessity and quasi-sufficiency (Ragin, 2000; 2008). In QCA, studies engaging only 'fully in'/'fully out' measures are referred to as crisp-set QCA (csQCA). While the origins of the method in social sciences lie with this mode of analysis (Ragin, 1987), studies today predominantly engage the method that allows for partial memberships. Fuzzy-set QCA (fsQCA) allows for the recognition of the social reality that regularly exhibits gradation in the causal attributes under study. FsQCA builds on the same foundations as csQCA but calls for an additional calibration step in the analysis. In this study, I utilised fuzzy-set QCA.

Overall, QCA proceeds in three key steps: the determination of attribute set memberships, the development of the truth table of all the logically possible configurations of the causal attributes and the logical reduction of the truth table configurations based on the observed and implied attributes of causal consequence. In fsQCA, the determination of the attribute set memberships initiates with the definition and calibration of the outcome and condition measures of the study. Chapter seven of the thesis elaborates on this study and its findings in closer detail.

3.6 Limitations of the adopted research strategy

All research projects have their shortcomings and issues. As such, it is important for the researcher to be aware of the limitations of the research design and wherever possible take extra steps in the design to manage them. It is, however, seldom possible to address the concerns fully. In these cases, it is vital that the researcher not only acknowledges the problems but is also open and honest about them.

This study was subject to many of the common challenges of qualitative research. Firstly, the volume of data collected and analysed during the project was large. As such, the data was prone to errors during the collection phase and there was a risk of data overload in terms of the ability to manage and meaningfully analyse all of the collected material (Miles & Huberman, 1994). Careful database management was put in place to ensure that all of the data items were collected, stored and analysed in a systematic and rigorous fashion. Triangulation helped to bring to the surface some of the collection errors and ensured that these could be addressed by going back to the archives to check the suspect data item.

Secondly, while the principles of theoretical sampling do not need to adhere to any random sampling rule systems, sampling can, however, be a source of fundamental problems in the research design (Miles & Huberman, 1994). In this research, I aimed to keep all of the ventures of the Nokia accelerator in the study as far as possible. In the interview data collection, I aimed to include multivocality and triangulation wherever possible to counter for possible selectivity.

Thirdly, over-accommodation of data and subsequent misinterpretation is a regular concern for qualitative researchers (Stake, 1994). Projects with several researchers can address these concerns by comparing coding results among the research team. In a single researcher project, like this one, the options are more limited. Fortunately, triangulation can, once again, help (Jick, 1979). In this case, I used both method and theory triangulation as well as redundancy of data gathering to challenge and counterbalance my personal prejudices and the salience of any first impressions.

The quality of positivist research is commonly assessed by the measures of validity and reliability. Validity in this context refers to the accuracy and credibility of the findings, while reliability refers to the repeatability of the findings (Creswell, 2003). The

appropriateness of these measures for qualitative research, and specifically one informed by a constructivist paradigm, has been challenged (Denzin & Lincoln, 1994) and alternative assessment criteria have been proposed (Easterby-Smith et al., 2008; Tracy, 2010). Beyond the rigour in the data collection and in the systematic analysis of the data, the alternative criteria commonly call for solid qualitative research to address topics of worth, to be conducted according to ethical principles and to be characterised by coherence in the design and self-reflexivity and transparency in the conduct of the researcher (Easterby-Smith et al., 2008; Tracy, 2010). In this study, I have aimed to address each of these areas. I believe the topic of the study to be worthy given the significant change that the majority of developed economies are experiencing with more and more work being organised in various entrepreneurial structures. At all stages of the research, I have aimed to adhere to high ethical standards as outlined in the earlier section. The design of the research was chosen to reflect the constructivist paradigm to ensure coherence of the data collection and analysis with the theoretical frame. Throughout the research, I have engaged in self-reflection in the form of a research diary and discussion with my research colleagues.

I cannot, however, claim that the results do not to an extent reflect my background and predispositions. Neither could I assert that the results are fully repeatable. Should another researcher embark on exactly the same data collection and analysis procedure that I have outlined above, it is likely that the results would introduce new aspects that I have failed to discover and would likely omit some of the findings that I outline in the following chapters. While I thus strive to generalise at the conceptual level based on my research experience (King, Keohane, & Verba, 1994), I am also acutely aware that the complex and dynamic nature of our social existence makes any research project at best capable of providing only a small inkling of the reality in its full richness.

3.7 Conclusions

This study is informed by a constructivist paradigm that reflects a relativist ontological and an interpretive, subjectivist epistemological stance. The social constructivist starting point of the study informed the interpretive methodology of the study. The adoption of qualitative research design and multiple case study strategy that integrated multiple data sources, in the form of interview and archival data, as well as multiple qualitative methods, in the form of two explorative multicase studies and a set-theoretic qualitative comparative analysis, ensured that the social realities of the research subjects could be studied without prioritising any one of the viewpoints presented by them (Poteete et al., 2010). Rigorous data collection and analysis procedures were applied together with researcher reflexivity and an ethical code of conduct to further ensure the quality of the research. While the objective of the study was not - and could not have been, given the social constructivist starting point of the study - the identification of generalisable causation mechanisms, the detailed and nuanced understanding of the existing perspectives on actor emergence, the systematic and philosophically consistent process of inquiry and the awareness of the impact of the researcher's identity (Easterby-Smith et al., 2008/: 422; King et al., 1994) are, however, hoped to provide a strong basis for theoretical applicability of the results.

4. THE RESEARCH CONTEXT

4.1 Introduction

The increased ability of technology to manage many of the tasks that until now have required human engagement is forecast to fundamentally change the landscape of work with employment fragmenting into smaller and increasingly virtual organisations (Johns & Gratton, 2013; Schwab, 2017). The Nokia redundancy programme and the associated entrepreneurial activity exemplify this change. As such, despite the programme reflecting the company's exceptional position in the Finnish economy and society, the lessons learned from the entrepreneurial ventures that originated from the Nokia accelerator programme can offer guidance well beyond Finland and the information and communications technology (ICT) sector.

This chapter describes some of the background to the Nokia redundancy programme. I will discuss Nokia's position in the ICT sector in Finland, the overall impact that the restructuring of the Nokia businesses had for the sector and the country as well as the broad recovery efforts in which Finland engaged in seeking to revitalise the sector and encourage new growth. I will then discuss the Nokia redundancy programme in more detail. The last section of the chapter provides descriptive statistics of the ventures and venture founders that have been included in this study.

4.2 Nokia, micro-venturing and the ICT sector in Finland

Finland is broadly recognised as an innovation success story of the 20th century (OECD, 2017b). Following the collapse of the Soviet Union, one of the key export markets of Finland, the country rapidly transitioned from a largely resource-dependent economy to a knowledge-economy (Gorodnichenko, Mendoza, & Tesar, 2012; OECD, 2017b). Nokia and the ICT sector were crucial in ushering in this change. During this period and into the early 21st-century Finland invested heavily in research and development (R&D) activities. In 2008, R&D expenditure accounted for 3.4% of the Finnish GDP (Statistics Finland, 2018), well above both the EU average of 1.84% and that of the United States at 2.77%. Nokia accounted for over a third of this investment in innovation (Ali-Yrkkö, 2010). In the same year, Nokia was equally dominant in patent submissions, accounting for 43% of the Finnish European Patent Office applications, in exports, accounting for close to a fifth of Finland's exports, and in employment, accounting for 0.9% of the country's total employment and up to 5.5% of manufacturing sector employment (Ali-Yrkkö, 2010). In 2008, 9% of Finnish corporate taxes were paid by Nokia (Ali-Yrkkö, 2010).

Against this backdrop, it is clear that the turn in Nokia's fortunes was a seismic blow for the country and its economy (Table 4.1)[1]. Combined with the global financial crisis and the technological changes that hit other traditional Finnish industries, such as the paper and pulp sector, the downturn was of such depth that ten years later, Finland is still on the path to recovery (OECD, 2017b; Suni & Vihriälä, 2016).

[1] The events leading up to the large scale structuring at Nokia are out of the scope of this thesis. Carefully elaborated accounts of this have been provided for example in Doz & Wilson (2017) and Vuori and Huy (2016).

Figure 4.1 Nokia share price from 1994 to 2018.



24-year stock price history of Nokia (NOK) (macrotrends.net, 2018).

From 2008 to 2016 Finnish exports dropped by a fifth, more than in any other advanced economy (OECD, 2017b). With the export of high tech goods particularly hard hit[1], the restructuring of Nokia is estimated to have accounted for around one third of the Finnish GDP decline between 2008 and 2014 (Figure 4.2) (Suni & Vihriälä, 2016). The ICT sector in total is estimated to have accounted for around two-thirds of the GDP decline (Suni & Vihriälä, 2016). During the same period, the redundancies at Nokia are estimated to have accounted for around 20%, and the ICT sector in total for around 30% of the employment reduction in Finland (Suni & Vihriälä, 2016).

Given the lengthy period of growth that the ICT sector had enjoyed, the majority of the redundant personnel left their employers for the first time in many years. A survey among the target group of the national ICT sector re-employment programme indicated

[1] The share of high tech goods in Finnish exports declined from 23% in 2005 to 6% in 2016 (OECD, 2017).

Figure 4.2 Nokia share of the GDP and employment in Finland 1990 – 2014.



Suni and Vihriälä (2016) based on Statistics Finland and ETLA calculations.

62% of the redundant employees to be leaving employment contracts of over 10 years and over 82% of the employees leaving contracts of over 5 years (Ålander et al., 2014). Given the long employment histories and the extensive scale of the industry restructuring, the re-employment efforts targeted a range of solutions from the return to wage-employment to the entry into self-employment and entrepreneurship (Ålander et al., 2014). While the majority sought re-employment, around 2.8% of the ICT sector employees, who were supported by the national re-employment programme, had entered entrepreneurship one year after their redundancy (Ålander et al., 2014).

Beyond the Nokia accelerator and the national ICT sector support programme, entrepreneurship was supported also by the government innovation fund. In 2013, the number of companies receiving grants, loans or export guarantees increased by 17.7% (Halme, Salminen, Lamminmäki, Barge, Dalziel, Miller, & Rikama, 2015). At the same time, the total sums paid out, however, reduced by 8.3% making the majority of the

support grants relatively small[1] (Halme et al., 2015). By 2014, an estimated 24% of the Finnish company population were startups[2] that provided just over 8% of the Finnish employment (OECD, 2017a). Expectations of growth fuelled by the new startups were high. Respondents from the Nokia venture pool referred to an expected 2.5-fold employment growth and nine-fold turnover growth within two years (Kiuru et al., 2013). In practice, growth has, however, been more modest and has taken notably longer to materialise (see Tables 4.1 and 4.2).

While the Finnish startup scene has been very active, much of the dynamism has been fuelled by new entries. In 2014, the OECD estimated the Finnish business churn rate[3] to be just below 24%, with births accounting for around 11% and deaths for around 12.7% (OECD, 2017a). High churn as a measure of creative destruction is often seen as a positive indication of renewal. With close to a quarter of the companies in Finland being either entrants or closures, Finland scores among the top five countries in the OECD 2014 dynamism measure by the churn listing (OECD, 2017a). On the ground, for the founders, employees and investors of the churning companies, the measure can, however, also imply high uncertainty, discontinuity and lost investment. While Finland has strived towards the international model of growth entrepreneurship, the conditions for this have not been optimal in all fronts (OECD, 2017b). The measures of entrepreneurship talk about the dynamism today having largely arisen from entries and exits rather sustained growth.

[1] The total amount of grants equaled 523m€, loans 356m€ and export guarantees 557m€. The number of recipients totaled 34,955 companies (Halme, Salminen, Lamminmäki, Barge, Dalziel, Miller, & Rikama, 2015).
[2] OECD defines a startup as "enterprises that are up to two years old, i.e. the newly-born enterprises plus those that are one and two years old" (OECD, 2018: 86).
[3] Churn rate is the sum of the company birth rate and the company death rate. As such, it gives the share of the companies that existed in the country company pool only part of the year due to having been either founded or closed during the year (OECD, 2017a).

Indeed, among small and medium-size companies, a panel study by the Finnish Federation for Entrepreneurs found in spring 2018 only 10% of the companies to be seeking rapid growth (Kuismanen, Malinen, & Seppänen, 2018). A half of the ventures were rather aiming to maintain their ongoing business (Kuismanen et al., 2018). Among micro-ventures, the average number of employees has been in decline from 1.4 in 2007 to 1.13 in 2015 (Koramo, Keinänen, Oosi, & Wennberg, 2017) and the pool of the ventures that provides employment beyond that of the founder remains small (Maliranta & Hurri, 2017).

Today, Nokia still remains one of the largest contributors to the Finnish GDP and continues to employ close to 7,000 people in Finland (Ali-Yrkkö, Seppälä, & Mattila, 2016). All in all, mid-size and large companies continue to employ over 70% of the Finnish workforce (Ali-Yrkkö, Kotiranta, & Ylhäinen, 2017; OECD, 2017a). The employment opportunities in entrepreneurial growth ventures envisioned during the ICT restructuring have not to date materialised as envisaged. Yet, small companies of less than 10 people account for over 90% of the company population in Finland (Ali-Yrkkö et al., 2017; OECD, 2017a). An opportunity lies within these. The 2017 OECD innovation report of Finland lists the low level of small and medium-sized enterprise engagement in research and development as one of the weaknesses of the country's innovation policy. It also proposes, as opportunities, the possibility of The Finnish Innovation Fund funding some 'out of the box' policy experiments in research and development. As a small country in a distant corner of Europe, Finland is unlikely to duplicate a Silicon Valley-type entrepreneurial ecosystem. Yet, it enjoys high educational standards, much endogenous talent and the ability to conduct policy experiments as the OECD highlights (2017b). The Finnish entrepreneurial model emerging from the ICT sector restructuring maybe yet to be found.

4.3 The Nokia redundancy programme

Overall the restructuring of Nokia continued for several years worldwide. This thesis focuses specifically on the redundancy programme that Nokia ran between late 2011 and early 2014 (Nokia, 2015). Internally the programme was called “Bridge”. This name has also appeared in some media accounts discussing the programme. The information in this section of the thesis relies on data from the meetings that I held with Nokia management at the beginning of my data collection and on the company confidential documents shared with me during these interviews. In most cases, the data aligns with the details included in the Harvard Business School case study of the programme (Sucher & Winterberg, 2015).

While the Nokia restructuring and the associated redundancies spanned beyond the period of the Bridge programme, many of the more involved outplacement services, such as those of the entrepreneurial accelerator, were only offered during the main programme. 18,000 employees were eligible for the services of the programme during its duration. These employees were located in company sites in eleven countries including Canada and the United States in the Americas, Finland, Denmark, Germany, the United Kingdom, Hungary and Romania in Europe, and India, Singapore and China in Asia.

The main objective of the programme was to identify the best employment route forward for each of the 18,000 impacted employees. Internal opportunities tended to be considered first. As Nokia was not closing all of its operations but was rather running down some of its sites, employees who were able to consider relocation were in a position to apply for internal alternatives. If internal alternatives were not an option, the programme facilitated external employment search. A range of career services including coaching, training and job fairs were offered.

Beyond the wage-employment options, the Nokia redundancy programme also supported either a training route for re-employment or the entrepreneurial accelerator route to self-employment. The training option sought to enable the learning of something new. Factory sites specifically offered vocational training alternatives. Lastly, the entrepreneurial accelerator offered, for the employees accepted to the programme, a suite of services ranging from coaching and mentoring to seed funding of the business.

Apart from serving a social purpose in ensuring the re-employment of hundreds of redundant employees, the accelerator programme and the services it offered reflected the structure and practices of commercially-oriented accelerators (Pauwels et al., 2016). While the company outplacement programme was open to all redundant employees, participation in the competitive accelerator was granted only based on application. Employees wishing to join the accelerator were invited to present their business plan in front of a funding panel that consisted of senior executives of Nokia. Acceptance to join the programme was granted based on the business potential of the venture. While no public information is available on the acceptance ratio of the programme, both the Nokia executives involved in the programme and the venture founders interviewed indicated that acceptances tended to be granted as long as the business plan was deemed feasible. In this respect, the programme was likely to have reflected strongly its social purpose of re-employment and to have diverged from the commercial accelerators that tend to place notable weight on the growth potential of new ventures in assessing them for acceptance.

On acceptance, Nokia set few requirements for the ventures joining the programme. Beyond the number of founders per venture being limited to four employees and the founders expected to register their company as a limited liability entity (osakeyhtiö), the

employees joining the accelerator were free to utilise whichever services of the accelerator they deemed valuable for them.

As per general accelerator programmes, all of the ventures were provided with some seed funding. The amount of funding was determined by the selection panel as a part of the programme acceptance review. Apart from the strength of the business plan, the number of founders influenced the total funding of a venture as the monies were granted per founder and paid as part of their redundancy packages. The amounts paid varied with the maximum per founder being set at 25,000€. Nokia took no stake in any of the ventures in exchange for the funding provided. Beyond the seed funding, business loans were made available for any ventures in need of financing that exceeded the seed grants. These short-to-mid term loans were facilitated and guaranteed by Nokia[1]. While all of the ventures benefited from the seed grant, the update of the loan was much more limited based on my interview reports.

Beyond funding, the accelerator facilitated a wide range of initial business services including provision of workspace, training and mentoring. A separate community workspace was provided at the Nokia offices for the early stages of the ventures. Many also utilised separate workspaces offered by local entrepreneurial incubators independent of Nokia. Training was also offered both by Nokia and by the local entrepreneurial support programmes. This varied from basic business skills training such as small business accounting to more technical courses, for example, in the Lean product development philosophy. Mentoring, as well as opportunities for networking and pitching in the local entrepreneurial community, were also made available.

[1] Nokia reported no official information on the financials. The venture founder interviews indicate loans to have extended for up to 5 years.

18% of the ventures exited with a Nokia technology licence or a release agreement made with Nokia with regards to the technology the company was going to utilise. The internal report of the accelerator programme proposed two different types of ventures to have emerged from the programme. On the one hand, the programme had encouraged the development of 'startups'. These, according to the internal reporting were businesses based on a "global type idea or business model", were organised for scalability and adopted a high-risk profile with high potential. The second group of ventures involved "traditional businesses" of basic products, known business models and low-risk, low-scalability operational set-ups.

4.4 The ventures and founders of the Nokia accelerator

Around 10% of the redundant employees in Finland joined the Nokia accelerator programme (Kiuru et al., 2013). Some of the 336 ventures founded in the programme included non-Nokia founders who, while listed in the company registry, were neither participants of the accelerator programme at Nokia nor entitled for the founder grant. The total number of the unique founders of the 'ex-Nokia' ventures was thus 544. As explained earlier in chapter 3, four of the ventures were registered abroad and a further 15 were found to be entry-by-purchase cases. These ventures were excluded from this research. A closer analysis of the ventures proposed that another 12 ventures, despite having been registered, had not engaged in any business activity since their registration. 16 cases were also found to have fundamental gaps in the available data profile. Following the exclusion of these, the final number of ventures included in this thesis research included 289 ventures and their 452 founders. The below analysis summarises the characteristics of this pool of research subjects (Tables 4.1 and 4.2).

Almost half of the companies were founded in the Helsinki area. The average number of founders in the companies was 1.6 with the maximum number of founders at 5. The average age of the founders was estimated to be around 40 with the majority above 36. About 17% of the founders were women. The majority of the companies did not include either non-Nokia founders or non-Nokia board members. The average share of the non-Nokia stakeholders across all companies was 0.17.

A few of the founders had prior entrepreneurial experience with the maximum duration of prior entrepreneurial roles among the sample reported being 14 years. The average entrepreneurial experience among the whole sample was, however, modest at 0.35 years. In contrast, the pool of founders exhibited extensive industry experience with the average employment tenure of the sample at 19.41 years and the Nokia tenure at 10.54 years. During their time at Nokia, the founders had held on average 1.94 different roles as measured by the variation in the socio-economic categories of the roles.

The founders were, in general, highly educated with many holding several degrees. The average number of higher education degrees across the whole sample was 1.59 with the majority having been educated at least to the bachelor level. Technical degrees were overall more common while business degrees were held by around a quarter of the sample.

In 2016, the majority of the ventures reported relatively modest income levels with a handful of the most successful ones reporting revenues in the millions. Around 25% had secured government granted TEKES funding since their founding. The TEKES funds awarded and paid reflected a similar highly skewed pattern as the revenues, with the average TEKES award around 90k€ and the maximum at 8.3m€. Given the limited turnover of the majority of the ventures, the full-time head-counts reported were also

low with the average full-time employment per venture at 1.36 heads and the maximum at 46 heads.

While close to 90% of the companies remained registered as active at the end of 2016, only 60% of the founders reported remaining in some level of employment at their ventures. 18% of the founders reported to hold another entrepreneurial role outside the venture, while 64% of the founders reported to hold a wage-labour employment role in addition to the entrepreneurial role maintained at the venture.

Table 4.1 Descriptive data of the founders.

FOUNDER DESCRIPTORS	count	mean	std	min	25%	50%	75%	max
Estimated age of the founder	452	40.54	6.89	26	36	40	45	63
Female founder (dummy)	452	0.17	0.38	0	0	0	0	1
Non-Nokia founder (dummy)	452	0.07	0.25	0	0	0	0	1
Founder in in active company (dummy)	452	0.60	0.49	0	0	1	1	1
Founder in employment elsewhere (dummy)	452	0.64	0.48	0	0	1	1	1
Founder in entrepreneurship elsewhere (dummy)	452	0.18	0.39	0	0	0	0	1
Founder status	452	2.60	1.33	1	2	2	4	6
Entrepreneurship role new	452	0.14	0.47	0	0.00	0.00	0.00	2
Prior entrepreneurial years	452	0.35	1.50	0	0.00	0.00	0.00	14
Industry years	452	19.41	6.34	3	15.75	18.50	22.25	40
Nokia years	452	10.54	5.86	0	6.00	11.00	14.00	27
Nokia of industry years	452	0.53	0.24	0	0.39	0.58	0.73	1
Nokia the first employer (dummy)	452	0.77	0.42	0	1.00	1.00	1.00	1
Number of unique Nokia roles	452	1.94	1.07	0	1.00	2.00	3.00	5
Venture employment years	452	2.94	1.80	0	2.00	4.00	4.00	19
Sole venture employment years	452	1.94	1.76	0	0.00	2.00	4.00	10
Number of unique industries worked at	452	2.13	1.16	0	1.00	2.00	3.00	6
Government role years	452	0.39	0.80	0	0.00	0.00	1.00	7
Higher education years	452	6.31	4.37	0	4.00	6.00	8.00	27
Number of Higher education degrees	452	1.59	1.11	0	1.00	1.00	2.00	7
Number of unique subjects studied at higher education	452	1.27	0.74	0	1.00	1.00	2.00	4
Highest higher education degree achieved	452	64.37	21.42	0	70.00	72.00	72.00	82
Highest higher education business degree achieved	452	18.35	30.21	0	0.00	0.00	40.00	82
Highest higher education technical degree achieved	452	48.78	33.25	0	0.00	71.00	72.00	82

Estimated age of the founder: Age estimated based on the higher education start and first industry role data.
Female founder: Founder registered in the company registry is female (dummy).
Non-Nokia founder: Founder with no pre-venture Nokia experience at any time of his/her employment (dummy).
Founder in, in active company: Founder reports to remain in employment at the venture, venture registered as active in the company registry (dummy).
Founder in employment elsewhere: Founder reports to be employed in another company, may also remain with the venture (dummy).
Founder in entrepreneurship elsewhere: Founder reports to hold an entrepreneurial role in another company, may also remain with the venture (dummy).
Founder status: Founder ex-Nokia venture employment status as reported by them (1: fully employed at the ex-Nokia venture; 2: partially employed at the ex-Nokia venture; 3: fully out of the ex-Nokia venture and in entrepreneurship elsewhere; 4: fully out of the ex-Nokia venture and in employment elsewhere; 5: fully out of the ex-Nokia venture but status unknown; 6: reports to continue to be employed by the ex-Nokia venture but company no longer registered).
Entrepreneurship role new: Relation of the occupational role in the ex-Nokia venture to prior occupational roles (0: fully new role; 1: occupational role held in prior industry positions; 2: occupational role held previously at Nokia).
Prior entrepreneurial years: Prior employment in entrepreneurship roles (socio-economic groups 10 and 23).
Industry years: The sum of employment years at any non-entrepreneurial role.
Nokia years: The sum of employment years at Nokia.
Nokia the first employer: The first employment role after education reported to have been at Nokia (dummy).
Number of unique Nokia roles: The sum of the unique socio-economic roles reported as part of employment at Nokia.
Venture employment years: The sum of the employment years at the ex-Nokia venture.
Sole venture employment years: The sum of the employment years when employed only at the ex-Nokia venture.
Number of unique industries worked at: The sum of the unique TOL codes included in the reported employment history.
Government role years: The sum of the employment years at public services TOL codes (84xxx and 854xx).
Higher education years: The sum of the years reported to be registered at higher education institutions.
Number of higher education degrees: Number of reported degrees obtained from higher education institutions. Professional short-term training courses that are not associated with degrees awarded by recognised higher education institutions are not included.
Number of unique subjects studied at higher education: Sum of subject categories studied as per Finland Statistics Classification of Education 2016.
Highest education degree achieved: Highest degree obtained across all the subjects studied/institutions attended.
Highest higher education business degree achieved: Highest degree obtained in business subjects (Finland Statics classification codes 4xx).

Highest higher education technical degree achieved: Highest degree obtained in engineering or related technical subjects (Finland Statics classification codes 52x, 53x, 54x, 61x, 70x, 71x, 72x ,73x).

Table 4.2 Descriptive data of the companies.

COMPANY DESCRIPTORS	count	mean	std	min	25%	50%	75%	max
In Helsinki (dummy)	289	0.42	0.49	0	0	0	1	1
In Tampere (dummy)	289	0.21	0.41	0	0	0	0	1
In Salo (dummy)	289	0.10	0.30	0	0	0	0	1
In Oulu (dummy)	289	0.28	0.45	0	0	0	1	1
Number of founders	289	1.58	0.89	1	1	1	2	5
Estimated average age of the founders	289	40.97	6.34	26	36	40	45	63
Share of female founders	289	0.20	0.38	0	0	0	0	1
In business (dummy)	289	0.88	0.32	0	1	1	1	1
In employment registry (dummy)	289	0.42	0.49	0	0	0	1	1
Number of non-Nokia founders	289	0.11	0.33	0	0	0	0	2
Number of non-founder board members	289	0.61	1.07	0	0	0	1	6
Share of non-Nokia stakeholders of all stakeholders	289	0.17	0.25	0	0	0	0	1
TOL distance to Nokia	289	3.12	0.51	1	3	3	3	4
Latest reported revenues	289	123	414	0	1	22	92	5,521
Cumulative revenues	289	326	1,345	0	4	45	200	19,434
Latest reported profit	289	13	47	0	0	0	2	370
Cumulative profits	289	-26	227	-1,333	-27	-6	4	1,309
TEKES funds awarded	289	93	539	0	0	0	11	8,325
TEKES funds paid	289	78	496	0	0	0	0	7,962
TEKES funds unpaid	289	16	72	-100	0	0	0	775
Latest full-time headcount	289	1.36	4.28	0	0	0	1	46

Location dummies: Based on registration location of the company (dummy).
Number of founders: The number of founders included in company registry registration. Regularly higher than the number registered in the Nokia application.

Estimated average age of the founders: Average age of the company founders. Founders' ages estimated based on the years in which they enrolled into higher education or started their first employment role.
Share of female founders: The proportion of female founders of the total number of founders registered in the company registry.
In business: Registration as active in the company registry (dummy). *In employment registry*: logged in the employment registry of the in the company registry (dummy).
Number of Nokia founders: Share of the founders with no pre-venture Nokia experience at any time of their employment.
Number of non-Nokia stakeholders of all stakeholders: Share of the founders and board members with no pre-venture Nokia experience at any time of their employment.
TOL distance to Nokia: Company industry classification variance to that of Nokia's (1: in exactly the same category as Nokia; 2: in the same overall category; 3: in the same field; 4 = in a different field).
Latest reported revenues: latest revenues in k€ as reported to company registry. *Latest reported profit*: latest profit/loss in k€ as reported to company registry.
TEKES funds awarded: Cumulative TEKES grants awarded in k€ as reported by TEKES.
TEKES funds paid: Cumulative TEKES grants paid in k€ as reported by TEKES.
TEKES funds unpaid: Difference in cumulative awards and payment as reported TEKES.
Latest full-time headcount: Full-time headcount based on company registry data or where missing based on the company website and LinkedIn data.

4.5 Conclusions

The ICT restructuring in Finland was a countrywide effort due the country's prior heavy reliance on Nokia for exports, taxes and employment. Despite the special national characteristics, the Nokia accelerator case offers a rich starting point for exploring the emergence of entrepreneurial ventures from corporate redundancy programmes. Given the long employment histories of many of the Nokia employees who adopted the entrepreneurial route, the programme offers a particularly strong grounding for the exploration of actor emergence among post-redundancy entrepreneurial ventures.

5. ACTOR EMERGENCE AND INSTITUTIONAL INFRASTRUCTURE

5.1 Introduction

The thesis was motivated by the interest to explore how institutional contexts may influence the emergence of post-redundancy entrepreneurial ventures as viable actors of their field. Entrepreneurship is regularly considered both to stimulate economic growth and to provide a counterbalance to the reducing wage-employment in corporations (Davis, 2016a). While the entrepreneurship literature provides a rich account of how entrepreneurs identify and develop opportunities, less is known about how the institutional context may influence the development of nascent ventures into viable organisations in terms of them obtaining the capacity and authority to act for themselves (David et al., 2017; Meyer & Jepperson, 2000). Yet context is known to both enable and constrain entrepreneurial development (Welter, 2011). In the case of post-redundancy entrepreneurship, institutional context can reasonably be expected to shape both the process and the product of venture creation (Gartner, 2013; Zahra & Wright, 2011).

In order to explore the role of context in post-redundancy entrepreneurship, I sought to study the emergence of the entrepreneurial actors within a system of entrepreneurship. I conceptualised the system of entrepreneurship as an institutional field. As discussed in more detail in chapter two, institutional fields are bounded, dynamic clusters of actors whose social interactions are guided by the orienting principles and hierarchy of the collective (Zietsma, Groenewegen, Logue & Hinings, 2017). Actor emergence within a

field implies that an entrant venture has developed adequate interactions with the incumbent members of the field and, as a result of the interaction, has come to internalise the goals, orienting principles and hierarchies of the field to obtain a position and status in the field that offer the actor the capacity and authority to maintain itself in the field (Meyer, 2017; Meyer & Jepperson, 2000; Selznick, 1996).

This first empirical study of the thesis inquires into actor emergence in a field by exploring the entrant ventures' engagement with the institutional infrastructure of the entrepreneurial field. Institutional infrastructure refers to the set of actors and structures that have a role in judging, governing or organising other actors within a field (Greenwood et al., 2011; Hinings et al., 2017). The infrastructure of a field not only enables and sanctions the action within the field but also provides the means for the diffusion of the shared practices of the field. (Hinings et al., 2017). As such, institutional infrastructure can be expected to assume a role in nascent actor emergence. The study thus questions *how the interaction of post-redundancy ventures with the institutional infrastructure of the entrepreneurial field influences their emergence as viable actors of it?*

Empirically, I explore the entrepreneurial actor engagements with the institutional infrastructure of the entrepreneurial field by studying a subset of the ex-Nokia ventures that originated from the Nokia accelerator programme discussed in more detail in chapter four of the thesis. As outlined more comprehensively in chapter three I use interview and archival data in a research design that relies on a multiple comparative case study strategy.

The findings of this first study propose that the system of entrepreneurship may split into two interlinked but, in certain dimensions, clearly separate subfields with some of the subfields potentially overlapping with non-entrepreneurial fields. The findings

suggest that the ventures in the different subfields may engage with notably different institutional infrastructure elements. Finally, the findings suggest that the institutional infrastructure of the entrepreneurial field may assume an active role in the actor emergence not only by influencing the identity and orienting principles that the ventures come to adopt but also by controlling the scope that the nascent actors have for deviant action.

The study contributes towards the development of the theory of institutional fields by offering a comparative analysis of the institutional infrastructure of the subfields within one institutional field. Unlike previously theorised, the results of this research propose that the maturity and coherency of a field may not associate with stronger isomorphic pressures. Rather, in this instance, the weaker elaboration and coherence of a field appears to offer less opportunity for deviance. Finally, the study foregrounds the diversity actors' positions at the periphery of the field. Prior research has presented contradictory findings with regards to the scope that the peripheral actors may have for deviance. By outlining the variances in the peripheral positions, this study thus offers promise for the reconciliation of the prior contradictory findings.

For the scholars of entrepreneurship, the study highlights how entrepreneurial systems may not operate as one but may instead contain sub-segments that may reflect notable variation in their goals and orienting principles. The variations in the goals and orienting principles of the sub-segments of the entrepreneurial system may carry implications for the plurality of the entrepreneurial forms supported by the system. For entrepreneurial policy audiences, the study thus highlights the role that the institutional infrastructure may adopt in supporting or depressing the plurality of entrepreneurship.

The remainder of the chapter is divided into four sections. I first, outline the theoretical foundations for the conceptualisation of institutional infrastructure. I then briefly

discuss the data utilised in this study and outline the analytic procedures adopted. The third section describes the findings of the comparative multiple case study. Finally, the fourth section includes a discussion of the findings and their implications for the scholarship of organisational institutionalism and that of entrepreneurship. Policy implications are also discussed.

5.2 Theoretical foundations

This section outlines the theoretical foundations of the concept of institutional infrastructure and links it to the theorisation of the elements of entrepreneurial systems. While the concept of institutional fields forms the theoretical base on which the study builds, I do not discuss the concept in any detail here as it has been outlined in chapter two. I do, instead, first discuss how the systems of entrepreneurship and specifically the concept of an entrepreneurial ecosystem can inform the study of the institutional infrastructure of entrepreneurial fields. I also outline how the actors of entrepreneurial ecosystems can be seen to relate to the elements of the institutional infrastructure of fields. I conclude with a review of how the variations in the institutional infrastructure are known to influence the nature of a field and the actors within it.

5.2.1 Systems of entrepreneurship

Research exploring entrepreneurship within its context regularly conceptualises the systems of entrepreneurship as ecosystems. In this literature tradition, ecosystems are groups of actors whose non-generic and super-modular complementarities enable them to create value through a specific structure of relationships and alignments (Jacobides et al., 2018; Thomas & Autio, 2014). In the remainder of the chapter, I refer to the systems of entrepreneurship and ecosystems interchangeably.

Systems of entrepreneurship, like institutional fields, are recognised as collectives of heterogeneous actors. While the institutional theory builds on the frequency and fatefulness of the interaction among the actors of the field (Scott, 1995), the ecosystem literature refers to the complementarity and modularity of the elements of the system (Ceccagnoli, Forman, Huang, & Wu, 2012; Jacobides et al., 2018).

In both ecosystems and institutional fields, the heterogeneous actors are acknowledged to be held together by a shared code of conduct or logic that guides the action within the collective (Adner, 2017; DiMaggio & Powell, 1983). Institutional fields are known to reflect both the shared goals and the shared logic of action (Zietsma et al., 2017). Ecosystems, on the other hand, are proposed to reflect a shared understanding of the common value propositions (Jacobides et al., 2018; Thomas & Autio, 2014).

Finally, both concepts also recognise the collective to be bound first, by the actual interactions and second, by the shared goal and logic. Institutional theory considers the field boundary to contain within the field those actors who have come to accept and internalise the goals and organising principles of the field (Lawrence, 1999). The ecosystem literature considers the boundary of the collective to be defined by the shared goal. The goal is considered to be of significance to such an extent, that the same set of ecosystem actors are suggested to form a separate system around each goal (Adner, 2017; Adner & Kapoor, 2010).

All in all, the concept of an entrepreneurial ecosystem offers a useful starting point for the exploration of the institutional infrastructure of entrepreneurial fields, as it provides helpful guidance with regards to the actors who may be involved in the governance of an entrepreneurial field.

5.2.2 Institutional infrastructure of entrepreneurial fields

Different theories of the systems of entrepreneurship vary in the list of actors that they consider to form the system (Metcalfe & Ramlogan, 2008). The broadest framework of an entrepreneurial ecosystem counts in actors from the government to the educators, from the distributors and evaluators to the support professionals, and from the financial resource providers to the actors engaging in the entrepreneurial culture creation and dissemination (Isenberg, 2011). Each one of these elements is considered to adopt an independent role in ensuring the functioning of the system. As such, each of the elements may assume an infrastructure role within the entrepreneurial field.

The infrastructure of an institutional field is formed by a set of actors and structures that have a role in judging, governing and organising the actors and their interactions within the field (Greenwood et al., 2011; Hinings et al., 2017). Mapping the entrepreneurial system elements to the infrastructure roles proposed by the literature helps to foreground the respective roles that the governance actors of an entrepreneurial system may adopt in the emergence of the actors within the field (Table 5.1).

Table 5.1 Entrepreneurial ecosystem mapped to institutional infrastructure.

The system of entrepreneurship *Isenberg 2011, Stam 2015*		**Institutional infrastructure** *Hinings et al 2017*	
Regulative	Laws and rules: expedience		
Government	Formal institutions, government funds, regulative framework, policies	*Regulators*	National, provincial industry
Normative	Binding expectations: social obligation		
Educational institutions	Professional training, entrepreneurship training	*Norms*	Education, professional training
Non-government organisations	Entrepreneurship promotion	*Collective interest organisations*	Unions, professional/industry associations
Intermediaries	Accelerators, incubators	*Informal governance bodies*	Certification bodies, infomediaries, voluntary governance
Networks	Well connected community, incumbents	*Relational channels*	Normative networks
Societal norms	Tolerance for risk, failure, social status of entrepreneurs	*Norms*	
Cultural-cognitive	Constitute schema: shared understanding		
Support professions	Legal, accounting, technical advisors	*Organisational templates*	
Investors	Visible, accessible, diverse community	*Categories, norms, status differentiators, networks*	Genres, classes, partitioning of markets
Leaders	Role models, success stories, mentors	*Organisational templates*	
Market actors	Reference customers, distribution channels, reviews and rankings	*Status differentiators*	Labels, rankings, signals, measures
Labour	Skill, serial entrepreneurship	*Status differentiators*	Educational status, historical position
Engagement	Events, conferences, meet ups Business plan contests, boot camps, pitch days	*Field config-uring events* *Organisational template*	Events, conferences, fairs & festivals

Regulative, normative, cultural-cognitive institutional mechanisms and bases of compliance as per Scott, 2014.

The framework of entrepreneurial ecosystems considers both formal and informal institutions. Formal institutions, such as governments and the regulative framework that they create and maintain, are recognised as one of the key elements of entrepreneurial ecosystems (Isenberg, 2011). This closely aligns with the central role of the regulator in the theorisation of the institutional infrastructure. Regulators, whether national, regional or industry ones, are in institutional fields seen as the guardians of the regulative institutional base of the field (Busenitz & Lau, 1996; Eesley, 2016). Regulators engage in rule-setting and monitoring to orient the actors and their activities within the field (Hinings et al., 2017). While the regulatory institutions rely on coercive isomorphism, regulation is not considered solely constraining or repressing (Scott, 2014). Rather, particularly in an entrepreneurial context, the regulative institutional infrastructure can commonly enable and empower the actors of the field (Scott, 2014). Apart from the regulators, the educators are broadly recognised as key actors of the entrepreneurial systems (Etzkowitz & Leydesdorff, 2000; Isenberg, 2011). Education and professional training are, indeed, considered equally integral parts of the normative governance structures of institutional fields (Hinings et al., 2017).

Beyond the formal institutions, entrepreneurial systems are theorised to encompass a range of informal institutions that closely align with the normative dimensions of the institutional infrastructure framework. Non-governmental bodies, such as entrepreneurial interest organisations closely align with the collective interest organisations of the infrastructure framework. Further, the intermediaries of the ecosystem framework, entrepreneurial hubs, incubators and accelerators, as examples, can be seen to align with the role of informal governance bodies in the infrastructure framework.

Both the ecosystem and the infrastructure frameworks recognise the important role that networks play in collectives. While the framework of entrepreneurial ecosystems speaks to the functional benefits of networks, the theorisation of institutional infrastructure specifically highlights the normative role that relational networks adopt in fields. In general, both frameworks acknowledge normative actors of the collective to be underpinned by the norms of the society and the community. The theorisation of the normative infrastructure specifically foregrounds the role that the normative elements, such as networks, assume in encouraging the diffusion and observance of the values, expectations and standards of the field.

Beyond the regulative and normative elements, the framework of entrepreneurial ecosystems recognises a range of elements that create and maintain the cultural-cognitive belief system of the community (Isenberg, 2011). Not unexpectedly, these once again closely reflect the elements of the institutional infrastructure framework (Hinings et al., 2017). As such, actors with control of resources of the community, such as investors in the entrepreneurial field may adopt infrastructure roles in category and status management of the field. They may also act as relational channels and normative guardians of the social order of the field. Support professions that provide professional services in the entrepreneurial system may assume infrastructure roles in enforcing chosen organisational models and templates and, by this, provide the means for the diffusion of the appropriate practices of the field. Entrepreneurial paragons, as role models and, commonly, as mentors of nascent ventures may equally assume an infrastructure role in the propagation of the preferred organisational templates of a field. Finally, market actors, early customers, distributors and ranking lists may all act as field infrastructure in maintaining the status differentiators, while the many forums for community engagement, such as events, meetups, business plan contests, boot camps

and pitch days in entrepreneurial systems, may act both as field configuring events and as providers of the media for the diffusion of the organisational templates.

As is evident from the mapping of the list of the actors of an entrepreneurial system, the number of potential infrastructure elements is long and their roles varied. Indeed, the infrastructure of a field is known to guide the emergence of field actors by several different means (Table 5.2). Firstly, the institutional infrastructure of a field provides the structures for authority, regulation and coercive enforcement of the rules and regulations of the field (Greenwood et al., 2011; Raaijmakers, Vermeulen, Meeus, & Zietsma, 2015; Thomas & Autio, 2014). Secondly, the infrastructure renders the interests and values of the field collective (Greenwood et al., 2011) and provides the means for task coordination within the community (Gurses & Ozcan, 2015; Marquis & Raynard, 2015; Thomas & Autio, 2014). The infrastructure puts forward the mechanisms and channels for both the diffusion of the chosen practices and for the guidance and enforcement of the appropriate behaviours (Greenwood et al., 2011). Finally, the institutional infrastructure of the field structures the social relationships of the field and acts as the instrument of boundary control by providing the means for both controlling the access to the field and the status designations within it.

For entrants to the field, the infrastructure plays a critical role both in enabling the entry and in providing the means for the entrant to become embedded equally in the social networks and in the belief systems of the field. Should the embedding falter or the entrant to be found as a deviant, the infrastructure provides the means for sanctions and correction as well as for the exclusion of the unfitting entrant from the field.

Table 5.2 The roles of the elements of institutional infrastructure in the literature.

Infrastructure element		**Symbolic system / Inter-connection**	**Implications for the entrepreneurial actor constitution in an ecosystem**	Principles		Interaction		
				regu-lation	prac-tices	access	status	rela-tional
Regulator				✓	✓	✓	(✓)	(✓)
Busenitz, Gómez & Spencer, 2000	Government policy and support functions	Rules and laws	Enables entrepreneurial action: regulatory framework reduces risk and facilitates resources access	✓	✓			
Eesley, 2016	Regulatory	Regulatory barriers	Encourage/discourage entry			✓		
Educational institutions					✓			
Daghbashyan & Harsman	University	Norms	Area of study and ranking of university influence likelihood of entrepreneurial entry		✓			
Informal governance bodies					✓	✓	✓	✓
Armanios, Eesley, Li & Eisenhardt, 2017	Intermediaries	Network	Intermediaries connect new actors to critical political resources			✓		✓
Pahnke, Katila & Eisenhardt, 2015	Investors	Norms, networks	Provide funding, categorise ventures, act as a signals of legitimacy		✓	✓	✓	✓
Sine et al., 2007	Certification bodies	Certification	Certification bodies legitimate new actors by acknowledging that they meet the required standard				✓	

Infrastructure element		**Symbolic system / Inter-connection**	**Implications for the entrepreneurial actor constitution in an ecosystem**	Principles		Interaction		
				regu-lation	prac-tices	access	status	rela-tional
Informal governance bodies					✓	✓	✓	✓
Nambisan & Baron, 2013	Entre-preneurial hubs	Norms	Hubs as ecosystem leaders define collective goals and exercise control over strategies		✓	✓	✓	✓
Hochberg, 2016	Accelerators	Norms	Accelerators shift the equilibria of funding activity		✓	✓	✓	✓
Relational channels					✓			✓
Saxenian, 1994	Industry network	Network	Loosely linked team structures across incumbents, educational institutions and new actors encourage collective experimentation and learning		✓			✓
Kacperczyk, 2013	University peer network	Norms	University peer network influences likelihood of entrepreneurial entry		✓			✓
Leaders - organisational templates					✓			
Eesley & Wang, 2017	Mentors	Organisational templates, categories	Act as role models		✓			
Field configuring events					✓		✓	✓
Parhankangas & Renko, 2017	Crowdfunding	Organisational templates, categories, status	Linguistic style influences success of crowdfunding		✓		✓	✓

5.2.3 Variation in isomorphic pressures

The study of the institutional infrastructure of entrepreneurial fields supports the exploration of entrepreneurial actor emergence, as it foregrounds the elements of the fields that may instrumentally influence the acceptance and embedding of an actor within a field. Not all fields impose equal pressure on their members, however (Zald & Lounsbury, 2010). Neither do all the positions within a field come under equal pressure of compliance (Hardy & Maguire, 2017).

While there are few comparative studies into fields, some typologies have been proposed that guide the query into the variation in the pressures that the institutional infrastructure of a field may impose on any field entrants. Firstly, fields have been proposed to be categorised according to the purpose of the field as either exchange or interest fields (Zietsma et al., 2017). In this typology, exchange fields are seen to bring together a relatively homogenous group of actors for the purpose of stabilising and coordinating exchange (Zietsma et al., 2017). Exchange fields are considered to exhibit temporally longer existence than issue fields and, as such, to be more elaborated and likely to impose stronger isomorphic pressures on the members of the field. Issue fields, on the other hand, are suggested to gather together heterogeneous groups of actors for a period of time for the purpose of shared issue resolution (Hoffman, 1999). Issue fields, as both temporally more limited and likely to have been structured around a focal concern, are theorised to be less elaborated and thus to impose notably weaker isomorphic pressures on the actors of the field (Zietsma et al., 2017).

Another, regularly utilised typology of fields foregrounds possible logic contestations within the field as the determinants of the strength of the isomorphic pressure of the field. In this framework, established fields of coherent, elaborated logics have been suggested to impose strong isomorphic pressures on the actors of the field owing to the

wide range of infrastructure in place in these fields (Hinings et al., 2017). Contested, emerging and fragmented fields have each, on the other hand, been proposed to allow more scope for divergence, due to the nascent or potentially disjointed state of the infrastructure.

Beyond the coherence and elaboration of the infrastructure of fields, the position of an actor is known to influence the level of isomorphic pressure. In general, actors within the centre are considered to belong to the field elite and thus to have their interests governed by the institutional infrastructure (Fligstein & McAdam, 2012b). As such, while actors in the centre of fields can be expected to be subject to strong isomorphic pressures, they are also likely to enjoy superior resource access and, notably, a level of control over the infrastructure (Greenwood & Suddaby, 2006). Positions at the periphery, in contrast, while likely to be subject to weaker isomorphic pressures (Rao et al., 2003) may also suffer from resource limitations that severely limit their scope for deviance (Battilana et al., 2009).

5.3 Data and methods

While institutional theory has engaged actively with the elaboration of institutional logics within fields (McPherson & Sauder, 2013; Voronov, De Clercq, & Hinings, 2013), few empirical studies have delved into the details of institutional infrastructure in the fields (Hinings et al., 2017). Equally, while the growing literature of entrepreneurial ecosystems has recognised the complementary nature of the elements of an entrepreneurial ecosystem (Adner, 2017; Jacobides et al., 2018), a closer understanding of the linkage between the entrepreneurs and the different elements of the ecosystem is still in development also in this scholarly field. All in all, while the extant literature offered beneficial guidance for the development of the research question, it did not

present strong hypotheses regarding post-redundancy entrepreneurial actor emergence in the context of the institutional infrastructure of an entrepreneurial field. As such, an explorative approach with inductive reasoning was a natural choice for this study (Denzin & Lincoln, 2000a). Similarly, a multiple case study strategy fitted closely with the empirical phenomenon, given the desire of the study to explore any variations in the infrastructure engagement among entrepreneurial ventures (Stake, 1995, 2000).

5.3.1 Data

This study utilises the interview data and a subset of the archival data collected for the thesis. For the thesis, data was collected in three separate regions in Finland. In this study, the initial ecosystem landscape analysis was limited to a single region alone. While much of the institutional infrastructure of entrepreneurship is national in Finland, some regional variation does exist. Some of the entrepreneurial interest and support organisations specifically operate locally rather than nationally. Only the 45 interviews conducted in region A were thus used for the landscape analysis of this study to ensure comparability across the cases[1]. The interviews of regions B and C were subsequently included in the grouping of the ventures for checking for any notable variations between the regions in the ventures' infrastructure engagement.

The archival data utilised included the venture data and, more importantly, archival data of each of the infrastructure elements. The information on the infrastructure elements was collected from a range of public sources, most notably from the websites of the actors, from press releases and from the business press.

[1] Please see table 3.2 in chapter 3 for the full listing of the interviews.

5.3.2 Analytic process

The analysis of the collected data proceeded in several steps. As the focal interest of the study was to understand the engagement of the entrepreneurial ventures with the institutional infrastructure of their ecosystem, I initiated the study by searching the interview data for all references to external engagements that the venture founders referred to. The coding thus began as in-vivo coding with the codes emerging from the data (Miles, Huberman, & Saldana, 2014). The codes included references to actors of the ecosystem as well as to events, networking activities and general groups of actors such as 'colleagues' or 'university peers'. As part of this initial coding, I also coded each of the ecosystem references according to whether the engagement was actually present or whether the informant was solely making a general observation. This meant that I identified whether the venture had, for example, accessed a service or collaborated with an ecosystem element, or whether the reference to the element was rather an acknowledgement of the awareness of the existence of it with no actual engagement having taken place. In cases in which an actual engagement had taken place, I coded the type of the resource that the engagement was associated with. Again, the coding of the types of the engagements initiated with in-vivo codes that over time could be grouped under basic thematic headlines, such as training, networking or idea development.

The codes from the first phase formed a table of actors, events and networks matched to activities that I then sought to explore more closely during the second phase. During this phase, I searched through public archival sources to build a more comprehensive understanding of the actors, events and networks that formed the infrastructure of the ventures' community. I generated a small database that included data points such as what is the infrastructure element, how does it describe its purpose and mission, who are its target audiences and/or members, what is its ownership and governance structure, what does it do, where does it do it and what kind of resources does it make available to

the entrepreneurial system. Based on this basic information of each of the elements, I then sought to identify the infrastructure role that the element adopted in the entrepreneurial ecosystem, for example, a regulator, a collective interest organisation, an intermediary or a cognitive-cultural role model.

The work of the second phase produced an infrastructure table that I was then able to explore in relation to each of the ventures in the study. During the coding, it was clear that there was a wide variation both in the range of the infrastructure elements that the ventures engaged with and in the uses that these engagements served. In the third phase, I thus sought to explore the nature of this variation more closely. I first developed a network image of the ecosystem elements and the ventures to explore the relations between them visually. This infrastructure engagement map highlighted a regional accelerator and a collective interest organisation as some of the central actors of the infrastructure. While many of the ventures implied a direct engagement with these, the regional accelerator specifically seemed to split the group of ventures into two, with one of the groups clustering closely around it and the other exhibiting a more arms-length connection to it.

In order to explore the separation between the two groups proposed by the infrastructure engagement map, I returned back to the interview data and developed mini-profiles of the two tentative groupings. As part of the development of the mini-profiles of the groups, I sought information of the nature of the ventures and also read through the interview transcripts for the descriptions that the venture founders put forward of their businesses. I noted an interesting variation in how the founders described their ventures, with some referring to their businesses as startups and others explicitly objecting to this description. Given how strongly the founders who saw themselves as non-startups made the distinction, I ran a lexical search on the interview data to identify any patterns

among the ventures with regards to their usage of the term ‘startup’ as well as some other entrepreneurial terms. The comparison of the results of the lexical search with the infrastructure engagement maps further reinforced the sense of the venture pool containing two separate groups.

Given that both the engagement map and the terminology of the venture founders hinted at a presence of two subgroups within the pool of ventures in the study, in the fourth and final stage I sought to develop a closer understanding of the engagement of these groups with the different infrastructure elements. I now considered the ecosystem actors, events and networks within their respective infrastructure groupings, for example, accelerators as instances of informal governance bodies and, as such, normative elements of the institutional infrastructure. I grouped the infrastructure elements according to the two entrepreneurial venture groups proposed by the data and developed a profile of the infrastructure for each. As part of this infrastructure profile development, it became clear that neither of the earlier identified venture groups was quite homogeneous. Rather both groups seemingly split into two based on how broadly and actively the ventures had engaged with the infrastructure. As a final step of the analysis, I thus developed mini-profiles of the subgroups comparing and contrasting these across the earlier-identified group boundary. This work suggested that the pool of the interview ventures split into two main groups with two subgroups within each of these. The compilation of some summary statistics for each of these groups from the archival data concluded the analysis.

5.4 Findings

This section outlines the findings of this first empirical study of the thesis. In the interest of clarity, the order of the presentation in this section differs from the actual

chronological order of the analysis[1]. I will first discuss the infrastructure elements that the ventures in the study reported to engage with. I then outline the separation within the studied pool of the ventures into two groups, one that I refer to as the startups, and another, that I here call the enterprises. I discuss the separation between these two both according to the ventures engagement with the different infrastructure elements and according to the founders' characterisations of their ventures. I also highlight two subgroups within each the startups and the enterprises. In the third and final section, I contrast the infrastructure landscape of the startups with that of the enterprises.

5.4.1 Infrastructure elements

The list of the ecosystem elements that the ventures had engaged with contained a wide range of institutional infrastructure actors. Several elements of the regulatory infrastructure were present. Similarly, collective interest organisations, informal governance bodies, relational channels, organisational template propagators and field configuring events were all represented with at least two instances (Table 5.3).

Regulatory elements were particularly visible in the founders' infrastructure landscape. Boosting competitiveness by improving conditions for business and entrepreneurship in Finland is one of the key objectives of the current government (Government Strategy Secretariat, 2018). The government project launched for this purpose has specifically set the delivery of "an entrepreneurship package that will support businesses on their different life cycle stages" as one of its main goals (Government Strategy Secretariat, 2018: 10). In the 2018-2019 action plan update, the prime minister's office confirms the key elements of the programme to have been completed including the government

[1] For more details of the chronological phasing of the analysis please refer to the prior section.

entrepreneurship package having been updated, a provision of 600 million Euro growth funding having been granted, a roadmap for platform economy having been created and the service provision through Business Finland having been reformed (Government Strategy Secretariat, 2018).

This active interest of the government in supporting entrepreneurial enterprise in Finland was evident in the infrastructure maps drawn up based on the experiences of the ex-Nokia ventures. Team Finland, Enterprise Finland and Business Finland, the national government entities for supporting new businesses, growth and internalisation were all actively present. Of these, Business Finland, a new entity that has merged the previously independent entities of the Finnish Funding Agency for Innovation (Tekes) and the Finnish Trade Promotion Organisation (FinPro), came through particularly strongly due to many of the ventures engaging with its funding programmes. Equally, many of the founders had engaged the regulatory infrastructure elements of the regional centres of economic development (ELY) and employment (TE) during the early stages of their ventures. The specialised funding bodies of the government, that is Finnvera, Finnish Industry Investment (TESI) and the government coordinated accelerator platform Vigo, were also present, although in notably fewer founders' engagement maps.

Table 5.3 The infrastructure elements identified by the interviewees.

Infrastructure elements	
Regulator	
Team Finland	A network of public sector actors providing internationalisation services
Business Finland	An accelerator for global growth with focus on small and medium size enterprises (SMEs). Provide internationalisation services and fund innovations.
Enterprise Finland	A network of public service provides for business in various stages of their lifecycle.
Centre for Economic Development, Transport and the Environment (ELY-keskus)	Government centre providing regional support for SMEs.
Centre for Work and Employment (TE-keskus)	Government centre for employment. Provides services also to entrepreneurs.
Finnvera	State-owned financing company providing funding for start, growth and internationalisation. Also guarantees against risks arising from exports.
Finnish Industry Investment (Suomen Teollisuus-sijoitus TESI)	Venture capital fund accelerating growth in Finland and the Nordic markets.
Vigo-program	Government-coordinated accelerator platform supporting startups to grow faster and smarter into the global market.
Business city *(regional)*	Support companies in creating jobs, promoting export, attracting talent and developing different lines of business.
Collective interest organisations	
Finnish Enterprise Agencies (Uusyrityskeskus)	Interest and service organisation for new entrepreneurs seeking to create good operational preconditions for starting a business and creating permanent jobs.
The Federation of Finnish Enterprises	Interest and service organisation for small and medium sized enterprises and their owners promoting entrepreneurship and improving the status of entrepreneurs and the conditions for business.

Infrastructure elements	
Collective interest organisations	
The Finnish Venture Capital Association (Pääomasjoitttajat)	The industry body and public policy advocate for the venture capital and private equity investors promoting the positive impact of venture capital industry in Finland.
Trade Unions	Interest organisation for a professional group. Support members in their careers, promote community and develop members' competence.
Informal governance bodies	
Finnish Chamber of Commerce	Interest and service organisation promoting entrepreneurship and favourable business environment.
Finnish Business Angel Network (FIBAN)	A non-profit association inspiring private startup investing in order to create high growth companies and develop the economy.
Accelerators e.g. Gorilla Ventures Helsinki, Nestholma, Oulu, NewFactory, Tampere	Private accelerator programmes seeking to advance the founding of new businesses.
Relational channels	
Regional startup communities	Communities of regional start-up and growth ventures seeking to support growth and collaboration.
Demola	A network of organisations promoting and developing methods for co-creation and open innovation.
Teknopolis	A co-working space provider.
Leaders / organisational templates	
Finnish Business Mentors	A non-profit association mentoring small businesses to get off the ground, grow and achieve their goals.
Kaato Business Community	A business community of high tech business leaders seeking to attract and drive new investment, new companies and new jobs in Finland.
Field configuring events	
Slush	An event celebrating entrepreneurship.
Kasvu Open	An event gathering growth professionals, investors and other partners into one solid network, which supports companies.

At the regional government level, the regional economic governance office that works to improve local business conditions by, for example, attracting investment and talent into the region, was similarly included in many of the ventures' infrastructure maps. Given my initial contact with this infrastructure actor while setting up the study, the name of this office was included in the interview introduction. The presence of the actor's name in the interview script is, however, not expected to have skewed the results in favour of this agency, as only explicitly acknowledged engagement with any of the infrastructure elements was considered in the analysis.

Among the collective interest organisations, the Finnish Enterprise Agency and the Federation of Finnish Enterprises were both included in the founders' infrastructure maps. Both of these organisations offer regional-level operations in addition to their national governance structures. Indeed, the Federation of Finnish Enterprises appeared as one of the most central infrastructure elements among the interviewed ventures. The list of the collective interest organisations also included the Finnish Venture Capital Association and Trade Unions. Union density in Finland is high with almost three-quarters of employees registered as union members (Fulton, 2015). While some of the unions, for example, the Union of the Academic Engineers and Architects, includes elements of entrepreneurial support in their programme of activities, the importance of the unions would most specifically be manifest in questions of unemployment, as the Finnish unions regularly provide unemployment insurance to their members.

The informal governance bodies that the ventures had engaged with included both national actors, such as the Finnish Chamber of Commerce and the Finnish Business Angels Network (FIBAN) as well as regional ones, such as regional startup accelerators, for example, Gorilla Ventures in Helsinki, New Factory in Tampere or Nestholma in Oulu. Among these, the regional startup accelerator was the key

infrastructure entity that split the studied venture pool into two: those who had actively engaged with the accelerator and those who had either not engaged with it at all or had trialled a contact and then considered this connection to not be for them. It is worth noting that this accelerator operated independently from the Nokia accelerator programme. While the Nokia accelerator encouraged contact with the regional accelerator programme, entry into the regional programme was a decision for the ventures to make.

The relational channels included in the ventures' infrastructure landscape included both actors focusing specifically on nascent businesses and actors whose target groups included both new and old businesses. Among the new-business-focused channels, the founders brought up the regional startup communities, such as Aaltoes in Helsinki and Tribe in Tampere. Demola, a company founded in Finland but facilitating co-creation among businesses and universities internationally, was also included. Among the regional channels that focus on both nascent ventures and incumbents, Teknopolis was included by several of the ventures.

The cultural-cognitive elements of the institutional infrastructure of the ex-Nokia ventures included, among others, the Finnish Business Mentors and the Kaato Business Community, both of which make business leaders and successful entrepreneurs available for the mentoring and coaching of nascent ventures. Finally, Kasvu Open, a sparring-network that organises the "Kasvu Open Karnevaali", a carnival of Growth Ventures (Kasvu Open, 2018), and Slush, the annual "celebration of entrepreneurship" (Slush, 2018), were both included in some ventures' infrastructure maps.

5.4.2 Startups and enterprises

While the ventures in the study all operated in the same geographic region and all originated from a single accelerator of a single corporate redundancy programme, they nevertheless engaged with the infrastructure of the shared system of entrepreneurship in a heterogeneous fashion. Idiosyncratic characteristics of the ventures may explain this variation to some extent. Yet the ventures also formed clear groupings, not just based on their infrastructure contacts, but also based on the entrepreneurial identities and orienting principles that they adopted. This would propose that the variances in the ventures' infrastructure engagements reflected more than just their idiosyncratic characteristics.

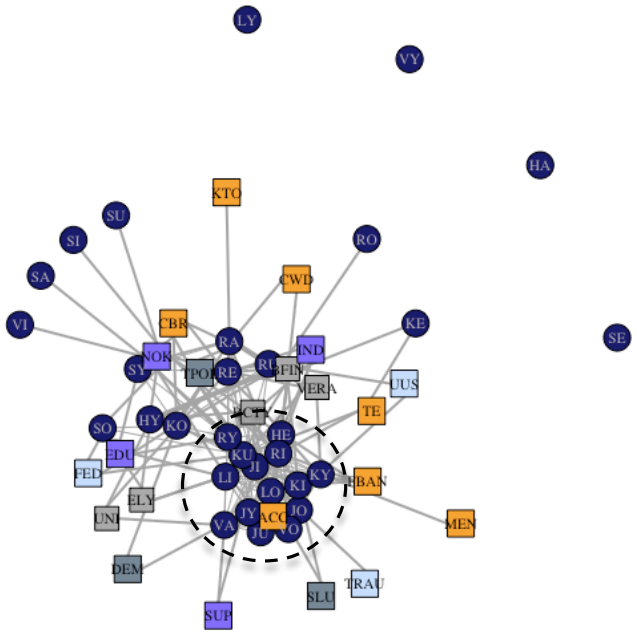
i. Entrepreneurial identity

The initial charting of the map of the infrastructure elements with whom the ventures engaged, indicated some level of clustering in the way that the different ventures engaged with the infrastructure of the entrepreneurial system (Figure 5.1). Most notably there seemed to be a group of ventures that gathered around the regional accelerator.

> *We met at some point at Nokia and they had a small startup that they were tuning at the local entrepreneurial accelerator. So I started hanging out there. (Joki Oy)*

> *[The Nokia accelerator programme] included a good amount of training. I utilised all of it. I can't even remember how many sessions I attended. At least six, if not even ten, training sessions of a couple of days each. I also attended a longer training course at the university, which took place over several months in blocks of a day or two here and there. That one covered a very broad spectrum from marketing to accounting and business development. It was a real mix and match of everything. It was good. In addition, we also joined in the action at the regional accelerator. [...] We were good scouts and danced to their tune. (Kosu Oy)*

Figure 5.1 The infrastructure landscape map.



The ventures of the study in circles.
The infrastructure in squares.

Regulator infrastructure in light grey.
Collective interest organisations in light blue.
Informal governance bodies and leaders in orange.
Relational channels and events in blue-grey.
Nokia, industry and educational networks in purple-blue.

Venture cluster around the regional accelerator indicated with the dotted line.

Beyond the cluster of the ventures that seemed to gather around the regional accelerator, the infrastructure network indicated there to be a second, more dispersed group that engaged more actively with the regulatory elements of the infrastructure than with the accelerator.

> *I cannot remember that I would have attended [the regional accelerator events]. I joined a couple of sessions that had some venture and startup founders talking about their experiences. So, some practical advice I gained but not really for anything else but the actual founding. No, I can't really remember but maybe I attended two or three [events]. (Susi Oy)*

The infrastructure map suggested that the cluster around the regional accelerator also engaged with entrepreneurial field-configuring events, such as Slush, and with entrepreneurial paragons, such as startup business mentors. In contrast, the ventures in the loose grouping, at an arm's-length from the regional accelerator, evinced more regular connection to relational channels, such as Teknopolis.

The industry codes of the ventures did not present any clear pattern that would have explained the separation into the two infrastructure clusters. Both the ventures gathering around the accelerator and those in the outer layer were most commonly working in high tech development activities under industry codes of computer programming or computer consulting activities (TOL codes 62010 and 62020). The interview data did, however, highlight an interesting variation in the terminology that the ventures used in describing their engagement with the regional accelerator. The ventures that had engaged with the accelerator referred repeatedly in their interviews to 'startups'.

> *A founder of a* startup *does not have any holidays. […] There could be some weeks that one didn't remember about being a* startup*. (Vano Oy)*
>
> *We joined the* startup *accelerator. […] I have been following up the* startup *scene here. (Kosa Oy, Founder B)*
>
> *They offered* startup *training for* startup *founders. […] So I founded a* startup*. (Joko Oy)*

This terminology was notably absent in the transcripts of the ventures that exhibited a more arm's-length connection to the accelerator. In a few instances among these ventures, the founders made an explicit statement of their venture not being a startup.

> *I attended [the regional accelerator] a couple of times […] but as I had neither that kind of big spin nor was I a startup, it wasn't for me. (Suso Oy)*

Indeed, a closer study of the founders' descriptions of their ventures suggested there to be a split among the ventures in their self-identification as a startup or a non-startup.

> *"We founded a two-man startup". (Kose Oy)*
>
> *"I have concentrated almost totally on the startup life now." (Kosu Oy)*
>
> *"I have, all the time, checked out the different startup possibilities." (Joku Oy)*

> *"We had experience about how to do things in a corporation but we had no real experience about how to do things in a startup. Still, we had an idea and a vision that we had developed for several years." (Vano Oy)*

In the interviews, these founders not only referred to their ventures as startups, but they also spoke about the startup world.

> *"I have noticed that the startup world has many unscrupulous rules and practices." (Kosy Oy)*

A lexical search of the interview transcripts confirmed the terminology split. While the ventures in the cluster around the regional accelerator represented around 40% of the ventures in the interview pool, they accounted for 69% of the references to 'startups' (Table 5.4). This group of ventures also accounted for 62% of the references to 'ideas' and 69% of the references to the 'Lean' product development philosophy (Blank, 2013). The second group of ventures outside of the regional accelerator cluster, in contrast, accounted for 100% of the references to not being startup although these comments were notably less common. Interestingly, a lexical search indicated the terminology relating to 'finance'[1] and 'growth' to be notably more evenly spread between the two groups.

Table 5.4 Usage of entrepreneurial terminology among the ventures.

	of ventures	**'a startup'**	**'*not a* startup'**	**'finance'**	**'growth'**	**'idea'**	**'lean'**
GROUP A: startups	39%	69%	0%	48%	36%	62%	69%
GROUP B: enterprises	61%	31%	100%	52%	64%	38%	31%

[1] Search included several terms relating to finance, such as finan*, money*, grant, invest*, loan, fund*.

In the interviews, the non-startup group appeared clearer about what they were *not* rather than what they were, in terms of the actual category into which they saw themselves fall.

> *(A) Our goals in entrepreneurship are quite level-headed. There are many different types of so-called startups. Many may have a single ingenious idea that they seek to secure external funding for. They start developing with risk funding and hired staff and wait to see if it works out. With one product only.*
> *(B) Yes, so only with one adequately interesting idea. We are more cautious. We haven't wanted to raise risk funding or invest large sums of our own monies. Rather we are trying to develop something small that we can then grow bigger. (Susa Oy, Founders A and B)*

> *There were maybe eight men [at the Nokia accelerator assessment panel] who had during the same day already interviewed some startups. Ones that all had truly amazing plans. These guys had really awesome plans. [They spoke as if they] were about to develop something for NASA or something along those lines. Then I turn up and say that I have this kind of enterprise that I have already founded and that will be good because I know what I can do. These will be my customers and this is how I will expand. Here is my annual plan. And they were like, ooh, fancy that. (Suso Oy)*

For the working purposes, I named the two groups as startups and enterprises. The startup naming clearly arose from the interview data. While the identity of the enterprise group was not as clear based on the ventures' own statements, I adopted the terminology of enterprises in the reflection of these ventures' infrastructure landscape maps containing elements whose role expanded beyond the governance of new venture operations into the maintenance functions of the incumbent industry communities.

ii. Orienting principles

Interestingly, independent of whether a venture had participated in the accelerator or not, the founders tended to recognise the different venture categories as well as the objectives of the regional accelerator in specifically nurturing a category of ventures with their focal interest in developing ideas to achieve fast growth.

> *The purpose of the regional accelerator was not to support the development of functioning enterprises. They were specifically training startups, developing ideas to an extent that they could secure funding and then a good exit at some point. (Startup Joku Oy)*
>
> *The accelerator activities leaned heavily towards beauty contests and pitching. [The intent was] to secure funding and a steep enough gradient for the [growth of the] operations and money. (Startup Kosu Oy)*
>
> *The talk was so soft and round. They were like they were about to take off any minute. I participated in a couple of meetings. It was not for me. It seemed to be targeted for the high-tech innovation startups; ventures that were talking about at least hundreds of thousands [of euros in revenues]. (Enterprise Suso Oy)*

Indeed, the startups in the study pool tended to engage more regularly in business models that relied on the development of an idea, while the group of enterprises included a higher share of ventures that had adopted a service-oriented business model. As such, the two groups seemed to vary also in their objects of commercialisation. While the boundary between the groups in this aspect was not as clear as it was in the infrastructure engagements or in their identity, the startups were notably more regularly built around a new product development project compared to their counterparts in the enterprise group. Many of the startups were developing software-based products, such as games or online service platforms, but the group also involved ventures working on hardware-based product ideas.

In contrast, the enterprises were regularly engaged in the sale of their expertise. Among these ventures, the object of commercialisation could at times be a highly targeted and packaged service offering for a chosen customer. Equally, purely consultancy-oriented ventures in this group tended to see their expertise and work as their objects of commercialisation.

The variations in the objects of commercialisation were clearly reflected in the orienting principles that the ventures had adopted. The startups working on the development of

new products and services had invested a period of time in developing a prototype and were regularly referring to pilots that they were running or seeking to run.

> *We have two pilots running right now. We expect to monetise next year. (Startup Kosa Oy, Founder B)*
>
> *A pilot is incredibly difficult to get to take off although we initially offered it for zero Euros. (Startup Kose Oy)*

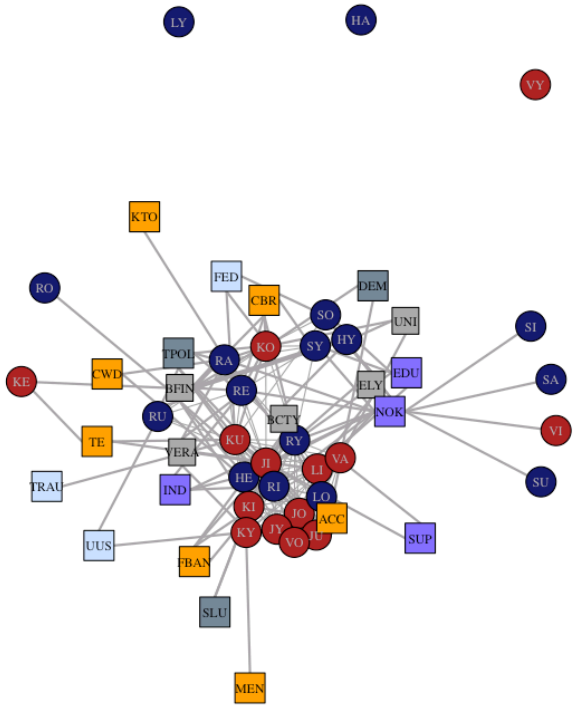
This stood in clear contrast to the organisational template of the enterprises. The enterprises tended to prioritise cash flow over any idea development. As such, they commonly referred to a 'no customer, no development' model.

> *We agreed right from the start that we have to find a customer who is interested in our solution so that we do not start developing a technology first, some fancy widget. We wanted to find a customer for whom we develop the solution. (Enterprise Lamo Oy)*
>
> *Everything that helped us to aim towards cash flow was prioritised. That meant that by the third or the fourth month we had several industry customers. We brought ourselves forward aggressively in all sorts of networking events and sought, right from the start, to sell the competence we had. [We sought] to commercialise the competence rather than develop yet another idea and [to go through] all the valleys of death, adopt that kind of logic. This was unusual. (Enterprise Roke Oy, Founder A)*

All in all, the pool of the ventures interviewed proposed to split into two subgroups along not only their infrastructure engagement patterns and their identities but also along their orienting principles and commercialisation models. The ventures clustering around the regional accelerator, startup events and startup mentors identified as startups and engaged in idea development. While the second group of ventures appeared as a notably looser grouping, they still shared many characteristics in identifying as non-startups, in focusing on the commercialisation of their expertise and in engaging with infrastructure elements of the entrepreneurial system that had a role not only in governing new business activities but also those of the incumbent industry. Figure 5.2 presents the infrastructure landscape of figure 5.1 with the startups depicted in red and

the enterprises in blue. In this case, the ventures are identified into one or the other of the groups not only based on the infrastructure connections but also based on the venture identification, mode of commercialisation and organisational template. As is to be expected in social sciences, the split is not as tidy in the earlier clustering proposed.

Figure 5.2 Startups and enterprises in the infrastructure landscape.



The ventures of the study in circles.
The startups in red.
The enterprises in blue.

The infrastructure in squares.
Regulator infrastructure in light grey.
Collective interest organisations in light blue.
Informal governance bodies and entrepreneurial paragons in orange.
Relational channels and events in blue-grey.
Nokia, industry and educational networks in purple-blue.

5.4.3 Scalability and stability-orientation

While the infrastructure engagements, the identities and, to an extent, the commercialisation models and orienting principles of the ventures spoke about the existence of two groups within the studied venture pool, neither of the groups was homogeneous. Both groups included ventures that were growing in terms of their turnover or expanding in terms of the employment opportunities they offered. Both also

included closures and cases in which the founders had had to seek a second source of income while still keeping the venture going.

Despite the startups and enterprises clearly orienting their operations around either the development of an idea or the sale of their expertise, both groups included subgroups that varied in their organisational templates, specifically in their scalability-orientation, their market approach and their team-orientation. One group within both the startups and enterprises had adopted an organisational template that reflected prioritisation of stability and continuity above growth and scalability. Among both the startups and the enterprises these ventures tended to have originated with fewer founders. They had very rarely sought to bring new founders or employees into the team. In most of the cases, the founders had rejected the opportunity of the Nokia-backed loan and had also not sought to secure external funding either from the government or from external investors. While the tighter access to funds naturally limited the speed of the growth of these ventures, the operational model was a conscious choice for these founders, who stressed the deliberate nature of their approach in prioritising stability and longevity of the venture over its growth (Table 5.5).

The second group, on the other hand, exhibited organisational templates that had been structured for scalability and growth. While these ventures had regularly originated with larger founder teams that sometimes included team members from outside Nokia, they had also, in many cases, actively sought to increase the size of the team in order to be able to strive for bigger contracts and sales growth. The team growth was, in most cases, among these ventures financed by government-backed funding. Several of these ventures had also utilised the option to draw the Nokia-backed loan. In clear contrast to

Table 5.5 Stability and scalability-orientation among startups and enterprises.

Organisational template: scalability	
Among startups	Among enterprises
Subgroups A: Stability and continuity	
We lived with the initial grant as we didn't really need to acquire any tools. We worked on our own laptops and had very little expense. (Startup Vano Oy)	*We are not that kind of start-up entrepreneurs who run after external funding. In fact, I don't think that type of entrepreneurs are our kind of independent actors. They sort of work for their financiers. We prefer to be independent, hold the gains to ourselves and also carry the risks. Although that of course limits the resources the firm has available.* (Enterprise Susa Oy, founder A)
I was really surprised that I was granted the Nokia funding as it was clear right from the start that this would not be a business that just explodes outwards and returns millions. (Startup Vani Oy)	*The reality has shown that a business of this size cannot employ. I haven't been able to take the step to become an employer. I don't have that kind of risk funding supporting me that I would have been able to employ someone and then look how the investment, little by little, starts to pay itself back.* (Enterprise Syso Oy) *An entrepreneur is a person who lives according to his or her means.* (Enterprise Lami Oy)
Subgroups B: Scalability and growth	
The situation today is that we are seeking international growth in earnest. We have some international pilots on the go. (Startup Kosy Oy)	*We are, of course, in the web, in LinkedIn, in Twitter and Facebook. [...] As soon as we got customers and contracts, we did press releases and published those through our channels. Through these we received requests for contact and information.* (Enterprise Roka Oy)
We have thought that Finland would be the start and then once we have a scalable system we can expand notably the operations. (Startup Kosi Oy)	*As I was granted such [a large] amount, the company had to have a will to grow. That we have always had.* *[...]* *We have aimed to the international markets right from the first second.* (Enterprise Hity Oy) *It is clear that one takes a risk in making this kind of change but if one thinks of growing the business fast [one takes it].* (Enterprise Roka Oy)

their stability-oriented peers, these ventures referred to their desire to expand the business. It should be noted that the scalability-oriented ventures, particularly among the enterprises, were not necessarily exhibiting more openness towards risk or indeed risk financing than the stability-oriented ventures among enterprises. Rather, the enterprises that sought growth had structured the operational model of the venture in a way that supported the attainment of the growth goal through other means, for example by commercialising their capabilities in a large scale.

While these subgroups were present among both the startups and the enterprises, the subgroups also clearly reflected either the startup or enterprise template. The startups, whether being organised for stability or growth, regularly built on a business model of a new product/service/idea development and gathered around the network of the regional accelerator. The enterprises, on the other hand, independent of their stability or growth-orientation, tended to seek to commercialise their work and had much more arm's-length connections to the startup community of the regional accelerator.

The subgroups among startups and enterprises also reflected a variation in their market approach. The stability-oriented ventures tended to exhibit highly-targeted marketing and sales structures. They had regularly conducted desk research of their marketplace . Based on this they sought out contracts directly. They also often relied on their network in establishing these contacts. The scalability-oriented ventures, on the other hand, regularly referred to the market building beyond any particular customer contact they had identified. These ventures spoke about active investment in awareness building and marketing. They also regularly joined industry events or trade shows in their area to expand their target industry's awareness of their offer (Table 5.6).

Table 5.6 Market approach among startups and enterprises.

Organisational template: Market approach	
Among startups	Among enterprises
Subgroups A (stability orientation): Targeted, direct one-to-one	
We were on some email posting lists that were still active those days. If one told there that [the product] is now available, the word started getting out. (Startup Vani Oy)	*We have sold in quite a targeted fashion. We have some modules, I guess you could call them products, that we think could address a need of certain companies. We have then contacted the potential customers that we have identified directly. We have not attempted any broader marketing.* (Enterprise Susa Oy, Founder A)
Subgroups B (scalability orientation): Broad awareness building	
We hired a marketing consulting firm. […] in order to increase our visibility. We were seeking both consumer and business markets. (Startup Koso Oy)	*Small contracts can come through the web and phone calls but [the big ones] have really come through the trade shows.* (Enterprise Hiti Oy) *In practise the idea has been to grow the firm radically in two to three years.* (Enterprise Roki Oy)

Again, while the stability and scalability oriented ventures shared characteristics in their market approach across the startup/enterprise boundary, the orienting principles of startups and enterprises remained clearly present. The market approach of the startups reflected their chosen model of product/service development and the mode of sale through piloting. As such, the startups regularly relied on new sales networks that they had developed as part of the venture development. The market approach of the enterprises, in contrast, relied more regularly on established industry and old contacts that the ventures activated in a new fashion to achieve the objectives of the new venture.

Finally, the subgroups within both startups and enterprises exhibited a variation in the team orientation of the ventures (Table 5.7). Evincing the variation in the size of the team discussed above, the stability-oriented ventures regularly spoke about the

loneliness of entrepreneurship. While this clearly reflected the small size of their teams or the nature of the venture as a business of a sole-entrepreneur, the difference ran deeper than this. The scalability-oriented ventures commonly reached out beyond the venture team. Many of the scalability-oriented ventures saw their businesses as a part of their community and actively referred to sharing and collaborating within it. The community approach was somewhat more common among the scalability-oriented enterprises but was present also among some of the scalability-oriented startups.

Table 5.7 Team orientation among startups and enterprises.

Organisational template: Team orientation	
Among startups	Among enterprises
Subgroups A (stability orientation): Lone venturing	
I chose knowingly to throw myself into doing everything by myself. (Startup Joky Oy)	*A big difference is that you are totally on your own and you have to do everything alone.* (Enterprise Susu Oy)
The company was me, myself and the laptop. (Startup Vana Oy)	*Maybe one way to support entrepreneurs would be to help to figure out when it would make sense to hire more staff to advance the growth of the business. I did not really dare to do it and maybe because of that I loaded myself with too much which then led to the enthusiasm dying out. The cautious growth (it is very difficult to recognise it.* (Enterprise Lami Oy)
Subgroups B (scalability orientation): Together also with partners / community	
We have been building our own company community. [...] Collective entrepreneurship and collective operational models are very important to us and we keep developing these. (Startup Kosy Oy)	*[If the customer case is not the right one for us], we rather pass it on [to companies in our network] than leave the customer searching. This has been our approach. It builds social capital on both sides.* (Enterprise Roke Oy)
We have sought to establish a partnership with this company since the spring. (Startup Koso Oy)	*We see that if we bring our proposal out quickly and openly to everyone involved this encourages positive demand towards us.* (Enterprise Hity Oy)

5.4.4 Infrastructure engagements

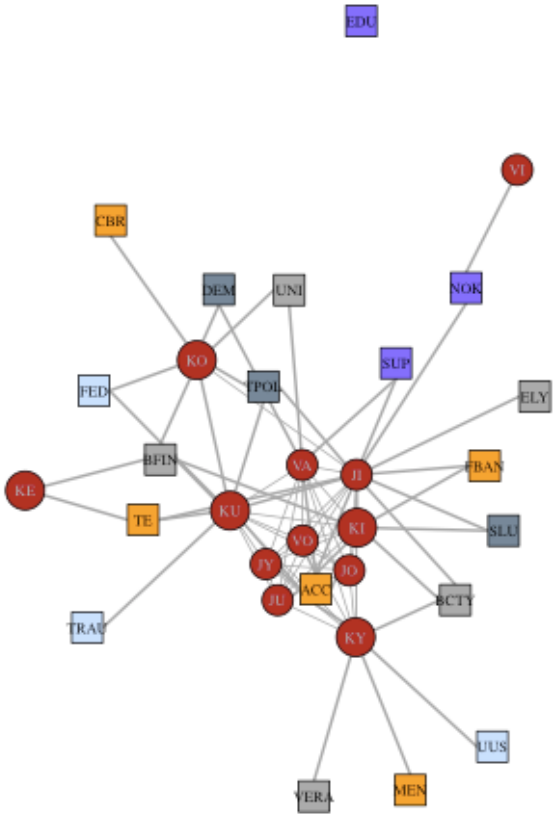
The separation among the ventures that was at first evident in their infrastructure engagement was identified as also reflecting variations in the ventures entrepreneurial identity, their orienting principles and their objects of commercialisation. This suggested the studied pool of ventures split into two entrepreneurial categories: one of the startups and another of the enterprises. Each of these entrepreneurial categories was found to further split into two based on the organisational templates that the ventures had assumed. Some had adopted a scalability-oriented organisational template that prioritised growth, broad market approach and community-orientation in the structuring of their teams. In contrast, others had opted for a stability-oriented template that prioritised continuity, a targeted market approach and small teams. Despite the different organisational templates of the groups of scalability- and stability-orientation, the ventures retained their identity as either startups or enterprises and, as such, associated with the orienting principles of their select identity.

The infrastructure maps of the startups and enterprises confirmed the infrastructure engagements of the scalability- and stability-oriented ventures to differ to some extent within their respective groups. In the start-up group both the scalability- and the stability-oriented ventures clustered around the regional accelerator (Figure 5.3). Among both orientations, some of the ventures also engaged with other infrastructure elements that reflected the identity and orienting principles of the startup cluster, such as the start-up event Slush and the start-up investor network of business angels. The scalability-oriented ventures tended to exhibit engagements within a wider range of the infrastructure elements than their stability-oriented peers. Contacts to infrastructure actors who operated both in the area of startups and incumbents, such as the Chamber of Commerce, was more incidental overall among the startups.

We haven't really utilised the Business City or the Chamber of Commerce at all. Really, the contacts that we have had beyond the accelerator have been instances like the angel investors, business angels and [other] accelerator people. […] Instances such as the Business City or the Chamber of Commerce can easily be quite removed from the real activity in startups. They can be a bit self-important actors who support a bit from the side but are really disconnected. (Startup Joki Oy)

We did utilise some of the support services of the regional Federation of Finnish Enterprises and maybe they did provide us with some ideas. Cynically, I have to say though that while there was nothing wrong with the ideas, we were rather in need of implementation resources. So, we have utilised them very little even though we are members. (Startup Kosu Oy)

Figure 5.3 Infrastructure maps of the startups.



Smaller circles for stability-oriented ventures.
Larger circles for scalability oriented ventures.

Startup ventures in red circles.
The infrastructure in squares.
Regulator infrastructure in light grey.
Collective interest organisations in light blue.
Informal governance bodies and entrepreneurial paragons in orange.
Relational channels and events in blue-grey.
Nokia, industry and educational networks in purple-blue.

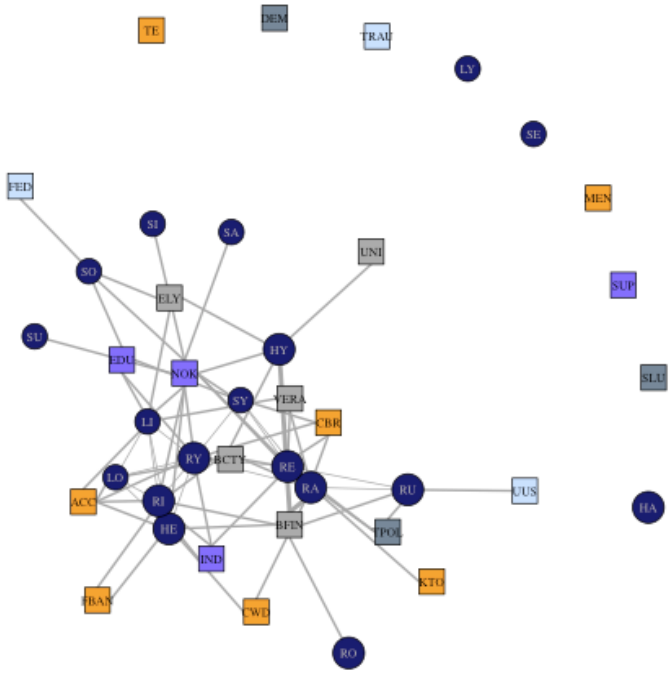
The experiences of the enterprises stood in stark contrast to those of the startups. Among these ventures, infrastructure elements that governed both the entrant and incumbent business operations were notably more present. The scalability-oriented ventures among enterprises suggested being particularly well connected to these

elements. At the same time, some of the elements prominent in the startup ventures' infrastructure maps appeared peripheral here. Elements, such as the startup event Slush or the co-creation platform Demola, for example, did not feature in these ventures maps at all.

> *The Chamber of Commerce has been important. (Enterprise Roka Oy)*
>
> *Business Finland had built an event. There were customers, there were potential collaborators that we didn't even know about. Good came out of it. That is a good equation. We found many connections in these [events]. This is how it works. It has been quite incredible. (Enterprise Hity Oy)*
>
> *These accelerators and others they are just talking shops for when you do not know what you are doing. You can go there and chat, have a think and gain some self-confidence. If you have any idea about what to do, it is better to concentrate on running the business. (Enterprise Hiti Oy)*

Given that the enterprise group of ventures seemed to be lacking an infrastructure actor that would have gathered the ventures into a cluster around it in the way that the regional accelerator did among the startups, the stability-oriented ventures tended to adopt more peripheral positions in this group. In some cases, the stability-oriented ventures indicated to be missing any connection to the infrastructure of the field (Figure 5.4).

Figure 5.4 Infrastructure maps of the enterprises.



Smaller circles for stability-oriented ventures.
Larger circles for scalability oriented ventures.

Enterprise ventures in blue circles.
The infrastructure in squares.
Regulator infrastructure in light grey.
Collective interest organisations in light blue.
Informal governance bodies and entrepreneurial paragons in orange.
Relational channels and events in blue-grey.
Nokia, industry and educational networks in purple-blue.

An obvious explanation for the variances observed between the groups of the study in their infrastructure engagements, identities and orienting principles, would be for the ventures to vary in their founder profiles to such an extent that the different orientations become obvious. Some variation was indeed naturally present. The scalability-oriented ventures among the startups, for example, had accumulated somewhat shorter industry and Nokia careers than the other ventures in the studied pool. The stability-oriented ventures in both fields also had somewhat higher educational attainment than the scalability-oriented ventures (Table 5.8). These variations in team compositions did little, however, to explain the alternative orientations of the ventures, either in the identities they evinced or in the organisational templates they had adopted.

Table 5.8 Descriptive statistics of the scalability and stability-oriented startups and enterprises.

	All	*(std)*	Interview ventures	Startup		Enterprise	
				scale	stable	scale	stable
Companies	289	0	36	6	8	11	11
Founders	452	0	69	15	11	29	14
Founder/company	1.6	0.9	2.0	2.5	1.4	2.9	1.4
Nokia years	10.5	5.9	10.7	8.2	10.0	11.3	13.0
Industry years	19.4	6.3	19.3	15.9	20.1	20.4	20.4
Nokia roles	1.9	1.1	2.1	1.8	1.6	2.3	2.5
University degrees	1.6	1.1	1.6	1.7	2.0	1.5	1.5
University subjects	1.3	0.7	1.3	1.3	1.7	1.1	1.5
Highest degree	64.4	21.4	144.9	65.8	72.4	73.8	72.0
TEKES award (k€)	93.0	539.0	50.4	218.9	0.0	1370.7	23.3
Cum revenues (k€)	326	1,345	2,850	120	18	9,653	386
Founder employment			57%	43%	13%	95%	60%

While the variations in the team compositions did little to explain the splits within the interview pool, the figures that the ventures reported concerning the government funding that they had secured and the early stage revenues that they had generated highlighted one last division-line among the groups of the study. On government funding, the scalability-oriented enterprises stood out among the whole group. These ventures had secured more of this type of funding than the other groups combined. While the group contained some outliers that skewed the average figure in favour of this group, the group overall had received substantial financial support through the government grants. This had been an investment well made; this group of ventures across the whole group was demonstrating positive trends, both in revenue and in employment growth.

A second notable observation was that, across the board, enterprises tended to outperform their startup peers. The stability-oriented enterprises tended to perform

better than their stability-oriented peers in the startup-subfield, and did, in some cases, also overtake the scalability-oriented startup peers. The development orientation adopted by the startups clearly put them at a disadvantaged position in terms of their short-term revenue development. This seemed to be particularly detrimental for the stability-oriented ventures in the startup group as, despite their lower cost-bases, few of these ventures seemed to have obtained viability. Indeed, the interviews confirmed many of the founders within the stability-oriented startup group having had to seek parallel wage-employment.

5.5 Discussion

5.5.1 Nesting of entrepreneurial fields

An internal Nokia memo of the accelerator programme referred to the programme having graduated two types of ventures: startups and 'traditional businesses'. The separation of the interview pool into startups and enterprise did not, however, fully reflect the Nokia description of startups as businesses based on a "global type idea or business model" and the 'traditional businesses' as "working on basic products, known business models and low-risk, low-scalability operational set-ups" (Nokia, 2015). In the interview pool, while the startups tended to have adopted an orienting principle that targeted them at idea development and the enterprises tended to have assumed an orienting principle that encouraged service-sales based cash flow generation, both groups contained ventures that had adopted a growth-oriented organisational template. Both also included ventures of stability-orientation.

The separation between the startups and the enterprises, not just in their infrastructure engagements but also in their identities and orienting principles hinted at a separation in the institutional fields of the two groups. One of the fields seemingly formed around the

regional accelerator that acted as an informal governance body within this field. By gathering the ventures into a shared space, this informal governance body provided the means both for membership access and relational structuration within this field. The shared space encouraged the initial formation of a tight community that not only shared the social connections within it but also linked through the internal governance body to the other infrastructure elements of the field, such as field-forming events and the paragons of the field.

The ventures that did not join the accelerator did not join the shared space of the informal governance body and, as such, did not become members of this field community nor did they form the linkages to the other infrastructure elements of it. These ventures formed a much looser group that could be hypothesised to have been positioned in the margins of the startup-subfield.

Fields, however, form not only around the interaction of the field but also around the goals, identities and orienting principles that the members come to internalise and, to an extent, take for granted. The two field groups of this study exhibited notable variation in each of these dimensions. The ventures in the startup-subfield identified themselves as startups. They exhibited an orienting principle that focused their operations at idea development. This orienting principle directed them towards the adoption of business models that relied on risk financing and the associated temporal frames of time to funding and time to exit.

The ventures in the group that seemed to adopt positions at the periphery of the startup-subfield, in contrast, identified themselves as ‘not-startups’. In this account, I have referred to these ventures as enterprises. The orienting principle of the enterprises’ activity was to commercialise their work. As such, the organisation of these ventures’ operations differed notably from that of the startups. The ventures compromised on the

ambition of their idea and rather sought to secure a customer with the elements they had at hand on day one. As such, the enterprises rarely sought external financing and relied on a different institutional infrastructure of the entrepreneurial field to that of the startups. The temporal frame of these ventures also varied from that of the startups as the pulse of the development of the venture ran from sale to sale rather than to the next round of funding or to the exit of the founders from the ventures.

The startups in the venture pool were regularly seeking to build something fundamentally new. In this, they built on the identity and organisational templates provided by informal governance organisations and the paragons of the startup-subfield. These were further propagated in field events, such as Kasvu Open and among the relational networks of the field, such as Demola. In contrast, the enterprises relied to a notable extent on the infrastructure of the established industry. In relational channels, they sought to position themselves within the incumbent industry by relying both on established informal governance bodies such as the Chamber of Commerce, and on the incumbent industry co-working spaces such as Teknopolis. Enterprises also regularly utilised the infrastructure of incumbent trade fairs.

Given the variation not only between the infrastructure that the startups and enterprises engaged with but also in the identities, the goals and the orienting principles of the two, I propose the entrepreneurial system to have split into two subfields. While these subfields were clearly interlinked and shared some elements of the infrastructure, most notably the regulator, they also adopted notably divergent orienting principles and identities (Table 5.9).

Table 5.9 The startup and enterprise-subfields.

Field	Startup	Enterprise
Infrastructure	Infrastructure engagement centred around the regional accelerator. Other key elements: startup communities and mentorship for organisational models, field forming events celebrating startups.	Engagement with infrastructure elements of the incumbent industry. Other key elements: trade fairs
Identity	A startup.	'Not a startup', an enterprise.
Goal	Growth.	Cash.
Object of commercialisation	New product/service; pilot; the venture.	Competence/work.
Orienting principle	Idea development, risk finance, exit.	Cash flow, self-finance.
Temporal frame	Determined by inventors: time to funding, time to exit.	Determined by customers: time to sales.

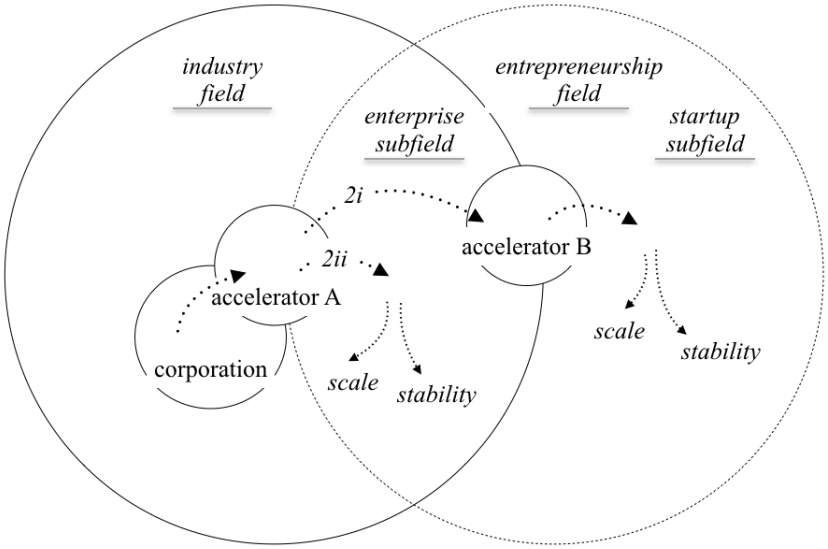
Proposition 1. Regional entrepreneurial systems may contain subfields that reflect separate identities and orienting principles.

Fields are known to share interconnections and, as such, be subject to nesting and overlapping (Fligstein & McAdam, 2012b). In this case, while the startup and the enterprise-subfields shared some of the infrastructure of the entrepreneurial system, such as the regulatory elements, the enterprise-subfield seemed to also benefit from the infrastructure of the incumbent industry. Given that the enterprise-subfield also closely reflected the goals and orienting principles of the incumbents, it seems feasible, in this case, to theorise that the enterprise-subfield overlapped the industry field (Figure 5.5).

Proposition 2a. Subfields within entrepreneurial systems may overlap with non-entrepreneurial fields.

Proposition 2b. Subfields within entrepreneurial systems that overlap with non-entrepreneurial fields may exhibit goals and orienting principles that reflect those of the non-entrepreneurial field.

Figure 5.5 Actors in nested and fragmented fields.



Corporate accelerator A as the boundary organisation into the entrepreneurial field. Regional accelerator B as the boundary organisation into the startup subfield. Transitions 2i and 2ii as the first separation of the ventures into their respective subfields. 2i into the startup subfield. 2ii into the enterprise subfield. Within both fields, a further split into scalability and stability-orientations.

5.5.2 Actor emergence in the context of institutional infrastructure

The divergence of the subfields, in this case, was most evident in the emergence – or the lack of it – among the stability-oriented ventures. Surprisingly, despite their small sizes and most likely marginal positions in the field of incumbents, the stability-oriented ventures in the enterprise-subfield had regularly secured a niche role for themselves in the field. The relational network of the field connected them to the incumbents and, given the alignment in the goals and orienting principles of the incumbents, they became viable actors in terms of obtaining the capacity and authority to act for

themselves (Meyer & Jepperson, 2000). In contrast, their stability-oriented peers in the startup-subfield rarely emerged as viable actors of this subfield. By deviating from the shared goal of the field in delivering growth, the ventures became marginalised and failed to secure adequate authority or resources to sustain themselves in the field.

Extant literature has proposed that mature fields of highly elaborated, coherent institutional infrastructure tend to impose strong isomorphic pressures on the actors of the field and, as such, offer limited scope for deviance (Hinings et al., 2017). Fragmented fields of low elaboration and competing logics, and subsequently low coherence have, on the other hand, been proposed to exert weaker pressures for isomorphism and, as such, offer broader scope for divergence among the actors of the field. This thesis, would, however, propose the opposite. Here the enterprise-subfield overlapped that of the incumbent industry and its infrastructure. This infrastructure reflected high elaboration with a number of different infrastructure elements, each contributing in a complementary fashion towards the governance of the field. Despite the range of heterogeneous institutional elements, the field exhibited high coherence across these elements. Among the collective interest organisation, for example, trade unions and the Federation of the Finnish Enterprises each have their own complementary role to play in the governance of the field. Both contribute not only towards the membership management and diffusion of the practices of the field but also towards the regulatory framework of the field.

The startup-subfield, on the other hand, could be argued to reflect a more emergent order and, as such, exhibit lower elaboration and coherence of its infrastructure. For example, the infrastructure of the field promotes open access, open-mindedness and broad entry to the field at events designed to celebrate entrepreneurship. At the same time, the orienting principles of the field promote a highly-centralised membership

structure that directs the resources of the field to a limited number of the members of the field. The conflict between the membership control practices of the different infrastructure elements can be theorised to reflect the low consistency in the member evaluation criteria among the governing actors of the field. As such, some of the infrastructure elements can become more prominent in controlling the members of the field. While the field overall exhibits divergence-enabling low elaboration and low coherence, the few infrastructure actors in membership control positions can, in fact, impose much stricter isomorphic pressure on the members. In the startup-subfield, the strong isomorphic pressures can be theorised to manifest, for example, in the infrastructure elements that control the financial capital of the field in enabling only particular organisational templates of entrepreneurship while constraining others.

The findings thus suggest that, unlike previously theorised, mature fields with highly elaborated infrastructure may offer more scope for deviant action. In contrast, emergent fields that evince low elaboration of the institutional infrastructure and low coherence of it may also exhibit a high concentration of infrastructural control on a few elements of the infrastructure. This may associate with strong isomorphic pressure in the field and, as such, offer limited scope for deviant action.

> *Proposition 3a. Fields with emergent infrastructure may exhibit a high concentration of the infrastructure roles on a few elements of the infrastructure.*
>
> *Proposition 3b. Fields with a high concentration of the infrastructure roles on a few elements of the infrastructure may impose strong isomorphic pressure on the actors of the field.*

5.5.3 Implications

The findings of the study demonstrate the important role that fields and the institutional infrastructure of the fields may take in the emergence of entrepreneurial ventures. In this case, ventures that originated from shared origins into a common entrepreneurial system adopted two alternative subfields within the entrepreneurial system. The two subfields not only imposed different goals and orienting principles on the ventures but also offered heterogeneous scope for divergence. As such, the findings contribute to both the literatures of entrepreneurship and institutional theory.

For institutional theory, the study offers a rare comparative analysis of two subfields. In this study, the entrepreneurial system split into two subfields, one of which overlapped with a non-entrepreneurial field. The study thus also demonstrates how the subfields of a field may reflect segments that overlap other fields.

The study further elaborates the elements of the institutional infrastructure and challenges the previously-made assertion regarding mature fields imposing stronger isomorphic pressures on the actors of the field than emerging fields. In this, one of the subfields evinced low elaboration of the institutional infrastructure. The subfield, however, also exhibited a high concentration of the infrastructure roles on few infrastructure elements. As such, the field imposed stricter member control on the actors of the field and offered fewer opportunities for deviation than the second, more mature subfield.

Finally, the study encourages inquiry into the heterogeneity of the peripheral actors of institutional fields. In fields that split into subfields or overlap with other fields, some of the peripheral actors may occupy simultaneous positions in two fields that may offer them superior access to resources and offer them opportunities for institutional entrepreneurship.

For the scholars of entrepreneurship, the study highlights the importance of considering the systems of entrepreneurship as systems of meaning. While the current literature has recognised ecosystems to form around a single shared goal, the full implications of this have only rarely been elaborated in the extant literature of entrepreneurship. The foregrounding of the goals, identities and orienting principles of entrepreneurial systems offers new avenues for the study of the critical ingredients of growth entrepreneurship. More importantly, it encourages theorisation of the plurality of entrepreneurship and offers a promise of improved understanding of any unintended outcomes of the systems of entrepreneurship.

Beyond academia, the study offers guidance for the entrepreneurial policy audience. The study highlights how entrepreneurial systems may enable and constrain the plurality of entrepreneurial forms. Entrepreneurial systems designed to encourage high-risk growth entrepreneurship may not provide the required infrastructure support for other forms of venturing. At the same time, systems with overlapping infrastructure elements with incumbent industries may offer alternative routes to entrepreneurial growth. While entrepreneurship can offer a promising option for employees who face redundancy from wage-employment positions, these cases are likely to call for a broader range of infrastructure support than the systems that are tuned to support high-risk, fast-growth startup models.

5.6 Conclusions

This first empirical study of the thesis explored the questions of entrepreneurial actor emergence in the context of the institutional infrastructure. The findings of the study highlighted the ventures of the thesis to have adopted positions in two alternative subfields of the entrepreneurial system. The findings implied the enterprise-subfield to

offer more scope for different organisational templates by supporting both ventures that adopted a scalability-oriented model and those that opted for a stability-oriented model. The startup-subfield, in contrast, seemingly supported only the scalability-oriented ventures. In order to explore closer the variation in the viability of the ventures in the two subfields, I next consider how the capital of the ventures relates to their emergence in the entrepreneurial system.

6. ACTOR EMERGENCE AND CAPITAL

6.1 Introduction

This thesis was motivated by the desire to explore the role that context may assume in influencing the entrepreneurial development of ventures that originate from a corporate redundancy programme. The thesis specifically sought to explore how institutional contexts may influence the development of post-redundancy entrepreneurial ventures into viable actors of their field. The first empirical chapter of the thesis approached the research question of the thesis by foregrounding the role of the institutional infrastructure in the nascent actor emergence. The findings of this study proposed the group of ventures within the studied region to have positioned themselves into two subfields within the entrepreneurial system. While the subfields were found to differ in some elements of the institutional infrastructure and exhibit divergence in the goals, identities and orienting principles, they were also observed to share some elements of the institutional infrastructure, most notably the regulatory elements. The emergence of the studied ventures was found to reflect the variations identified between the subfields. The enterprise-subfield was theorised to overlap an incumbent industry field and, as such, to benefit from the infrastructure of it. This field was also found to allow for more scope for plurality among the entrepreneurial ventures than the startup-subfield did. The startup-subfield that rested on the orienting principles of idea commercialisation and risk financing also seemingly promoted fast turnaround of ventures which offered less scope for divergence from the prioritised organisational models.

The variations in the infrastructure engagements, goals, identities and orienting principles that the ventures in the two fields adopted implied not only a divergence in how the ventures engaged with their context but also in how they utilised their connections, the skills, and the cultural understandings that they had gained during their corporate employment. The second empirical study thus sought to explore this in more detail.

Actors in entrepreneurial communities are known to rely, to a significant extent, on resources that arise from their community (Baker & Welter, 2017; Zahra & Wright, 2011). Equally, the dynamism of the community is known to rely on it is actors (Garud, Gehman, & Giuliani, 2014). Given the collective, incremental and cumulative nature of innovation, new forms of distributed organising, enabled by technological advances, are expected to offer much promise for entrepreneurship and innovation (Lusch & Nambisan, 2015). The accounts of the benefits of distributed innovation acknowledge the advantages that the combination of heterogeneous skills, capabilities and resources across communal, organisational and geographic boundaries may offer (Chiles, Tuggle, McMullen, Bierman, & Greening, 2010; Yoo, Boland Jr, Lyytinen, & Majchrzak, 2012). Few of these accounts, however, foreground questions regarding how the social order of different communities may enable or constrain the new resource combinations within them (West & O'Mahony, 2008).

In order to explore the scope that different contexts may offer for resource combinations, this second study complemented the first by querying *how post-redundancy ventures' strategies of repurposing and recombining previously-accumulated capital with any newly-acquired one influence their emergence as viable actors of the entrepreneurial field.* As in the first study, I utilised the interview data of

the thesis together with the archival dataset and adopted a multiple comparative case design.

I conceptualised the entrepreneurial community to reflect the social order of institutional fields, as I had already done in the first study. In order to explore the resource strategies within a field and across different categories of resources, I conceptualised resources as capital. I focused on capital in four of its forms, namely financial, human, cultural and social. Capital is defined as accumulated human labour that evinces both in material and in embodied forms (Bourdieu, 1986: 15). It takes time to accumulate. It can reproduce either in an identical or in an expanded form. The reproduction materialises in and through an exchange (Bourdieu, 1986: 15). Capital only exists and functions in relation to a social context or a field (Bourdieu & Wacquant, 1992), yet in the right circumstances, any one of the forms of capital can be converted to one of the other forms (Bourdieu, 1986). Thus cultural capital may, for example, be converted to financial capital or social capital to human capital. Capital offers a useful lens for the study of entrepreneurial actor emergence in context as entrepreneurs are known to rely both on the innovative repurposing of prior resource and on the skilful acquisition of new community resources.

While the first study proposed the ex-Nokia ventures to have positioned themselves into two subfields within the entrepreneurial system, I did not initiate this research based on that finding but rather pulled all the ventures back together into a single group. This ensured that no prejudice with regards to the ventures' positions entered the analysis. A grouping of two alternative resource strategies did emerge from this analysis. This closely reflected the separation of the ventures into startups and enterprises as identified in the first study. Two alternative patterns of resource breadth usage also emerged.

These closely reflected the split of the ventures into the groups of scalability- and stability-orientations.

The findings of the study suggested there to exist notable variation in the capital strategies of the ventures in the different subfields. The ventures in the enterprise-subfield suggested relying more, on average, on repurposing their prior capital while their peers in the startup-subfield tended to prioritise the acquisition of new resources. In both subfields, the groups of scalability- and stability-orientation could again be observed based on a variation in the capital strategies. While the scalability-oriented ventures in both fields sought to utilise a range of the different forms of capital, the stability-oriented venture tended to rely on a more intense usage of a narrower range of the capital forms.

The findings foreground the importance of context in questions of capital and highlight how, in entrepreneurship, it is not only the accumulated but also the use-value of the previously-accumulated capital that influences entrepreneurial actor emergence. As such, the findings contribute to the literatures both in organisational institutionalism and in entrepreneurship. For the institutional theory, the findings highlight how similar field positions may vary across fields. For the literature of entrepreneurship, the findings contribute towards the view of capital not functioning equally across entrepreneurial systems. Finally, for policy development, the study highlights the importance of entrepreneurial support organisations assisting previously-accumulated capital conversion alongside any capital acquisition programmes.

The remainder of the chapter is divided into four sections. I first discuss the theoretical foundations of entrepreneurial capital in social contexts. I then briefly outline the data and analytic procedures utilised in the study. For a more elaborate discussion of the data and research methods of this thesis, please refer to chapter 3. I then present the findings

of this study in detail in section four of this chapter. I conclude with a discussion and conclusions that expand on the findings by outlining the implications for the theorisation of entrepreneurs' resource strategies and actor positions within institutional fields.

6.2 Theoretical foundations

In this section, I review the theoretical foundations of entrepreneurial capital in institutional fields that inform my research question development. I first discuss the different forms of capital and then relate the concepts of fields and capital to the literature, discussing bricolage as an integral part of entrepreneurial resource strategies. While this study is underpinned by the theory of fields, I do not elaborate on this given that fields have been extensively discussed in chapter 2.

6.2.1 Capital

Capital is accumulated human labour (Bourdieu, 1986). As such, it takes time to accrue but once in existence, can reproduce and expand both in material and embodied form (Bourdieu, 1986). Given that both the accumulation of capital in labour and the expansion of it are social affairs, capital is said to only exist and function in relation to the social context or the field (Bourdieu & Wacquant, 1992). In fields, capital is theorised to equate to the relative position of the actors within the field and, as such, to power (Bourdieu, 1986; Wacquant, 1989).

The literature outlines a number of different categories of capital (see for example: Davidsson & Honig, 2003; Nahapiet & Ghoshal, 1998; Pret, Shaw, & Drakopoulou Dodd, 2016). Here I adopt the four categories that have conceptually been shown as

mutually exclusive namely economic, human, cultural and social. Each one of these different forms of capital may be converted from one to another of forms (Bourdieu, 1986). The convertibility of the capital is, however, not a given. Rather the conversion is always context dependent (Bourdieu, 1986). The conversion may also at times be subject to an 'exchange rate' that expands or diminishes the capital (Bourdieu & Wacquant, 1992). This implies that in some circumstances the conversion may not be feasible at all.

Of the four forms, the economic or financial capital as human labour accumulated in the monetary form has the clearest definition and boundaries. Given the regularly acute financing needs of entrepreneurial ventures, financial capital is actively discussed in the entrepreneurship literature (Cassar, 2004; King & Levine, 1993). Much of the extant literature explores the process of financial capital acquisition, for example, how entrepreneurs gain financing (Kaplan & Strömberg, 2004; Wang, 2016) or how different types of entrepreneurial assistance organisations may support the search for financial capital (Pauwels et al., 2016; Smith & Hannigan, 2015). While these studies recognise the financial capital acquisition involving a conversion into the financial form of the prior human, cultural or social capital of the venture (Cope, Cave, & Eccles, 2004; Santana, Hoover, & Vengadasubbu, 2017), contextual factors are seldom explicitly acknowledged.

Human capital is generally considered to consist of education, knowledge and skills (Coleman, 1988; Schultz, 1961). In the empirical literature, accumulated human capital has been associated with general organisational outcomes (Pennings & Wezel, 2007), innovativeness (Bayon, Lafuente, & Vaillant, 2016; Zucker, Darby, & Brewer, 1998) and performance (for example Carpenter, Sanders, & Gregersen, 2001; Hitt, Bierman, Shimizu, & Kochhar, 2001). Entrepreneurs have particularly been shown to rely on

human capital in opportunity recognition (Marvel, Davis, & Sproul, 2016), in venture emergence (Estrin, Mickiewicz, & Stephan, 2016; Gimeno, Folta, Cooper, & Woo, 1997) and in ensuring profitable outcomes (Bates, 1990; Unger, Rauch, Frese, & Rosenbusch, 2011). As such, the benefits of human capital in entrepreneurship have been related to the conversion of it into all the other three forms of capital.

Education and skill are sometimes considered as cultural rather than human capital (Bourdieu, 1986: 241). In this thesis, I, however, adopt the conceptualisation of cultural capital that clearly separates it from the human capital and considers it to consist of formal knowledge, preferences, and behaviours, that signal inclusion in and exclusion from a membership within a community (Bourdieu, 1986; Lamont & Lareau, 1988). Cultural capital is closely linked to symbolic capital in that both relate to the processes of identification, socialisation and legitimation within a social group (Pret et al., 2016; Throsby, 1999). In entrepreneurship, cultural capital has specifically been shown to associate with improved access to community resources, and, as such, to the conversion of it to the other forms (De Clercq & Voronov, 2009; Zott & Huy, 2007). Cultural capital has equally been related to entrepreneurial survival (Hechavarria & Reynolds, 2009).

Finally, social capital is defined as actual and potential resources and obligations that arise from membership of a group (Bourdieu, 1986). In the empirical literature, social capital is largely seen as arising from particular positions within a social network (Adler & Kwon, 2002; Burt, 2000; Kilduff & Brass, 2010). An extensive range of studies have shown social capital to associate with legitimacy (Burt, 1997), innovation (Burt, 2004; Tsai & Ghoshal, 1998), group effectiveness (Oh, Chung, & Labianca, 2004), competitiveness (Gabbay & Zuckerman, 1998) and superior access to information (Inkpen & Tsang, 2005; Kale et al., 2000; Seibert, Kraimer, & Liden, 2001). Among

entrepreneurs, social capital has specifically been linked to innovation (Audia et al., 2006), legitimacy (Ahuja, 2000; Stuart, Hoang, & Hybels, 1999), resource access (Uzzi, 1999), time to first profit (Davidsson & Honig, 2003) as well as survival (Stam et al., 2014; Watson, 2007).

While the conceptualisation of the different forms of capital in the literature regularly implicitly assumes any form of capital to hold universal value, the original conceptualisation of capital as a representation of power within a field stressed that capital only "exists and functions in relation to a field" (Bourdieu, 1985; Bourdieu & Wacquant, 1992: 101). As such, while capital accumulated in one field according to the orienting principles and hierarchy of that field may carry use-value beyond the field, it may well be subject to an exchange rate that increases or decreases the use-value of the capital in another context. The exchange rate mechanism can be expected to be of particular significance in cases in which the holder of the capital seeks to transform one form of capital to another (Bourdieu, 1986). While all forms of capital are transposable, the mechanisms and costs of transpositions are not universal but rather field specific (Bourdieu, 1986; Grenfell, 2014).

6.2.2 Resources of entrepreneurship

Much of contemporary strategic management relies on the basic tenet of the competitiveness of companies arising from the value and rarity of their resources (Barney, 1991; Barney, Wright, & Ketchen Jr, 2001). Entrepreneurship is, however, specifically acknowledged to engage in the pursuit of opportunities regardless of the resources under control (Baker & Welter, 2017; Stevenson & Jarillo, 1990). As such, entrepreneurial resource strategies are proposed to involve both the search for new, external resources and active repurposing of old, previously-acquired ones (Alvarez &

Busenitz, 2001; Baker & Nelson, 2003). Bricolage, as making do with resources at hand by repurposing and recombining these for the demands of the new circumstances (Baker & Nelson, 2003; Lévi-Strauss, 1966), is thus broadly considered as an instrumental element of entrepreneurial resource repertoires (see for example: Perkmann & Spicer, 2014).

Conceptually the process of bricolage aligns closely with that of capital transformation. Bricolage as a process involving both retrospective, in terms of the bricoleur needing to consider what has been accumulated previously, and prospective, in terms of the discovery of the previously acquired combining into something new (Lévi-Strauss, 1966: 18), reflects the transposition of a form of capital into another (Bourdieu, 1986). While some accounts of bricolage outline this as a process of recombination rather than transformation, the outcome is clearly something that did not exist prior to the process (Duymedjian & Rüling, 2010). In both cases, there is recognition of the emergence of a resource that was not in existence in its extant form prior to the process of bricolage or transposition taking place. In both cases, the extant resources or capital also carry the potential for renewal and expansion. Finally, in both cases, there is a recognition that the range of possible transformations is limited by the history of the resources (Bourdieu, 1986; Lévi-Strauss, 1966). The original conceptualisation of bricolage makes explicit reference to the outcome being a compromise rather than a purpose-built tool (Lévi-Strauss, 1966). This closely reflects the acknowledgement of capital as field-specific and highlights the potential change in value when the capital of one field is put to use or transposed into a new field.

The reference to bricolage and capital transposition being limited by the history of the resource reflects the social nature of resources. Bricolage is sometimes referred to as a process of breaking the socially-constructed constraints of the resource (Baker &

Nelson, 2003). In these accounts, it is the actors' willingness to break the existing practices and norms in order to reframe the prior resources that renews and expands their potential (Baker & Nelson, 2003). Few empirical studies have, however, explored the scope that actors in different contexts may have for engaging in the social norm-breaking as part of the process of bricolage. The theorisation of the capital transpositions seems to imply that the opportunities and costs associated with the norm-breaking bricolage may be field specific.

All in all, while entrepreneurs can clearly be expected to both repurpose their previously-accumulated resources to better suit the new circumstance and to seek new resources of a more congruent nature, the boundaries of these activities are not well understood in situations that involve the entrepreneur traversing institutional field boundaries. The remainder of the paper will refer to resources and capital interchangeably.

6.3 Data and methods

Context sensitivity of capital and its influence on entrepreneurial actor emergence has, to date, been explored rarely in the empirical literature. In a reflection of this, I adopted an inductive research approach and multiple case study design also for this second study of the thesis (Stake, 1995; Yin, 2009). I utilised the theoretical coding of the interview and archival data in the data analysis (Eisenhardt, 1989; Miles et al., 2014).

As was the case with the first study, I moved between the levels of analysis in exploring both the founders of the ventures and the ventures themselves (Bartlett & Vavrus, 2017). I strived not to separate my units of analysis, the entrepreneurial ventures, from their context but rather to trace the developmental paths of the ventures within their social landscape.

6.3.1 Data

This second study of the thesis utilised the same interview data and archival dataset as the first empirical study. In this case, I included all of the interviewed ventures into the analysis right from the start, as the variations across the regional contexts were less relevant. For more details of the data and the data collection procedures, please refer to chapter 3.

6.3.2 Analytic Process

The analysis of the study proceeded in three main phases. The first one of these explored the data with a focus on the ventures' resource practices. The second phase then sought patterns among the different strategies and developed detailed profiles of the strategy groupings. At the third and final stage, I compared and contrasted the field and strategic-orientation groupings of the first study with the ones that emerged from this analysis.

At the beginning of the first phase, I initiated the search for the research practices of the ventures with a start code list (Miles et al., 2014). The start code list included a range of search terms under each of the four categories of capital. Thus I, for example, coded under financial capital any sections that referred to the Nokia grant or an angel investment. Equally, references to education or entrepreneurial training were coded under human capital. Working practices, such as teamwork, or material items, such as a business plan or a prototype, were coded as cultural capital. Finally, social contacts and networks were coded as social capital. While this first run of the first phase produced a rich library of resource statements, it offered little insight into the actual strategies employed in relation to them.

At the second stage of the first phase, I then employed parallel coding and sought to identify whether the capital originated from prior education and employment experiences or whether it was something that had been acquired during the ventures' operations. I initiated the coding with a start list that identified capital originating from prior experiences as 'previously accumulated' and the capital originating from the entrepreneurial community as 'newly acquired'. This coding clearly included both temporal and spatial elements, which presented a risk of confusion. For example, should the further development of prior educational skills at a university during the entrepreneurship period be considered as a part of education or entrepreneurship resources? I prioritised the topic over temporality in these aspects but I also sought to acknowledge the newness of the capital. In the case of further education, for example, I coded further education in the same area as the founder's original professional education as the previously-acquired human capital 'expanded'. Education in a new area was coded as newly-acquired human capital. I also ended up adding a third code that captured the various support programmes from which the ventures had secured resources during their transition into entrepreneurship. This second level of parallel coding thus captured the various forms of capital against the contextual setting from which they were considered to have arisen.

Not all of the founders' resource references referred to the actual resources acquired or utilised. Rather, the founders made regular observations both of resources missing and of hearsay. At the third phase of the first stage of the analysis, I thus sought to separate the observations and acknowledgements of insufficient resources from the statements referring to the actual resource usage or acquisition. This ensured that the contextual map of the different forms of capital could be filtered to reflect the capital strategies that had actually been implemented. Finally, to add more depth to the capital strategies, I used evaluation coding to assign a high-level judgement of merit to the resource

statement (Saldaña, 2015). This gave a better feel for whether the founders considered a particular capital to have been of worth or not.

At all times during the first stage, I kept referring back to the literature as well as reviewing and recoding the data, both to ensure that the capital categories remained distinct and clear and also so that I wasn't forcing the data into the categories. Thus, some of the codes, such as the transition support programme as an origin of the resources, emerged from the data. Table 6.1 summarises the high-level codes used during the analysis.

The second phase focused, firstly, on searching for patterns within the capital map produced during the first stage and secondly, on developing detailed profiles of the ventures in each of the capital strategy groups. At this stage, my attention centred on the comparison between the venture cases. I sought to identify any similarities and differences among the cases to see whether they would form identifiable groups. By grouping cases of similar resource patterns on two dimensions, namely on the focal origin of the resources and on the range of resource categories engaged with, it was possible to separate the interview pool of the ventures into two groups, each of which contained two subgroups. By studying all of the collected data for each of the groups it was possible to compile profiles of each of the groups identified.

Having identified a similar division into two main groups and two subgroups in the first empirical study of the thesis, at the third phase, I compared and contrasted the groupings that had emerged from the two individual studies. In many cases the groupings reflected each other closely, this helped to deepen the case profiles. In cases in which the patterns of the two studies diverged, I returned to the data to ensure that data had been correctly coded, and if this was the case, to seek to better understand the underlying dynamics of the case that might explain the differing findings between the

two studies. In the findings reported in this thesis, the groupings in chapter 5 and those of this chapter are aligned.

Table 6.1 Coding structure.

First cycle. Capital strategies.				
Phase A1: Capital		**Phase A2: Origins**	**Phase A3: Origins**	**Phase A4: evaluation**
Economic*		***Previously****	***Experience***	***Positive***
Money	Funding, capital, financial backing, money, loan, euros	Prior employment, Nokia, professional education	Personal event, lived through	Good experience, beneficial impact
Human*		***Newly****	***Lack of experience***	***Neutral***
What	Course, training, education, university, book knowledge, technology, idea	During venture operations	Personal event, not lived through	Experience or observation without experience/impact assessment
Cultural*		***During transition***	***Observation***	***Negative***
How	Membership, team, alone; planning/doing, practises: lean, bricolage, pivot, test system, product/idea	Nokia accelerator, at support functions related to the accelerator	General statement, someone else's experience	Bad experience, negative impact
Social*				
Who	Social network, own/Nokia/entrepreneurial, networking			

Second cycle. Capital strategy patterns		
Phase B1: Origin weighting		**Phase B2: Range Weighting**
Group A		***Group i***
	Resources newly acquired in the entrepreneurial community. Resources new acquired at the transition support programmes.	Several of the different categories of resources activated.
Group B		***Group j***
	Resources previously accumulated in the industry community.	Focused use of a narrow range of resources activated.

Start list codes indicated with *.

6.4 Findings

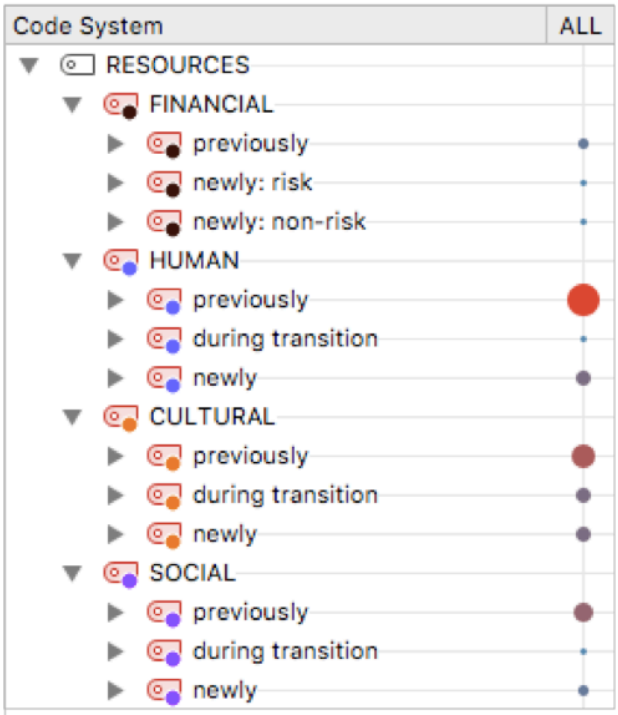
6.4.1 Accumulated and acquired capital

The interview schedule was structured to encourage the venture founders to discuss how their prior experiences in education, in industry and at Nokia, in addition to their new experiences in entrepreneurship, had influenced the developmental paths of their ventures. While the questions did not probe the founders directly about the resources that they had utilised in setting up and developing their ventures, the majority of the founders made regular references both to the resources that the ventures had newly acquired and to the resources that the founders had previously accumulated and that had come to be put to new uses at the venture.

Figure 6.1 shows visually the relative prominence of the references to each of the four forms of capital, namely human, cultural, social and financial, by their origin across all of the interviews[1]. Across the four categories of capital, the founders tended to linger most on human capital. Given the background of all of the venture founders in professional roles at Nokia, this was not unexpected. The founders were, in general, highly educated with the majority possessing a university degree and several having acquired more than one degree (see Table 5.8 in chapter five). The majority of the founders also had lengthy professional careers behind them in high technology and at a corporation that valued training and, during its prime, invested actively in the professional development of its staff.

[1] Please note that the visual map is generated based on the codes rather than the raw interview data. As such, it provides a helpful view into the prominent themes that the researcher has picked up in the data and can guide the next stage of the analysis. The map should, in this study, not be used as a 'final product' of the analysis as the coding was not systematised to an extent that would allow meaningful analysis of the differences in the relative weights of the topics.

Figure 6.1 Comparative occurrences of the different forms of capital in the interviews.



The size of the dot in the chart represents the relative prominence of the references to each of the four forms of capital according to their origins across all of the resource categories and all of the ventures.

Please note that while the visual analysis of relative prominences can be helpful in directing the further analysis of the data, the weights as such should be read with caution as they are not context sensitive and do not, as such, communicate any additional information beyond the presence of a coded utterance in the interview script.

i. Human capital

In discussing human capital, many of the founders spoke vividly both about the varied experiences that their time at Nokia had offered them and about how these skills had come to be of use in entrepreneurship.

> *We have our strengths and we also understand our limitations. We may not understand [the industry of our customer], we admit that, but we can say that we have, for the last 20 years been constantly right at the forefront of high tech development, right where it has happened and we would like to bring this experience and understanding to a more traditional industry area. [...] We [may only] have a couple of employees and this is really just a hot dog stall, so there is no reason to brag. Yet, in reality, each one of us has fifteen years of experience, on average, and have been delivering the most sophisticated technical solutions in the world. We can walk into any company and offer our expertise. (Roky Oy)*

> *[At Nokia] we had to engage regularly across different interfaces. Those experiences of diplomatic engagement have been very useful as we learned to work with very diverse stakeholders to get them to talk to each other. [...] That has been one of the most significant legacies of Nokia for us. (Kosy Oy)*

> *I liked the leadership and project management work [at Nokia]. I think those have had the most significant influence on the way that I work. In fact, I have been commended for it [in entrepreneurship]. The thorough way of working at Nokia. Even if there were mistakes made there, at least the thorough follow-up of the undertakings and projects was truly professional. That has perhaps given me the most ammunition for entrepreneurship. (Susi Oy)*

While the Nokia experience was seen to offer a strong base for the ventures, the founders also regularly referred to their lack of experience in sales, marketing and entrepreneurial business management. Many had sought to address these shortcomings either at the shorter more-targeted training programmes offered during the accelerator programme at Nokia or later by enrolling in one of the longer and broader business programmes at a university. In some cases, the founders had returned to the university to refresh and expand their prior professional training.

> *[On lack of human capital]*
> *In general, the lack of knowledge when you start a new business, that is the first big issue. Unrealistic expectations and the lack of knowledge. (Vano Oy)*
>
> *We had no idea of how businesses get founded and run. (Roku Oy)*
>
> *[On training sought]*
> *We attended the startup training [at Nokia] and I also joined an entrepreneurship course that was run by the regional accelerator. Training is, of course, always helpful but maybe one can get by also with less. Even a one week's intensive course can sometimes help more or be enough to pick up the couple of points that every nascent entrepreneur should take into account. (Lamo Oy)*
>
> *After leaving Nokia I enrolled in a business management and leadership programme at the university. That covered more, and pretty well, topics that one needs to know in running a business. That was very useful training. (Koso Oy)*

In entrepreneurship, the acquisition of new human capital was broadly recognised to have taken place in the day-to-day running of the business. Many of the founders actively referred to the lessons learned in operating their nascent ventures. While some

of the learning had taken place through unexpected turns in the operations of the venture, the founders also spoke about having actively sought work and projects that would enable them to improve their competences on the run.

> *We have worked on all sorts of projects that no one had done before and so we have learned that these kinds of things do go ahead and this is how it works. (Hito Oy)*
>
> *We noticed that one should know these things and so we started combining stuff in a kind of competence development project. (Susa Oy, founder B)*

All in all, while the prior experience was strongly present in the ventures' human capital strategies, so were the lessons learned both in training and in the day-to-day running of the ventures.

ii. Cultural capital

The accounts of cultural capital similarly reflected a strong presence of the lessons learned at Nokia. Some of the ventures referred to the benefits of the cultural practices of Nokia in entrepreneurship. In many cases, however, the ventures made explicit statements regarding having either left the prior practices behind or having adapted these to better suit the circumstances of a nascent entrepreneurial venture.

> *We brought from Nokia, for example, the way that we develop the product with the customer. Nokia was criticised a lot for this and they made many changes. We learned a lot there and brought it over here immediately. [...] We brought that and it has been very valuable. (Roka Oy)*
>
> *Nokia gave us insight into how certain things should not be done. In other words, there needs to be some kind of process and some kind of working practices but now we have a chance to adjust them to fit our case. One guy said a couple of years ago that it is good that in a small firm one can straighten the curves. We don't really straighten the curves in our company, as we don't have any. We do things, of course, in a different way [to the large corporation] and have straightforward processes that we have cut down. We can do the work much quicker this way. (Roki Oy)*

> *Nokia and the culture of a large corporation have functioned as cautionary examples. We have aimed to avoid those. (Roke Oy, Founder A)*

New cultural aspects that the ventures referred to most commonly related to experimentation and specifically to the Lean philosophy in startup entrepreneurship. While some of the founders referred to the fact that Nokia utilised the Agile philosophy in its product development programmes, both the Nokia accelerator and the regional accelerator had taught the Lean philosophy and, as such, this came through in the interviews notably more forcefully.

> *'It was really good of Nokia to support entrepreneurship, as through the [accelerator programme] a seed of a culture of experimentation, of entrepreneurship and of startups got sown in those regions in which the programme ran. (Roki Oy)*

> *There's the Lean method. I attended those pieces of training and found that it made a lot of sense. So you develop in a very light fashion a minimum viable product that you then test to see if the idea works. (Joku Oy)*

> *There was a lot of excitement about Lean and Agile and minimum viable product. Of course, we also read all the books, went through all the courses and did the falling down in the revival meetings. (Kosu Oy)*

While the support programmes took a prominent role in enabling the acquisition of new cultural capital, the founders also talked about how new cultural capital has kept accumulating in the daily running of the ventures. In referring to the ventures' day-to-day operations, the founders spoke about the new cultural practices most prominently in areas such as collaboration, raising financing and developing the cultural understanding of their product in the marketplace.

> *We have had to learn the way to work, what brings the value to the customer, what has to be done by us and what can be done in collaboration and in partnerships. [We have adopted] a very open approach. In a large corporation, everything had to be built internally. Ownership of the technology was incredibly important. This is not the startup [way]. When one has to get the first product ready, that [technology ownership] is not at all the first thing. (Hite Oy)*

> *One lesson learned [in pitching] has been not to include too much content in the presentation. […] Just put it very simply so that anybody can find the point. You can never overestimate people's ability to absorb. (Kosi Oy)*

In summary, the accounts relating to cultural capital hinted at a variation among the ventures in terms of their cultural capital strategies. While some of the ventures considered their Nokia experiences to have equipped them well with cultural resources that could, at times, be updated for the new purposes, others showed a stronger preference for new cultural capital.

iii. Social capital

In social capital, the relative balance of the different sources largely reflected that of cultural capital. Nokia connections were actively present, with the Nokia network, at times, providing access to customers, suppliers and peer support.

> *[Customers]*
> *The first customers came through my closest colleagues and other Nokia people. They were the first customers and that's how it got going. (Susu Oy)*
>
> *We can take any company and check who do we know there and there is always someone we know. We always get an inside quote of 'yes, these are true doers, these are skilled and knowledgeable' and that helps to get us into the conversation. (Roke Oy)*
>
> *[Suppliers]*
> *In product development, for example, we had direct contacts with some suppliers of technology. As a new, small firm we have had access to high tech that some other firms surely would not have been able [to access]. This worked through our network and so it has been also with our production. (Hito Oy)*
>
> *[Peer support]*
> *Every time we had to check something regarding the technology we could always find someone who knew the answer. In the technical aspects, our network helped enormously. (Hite Oy)*

Once again there was variation among the ventures, with some finding new networks more beneficial. The connections generated among the transition period came through in some accounts although not as strongly as the community that was identified around the regional accelerator in the first study would have led to believe. In many cases, while the founders acknowledged the networking opportunities that the support programmes had offered, they also felt that these had only opened up access to networks that served a particular, limited purpose.

> *Almost all of our contacts are new. The regional accelerator community, for example. The Nokia contacts have not really been of use in the end. (Kosi Oy)*
>
> *The startup training provided an easy-to-access network of professional service contacts but once we actually got to the running of the business, the first door openings [to customers] have, in practice, come through the network from our college days. (Roky Oy)*
>
> *Meeting different people has been very important. Although we have met a huge number of people, not that many sales have come through them. Still, these interactions have been the way that we have progressed. Not one of the meetings has gone to waste as we have learnt from every single one. (Roku Oy)*
>
> *The startup accelerator was really good for networking and for running into people but beyond hanging around there and drinking free coffee the support was quite marginal.*

In the majority of the cases, the beneficial social capital tended to arise from previously created contacts. In some of the cases, the networks that the ventures had generated in entrepreneurship had, however, proven to be equally significant.

> *I didn't really network through the regional accelerators. More through my contacts among the hobbyists and their associations. It is through these that we have advertised and campaigned. (Lamo Oy)*
>
> *Funding would have been impossible without the network. In practice, it has come through all sorts of events. We got a chance to go and talk to all sorts of organisations. That's how it has got going. (Roki Oy)*

iv. Financial capital

Finally, while money and funds were prominently present in the interviews, a minority of the ventures had gone for external risk financing. The typical route towards increased funds had been the Nokia-backed loan as a first step, a Business Finland grant as a second, a Business Finland or Finnvera loan as a third and, if further funds were raised, an angel or crowd-sourced risk financing round.

> *[Nokia funding]*
> *'My firm would not have got going without the support and the personal grant. I would not have had any other choice but to register as unemployed. (Joki Oy)*
>
> *[Funding during the transition]*
> *There was a beauty contest of a couple of days of sparring and pitching and other stuff. We participated again but at that stage of the beauty contest [the money] did not hit us. It was a fair game. (Kosu Oy)*
>
> *[Funding of the day-to-day entrepreneurship]*
> *Finnvera is not interested unless we are over 10 million [Euros in size]. At the moment, being on our way there, we are facing a tough situation. (Roke Oy)*

While the Finnish government is currently actively supporting the development of a venture capital market in Finland, these efforts were at a very early stage during the time of the Nokia redundancy programme. Particularly given the detrimental effect that the Nokia restructuring had on the Finnish economy overall, it is not surprising to find such a low-risk financing rate among the ex-Nokia ventures. This is, however, to some extent in discord with the orienting principles of the startup model that was prominently present among some the ventures analysed for the previous study (for more details please see Chapter 5).

6.4.2 Capital conversion patterns

While the venture accounts gave a clear sense of the significance of the capital that the founders had previously acquired in education and employment, the universal convertibility of the capital was not as clear based on the interview data. Indeed, both the founders themselves and the interviewees of the regional economic governance office reflected on the Nokia experience not always equipping the founders for entry into entrepreneurship in the best possible way.

> *When one comes from a technology firm there are two basic questions: who are the customers and how much are they willing to pay? These have not always been thought through when kicking off a development that may be very nice technically. (Economic actor KHE)*
>
> *There were some engineers who worked on a content project but did not consume the content themselves. They had no sense of that culture that they tried to explore. It's quite incredible. It is as if we were developing a car but we didn't drive one, didn't have drivers' licences and were, in fact, not even interested in cars. There is a big conflict in that. As if it was possible for anyone to just to get working and be equally capable. (Vano Oy)*
>
> *Many people at Nokia just stayed put, arrived in the morning and left in the afternoon to pick up the kids from the kindergarten. That was it. They had not seen the world outside of Nokia. Had maybe been to the city centre last time six months ago. (Joki Oy)*
>
> *If I make a slightly cheeky point, many of my peers had been totally bottled up happily in the big corporation. I am very fond of them, they are extremely capable guys. (Roky Oy)*
>
> *Equally, there were instances in which the founders had come across denunciation of ex-Nokia personnel. Some people have decided that all Nokians are arrogant oafs. It has been in the papers many times. (Vana Oy)*
>
> *Internationally Nokia is still held in high regard. In Finland, ex-Nokians are spat at, kind of 'what about you losers?' When you go abroad [businesses] are really interested and appreciative. (Roka Oy)*

Against this background, it seemed likely that the capital accumulated at Nokia would not be convertible equally in all circumstances. Indeed, references to the conversion of

previously-acquired human and cultural capital to other forms of capital in the new context included both successes and failures (Table 6.2).

Table 6.2 Conversions from the previously-acquired capital.

Conversion From	To	Example	Exchange rate
Human	Social	[selling service to industry] On most of the days the selling just does not feel natural. There we are really in our discomfort zone. [...] Yet, in reality we have fifteen years experience among us on average and have been delivering the most sophisticated technical solutions in the world. We can walk into any company and offer our expertise. *(Roky Oy)*	+
Accumulated knowledge enabling the venture to access new customer organisations.			
Human	Cultural	[selling to consumers] Nokia gave me a lot of transferrable skills and courage. Having been part of successful projects that had started from zero and still hit the goal, it provided good examples, practise and experience. *(Lami Oy)*	+
Professional knowledge converting to ability to engage with new customers.			
Human	Cultural	[reviewing the business plan at the regional accelerator] It was very clear to me what I would do and that I had a good package to offer.[...] But it just didn't seem to be enough at all. Rather they wanted to include all sorts of fluff around it, sort of 'if you had this and this". But I don't, I do not sing or dance or draw or make videos. *(Suso Oy)*	-
Professional knowledge not conveying the message of promise to the startup community.			
Human	Cultural	[selling the product idea to investors] Despite attempts, we could not secure the funding for the next step of the development. Let's say, it was probably because we didn't talk in large enough numbers or did not know how to market it. We are, after all, in our team all people who understand technology. We have only just learned that with investors it is better to point at the potential than demonstrate the product. *(Kosi Oy)*	-
Design knowledge not conveying the message of promise to the finance community.			
Human	Cultural	[selling to industry] Maybe the person with whom we spoke did not understand what we tried to explain or we did not have the required background and references that would have demonstrated that we can help. Of course, it was due to inexperience also that we proceeded like that. *(Roku Oy)*	-
Professional knowledge not conveying the message of legitimacy to industry customers.			

Conversion From	To	Example	Exchange rate
Cultural	Social	[selling service to industry] Quite early on I got the sense of how the collaboration between large companies and small ones works. My own experience is, after all, from working with large corporations so it worked quite naturally. It helped us right from day one to be courageous and capable in approaching the large ones. *(Roke Oy)*	+
Cultural understanding enabling the access to new customer organisations.			
Cultural	Social	[selling pilot to industry] In a nutshell, with private businesses the challenge was: 'Is this in use anywhere else?' 'No, we are offering a pilot'. It is damn difficult to get a pilot off the ground. *(Kose Oy)*	-
The cultural construct of a pilot not enabling the access to new customer organisations.			
Social	Cultural	[selling service to industry] We can take any company and check who do we know there and there is always someone we know. We always get an inside quote of 'yes, these are true doers, these are skilled and knowledgeable' and that helps us get into a conversation. *(Roke Oy)*	+
Social contacts enabling the access to new customer organisations.			
Social	Human	[operating in national context] The worst aspect with the Nokia background is that one does not have any local network. None. All Nokia colleagues and customers that we [used to] work with were with global companies. Because of this [our] understanding of the local context is pretty non-existent. *(Vana Oy)*	-
Social contacts not enabling understanding of the local context.			

Overall the opinions across the ventures varied notably in whether the prior capital, particularly the cultural capital acquired during the time at Nokia, was considered to be of value in entrepreneurship. Equally, some questioned the value of the new capital acquired during the accelerator programme. Overall, the preferences that the ventures expressed for different resources hinted at them differing in their capital strategies.

6.4.3 Capital strategies

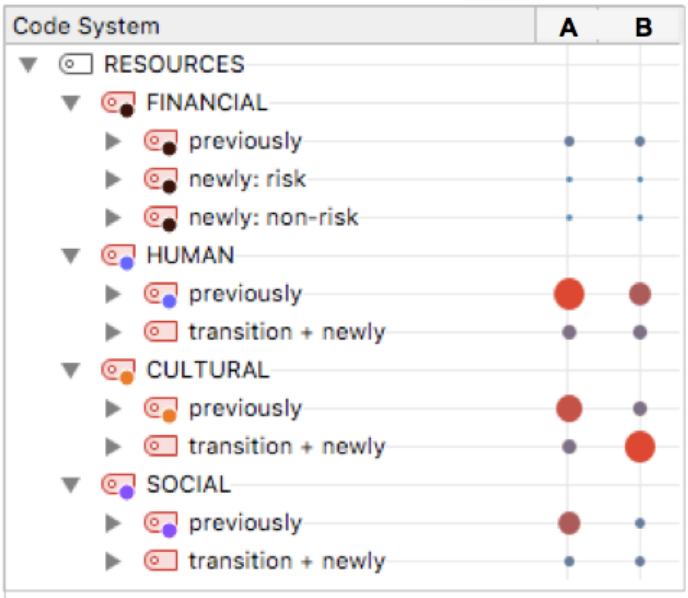
Exploring the ventures' relative prioritisations of the different forms of capital revealed a separation among them. One group made relatively more regular references to the capital that they had acquired previously in their industry roles and found this to be of use-value in a range of new circumstances. Another group, in contrast, prioritised resources that they had acquired during the transition programme and while running the new venture. The difference between the two groups was particularly pronounced in the cultural capital with one group considering the capital accumulated at Nokia to be of good use-value in entrepreneurship and the other clearly prioritising the new capital of entrepreneurship (Figure 6.2).

Not totally surprisingly, the terminology split identified in the first study of this thesis was reflected also between the two alternative capital strategy groups. The first group (Group A), that proposed to be developing the venture by having largely repurposed their previously-acquired human, cultural and social capital, closely aligned with the enterprise group of the first study. They regularly referred to themselves as non-startups and tended to engage with the established industry infrastructure.

The group that seemingly had repurposed their previously-accumulated capital notably more actively with the newly-acquired capital (Group B) regularly identified themselves as startups and tended to be more actively engaged with the institutional infrastructure of the startup community[1]. The close alignment between the groups emerging from the analysis of this study with those of the first study offered some confidence towards the earlier proposed separation of the entrepreneurial system into two subfields of enterprises and startups.

[1] For more information about the two communities and their respective infrastructures, please refer to Chapter 5.

Figure 6.2 The split in the capital strategies.



The size of the dot represents the relative prominence of the references to each of the four forms of capital according to their origins across all of the resources and all of the ventures.

Please note that while the visual map of relative prominences can be helpful the map should, in this study, not be used as a 'final product' of the analysis as the coding was not systematised to an extent that would allow meaningful analysis of the differences in the relative weights of the topics.

As in the first study, the groups were not homogeneous but rather exhibited splits into subgroups. In exploring the variations in the capital strategies, practices and preferences of each of the groups, the divergence within the groups was most evident in the financial and cultural practices that related to the risk profile of the venture. A subgroup of ventures, both in the startup and enterprise-subfields, exhibited a notably more risk-averse profile. This was naturally manifest in the financial capital strategies of the ventures, with these ventures regularly opting out of not just risk financing but also of the public grants. While the reduced access to financial capital clearly narrowed, to some extent, the activities with which these ventures were able to engage, the rejection of external financing reflected a strategic choice of these ventures. These founders also expressed a preference for a steady, small-scale development of the venture. All in all, the risk-averse subgroup closely resembled the stability-oriented group of ventures identified in the first study of this thesis.

> *We are not the kind of startup entrepreneurs who run after external funding. In fact, I don't think those types of entrepreneurs are our kind of*

> *independent actors. They sort of work for their investors. We prefer to be independent, hold the gains to ourselves and also carry the risks. Although that, of course, limits the resources the firm has available. (Susa Oy, Founder B)*

The second subgroup was characterised by a more aggressive drive towards growth. While this clearly called for a stronger financial capital base, this group did not, in every instance, resort to risk funding. Rather, the access to increased financial capital was in many cases fuelled by non-risk grants and a pragmatic drive towards financial independence. Again, this second group closely reflected the characteristics of the scalability-oriented ventures identified in the first study of this thesis.

> *We have aimed at the international markets right from the first second. (Hity Oy)*

> *Two months after leaving Nokia we realised that this idea will not work. Our salvation was that our way of thinking is pragmatism. If it isn't working, change. Fail fast is not about truly failing. Fail fast is that the failure is soft enough so that you can still do something about it. It is really about how quickly one does learn. [...] We are interested in cash flow because we decided that this company would succeed. Following this, how will the company succeed? Therefore everything that helped us to aim for cash flow got prioritised as highly as possible. (Roke Oy)*

All in all, the interview data thus implied a presence of four separate groups that closely tied in with the groups identified in the first study. This was not fully unexpected, as it was reasonable to hypothesise the strategic orientation of a venture to be reflected equally in its capital preferences as in its infrastructure engagements. Given that many of the new resources of the entrepreneurial ventures arose from their communities and in interaction with their context, the infrastructure engagement practices identified in the first study could be hypothesised to be mirrored in the new capital acquisition patterns of the ventures.

6.4.4 Two Fields, two strategies

The first two studies together allowed the formation of increasingly detailed profiles of the ventures in the subfields of startups and enterprises. Equally, a more detailed understanding of the alternative operational templates of scalability and stability-orientation could be built based on the two analyses.

i. The disruptors: scalability-orientation in the startup-subfield

> *It has been challenging to gain visibility, to make the concept understandable at all. In Finland, we are the front-runners with this thinking. Internationally there are others. Explaining and making us known has taken much time and we are still continuing with that. The work in this is not done. (Kosy Oy)*

The scalability-oriented ventures in the startup-subfield reflected closely the disrupting growth ventures of much of the entrepreneurship literature. These ventures entered entrepreneurship through the regional commercial startup accelerator and were, as such, closely linked to the infrastructure of the startup-subfield. They consistently identified themselves as startups and actively utilised the terminology and cultural tools of startups. They regularly spoke about the practices of the Lean philosophy and actively utilised the terminology relating to it. They commonly talked about piloting their designs, pivoting their business models, pitching for investors and sparring within the startup community. These practices, and the language used in describing them, closely reflected the goal of the subfield in commercialising ideas. These ventures also commonly referred to risk financing although risk investments were relatively rare across the whole interview pool.

The capital strategies of the disruptors reflected their focus on new innovative product development that was intended to fundamentally change some of the existing market structures. While they did seek to repurpose, in particular, their previously-accumulated

human capital, this did not always convert successfully to the capital of the entrepreneurial field (see, for example, the statement by the startup venture Kosi Oy in Table 6.2). As such, they had tended to have invested in the development of their entrepreneurial skills and had often attended training that extended beyond that which was offered as a part of the initial accelerator activities. Several of the ventures had adopted broader founding team structures that relied on a mix of skillsets. In some cases, they were also actively seeking to utilise community resources.

The capital strategies of the disruptors also spoke about the need for acquiring new social capital. These ventures were highly aware of the importance of their social network and spoke about the active investment effort that they had put into building their network. Networking and purposeful development of the social connections was actively in the mind of these founders as their original Nokia network was regularly seen as not fit-for-purpose in entrepreneurship.

Given the expense associated with scalability-orientation and the regularly nascent state of the actual offer development, the disruptors were relatively more like to rely on external funding. The higher level of investment that the disruptors had made into the venture was not only reflected in their operational set-up but came up also in the founders' relatively more regular deliberation of the emotional investments they had had to make. The notable investments made across the resource categories were also evident in these founders tending to adopt a more long-term view in their assessment of the future plans of the venture.

ii. The innovators: stability-orientation in the startup-subfield

> *It seems that it is important even for a small firm to grow all the time. So if I have this teeny-weeny firm and it stays very small, the funding and valuation go [downhill]. Particularly product development costs always at*

> *minimum a million [until] there is something to put to the shops. Often that isn't enough. Gathering that million is a big job in Finland. Spending it is not. (Joky Oy)*

The stability-oriented ventures in the startup-subfield similarly indicated a clear departure from the context of their industry employment into startup entrepreneurship. They shared the terminology usage patterns and the orienting principles of the disruptors. They, however, portrayed more modest growth aspirations. As such, while their identity as a startup and their goal in commercialising their ideas were aligned with their scalability-oriented peers in the field, they tended to engage with fewer of the infrastructure elements and regularly relied heavily on the services and community of the regional accelerator.

The innovators regularly expressed a preference for risk avoidance. This encouraged them to structure their operations in a way that ensured lower requirements for new resource acquisition. The founding teams of the innovators tended to be smaller than those of the disruptors. They seldom considered employing new team members. Their market approach thus reflected their lower financial and human resource pool with many of them adopting a targeted one-to-one mode of sales.

Despite the more limited resource pool of the innovators, they were often engaged in the development of new products. As such, the innovators tended to prioritise their human capital, building on both their newly-acquired and previously-accumulated capital. In a reflection of their small teams and their hands-on attitude, the innovators spoke prominently about ‘doing’. They also tended to stress the cultural aspects of the startup-subfield while often being critical of the culture of their corporate world. Similar to the disruptors, the innovators tended to rely on new social contacts within the startup-subfield.

Given the limited size of the innovators' operations and the urgency of new resource acquisition arising from the innovative nature of these ventures, many of these venture founders had found it necessary to split their time between the venture and paid-employment. Among the innovators, financial resources were thus regularly being raised for the venture operations in an exogenous fashion.

iii. The industrialists: scalability-orientation in the enterprise-subfield

> *Our time at Nokia had given us, how could I describe it, a technical base. We had learned to do things in a certain way and believed that we were world class in that. (Hito Oy)*

The scalability-oriented ventures in the enterprise-subfield reflected similar growth-orientation to the disruptors in the startup-subfield. These ventures propensity for industry engagements, however, demonstrated clear separation from the startup-subfield. The industrialists identified themselves as non-startups, exhibited notably less usage of the startup terminology and tended to adopt organisational templates that reflected their goal in commercialising their extant competence. They engaged with a different infrastructure to that of the ventures in the startup field, regularly utilising the infrastructure elements of the incumbent industry, such as the Chamber of Commerce and trade fairs.

The capital strategy of the industrialists relied heavily on them repurposing their previously-accumulated capital in each human, cultural and social form as they sought to commercialise this for an early development of a positive cash flow. While previously-accumulated capital clearly formed the base on which the industrialists sought to build their venture, they did also engage in the acquisition of new capital of the entrepreneurial field, regularly attending entrepreneurial training beyond the short-term courses offered by the accelerator programmes. Of all the ventures, the

industrialists were utilising their prior industry network in the broadest fashion and had commonly secured both sales and supply contacts through this.

The initial focus on the commercialisation of their skill and the cash flow secured through it had, in some instances, enabled the ventures to diversify into new product development activities later on. Among all the ventures interviewed, the industrialists were thus most likely to have both structured their initial operations in a way that enabled upwards scaling and to be engaged in the development of a portfolio of activities that could support and complement each other.

iv. The artisans: stability-orientation in the enterprise-subfield

> *I had the blessed education and self-knowledge; an understanding that I could achieve something. (Suso Oy)*

The stability-oriented group in the enterprise-subfield shared the non-startup identity and the desire to commercialise competence with the industrialists in the enterprise-subfield. These small-scale artisans, however, expressed a strong presence for risk avoidance similar to that evinced among the innovators in the startup-subfield. Among all of the ventures of the study, the artisans were most segregated in the sense that their small operations tended to evolve without much engagement with the infrastructure of the enterprise-subfield that was lacking relational channels such as the regional startup community in the startup-subfield.

The artisans tended to prioritise their previously-accumulated human capital. Some of them had sought to further strengthen their human capital base by enrolling in additional professional training during the transition to entrepreneurship. Indeed, the artisans' operations often relied on the strong professional resources that they had previously

accumulated. This capital regularly extended beyond human capital, with the artisans explicitly referring to their understanding of the culture of their chosen profession as well as the significance of their prior professional networks in the development of their ventures.

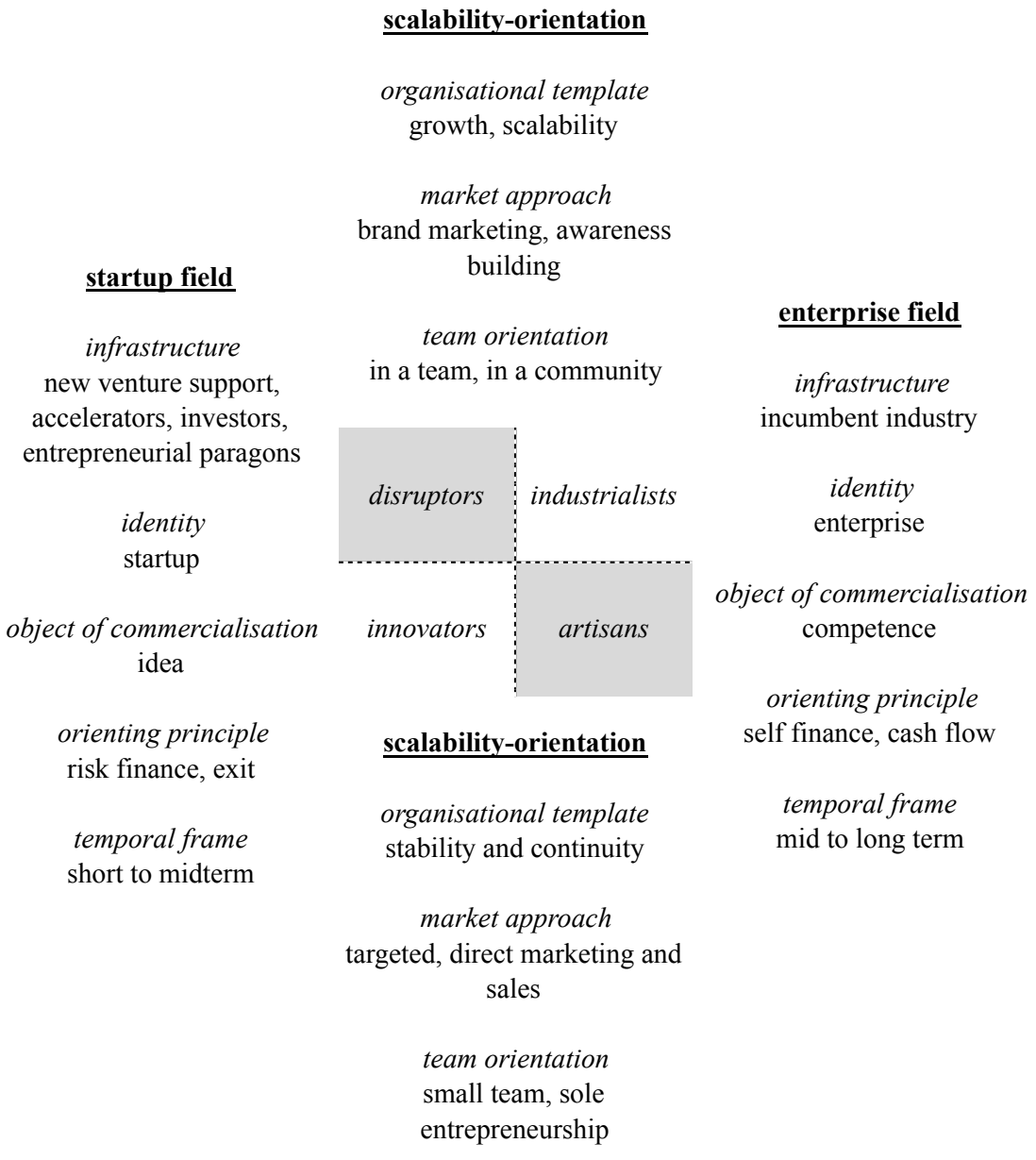
In contrast to their stability-oriented counterparts in the startup-subfield, the artisans tended to be either fully employed or fully out of their ventures. In cases in which the founders remained fully employed by the venture, the smaller financial demands of their operations combined with the active repurposing of the previously-accumulated resources seemingly helped to ensure the financial viability of these ventures. In fact, the group of artisans included some of the few venture exits through the sale of the business. The exits from the ventures among the artisans did not, in these few cases, reflect financial capital constraints. Neither were they motivated by expectations of financial return. Rather, the few artisans who had exited their business explained the exit to have stemmed from exhaustion with the lonely work. This group thus seemed to suffer specifically from the lack of mechanisms to support them in the acquisition of new cultural and social capital in the entrepreneurial field.

6.5 Discussion

Recent literature in entrepreneurship has called for more research to consider entrepreneurship in its context (Autio et al., 2014). In order to gain a better understanding of the role that institutional contexts may play in the constitution of entrepreneurial actors who originate from a corporate redundancy programme, this study explored how the institutional context may influence entrepreneurs' capital strategies, specifically their preferences with regards to the acquisition of new resources, repurposing of old ones and recombining of the two.

The ventures of this study entered two separate social spaces or subfields within the entrepreneurial system. The subfields did exhibit divergent social orders in terms of their goals, identities and orienting principles (Figure 6.3). The startup-subfield structured around the goal of commercialising ideas while the enterprise-subfield convened around an organising goal of commercialising competence. The identities, institutional infrastructures and preferred organisational templates of the subfields reflected these goals.

Figure 6.3 The two fields with two strategic orientations evident within them.



The different social orders of the two fields were evident in the resource strategies that the ventures entering them came to adopt. Ventures in the enterprise-subfield operated in a similar social order to that in which they had accumulated their extant capital. As such, these ventures tended to prioritise the repurposing of their previously-accumulated capital for the new circumstances. Beyond utilising the capital in its existing form, the ventures also engaged in converting some of the extant capital into other forms. While both the scalability and stability-oriented ventures in the enterprise-subfield benefitted from capital conversions, the scalability-oriented ventures activated a notably broader range of the different forms of capital. The stability-oriented ventures in the enterprise-subfield activated a notably narrower range of capital. Despite this, they succeeded in sustaining their ventures given the maintained use-value of their extant capital (Table 6.3).

The ventures in the startup-subfield embarked on a notably more active programme of new capital acquisition, particularly with regards to cultural capital. This may imply that their previously-accumulated capital was not of equal use-value in the startup-subfield as it had been in their industry roles. Again, the stability-oriented ventures activated a narrower range of the different forms of capital. In this field, however, the stability-oriented ventures struggled to sustain their operations. This may reflect possible difficulties in capital conversion across the fields.

The findings demonstrate the context sensitivity of entrepreneurial capital and the notable implications that the convertibility of previously-accumulated capital in a new context may carry for nascent entrepreneurial ventures. As such, the findings contribute towards the literatures of entrepreneurship and institutional theory. The results also offer guidance for entrepreneurial policy development.

Table 6.3 Capital strategies across fields.

	Enterprise Field		Start-up Field	
	Stability	Scale	Stability	Scale
Human	**EST** & acq	**est** & acq	**est** & acq	**est** & acq
Cultural	**est**	**EST**	**ACQ**	est & **ACQ**
Social	**est**	**EST** & acq	est	**acq**
Financial		acq		**acq**
Principal theme	human & social capital	cultural & social capital	human & cultural capital	cultural & social capital

EST denotes previously-accumulated capital. ACQ denotes newly acquired capital. Focal capital categories in ALL CAPITAL.

6.5.1 Entrepreneurial capital in context

Entrepreneurship is known to rely on bricolage of entrepreneurs' previously-accumulated resources and the skilled combination of these with the resources newly acquired from the community within which the entrepreneurial venture development takes place(Baker & Welter, 2017; Stevenson & Jarillo, 1990). The findings of this study demonstrate how the scope for entrepreneurial bricolage may vary in different entrepreneurial communities. Considering entrepreneurial communities as institutional fields or as bounded social spaces, in which the social interactions are guided by shared orienting principles and hierarchies, foregrounds the context sensitivity of capital.

The transformation of the capital held by the entrepreneur is intense at the early stages of a new venture due to a new venture regularly requiring a range of different forms of capital rather than being able to survive and prosper on one form alone (Davidsson & Honig, 2003; De Clercq & Voronov, 2009; Stam et al., 2014). Different environments do naturally provide different resource landscapes but the problem is more complex than this. Firstly, access to the resources of the community is subject to the entrepreneur internalising the social order of the community and coming to be seen as a legitimate

member of it. Secondly, unlike regularly implied in the literature, the previously-accumulated resources of the entrepreneur may not carry equal use-value in the new community as they may have carried in the old one. As such, the opportunities for bricolage may be limited, not because the entrepreneur would not hold any capital, but rather, because the social context may constrain the opportunities for conversion of that capital into more-beneficial forms.

In this study, both the scale- and stability-oriented ventures in the enterprise-subfield identified human capital as one of the key currencies of their operations. This stood in contrast to the ventures in the startup-subfield that relied rather on cultural capital. Given that the order of institutional fields is known to determine what is considered appropriate within them, it is not surprising that the orienting principles also influenced the understanding of the forms of capital that were considered valuable within the respective fields. Entrants to a new field can be expected to be subject to pressures to comply with the expectations of the field. Some forms of capital held by the entrant may thus be of more use-value than others.

> *Proposition 1. The primacy of the different forms of previously-accumulated capital may vary according to the differentiated social orders of institutional fields.*

Beyond demonstrating the significance that field separation may carry for the use-value of the entrants' previously-accumulated capital, the study also highlights how the orienting principles of a field may determine the required range of the different forms of capital. In this case, in both the enterprise and the startup-subfields, some of the ventures adopted a scalability-oriented strategy while others opted for stability-orientation. This choice carried notable implications for the utilisation of the ventures'

previously-accumulated capital. In the enterprise-subfield, the previously-accumulated human capital seemingly carried adequate use-value to enable the stability-oriented ventures to transact mostly with this. Their new capital acquisition thus tended to focus on building on the prior human capital. The scalability-oriented ventures, in contrast, built on a notably broader range of capital and, as such, engaged more actively in the acquisition of new capital. The scalability-oriented ventures thus both employed a broader range of previously-accumulated capital and a more comprehensive programme of new capital acquisition. The possession of capital is known to equate to positions and power within the field (Bourdieu, 1986). As such, the stability-oriented ventures could be theorised to have assumed peripheral positions, while the scalability-oriented ventures adopted a more central position within the field.

A similar pattern was evident among the ventures in the startup-subfield. While both of the venture groups here relied more prominently on the new capital acquisition, the stability-oriented ventures could be observed to focus on a narrower range of both previously-accumulated and new forms of capital than their scalability-oriented peers. As such, the significance of the different forms of previously-acquired capital did not only vary across the fields but also within the fields in a reflection of the positions that the actors came to adopt within them. Actors in peripheral positions seemingly utilised a narrower range of previously-acquired capital than those in central positions.

> *Proposition 2. The primacy of the different forms of previously-accumulated capital may vary according to the position an entrant assumes within the institutional field.*

The findings carry several practical implications for nascent entrepreneurs. Firstly, the findings highlight the importance for would-be entrepreneurs to consider the

institutional context within which they aim to position their venture. The capital held by the entrepreneur may carry notably different use-values in different social arenas. This can fundamentally influence the ventures' chances of survival. Secondly, while the use-value of entrepreneurs' capital may vary across fields, the range of the capital possessed may similarly play an important role in the development paths of the nascent ventures. Narrower engagement of prior capital may assign the venture into the periphery of the field, as centrality is likely to call for a broader engagement of different forms of capital.

6.5.2 Implications for entrepreneurial policy

Apart from entrepreneurs commonly relying on previously-accumulated capital, the acquisition of new capital is an important element of new venture development (Chen, Yao, & Kotha, 2009). Once again, a separation could be observed between the two subfields of the study. Given that the ventures in the enterprise-subfield benefitted from their previously-accumulated capital, they also enjoyed a temporal advantage in being able to initiate their operations with the capital in hand. As such, their new capital acquisition strategy could focus on key elements of capital required. In many cases, the range of newly-acquired capital required by them was narrower than that of their counterparts in the startup-subfield in which the ventures largely relied on newly-acquired capital. Not only did the intensity, but also the range of the forms of acquired capital, vary between the two fields.

> *Proposition 3. The primacy of the different forms of newly-acquired capital may vary according to the differentiated social orders of institutional fields.*

In both subfields, the scalability-oriented ventures did, however, engage in broader programmes of new capital acquisition than their stability-oriented counterparts did. Not only did the primacy of previously-acquired capital vary depending on whether the venture aimed to adopt a central or marginal position within the subfield but also so did the primacy of the different forms of the newly-acquired capital.

> *Proposition 4. The primacy of the different forms of newly-acquired capital may vary according to the position an entrant assumes within the institutional field.*

The findings carry several practical implications for entrepreneurial policy and assistance. Entrepreneurial support organisations may function as gatekeepers for the entrepreneurial fields. As such, the support organisations are in a prime position to influence both the use-value of previously-acquired capital and the mechanisms employed in the acquisition of new capital.

In determining the use-value of prior capital, entrepreneurial support organisations can strongly influence who gets to play. Homogeneity in the support organisations can associate with homogeneity in their selection processes and subsequent entrepreneurial population. As such, entrepreneurial assistance organisations may benefit from the closer observance of the interplay between entrepreneurs' previously-accumulated capital and the desired contextual positioning of the venture. Specifically, entrepreneurial assistance organisations may benefit from offering entry routes into alternative entrepreneurial fields in recognition of the extant capital of the aspirant entrepreneurs. This acknowledgement of the contextual factors calls for closer recognition of the fact that one size may not fit all in entrepreneurial assistance.

6.5.3 Implications for the theorisation of institutional fields

Specific to the institutional theory, the findings highlight how different positions within institutional fields may vary across fields. While the extant literature has explored differences among the positions within a field and found these to carry significant implications for the actors of the field, the literature has stayed largely silent about any heterogeneity across fields. As such, the findings relating to the power and superior resource access of central, elite positions within a field have largely been expected to reflect characteristics of central positions in all fields (Hensmans, 2003; Zald & Lounsbury, 2010). Equally, marginality, that has in the context of fields been shown to associate with both opportunities for innovation and resource constraints, is implicitly assumed to reflect the periphery of the fields in all cases (Ansari & Phillips, 2011; Quirke, 2013).

Unlike previously proposed by the literature, the findings of this study demonstrate notable variation in the scope for action that different positions in different fields may provide for the actors. In this study, some of the actors positioned their ventures in the enterprise-subfield while others embarked on their entrepreneurial journey in the field of startups. In both cases, some of the ventures reflected a scalability-oriented strategy while others adopted a stability-oriented approach to the development of their venture. The resource strategies adopted and available for the ventures varied notably between the groups. In the enterprise-subfield, all of the ventures relied more on their previously-accumulated resources. Here, the more diverse combination of the old and the new resources seemed to position the scalability-oriented ventures in more central positions within the field and thus provide them with better access to further new resources. The stability-oriented ventures, on the other hand, seemingly remained in more peripheral positions within the field. In this field, they, however, enjoyed adequate access to the resources of the community to sustain themselves financially.

The findings among the enterprise-subfield actors largely reflect the understanding of different field positions in the extant literature. This, however, is not the case in the startup-subfield. While the resource strategies and the positioning of the scalability-oriented ventures in the startup-subfield reflected the same as their counterparts in the enterprise-subfield, the developmental paths of the stability-oriented ventures were starkly different here. Unlike in the enterprise-subfield, the peripheral actors in the startup-subfield failed to secure adequate resources for sustaining their operations. These findings propose fields to vary in the opportunities they offer for the conversion of previously-accumulated capital.

> *Proposition 5. The scope for capital conversion may vary between institutional fields.*

Much of the recent institutional literature has explored how actors reconcile different logics within institutional fields. The conundrum between homogeneity and opportunity for individual agency remains an active question in the literature. The findings of the study indicate that all fields are not the same in the extent of the isomorphic pressure that they impose on the actors of the field. The scope for non-isomorphism is thus not only a question of a field position but also of the nature of the field. The findings can help to reconcile some of the contradictory results in the extant literature regarding the scope for change that actors in different positions may have. The study thus contributes towards the recent calls for the differences between the fields to be recognised more actively in the research into institutional fields.

6.6 Conclusions

This paper explores the question of contextual influence on actor emergence by studying how the institutional context may influence nascent ventures' capital strategies. The findings of the study highlight the significant role that the social orders of institution fields may play in enabling and constraining the repurposing of the capital that has been accumulated in a different field.

The results of the study foreground the importance of the scholarship of entrepreneurship to be cognisant of the implications that the different social orders of institutional fields may have for the resources of nascent ventures. The use-value of the entrepreneurs' previously-acquired capital may vary notably between fields, thus rendering strategies that rely on a focused usage of few forms of capital more precarious in some fields than others. Additionally, the findings of the study highlight the central role that entrepreneurial support organisations may play in encouraging the adoption of entrepreneurial field settings in which the entrepreneurs' prior capital carries beneficial use-value. Finally, for institutional theorists, the study contributes towards a more granular conceptualisation of field positions. By recognising that the peripheral or central positions are not the same across all fields, institutional theorists can further improve the predictive power of the theory fields.

The first two empirical studies of this thesis explored a single regional setting of the Nokia accelerator programme in order to understand how the context may influence entrepreneurial actor emergence among nascent ventures that originate from a corporate redundancy programme. The first empirical study considered the role that institutional infrastructure may play in the actor emergence. This second study then explored the scope for different capital strategies across fields. Both of the studies have highlighted the precarious position of ventures that do not comply with the social order of the

institutional field. The third and final study of this dissertation turns its focus on embeddedness in order to explore the configurational dimensions of these precarious positions.

7. ACTOR EMERGENCE AND EMBEDDEDNESS

7.1 Introduction

The prior two chapters of this thesis have explored the question of how institutional contexts influence the emergence of entrepreneurial actors who originate from a corporate redundancy programme by studying first, the entrepreneurs' engagement with the institutional infrastructure of the entrepreneurial community and second, by querying the variations in the entrepreneurs' capital strategies in different contexts. This third, empirical study of the thesis builds on the findings of the prior two investigations and explores how the ventures' embeddedness influences their emergence in terms of them becoming viable by obtaining the capacity and authority to act for themselves.

In this study, I focus specifically on the ventures' viability by exploring the combinations of embeddedness in relation to low venture growth. I focus on low venture growth instead of failure in recognition of the multiplicity of operational modes that entrepreneurs may assume beyond the stylised dichotomy of success or failure. In a reflection of the prominence of growth as a measure of success, I explore a group of ventures that remain operational despite not having delivered growth in financial terms.

As in the prior two studies, I conceptualise the entrepreneurial system as an institutional field or a bounded, dynamic cluster of actors, whose social interactions are guided by the orienting principles and hierarchy of the collective (Zietsma et al., 2017). I consider membership within the collective to imply embeddedness in terms of both the actor having internalised the orienting principles of the field and the community having

recognised the actor as a legitimate member of it. By internalisation of the orienting principles, I refer to the logic of the field coming to be taken for granted by new entrants to the field (Powell & DiMaggio, 2012). With the logic of the field, I refer to both the regulative and constitutive rules of the field community. Regulative rules, such as values and norms, guide community action by defining the standards of behaviour (Scott, 2014). Constitutive rules, on the other hand, determine the roles of the community actors and provide meaning to their action (Scott, 2014).

Embeddedness offers a useful lens for the study of the contextual aspects of venture viability, as it is known to associate with the access to the community resources (Granovetter, 1985; Uzzi, 1996; 1999; Zietsma et al., 2017). The capital access associated with embeddedness is often conceptualised as a question of actor positioning within the field. Central, strongly embedded actors are regularly seen as the elites of the field that enjoy preferential access to the resources and command notable control of the field (Greenwood & Suddaby, 2006; Zietsma et al., 2017). Peripheral or weakly-embedded actors, on the other hand, are seen as prime initiators of innovation and change despite their inferior resource access within the field (Hardy & Maguire, 2008; Leung, Zietsma, & Peredo, 2014). Congruent with the conceptualisation of the strength of embeddedness associating with the positioning of the actor within the field, embeddedness and the capital arising from it have been, to date, most regularly studied as questions of social network structure (Kilduff & Brass, 2010). Embeddedness within a field, however, also reflects the regulative and constitutive rule systems of the institutional context. Embeddedness as submersion within a community of relations implies, by definition, awareness and internalisation of the social authority of the laws, cultures, and customs of the community (Polanyi, 1944). Although the different dimensions of embeddedness have seldom been studied holistically, a helpful conceptualisation of embeddedness along the four dimensions of cognitive, cultural,

political and structural has been proposed (Dacin et al., 1999; Zukin & DiMaggio, 1990).

In the four-dimensional model of embeddedness, cognitive embeddedness refers to the reliance, by the members of the field, on automatic cognitive processes that are guided by mental schemata of the context (DiMaggio, 1997). Cultural embeddedness implies internalisation and embodiment of the shared rule systems, beliefs, ideologies, and taken-for-granted assumptions of the field (DiMaggio, 1997). Political embeddedness relates to the awareness of the hierarchical power structures of the context and the ability to engage these in a purposive manner (March & Olsen, 1984; Meyer et al., 1985). Finally, as outlined in the broad social network literature, structural embeddedness concerns the situatedness of an actor within a pattern of ongoing interpersonal relations (Zukin & DiMaggio, 1990: 18). To better capture the multifaceted nature of the institutional context of a field, I consider the embeddedness of the actors within the field along the four dimensions and query *how the different dimensions of embeddedness combine in cases of low viability among post-redundancy entrepreneurial ventures.*

In this final empirical study of the thesis, I expand the pool of the ex-Nokia ventures to be studied to include the full cohort of the ventures that graduated from the Nokia accelerator between late 2011 and early 2014, altogether 317 nascent entrepreneurial organisations. While all of the ventures emerged from the single corporate accelerator in Finland, three to five years after the venture founding at the time of this study, notable divergence could be observed in the developmental paths of the ventures. While only 12% had closed down, the number of ventures that could be considered to meet some of the characteristics of growth ventures, as defined by the regional economic development agencies, measured at less than 10%. The majority of the ventures were found to be

either very small-scale businesses or to be positioned in a hybrid state in which the venture continued to operate but was unable to sustain the income of the founders, thus forcing them to seek parallel wage-employment.

The original dataset collected for the study integrates information from several different public data sources as explained in detail in chapter 3. In analysing this data, I adopted the set-theoretic fuzzy-set qualitative comparative analysis (fsQCA) approach in order to explore the combinatorial effect of the different dimensions of embeddedness in the cases of low viability.

The findings highlight the multidimensional nature of embeddedness and do, as such, contribute towards the development of the theory of fields by highlighting the multifaceted nature of field positions. Not all peripheral positions are the same. Rather, positions within the edge of a field may arise through a number of different configurations of embeddedness and through the temporally-different mechanisms of embedding and imprinting. This variation may explain some of the conflicting findings regarding peripheral actors' opportunity space in prior research.

For entrepreneurship research and policy, the study highlights the significance of holistic entrepreneurial support mechanisms. Cognitive training may, on its own, not be enough to embed nascent ventures into their entrepreneurial communities. Cultural and political embeddedness may take more time to build than is regularly allowed by short-term acceleration programs. Finally, the study highlights how the conditions of entrepreneurial systems may contribute towards the exclusion of entrepreneurial ventures that fail to internalise the cultural and political logics of the community. This calls for consideration as to whether more-inclusive support mechanisms could provide a better return for regional and national investments into them.

The remainder of the chapter is divided into four sections. I first briefly discuss the theoretical foundations of embeddedness in order to develop propositions that explore the implications of the variations of embeddedness within a field. I then outline the data and methods used for the research. Thirdly, I review the findings of the study. I conclude with a discussion including the shortcomings of the study and suggestions for further research.

7.2 Theoretical Foundations

In this section, I review the existing knowledge about field embeddedness in order to develop a set of propositions about the possible influence that the lack of embeddedness has in cases of low viability. I first discuss the role of embeddedness overall in actor emergence. I then briefly outline the role of each of the four dimensions of embeddedness in the actor emergence. I conclude with a review of the two temporally-separate mechanisms through which embeddedness is known to arise.

7.2.1 Field positions and benefits of embeddedness

Field positions are regularly considered to reflect actors' embeddedness within a field. Positions within fields and the associated embeddedness are of particular interest in the consideration of venture growth as both are known to associate with disparate opportunity spaces and differential access to resources. Organisations are known to be products of their contexts (Greenwood & Hinings, 1996). Similarly, different positions within a field are known to associate with different possibilities (Bourdieu, 1990). Resources for entrepreneurship have specifically been shown to regularly arise within the environment rather than within the nascent organisation itself (Baker & Nelson,

2003). Membership within the entrepreneurial field may thus have far-reaching implications for innovativeness (Autio et al., 2014), performance (Hervas-Oliver, Lleo, & Cervello, 2017) and survival of nascent ventures (Delmar & Shane, 2004; Elfring & Hulsink, 2003).

Central positions within fields are generally considered to reflect strong embeddedness within the field and associate with elite power (Greenwood & Suddaby, 2006). Peripheral positions within fields, on the other hand, are regularly seen to imply weak embeddedness within the field. While peripheral positions are known to offer opportunities for institutional entrepreneurship and innovation (Hardy & Maguire, 2008), they can also associate with poor access to the resources of the community.

The community resources arising from embeddedness are regularly conceptualised as different forms of capital. Capital as accumulated human labour takes time to accrue but once present can reproduce both in material and immaterial form (Bourdieu, 1986: 15). Education and skills that enable people to act in new ways have been categorised as human capital (Coleman, 1988; Schultz, 1961). Knowledge of a social collective that enables expansion of the existing capital has been referred to as intellectual capital (Nahapiet & Ghoshal, 1998; Stewart, 1997). Formal knowledge, preferences, and behaviours signalling inclusion and exclusion of membership within a group of people have been associated with cultural capital (Bourdieu, 1986; Lamont & Lareau, 1988). Importantly for the consideration of entrepreneurial fields, each of the different forms of capital acts as an enabler within the field for those who hold it. Each may also, in certain circumstances, be converted to one of the other forms.

While both intellectual and cultural capital imply embeddedness in terms of understanding of the context or inclusion within a community, embeddedness is, in the literature, most regularly associated with yet another form of capital: social capital (Lin,

2002). Social capital has in turn been defined as an obligation (Bourdieu, 1986), goodwill (Adler & Kwon, 2002) or return on investment (Lin, Cook, & Burt, 2001) that arises from social relations. Social capital can be a significant resource as it can extend an actor's access to resources such as information (Granovetter, 1973; Mouw, 2003). The ties can help to legitimise an actor (Uzzi, 1999) and exert influence on parties who are critical for the purposes of the actor (Reagans & McEvily, 2003). Empirical research on social networks has shown different kinds of social ties (Granovetter, 1983) and different positions within larger network clusters (Burt, 2004; Coleman et al., 1966) to associate with variations in social capital, thus hinting at the local nature of embeddedness.

Prior research has shown the various forms of capital to be important resources for entrepreneurial ventures. Entrepreneurship is known to involve bricolage of resources that are not in direct control of the entrepreneur (Baker & Nelson, 2003). Human (Sorensen & Fassiotto, 2011), intellectual (Nahapiet & Ghoshal, 1998), cultural (De Clercq & Voronov, 2009), and social capital (Yli-Renko, Autio, & Sapienza, 2001) have all been shown to positively support the process of bricolage. Social capital has specifically been linked to entrepreneurial innovation (Audia et al., 2006), legitimacy (Ahuja, 2000; Stuart et al., 1999), resource access (Uzzi, 1999), time to first profit (Davidsson & Honig, 2003) and survival (Stam et al., 2014; Watson, 2007). While embeddedness in the entrepreneurial field and the capital associated with it is thus known to associate with the longevity of entrepreneurial ventures, the different positions within the field can be expected to give rise to differential capital.

Proposition 1. Weak embeddedness within a field may associate with a low viability.

7.2.2 Dimensions of embeddedness

Although the concept of embeddedness is commonly used to refer to the relational base of economic action alone (Granovetter, 1985), the recognition of embeddedness as comprising not only structural but also cognitive, cultural, and political dimensions (Zukin & DiMaggio, 1990) more faithfully captures the interwoven nature of economic action in social relations that are guided by the social code of the context (Polanyi, 1944). In the context of an entrepreneurial field, multidimensional embeddedness highlights how the observable social network connections of the community are both constitutive and reflective of the cognitive schemata, the symbolic belief systems and the hierarchal power structures of the community.

Cognitive embeddedness within an entrepreneurial field implies reliance on automatic cognitive processes that are guided by the mental schemata of the field (DiMaggio, 1997). Automatic cognitive processes, such as satisficing (Simon, 1955) and heuristics (Tversky & Kahneman, 1974) are known to ease the cognitive load and increase the speed of decision making. These automatic processes do, however, operate at the expense of more deliberative thinking and can, as such, expose decision-makers to systematic biases that may substantially influence organisational outcomes. Prior research has found observable variation in the cognitive schemata of entrepreneurs and corporate managers (Busenitz & Barney, 1997). By encouraging homogeneity, cognitive embeddedness has also been shown to influence the dynamic capabilities of firms (Zahra & George, 2002) and the development of industry structures (Porac et al., 1995; Zajac & Bazerman, 1991). Accepting that entrepreneurial fields are characterised by cognitive schemata, which differ from the schemata of others fields, implies that entrants into the field, who wish to benefit from the resources of the community, face a need to internalise the cognitive schemata of the field. Peripheral position within a field

may reflect weak cognitive embeddedness. In the case of nascent ventures entering the entrepreneurial field, this may associate with a low viability.

Proposition 2. Weak internalisation of the appropriate cognitive schemata of the entrepreneurial field may associate with a low viability.

Cultural embeddedness within an entrepreneurial field refers to the internalisation and embodiment of shared community rule systems, beliefs, ideologies, and taken-for-granted assumptions (DiMaggio, 1997). Rational action within a field is not solely a result of efficiency-driven cognitive processes of the entrepreneurial actors, rather rationality within the community is an ongoing, situated process (March, 1994b). Categories and scripts, as institutive forms of the logic of appropriateness, as well as norms and values as regulatory ones, each promote certain forms of behaviour over others (Dowling & Pfeffer, 1975). In the context of innovation and emergence, categories have been shown to support the construction of social identity (Creed et al., 2002), enable new market creation (Navis & Glynn, 2010) and influence the structuration of competitive fields (Cattani et al., 2017). Shared norms and values have, on the other hand, been associated with the formation of evaluative criteria (Hong & Kacperczyk, 2009) and routines (Barley & Kunda, 1992; Marquis et al., 2016). In order for the entrants of an entrepreneurial field to gain access to the resources of the community, there is likely to be a need for the entrants to internalise the shared community rule systems, beliefs, and taken-for-granted assumptions. A peripheral position within the field may reflect weak cultural embedding within the field. In the case of entrepreneurial entrants, this may associate with the venture failing to fulfil its promise.

Proposition 3. Weak internalisation of the appropriate cultural rule systems of the entrepreneurial field may associate with a low viability.

Political embeddedness as the internalisation of the contextual power structures refers to the subordination of economic action to the principles of governance that reflect the hierarchal social order of a field (Zukin & DiMaggio, 1990). The social order is maintained by the enactment of control by the dominant incumbents of the field (Powell & DiMaggio, 2012). In practice this is regularly done through the institutional infrastructure that provides the means for the governance of the field (Hinings et al., 2017).

Power, as the ability to bring about desired outcomes, derives from the context (Pfeffer & Salancik, 2003; Salancik & Pfeffer, 1977). Organisational literature discussing politics as decision-making has noted how the process of politics in itself may, at times, be more significant than the outcome of it (March & Olsen, 1984: 742). Political embeddedness thus implies not only an awareness of the hierarchal social order of the context but also an ability to navigate the order in a purposive manner (Meyer et al., 1985). Entrants to an entrepreneurial field are likely to encounter a new hierarchical social order in which those in positions of power maintain control of the community resources. Access to the resource is likely to require a level of socialisation that ensures the entrant's ability to both identify and negotiate the gatekeepers of the resources. A peripheral position within the field may reflect weak political embeddedness. In the case of a nascent entrepreneurial venture, weak political embeddedness may associate with slower development.

Proposition 4. Weak internalisation of the hierarchical social order of the entrepreneurial field may associate with a low viability.

Fields reflect a networked form of organising (Powell et al., 2005). Embeddedness within a field thus implies situatedness within a network of ongoing interpersonal relations. The majority of empirical research into embeddedness has focused on the theorisation of the relative benefits of different positions within networked social structures (Gnyawali, 2001; Simsek, Lubatkin, & Floyd, 2003). Both different constellations of social ties and the nature of individual ties have been shown to matter. At the network level, cohesive, tightly-connected structures have been shown to associate with innovation (Fleming et al., 2007a), quick diffusion (Coleman et al., 1966; Rice & Aydin, 1991), trust and collaboration (Moody, 2004). Structural holes of a few existing ties have, on the other hand, been shown to offer competitive advantages and opportunities for beneficial brokering action (Burt, 2004, 2005; Obstfeld, 2005). At the level of individual ties, strong ties of regular reciprocal interaction have been associated with trust (Brass et al., 2004) and collaboration (Uzzi, 1996; 1997), while weak ties have been shown to offer superior access to new information (Granovetter, 1973, 1985). In entrepreneurship, social ties have been shown to be associated not only with entrepreneurial innovation (Ahuja, 2000) but also with the performance (Havnes & Senneseth, 2001) and survival (Watson, 2007) of nascent ventures. For new entrants to a field to gain access to the resources of the community, they are likely to face the need to both develop new social ties and to repurpose old ones. Failure to do so is likely to position them within sparser sections of the network in the periphery of the field. While a position within a less connected cluster of the field may associate with a lower redundancy of the social network, and may, as such, offer opportunities for brokering, it can also associate with overall weaker position and low viability.

Proposition 5. Lack of social ties within the entrepreneurial field may associate with a low viability.

Although the different dimensions of embeddedness have been studied in isolation, conceptually embeddedness stresses the combinatorial effect of these. A central position within a field is likely to reflect a central position in a network structure as a result of a continued reciprocal interaction that reflects a level of shared cognitive schemata, taken-for-granted behavioural patterns as well as an understanding of the hierarchical power structures of the context. For new entrants to embed themselves into a field in order to gain access to the resources that arise from embeddedness, they will not only need to build new social connections but will also have to exhibit a level of internalisation of the cognitive, cultural and political logics of the field in order to appear legitimate actors of the field. Coordination and collaboration have been shown to emerge and persist through the resistance of the external influences (Axelrod & Hamilton, 1981). In practice, both the formation and maintenance of collaborative communities have been shown to rely on the pruning of non-collaborative ties rather than on the addition of new potentially collaborative ones (Fehl, van der Post, & Semmann, 2011). For new entrants, the quality of the interactions is of critical significance both for continued membership within the community (Gulati & Gargiulo, 1999) and for the access to the resources of the community. The quality of interaction relies on the internalisation of the logic of the community that happens over time.

7.2.3 Temporality of embeddedness

While embeddedness is generally associated with the longitudinal process of embedding that relies on interaction reciprocated over time, embeddedness may also arise from the more punctuated process of imprinting. The different temporal mechanisms of embeddedness are of particular interest in the consideration of entrepreneurial communities as the entry of new members is an elemental part of the field. Furthermore,

the limited nature of the resources of nascent ventures may fundamentally limit the temporal scope of their embedding within the field.

In the literature, embedding as the process of internalisation of the logic of appropriateness in a particular field of action is regularly outlined as a process of building trust and legitimacy over time (Uzzi, 1997). Trust is shown to build as a result of resource exchange specifically when an exchange is reciprocated with extra effort (Tsai & Ghoshal, 1998). At the macro-level, repeated reciprocal interactions are known to contribute towards the stability of established social systems due to them encouraging internalisation of the obligation of giving back to those from whom one has received (Gouldner, 1960). In entrepreneurial fields, access to the resources of the community is likely to develop only over time as a result of embedding of the entrants into the community through repeated reciprocal interactions. Peripheral position within the field may reflect a failure to engage over time in repeated interactions within the field. This may further associate with a low viability.

> *Proposition 6. Lack of long-term embedding in the entrepreneurial field may associate with a low viability.*

In many accounts, the temporally-spread process of embedding is preceded and enabled by imprinting. While reputational signals (Larson, 1992) and introductions (Uzzi, 1997) can support the entry of a newcomer into a field, imprinting tends to associate with long-lasting behavioural implications that encourage embeddedness (Stinchcombe, 1965; Tilcsik, 2014). Imprinting has been shown to take place at periods of transition (Immelmann, 1975; Marquis & Tilcsik, 2013). The patterns of behaviour adopted during the initial sensitivity period of a new situation have been shown to be of a highly persistent nature and to resist change even when exposed to environment changes

(Marquis & Tilcsik, 2013). In entrepreneurial contexts, both the initial environment (Stinchcombe, 1965; Stuart & Sorenson, 2003) and founder histories (Beckman, 2006; 2008; Burton et al., 2002) have been shown to imprint nascent ventures. While imprinting as a mechanism operates at a notably shorter timeframe than embedding, it is similarly associated with benefits arising both from improved legitimacy (Aldrich & Fiol, 1994; Dobrev & Gotsopoulos, 2010) and from superior access to resources (Agarwal et al., 2004; Burton et al., 2002). Given that embedding generally takes more time than imprinting, imprinting in the entrepreneurial field can be expected to play a significant role in the early stages of a new venture. Peripheral position within the field may reflect weak imprinting in the early stages of the venture. Further, weakness in the early-stage imprinting in the field may thus associate with a low viability.

> *Proposition 7. Lack of early-stage imprinting in the entrepreneurial field may associate with a low viability.*

7.3 Data and methods

7.3.1 Data

This final empirical study of the thesis used the full archival dataset of the 317 ventures and their 512 associated unique founders of the Nokia accelerator programme. The Nokia accelerator offered a good opportunity to study the role of field embeddedness in entrepreneurship, as the majority of the founders of the program entered entrepreneurship for the first time after having accumulated substantial experience in the corporate field.

As explained in more detail in chapter 3 of the thesis, the material for the original archival data set was collected from several different archival sources including the Finnish Company Registry, three separate Finnish business press databases, and a

commercial company data, company web pages, press releases and public CV databases. To ensure comparability, the raw data was coded according to standardised codes that in most cases reflected those of the Finnish public statistics authority, Statistics Finland. For the full details of the data collection strategy please refer to chapter three. The final data set utilised in the study included 289 companies and their 476 unique founders as 12 non-starter companies and 16 cases with significant gaps in their data record were excluded.

The collected data provided a promising starting point for the exploration of embeddedness. Firstly, the rich data collected regarding founder professional histories offered a solid starting point to explore each of the four different dimensions of embeddedness. Prior research that has relied on public census data has tended to focus on single aspects of embeddedness rather than considering the combined effect of the various dimensions. Secondly, the consideration of the full employment histories enabled reflection on the temporal mechanisms of embeddedness. Much of the prior research considering the influence of founder histories in entrepreneurship has tended to adopt shorter temporal focus with a concentration on the employment positions immediately preceding the venture founding. Finally, the large size of the Nokia outplacement program and the access to the data regarding all of the ventures founded within the program offered a unique opportunity to explore transitions into the entrepreneurial field from a single corporate field.

No dataset set is, however, without limitations. In this case, much of the biographic data relied on self-reported information and was, as such, both patchy and messy at times. Wherever possible I cross-referenced and sought broader supporting facts to corroborate the self-reported data. While I corrected many trivial errors and some conflicting data

points, my aim was always not to introduce any interpretation into the data codes but rather to exclude cases in which data could not be reliably validated.

7.3.2 Analytic process

Given that the theoretical foundations of the study lay at the conceptualisation of embeddedness as multi-dimensional, I chose set-theoretic fuzzy-set qualitative comparative analysis (fsQCA) as the method for the study (Ragin, 2000; 2008). While striving towards a parsimonious explanation, QCA enabled the study of causal complexity and linking of different levels of analysis that characterised this inductive study. The Boolean algebra-based QCA analysis ensured that the different dimensions of embeddedness could be elaborated as integral parts of the configuration of embeddedness. Furthermore, the recognition by QCA of alternative paths potentially leading to the same outcome allowed for the elaboration of the temporal dimension of embeddedness. Finally, the utilisation of the fuzzy-set method ensured that gradation in embeddedness could be recognised in full and the need to resort to simplified in/out-binary measures could be avoided. As in the prior studies of the thesis, the companies rather than the founders were chosen as the 'cases' of the study (Cook & Campbell, 1979; Rihoux & Ragin, 2009).

i. Outcome

The outcome measure was selected to identify the ventures that could be theorised to fall into the group of low-viability actors. I chose to use low revenues as the indicator or low viability. Economic reports of small and medium-sized enterprises regularly categorise the ventures based on their employee numbers. Micro-enterprises are, for

example, regularly categorised as ventures with less than 10 employees (OECD, 2017a). The categorisation based on the employee numbers acknowledges small ventures to exhibit a range of turnover patterns and can, as such, provide a more accurate assessment of the status of a venture. In this study, the employee data available was, however, not reported as consistently as the monetary financial indicators. To ensure comparability across the cases, I thus chose turnover as the basis for the outcome measure. Given the nascent state of the ventures, rather than seeking to establish any turnover trend measures, I used the latest reported figure.

As a set-theoretic method, QCA requires the researcher to define the limits for the set-memberships. Given the research question's focus on the role of context in low viability, I chose the focal set of the study to contain the ventures that exhibited low turnover growth. The European Union considers the limit of micro-entrepreneurship at two million Euros annual turnover (Liikanen, 2003). Given the early stage of the development of the ventures in this study, only a handful was reaching beyond 0.5 million Euro annual turnover. 90% of the ventures were reporting turnovers below 0.25 million Euros. To better understand the dynamics among this group, I set the exclusion point of the low-growth set at 0.25m€. All ventures below this turnover breakpoint were thus considered to belong to the set of low growth ventures.

Recognising that many of the ventures within this pool were sole entrepreneurs whose low-cost base service businesses could feasibly operate at this level of turnover, I set the crossover point at which I considered the venture to drop below supporting even a sole entrepreneur at 75k€. Ventures below the 75k€ turnover point were thus considered to be increasingly 'in' in the set of low viability ventures up to the point of 0€ turnover. At 0€ turnover, I excluded any ventures whose registration status implied inactivity or discontinuation. The rest were included and considered to be 'fully in' in the set of low

viability. I included them in recognition of the fact that many of the ventures engaged in product development were not necessarily recording any sales while still continuing the development of their product. Above the 75k€ crossover point, ventures were considered to be increasingly 'out' of the set of low viability ventures with those whose turnover exceeded 0.25m€ noted to be 'fully out'.

I chose the 75k€ turnover crossover point both in the reflection of the turnover distribution within the sample and the EU company VAT registration thresholds. While 75k€ can be considered a modest level of income for a venture, it can also be seen to be at the low end of sustainable operations for self-employed entities with low operating costs. With 60% of the sample reporting turnovers below this threshold, it split the pool roughly into two.

ii. Conditions

The measures of embeddedness were selected to identify the ventures' relative embeddedness in the new entrepreneurial field. They first sought to capture the different temporal dynamics of embedding and imprinting. Measures of imprinting were chosen to capture the discrete nature of imprinting at the times of change. To recognise the punctuated nature of imprinting, some of these measures were included as crisp or dummy attributes. In contrast, measures of embedding were chosen to capture the longitudinal build-up of embeddedness. These measures were all included as fuzzy attributes that recognised the wide variation in the founder employment histories.

Secondly, the measures of embeddedness sought to capture each of the four different dimensions of embeddedness. Cognitive, cultural, political and structural dimensions were thus all assigned their own measure for each of the two temporal mechanisms.

This implied that the venture cases of the study were to be assessed along eight different conditions, that is cognitive imprinting and embedding, cultural imprinting and embedding, political imprinting and embedding and finally, structural imprinting and embedding.

While QCA as a diversity-oriented method is well suited for the analysis of combinations of this complexity, the researcher should remain cognisant of the fact that each new condition increases the complexity of the configuration by a power of two. A study eight conditions would thus be expected to explore up to 256 possible configurations of the conditions. The number of the venture cases included in the study at 289 could have supported this level of complexity. It was, however, highly likely that the study would suffer from a notable limited diversity problem in that there would be no observations of several of the logically possible combinations of the conditions. Given that limited diversity can relate to fundamentally-flawed results in QCA, I chose to reduce the number of possible configurations by dropping the measure of political imprinting. I discuss the reasons behind this below as part of the discussion of the measure of the study. With seven conditions included in the final analysis, the possible logical configurations dropped to 128. This level of complexity was much more feasible to address with the number of cases included in the study and, as such, promised to delivery also more solid conclusions. All of the measures were aggregated across all of the founders of a venture and normalised to ensure comparability across the cases.

Cognitive embeddedness. The measures of cognitive embeddedness were chosen to assess the extent to which the venture founders could be expected to place preference on the cognitive schemata of entrepreneurship (Shane & Venkataraman, 2000) or to reflect flexibility in their cognitive schemata (March, 1991). The punctuated process of cognitive imprinting was operationalised with a crisp measure of whether the ventures

had acquired entrepreneurial training following the venture establishment. The second empirical study of this thesis found many of the interviewed founders to have engaged in entrepreneurial training programmes during the transition from wage-employment to entrepreneurship. The second study also found the acquisition of new human capital to be of more significance in some areas of entrepreneurship than in others. As such, the cognitive imprinting measure in this study was set to capture any link between the acquisition of the new entrepreneurial human capital, or the lack of it, in the cases of low viability.

The development of preferred mental schemata over time, that is cognitive embedding, was operationalised with a measure of the average share of a single occupational engagement of the overall career of a founder. The measure sought to capture the mobility of the venture founder across different occupational categories. A move into a new occupational category is known to involve learning and, as such, the introduction of new mental schemata (March, 1994a). Founders with several moves over their careers could thus be theorised to exhibit a level of ambidexterity in their cognitive schemata, reflective of the cognitive requirements of the entrepreneurial field (Raisch, Birkinshaw, Probst, & Tushman, 2009). The second empirical study of this thesis highlighted a notable variation in the ventures' ability to repurpose their prior human capital for new uses in entrepreneurship. As such, the measure of cognitive embeddedness in this study was introduced to explore the benefits and constraints associated with the occupational range of the human capital of the venture.

Cultural embeddedness. The measures of cultural embeddedness were chosen to capture the extent to which the ventures were likely to embody the prior versus the new community rule systems, beliefs, and ideologies. The findings of the first two empirical studies of this thesis proposed the ventures be positioned within two separate subfields

within the entrepreneurial system. One of the subfields was theorised to reflect the rule systems, beliefs and ideologies of the industry community while the other was considered to reflect a different rule system more akin to that of a startup community. The prior studies highlighted how ventures in these two groups had adopted different organisational templates in seeking either to commercialise their prior competences or aspiring to develop new ideas for commercialisation.

Seeking to capture the separation between the organisational templates among the ventures, I operationalised the ventures' cultural imprinting with a measure of the distance between the industry sector of Nokia from which the ventures originated and the one into which the ventures had positioned themselves. Higher industry distances were theorised to associate with idea development and exploratory behaviours and, as such, stronger imprinting by the entrepreneurial system. Lower industry distances, on the other hand, were considered to reflect venture positioning in cultural neighbourhoods of the parent industry and as such weaker imprinting by the entrepreneurial system. I used the sector classifications of Statistics Finland and considered the distance to increase in incremental steps based on the venture codes being listed in the Finnish Statistics Industry categorisation within the same industry, the same category, the same field or totally separately. This was the only imprinting measure that was included as a fuzzy-attribute instead of a crisp one to capture the variation in the industry distances.

The development of cultural embeddedness through embedding over time was operationalised with a measure of the relative length of any prior periods in entrepreneurship. The process of embedding relies on a reciprocal interaction that both deepens, in terms of the build-up of trust, and broadens, in terms of trust facilitating further connectivity, over time (Uzzi, 1999). Prior periods in an entrepreneurial field

could thus be theorised to associate with a stronger internalisation of the cultural code of the entrepreneurial field. In contrast, the lack of any prior entrepreneurial experience could be theorised to imply immersion only in the cultural code of the corporate field (Kelly & Amburgey, 1991).

Political embeddedness. The measures of political embeddedness were used to evaluate the ability of the ventures to navigate and utilise the institutional infrastructure of the field. The first two studies of this thesis identified a separation among the ventures with regards to their engagement with the different institutional infrastructure elements of entrepreneurship. The earlier studies found that in one of the regions in which the Nokia accelerator operated some of the ventures had entered a regional entrepreneurial accelerator programme following the Nokia one. The period in the regional accelerator was found to have had a notable impact on the developmental paths of the ventures. Many of the ventures that had joined the accelerator had come to adopt an identity as a startup and had structured the venture towards a goal of idea development through risk financing. In contrast, ventures outside of the accelerator had adopted an identity as an enterprise and were regularly targeting cash generation through extant capability commercialisation. Given the regions varied in the availability of the regional accelerators, I did not wish to introduce engagement with one of these as a measure in this study of the national pool of ventures. I thus opted to omit the *political imprinting* measure. Overall, I considered the cognitive, cultural and structural imprinting measures, in this case, to capture well the punctuated mechanism of imprinting given that all of the ventures had shared the similar exposure to the entrepreneurial system at the Nokia accelerator.

Despite deciding to drop the condition of political imprinting from the analysis, I did maintain the condition of political embedding. Institutional infrastructure of a field is

known to engage in membership access control in institutional fields. I thus operationalised the political embedding with a measure of the government funding that the ventures had secured after the first two years of their operations. Beyond providing critical financial resources to a new venture, the receipt of a government grant can act as an important signal of legitimacy within a field (Plummer, Allison, & Connelly, 2016). The receipt of a grant could thus be theorised to imply both an understanding of the political context and an ability to legitimately position the venture within this. I used the grant amounts awarded by Tekes, The Finnish Funding Agency for Innovation, and normalised these across all of the ventures included in the study. I only considered awards granted two years after the venture founding to capture the longitudinal dimension of embedding. Higher relative amounts were expected to associate with stronger affiliation within the entrepreneurial field.

Structural embeddedness. Finally, the measures of *structural embeddedness* were focused on the interpersonal networks of the venture-founding teams. Given that the dataset of this study did not include any network data and the purpose of the study was to explore the combinatorial effect of the different aspects of embeddedness, proxy measures were used in this case instead of any purpose-built network ones.

The measure of structural imprinting was chosen to reflect the variety of the founding team and subsequent implied resource access. Founding teams are known to strongly influence their ventures (Burton et al., 2002; Kacperczyk, 2009). It was thus reasonable to theorise heterogeneous teams, whose members had over time been embedded in different fields to associate more strongly with the entrepreneurial context than those ventures that only included Nokia founders. As with the cognitive imprinting, I operationalised the structural imprinting as a crisp yes/no indicator whether non-Nokia founders were included in the team.

Lastly, structural embedding was operationalised with a measure of the relative share the founders' employment outside of Nokia. Founders with several employers of several years were theorised to evince broader networks than those would you have remained within the network of a single employer.

Across the conditions, the measures were first aggregated across all of the founders of a venture and then normalised to ensure the comparability of the ventures cases across the whole pool. Table 7.1 includes a summary of all the measures employed in the study.

Table 7.1 Conditions of embeddedness.

mode / mechanism	Cognitive	Cultural	Political	Structural
Imprinting	Entrepreneurial training at the time of transition *Burton, Sorensen & Beckman, 2002; Hitt, Bierman, Shimizu & Kochhar, 2001*	Venture industry to corporate industry distance *Tilcsik, 2014*		Non-Nokia founder joining the team *Burton, Sorensen & Beckman, 2002*
Embedding	Average length of occupational engagements over founders' careers *Nooteboom, 2000, 2007; Wuyts et al., 2005*	Relative share of entrepreneurial experience *Kelly & Amburgey, 1991*	Relative size of government grants raised after year two of the operations *Hillman, 2005; Burt, Christman and Kilburn 1980*	Relative share of non-Nokia employment during founders' careers *Romo and Schwartz, 1995; Uzzi, 1999*

iii. Calibration

Given the origins of the venture founders in a large corporation in an industry, the measures of embeddedness were developed to indicate a position on a range between

embeddedness between the industry context and the entrepreneurial one. The contrasting of the memberships built on the literature that has argued for embeddedness to reflect questions of identity (White, 2008). As such, while measures in between were considered feasible, membership in both simultaneously theorised not to be likely. The normalised rate-measures thus recognised partial memberships and simultaneous identities within different fields but also reflected possible stronger memberships in one or the other.

As an example, a venture whose founders' cumulative years in prior entrepreneurial ventures came to three against their total employment years of nine, would record a cultural embeddedness measure of 0.3 thus implying stronger relative membership in the corporate field than in the entrepreneurial field. By similar measure, a sole founder with two entrepreneurial years and a full employment history of three would record a cultural embeddedness measure of 0.67 thus implying relatively stronger affiliation with the entrepreneurial field. While I chose the measures to reflect the theoretical foundations of embeddedness, the structure offered the additional benefit of avoiding the need to further calibrate the data, thus reducing the potential for introducing bias at this stage. For all of the relative measures, the cut-off point for full exclusion was set at 0.1 and the cut-off point for full inclusion at 0.9. The crossover point of maximum indifference with regards to a set membership was set at 0.5.

iv. Logical reduction

While QCA is a diversity-oriented method, diversity can also be the method's Achilles heel. The lack of empirical evidence across the possible causal configurations and their associated outcomes can lead to critical problems in deriving the causal relations by implication, as results can vary widely depending on the assumptions made regarding

the unobserved cases (Marx, 2010). Even though I dropped one of the theoretical conditions in order to manage the complexity of the case, the analysis was still likely to encounter notable amount of limited diversity. Given that the different dimensions of embeddedness have rarely been studies as combinations, the literature did not offer any obvious theoretical frame with which to elaborate on any limited diversity problems. As such, I chose to utilise the recently introduced algorithm of co-incidence analysis (CNA) in the development of the minimised solution (Baumgartner, 2009, 2013; Baumgartner & Thiem, 2015). In contrast to the standard top-down logical reduction of the truth table, CNA searches for the minimised solution bottom-up, relying only on the observed cases (Ambuehl, Baumgartner, Epple, & Thiem, 2017). While CNA is still a method in development with only a few empirical studies in publication (Baumgartner & Epple, 2014; Cooper & Glaesser, 2016; Thiem, 2015), the method was attractive in this case given the potential pitfalls of limited diversity. CNA avoided the need for broad application of counterfactual assumptions, which was particularly attractive here given that there was little prior empirical literature to rely on with regards to multidimensional embeddedness[1]. R QCApro version QCApro_1.1-1 was used for the calibration of the data as well as for the supplementary Standard Analysis. R CNA package version cna_999.1.0 was employed for the co-incidence analysis.

[1] Some have argued that given the incompatible claims made by the scholars adopting the earlier algorithm of QCA, commonly referred to as the Standard Analysis, and those focusing on redundancy free models such as CNA, a researcher has to choose sides between these two (Thomann & Maggetti, 2017). While I recognise the disputes between the two schools of thought and clearly adopt the algorithm focusing on redundancy free solutions, I, however, hope to stress the importance of the grounding of the analysis in prior theory and substantive understanding as advocated by the scholars of the Standard Analysis.

7.4 Findings

The results of the analysis lend support to proposition one in suggesting that the ventures of low viability do indeed exhibit weak embeddedness. The picture is, however, more complex than this.

Table 7.2 lists the solution of the analysis that meets the set criteria of consistency and coverage. Only redundancy-free disjunctions that satisfy the set parameters of fit of consistency and coverage are reported. In QCA analysis consistency refers to the extent to which all of the cases of a configuration are expected to align with the outcome (Ragin, 2006). In this project, I set the consistency threshold at 0.8, slightly above the typical limit of 0.75 (Ragin, 2008). This set a tougher cut-off point for the solutions that were accepted as valid configurations of embeddedness in the cases of low venture viability. Coverage, on the other hand, indicates the extent to which a configuration accounts for the outcome and, as such, can be seen to communicate the relevance of the condition (Ragin, 2006: 292). While the coverage thresholds can regularly be notably lower than that of consistency, CNA analysis is particularly sensitive to any reduction in this parameter. I thus set the coverage threshold at 0.9, above the recommended limit of 0.8.

The presentation of the results in table 7.2 reflects a now-broadly-adopted practice of QCA solution organisation (Ragin & Fiss, 2008). The conditions are listed on the left and the logically reduced configurations of these that associate with the outcome are depicted on the columns on the right. In the columns, the necessary conditions are indicated by black circles, while conditions whose absence in the causal configuration is associated with the outcome are shown by a cross inside a circle. Conditions whose presence or absence in the configuration makes no difference with regards to the presence of the outcome are shown as blank spaces. The table also reports the

Table 7.2 The solution of the coincidence analysis.

Coincidence analysis: atomic solution																				
	AS1				**AS2**				**AS3**				**AS4**				**AS5**				
Configuration	i	ii	iii	iv	i	ii	iii	iv	i	ii	iii	iv	i	ii	ii	iv	i	ii	iii	iv	v
	A	B	C	D	A	B	C	E	A	B	F	C	A	B	F	D	A	G	F	C	D
Imprinting																					
cognitive			●				●					●								●	
cultural	●				●				●		⊗		●		⊗		●	●	⊗		
structural				●				●								●					●
Embedding																					
cognitive																					
cultural								⊗										⊗			
political	⊗			⊗	⊗				⊗				⊗			⊗	⊗				⊗
structural		⊗				⊗				⊗				⊗							
Consistency	**0.802**				**0.804**				**0.808**				**0.806**				**0.804**				
Coverage	0.911				0.907				0.902				0.900				0.901				

consistency and coverage measures for each of the alternative solutions. The solutions are presented in a descending order of coverage so that the solution with most coverage, that is the solution ranking highest in empirical importance, is presented first on the left.

The solution outlines five alternative paths to low viability (AS1 to AS5). In addition to the first-order, across-type, equifinality indicated by these alternative paths, the solution also reports neutral permutations or second-order or within-type equifinality in all of the solution configurations. The strong presence of equifinality highlights how embeddedness is not a dichotomous characteristic. Not all of the ventures of low viability are the same. Rather, several configurations of the different dimensions of embeddedness may associate with a low viability. Having said that, some of the configurations (A to F) keep repeating throughout the solutions with A being present in all of the solutions. In this pool of ventures, there proposes to be an identifiable pattern in the embeddedness, or the lack of it, among the low viability ventures.

Given the limited variation in the coverage figures of the five solutions of the analysis, none of the configurations dominates among the studied cases of low viability. All of

the solutions, interestingly, exhibit a similar pattern of imprinting in the entrepreneurial field combined with a lack of embedding in the same. This pattern lends support to proposition 6 that suggested low viability ventures to reflect weak embedding in the entrepreneurial field. At the same, proposition 7 is seemingly not supported to the similar extent in that many of the low viability ventures exhibit imprinting in one of the dimensions of embeddedness.

The strong within-type equifinality is very noticeable across the solutions. The configuration A of a cultural imprinting combined with the lack of political embedding carries through all of the solutions. This combination reflects the positioning of the venture in a distant sector from that of Nokia while at the same time failing to secure financing after the initial period of its development. While caution should be exercised in reading too much into the proxy measures employed in this analysis, this combination hints at an orienting principle of idea generation with the lack of adequate funding for it.

The configurations B and C are both present in four of five solutions. Of these, the configuration B lends support to the proposition five that highlights an entrepreneurial challenge that has been actively explored in the entrepreneurial literature, namely the lack of embeddedness in the social network of the entrepreneurial field. The configuration C, however, introduces an interesting variation into the alternative paths to low viability. This configuration disputes proposition two by highlighting cognitive imprinting as one of the routes to low viability among the studied venture. This measure of cognitive imprinting was operationalised as a dummy condition indicating whether the venture founders had sought business training after their exit from Nokia. This configuration in the solution may thus reflect cases in which additional training was sought to support re-employment. This configuration highlights how the low viability of

the venture may in some cases reflect the founders' primary focus having moved from the venture. Founder capacity in terms of cognitive capital gained in further education is likely to open up opportunities beyond the venture development.

The strong within-case equifinality among the solution offers the possibility of comparing and contrasting the solutions in order to search for possible substitute routes to low viability. Solutions AS1 and AS2, for example, contain both configurations A, B and C. As such, the configurations D and E thus propose to act as substitutes. Structural imprinting combined with the lack of political embedding thus proposes to equate to structural imprinting combined with the lack of cultural embedding. Structural imprinting was operationalised as a crisp measure of the presence of a non-Nokia founder in the venture. The fact that the presence of this condition combines either with the lack of long-term funding or with the lack of prior entrepreneurial experience, may hint at low viability at times arising from an imbalance in the team aspirations.

Condition F proposes low viability in some cases to arise from the lack of cultural imprinting. This is the only configuration in the solution that highlights the lack of imprinting as a route to low viability. Again, considering the operationalisation of this measure as a distance to the Nokia industry segment, this configuration may highlight those cases of low viability in which the venture has sought to commercialise the existing competence in too narrow a fashion.

Lastly, configuration G closely resembles that of A and proposes cultural imprinting to combine with the lack of cultural embedding in cases of low viability among the studied ventures. This condition suggests low viability, at times, to reflect cases in which the ambition in idea development may not have been adequately matched with other resources, in this case, broader cultural embedding in the entrepreneurial field.

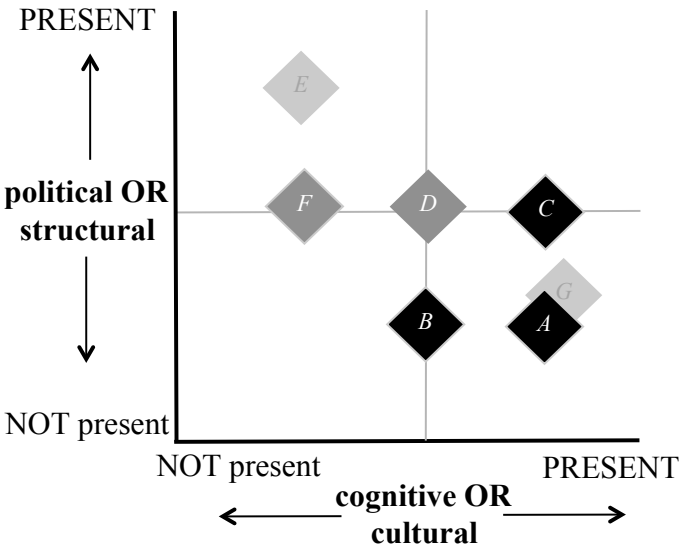
Table 7.3 Minimally sufficient conditions of the coincidence analysis.

Coincidence analysis					
	Minimally sufficient conditions				
Configuration	m1 A	m2	m3 G	m4 B	m5
Imprinting					
cognitive					
cultural	●		●		
structural					
Embedding					
cognitive		⊗			
cultural			⊗		
political	⊗				
structural				⊗	●
Consistency	**0.823**	**0.81**	**0.816**	**0.835**	**0.83**
Coverage	0.855	0.813	0.725	0.633	0.459

Coincidence analysis reports separately the configurations that form the basis of the solution (Table 7.3). While these configurations should not be interpreted causally, they provide another viewpoint into the elements of the solution discussed above. Configuration A representing the one of cultural embedding combined with the lack of political embedding is naturally most strongly present here too. In fact, only this minimally sufficient condition and that of m2 (lack of cognitive embedding) satisfy the coverage requirement of 0.8. Of the configurations that are present in the analysis solution, only A, B and G meet the consistency requirement of 0.8.

Given the large number of attributes in the study, the configurations do easily get very complex and interpretation becomes hard. To better assess the balance of the cognitive/cultural factors with the political/structural dimensions, Figure 7.1 positions the attribute configurations of the atomic solution on a two-by-two with the cognitive and cultural dimensions on the x-axis and the political and structural dimensions on the y-axis. While the figure should not be interpreted for any causal statements, as none of the configurations presents strong enough evidence in their own right, the figure highlights the imbalance between the cultural/cognitive and the political/structural

Figure 7.1 Cognitive/cultural and political/structural configurations of the solution.



dimensions within the overall solution. In the solution, the alternative paths to low viability tend to combine a presence of cognitive/cultural embeddedness with the lack of the political/structural one. The results of table 7.2 further propose this imbalance to reflect a temporal imbalance in the sense that the low viability ventures' cognitive/cultural embeddedness proposes to arise through the short-term punctuated mechanism of imprinting while the weak embeddedness suggests arising due to the longer-term mechanism of embedding failing in the political/structural dimension.

The findings lend support for the proposition that failure to embedded in the entrepreneurial field may associate with a low viability of a venture. They also offer support for the proposal that embeddedness may arise through two temporally-separate processes: short-term imprinting and long-term embedding. Finally, the findings clearly propose that embeddedness is not a question of embedding along a single dimension alone but rather a result of the complex interaction of the different dimensions.

The findings do, however, fall short of offering clarity in the exact interaction of the different dimensions of embeddedness. While the findings do indicate that embeddedness along the different dimensions is not additive, various configurations of embeddedness and the lack of it are similarly shown to associate with a low viability. Further study of the cases of the different configurations can help to identify the circumstances in which the different configurations take precedence without denying the complexity of social reality.

7.5 Discussion

This final study of the thesis sought to bring the findings of the earlier two studies together by exploring the emergence of entrepreneurial actors as a question of their embeddedness in the field of entrepreneurship. As in the prior two studies, I conceptualised the entrepreneurial system as an institutional field. I adopted a framework of embeddedness as multidimensional and considered not only the ventures' position in the social network of the field but also their internalisation of the cognitive schemata, the cultural rule systems and the political hierarchy of the field. In the analysis, I sought to explore the variations in the embeddedness of the ventures. I specifically focused on those ventures that could be considered not to have attained viability in terms of fully obtaining the capacity and authority to act for themselves. I operationalised the viability of the ventures with the measure of their turnover.

The findings of the study proposed the low viability ventures to reflect a range of alternative configurations of embeddedness. Most notably, contrary to prior studies, that have proposed early stage imprinting to position nascent ventures on a route to viability (Burton et al., 2002; Stinchcombe, 1965), this did not appear to be the case among the ventures that emerged from the corporate redundancy programme of the study. Rather,

several of the alternative configurations of embeddedness among the low viability ventures suggested to have been embedded in the entrepreneurial field through the short-term mechanism of imprinting but to have subsequently faltered in the long-term reciprocal mechanism of embedding and, as such, not to have embedded themselves fully into the system of entrepreneurship.

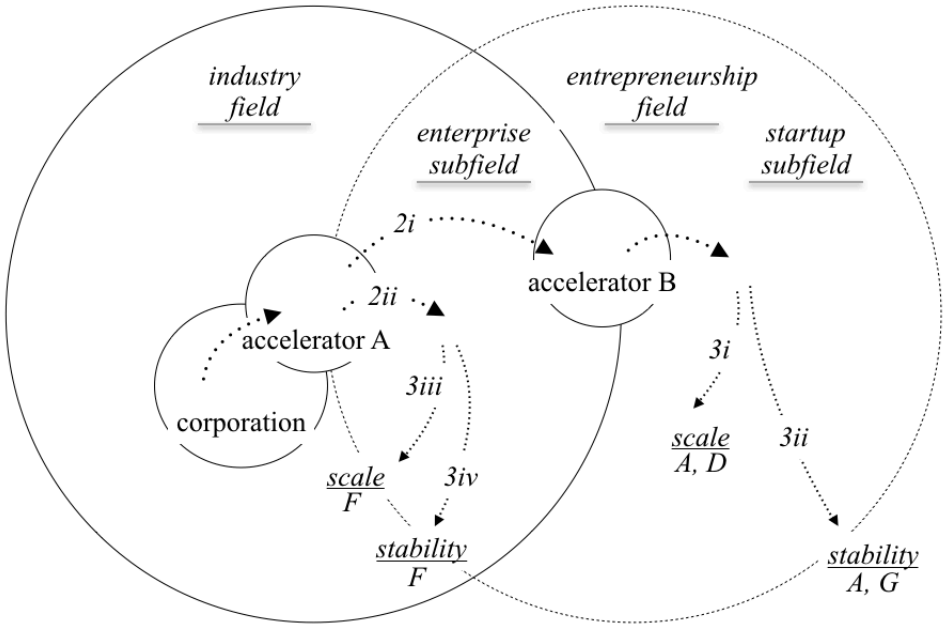
Beyond the imbalance in the temporal mechanisms of embeddedness, the findings proposed the low viability ventures to exhibit imbalance also in the different dimensions of embeddedness. While the ventures commonly signalled embeddedness in the cognitive and/or cultural dimensions, they demonstrated weak embeddedness in the political and/or structural dimensions. This imbalance, together with the temporal one, may propose embeddedness in the cognitive and cultural dimensions to arise through shorter temporal processes while embeddedness in the structural and political dimensions may take longer to develop.

While the findings suffer from the study having had to rely largely on proxy measures in many of the dimensions of embedding, they do, however, hint at possible patterns among those entrepreneurial ventures that fail to emerge. The prior two studies proposed the entrepreneurial ventures that originated from the corporate redundancy programme to split into two interlinked, but separate, subfields of the entrepreneurial system (Figure 7.2). Some of the ventures entered a subfield that reflected the orienting principle of idea commercialisation (2i in the figure), while others positioned themselves into a subfield that structured around the orienting principle of commercialising competence (2ii). In both of the subfields, some of the ventures further adopted a scalability-oriented organisational template, while others opted for a stability-oriented one.

Considering the findings of the third study in parallel with the knowledge of the venture routes obtained from the prior studies, suggests the configurations of the co-incidence analysis (Table 7.2) to possibly reflect the patterns of embeddedness among the ventures in both of the subfields and in both of the organisational templates.

Ventures in the startup subfield adopted the orienting principle of idea development, thus embarking on a development journey that regularly took them to a different sector to that of Nokia. The development effort commonly called for upfront investment. The combination of cultural imprinting together with the lack of political embedding (configuration A) could thus be theorised to relate to a low viability among both the scalability- and the stability-oriented ventures in the startup subfield (groups 3i and 3ii in Figure 7.2).

Figure 7.2 Alternative routes to low viability.



Corporate accelerator A as the boundary organisation into the entrepreneurial field. Regional accelerator B as the boundary organisation into the startup subfield. Transitions 2i and 2ii as the first separation of the ventures into their respective subfields. 2i into the startup subfield. 2ii into the enterprise subfield. Within both fields, a further split into scalability and stability-orientations. Configuration F as a possible route to low viability in the enterprise subfield. Configurations A, D and G as possible routes to low viability in the startup subfield.

Furthermore, some of the ventures in the startup subfield adopted the orienting principle of idea development while, at the same time, assuming a stability-oriented organisational template. This organisational template could be hypothesised to diverge from the shared template of the field. The combination of cultural imprinting with the lack of cultural embedding (configuration G) may thus relate to low viability among the stability-oriented ventures in the startup subfield.

Given the idea development goal shared in the startup field, the scalability-oriented ventures included in their teams, in some instances, non-Nokia founders who could bring broader entrepreneurial competence to the team. While the scalability-oriented ventures in the enterprise field also adopted larger team structures, they tended to rely more on their Nokia contacts. As such, the configuration of structural imprinting combined with the lack of political embedding (configuration D) may reflect another route to low viability in the startup field.

In the enterprise field, both the scalability- and the stability-oriented ventures sought to commercialise their competence, thus mirroring closely their Nokia roles in the new ventures. Configuration F, as the lack of cultural imprinting in the entrepreneurial field, may reflect these ventures' route to low viability (groups 3iii and 3iv in Figure 7.2).

The solution further proposed cognitive imprinting to have presented one route to low viability among the ventures (configuration C). As discussed previously, this route may reflect the opportunities that the additional training has created beyond the development of the venture. As such, this route may be applicable in both fields and among the groups of both scalability- and stability-orientation.

Finally, one of the solutions proposed the low viability ventures to reflect a configuration of structural imprinting combined with the lack of cultural embedding. This configuration appeared as a low-weight one in the solution. Indeed, in the prior

studies, this configuration was not strongly in evidence. It may thus imply the national pool of ventures contained a variation in the venture developmental routes that was not strongly present in the regional context that was studied in more detail.

7.5.1 Implications for institutional theory

The results of the study contribute towards the institutional theory in a number of ways. Firstly, the findings highlight the multidimensional nature of embeddedness. Extant research has tended to consider embeddedness largely as a question of an actor's position within a social network structure. Without denying the importance of either different types of social ties or the various network formations, these results, however, encourage the recognition that structural ties may not suffice on their own. The acknowledgement of embeddedness as consisting of cognitive, cultural and political dimensions in addition to the structural one can support richer theorisation of actors emergence in the context of fields.

Secondly, the findings highlight how marginal positions in a field may associate with a number of different configurations of embeddedness. Prior research has tended to consider embeddedness as dichotomous. The results of this study, however, propose there to be variation in the dimensions of embeddedness among marginal actors. This variation may explain some of the conflicting findings regarding agency in the periphery of fields. Given the prominence of the concept of the embedded agency in the institutional literature, the recognition of the variations in the nature of embeddedness can support more nuanced theorisation of the scope that different actors within fields have for action.

Thirdly, the study brings the different temporal mechanisms of embeddedness together. While organisational institutionalism has actively explored the influence of imprinting

(Marquis & Tilcsik, 2013) and the social network literature has done the same with regards to embedding (Kilduff & Brass, 2010), few studies have considered these as complementary mechanisms of embeddedness. The use of set-theoretic methods in this study enabled the exploration of the mechanisms next to each other in order to better understand how they combine to embed actors in their contexts. The findings propose that, unlike what was previously broadly theorised, imprinting may not in all circumstance suffice for actor emergence.

7.5.2 Implications for entrepreneurial policy

The empirical context of this study closely reflected the landscape of entrepreneurship today, in that several policy interventions sought to support the transition of the redundant Nokia personnel into arrangements of entrepreneurial employment. The findings of this third concluding study of the thesis offer guidance for further development of these interventions on several fronts.

Firstly, the study highlights how entrepreneurial actor emergence is regularly a question of long-term development. The ventures in this study enjoyed exceptional support in the short-term. Indeed, both the interview studies and the combinatorial analysis of this third study recognised this. Yet in the long-term, many of the ventures faltered in embedding themselves into the entrepreneurial field. The findings suggest entrepreneurial policy to benefit from a longer-term focus.

Secondly, the study demonstrates how entrepreneurial emergence calls for developmental effort on several fronts. The ventures of this study benefitted from a range of training and networking opportunities during their transition into entrepreneurship. Yet many faltered in embedding themselves into the incumbent networks of the entrepreneurial field. The findings propose entrepreneurial support to

benefit from developing the entrepreneurs' interconnections with a broad set of actors of both the entrepreneurial and non-entrepreneurial kind.

Finally, this third study encourages entrepreneurial policy to consider the plurality of entrepreneurship. While growth ventures continue to serve as important engines of economic renewal, an opportunity can be missed if the churn associated with the growth model is taken as a given. In this research, 90% of the ventures reported turnovers below the set threshold of viability of 0.25m€. Within the low viability group, a number of routes to marginality were observed. While a level of churn is a natural by-product of innovation and development, policy measures that support the long-term development of a range of different types of entrepreneurial ventures may benefit not only the entrepreneurs but also the entrepreneurial system itself.

7.6 Conclusions

In this final study of the thesis, I utilised an archival dataset of all of the ventures that originated from the Nokia accelerator to explore variations in the embeddedness among those ventures that proposed to have faltered in their emergence and, as such, proposed to suffer from low viability. The findings elaborated on the multidimensionality of embeddedness. They further demonstrated viability to arise not only from short-term imprinting but also from the long-term embedding.

Any empirical study has to battle with the shortcomings of theoretical concept operationalisation. This was particularly the case in this study, given the complexity of the construct of multidimensional embeddedness. While all of the condition measures employed in the study were chosen based on their prior usage in published research and reflected the findings on the earlier two studies of the thesis, in many cases I had to resort to proxy measures. As such, future research could engage with the findings of the

study and elaborate these by developing measures that more accurately reflect the different dimensions of embeddedness.

Despite the shortcomings of the study, the findings can give rise to a fruitful discussion regarding policy development in the entrepreneurial sector. Transitions to entrepreneurship are increasingly common and actively encouraged by many governments. Despite widely-adopted entrepreneurial support programmes, the majority of entrepreneurial ventures remain small or fail. A better understanding of how these transitions can be supported is thus of vital importance.

8. DISCUSSION

8.1 Theoretical contributions

This thesis sought to understand the role that institutional fields may assume in the development of post-redundancy entrepreneurial ventures into viable actors of their field. While both entrepreneurship and organisational institutionalism have attracted active research interest, the studies that adopt an institutional lens in the exploration of the entrepreneurial phenomenon are still relatively few in number (David et al., 2017). By considering entrepreneurial development in a system of entrepreneurship as a question of entrepreneurial emergence in an institutional field, the thesis seeks to contribute both towards the contextualisation of entrepreneurship and towards the theorisation of institutional fields.

The adoption of institutional theory in the study of entrepreneurial ventures has at times been subject to criticism due to some considering the theoretical foundations of the two fields inherently incompatible (David et al., 2017). These critics consider the premise of isomorphism in organisational institutionalism intrinsically contradictory to the nature of entrepreneurial activity given the focus of entrepreneurial enterprise in breaking the old structures and ushering in change. Yet, entrepreneurship does not arise or thrive in a vacuum. This is broadly acknowledged, not only among the institutional theorists but also among the scholars of entrepreneurship; consider, for example, the basic tenets of the Lean philosophy in encouraging entrepreneurs to engage with their contexts early in the process of innovation (Blank, 2013). Institutional theory offers powerful conceptual tools for the study of how context may direct not only the emergence of innovations (Hargadon & Douglas, 2001) but also of entrepreneurial ventures.

The studies of this thesis contribute towards the contextualisation of entrepreneurship in several ways. Firstly, the thesis demonstrates that rather than systems of entrepreneurship forming unitary entities of homogeneous goals, identities and principles, they may, in some cases, split into subsystems. While ecosystems have, in the literature, been acknowledged to form around singular goals (Adner, 2017), the literature that considers the design of these systems has remained largely silent about the possible implications that divergent goals within the system may carry. Indeed, few empirical studies have to date explicitly investigated potential splits within the systems of entrepreneurship. In this study, I explored an entrepreneurial system that seemingly split into two subfields. The governance of these subfields was found to rely on different institutional infrastructures. The goals, identities and orienting principles of the ventures that entered the two subfields were also found to diverge from each other. Most notably, ventures that adopted similar stability-oriented organisational templates were found to emerge in one subfield while this failed to happen in the other field. As such, the findings propose not only that the institutional context of entrepreneurial systems may influence entrepreneurial outcomes but also that possible splits within the systems of entrepreneurship may influence the plurality of entrepreneurial forms.

Secondly, the thesis substantiates the claims of the importance of the contextual considerations in the research of entrepreneurship by demonstrating how the convertibility of capital may, at times, be restricted by the context. Entrepreneurs are broadly recognised to be bricoleurs of resources (Baker & Nelson, 2003). Bricolage, by definition, relies on capital that has been previously accumulated, regularly in a context whose social order may differ from that of the entrepreneurial activity. While the benefits of resource combinations across the boundaries of social orders have been actively recorded in empirical studies, possible constraints in capital conversion across them have received less attention. In this study, I explored the portability of human,

cultural and social capital from a prior industry context into two entrepreneurial subfields that reflected divergent social orders. Ventures within the two subfields were found to adopt different capital strategies. While ventures in one of the subfields actively repurposed their prior capital, ventures in the other prioritised the acquisition of new ones. Furthermore, ventures that relied on a narrow range of the different forms of capital only emerged as viable actors in the context in which they were able to build on their previously-accumulated capital. The findings suggest that capital may not carry equal use-value in all social contexts. They further highlight the detrimental effect this may have for the emergence of nascent ventures, particularly in cases in which the organisational template of the venture relies on a narrow range of the different forms of capital.

Finally, the thesis elaborates the multidimensionality of entrepreneurial ventures' embeddedness in their social contexts. Research into the social networks of entrepreneurs has shown the network structures to influence the emergence of nascent ventures. Analysis of the structural characteristics of entrepreneurs' networks has, however, reported contradictory findings in terms of the superiority of different structural arrangements. In this thesis, I studied entrepreneurial ventures' embeddedness in their social contexts, not only as a question of positioning within a social network but also as a question of internalisation of the cognitive schemata, cultural behaviour patterns and political hierarchy of the context. The findings intimate imbalance in embeddedness along the different dimensions to relate to low viability of entrepreneurial ventures. The findings further demonstrate embeddedness to arise through long-term embedding and not only through short-term imprinting.

Beyond the contribution to the contextualisation of entrepreneurship, the thesis substantiates the theory of fields in organisational institutionalism. Firstly, the thesis

offers a rare view into the separation of institutional infrastructure into subfields. Comparative studies of institutional infrastructure are still few in number in the literature. This thesis thus offers an unusual account of how entrants to a field may come to adopt positions in interlinked but separate subfields by prioritising engagements with the infrastructure of the respective subfields. Contrary to prior literature, the thesis also demonstrates that highly elaborated institutional orders may, at times, impose weaker isomorphic pressures on entrant actors and, as such, offer more scope for deviant action than emerging social orders.

Secondly, by exploring actors within subfields, the thesis foregrounds questions regarding the homogeneity of the marginal positions within fields. The centre-periphery dichotomy is commonly applied to describe the heterogeneity of field actors' positions within a field. Periphery is in these accounts considered to enjoy weaker isomorphic pressures but also to suffer from inferior access to the resources of the field. Empirical studies have, however, found contradictory findings regarding the potency of the peripheral actors. Indeed, marginal actors have, at times, been found to exhibit agency above their station. This thesis proposes that the periphery of a field may, on occasion, be a rich terrain of overlapping social orders, nonisomorphic actors, and heterogeneous positions. In the research of this thesis, the periphery of the entrepreneurial field contained both actors whose emergence in the central startup field was in question, and actors who were rather coming to adopt positions in the neighbouring industry field. As such, they were subjected to different normative and mimetic pressures and encountered heterogeneous resource landscapes. The findings thus call for studies of peripheral actors of institutional fields to consider the position of the focal field within its environment.

Finally, the study contributes towards the methodological development of the scholarship of organisational institutionalism. While social orders are recognised as complex systems, the combinatorial effects of the goals, identities, and orienting principles are seldom explored explicitly. In this thesis, I employed fuzzy-set qualitative comparative analysis to inquire how different configurations of embeddedness or the lack of it may relate to actor emergence in fields. The findings supported the elaboration of the equifinality of actor emergence. While recognising the core tenet of institutional theory in all actors of a field being subject to the isomorphic pressures of the field, the method eschewed the conceptualisation of the actors of the field as automatons or indeed the field as a homogeneous landscape of a single description. The thesis thus demonstrates how configurational methods can advance the development of institutional theory by encouraging the elaboration of diversity within isomorphic fields.

8.2 Practical implications

Entrepreneurship is known to stimulate the economy and to offer an attractive instrument for labour policy, particularly in sectors of decreasing wage-employment. Indeed, much public investment is directed both at the development of systems of entrepreneurship and at entrepreneurial interventions, such as startup accelerators or hubs. Prior research into national systems of innovation has cautioned policymakers regarding institutional borrowing, highlighting how national contexts may call for localised responses in the innovation system design (Dalum et al., 2010). This thesis further encourages sensitivity to the contextual settings in the development of entrepreneurial policy.

This thesis explored the emergence of entrepreneurial ventures that originated from a corporate redundancy programme. The studied ventures were found to adopt two

alternative developmental routes. One of these routes closely reflected the contemporary startup model of risk financed idea development. The other one prioritised short-term pragmatic cash generation that in some cases spurred later innovations. Both routes resulted in successes and failures as is typical in entrepreneurship. Among the small regional sample of the study, however, the pragmatic cash-generation route allowed for more diversity among the entrepreneurial ventures and enabled a smoother route to viability. These results should not and cannot be generalised given the small size of the sample. They can, nonetheless, stimulate the query into how entrepreneurial system designs may better support entrepreneurial plurality in terms of enabling both the innovation-driven start-up and the more pragmatic cash-generation model to flourish. The case further foregrounds the beneficial effects that any overlaps of the entrepreneurial system with the incumbent industry may carry. As such, the thesis calls for policymakers to encompass the consideration of the roles that incumbent industry infrastructure may adopt in entrepreneurial system designs.

The thesis encourages policy audiences to consider the temporality of entrepreneurial interventions. In this case, as is typical in entrepreneurial support programmes in general, the majority of the entrepreneurial support organisations focused on encouraging and aiding entrepreneurial entry. The findings of the study, however, clearly demonstrate embeddedness in the entrepreneurial context to be a long-term endeavour. Those ventures in this study that positioned themselves in the industry context and adopted a scalability-oriented strategy tended to benefit from the community of the incumbent industry. The ventures positioned in the startup context and, in some cases, the smaller ventures in the industry context, however, regularly lacked the benefits of a peer group. As such, they found entrepreneurship a lonely undertaking that they regularly, even in cases of financial stability, came to consider

unviable in the long-term. Support structures that encourage entrepreneurship as a communal exercise may better motivate both entrepreneurial entry and perseverance.

Finally, the thesis encourages consideration of how entrepreneurial policy interventions may facilitate more effective utilisation of all the different forms of entrepreneurs' prior capital in the entrepreneurial endeavour. Many of the contemporary entrepreneurial policy interventions support the acquisition of new capital in all its different forms. Particularly in the cases of post-redundancy entrepreneurship, a more effective utilisation of prior capital may, however, offer an equally feasible route to venture viability.

For educators of entrepreneurship, the thesis demonstrates the importance of supporting aspirant entrepreneurs' development not only in their cognitive skills but also in their awareness of the cultural, political and social aspects of entrepreneurship. Ability to read the social order of a new context may call for the students to venture beyond the formal knowledge of entrepreneurship. Yet, these skills will be beneficial not only in entrepreneurship but also in navigating the changing landscape of work in general.

For the practitioners of entrepreneurship, the thesis demonstrates the importance of acknowledging the social order of the context in which the venture is to be set up. The thesis calls aspirant entrepreneurs to engage in self-reflectivity in terms of considering not only whether their product offer resonates among their target customer audiences but also whether the goals, identities and orienting principles of the entrepreneurial system are ones that the entrepreneur wishes to adopt.

All in all, across the practice and policy audiences, the findings of the thesis encourage entrepreneurship to be recognised as carrying value in all its different forms. Natural ecosystems thrive on plurality. So do entrepreneurial ones.

8.3 Limitations of the study

The choice of research design, by necessity, introduces weaknesses into any research project, as no method can perfectly capture the rich tapestry of the social reality. While a diligent researcher aims to balance the weaknesses of the chosen method through rigorous implementation of the design including case selection, data collection and data analysis, it is also important for the researcher to be aware of the limitations of the study.

The research design of this thesis was informed by the constructivist interpretive framework. As such, the studies of the thesis adopted multiple case study approaches that relied on the application of inductive pattern matching and set-theoretic logics on interview and archival data. While the design sought to incorporate a number of different data sources and methods to ensure rigour of the data interpretation, the thesis suffers from the inherent weakness of interpretive research in that isolating the researcher's understanding of the context and the phenomenon is not fully possible.

Beyond the inherent methodological weaknesses, the thesis suffers from a partial data problem. Despite the data collection of the project designed to capture all of the ventures of the Nokia accelerator programme, at least at the archival data level, the conceptual development of the thesis would have benefitted from more comprehensive data collection. Specifically, the decision to focus the interview data collection primarily on the ventures meant that the development of the infrastructure framework had to rely largely on archival data. Furthermore, interviews with both the incumbents and the entrants of the field would have provided a more balanced view into the field.

Beyond the methodological issues, the case chosen for this study was clearly an extreme one. While extreme cases can be beneficial in foregrounding dynamics of a phenomenon that would not, in regular circumstances, be as observable, they may also

direct the researcher towards idiosyncratic findings. Future studies in different settings may help to address this issue.

8.4 Future directions

The avenues for further research arise in the case of this thesis from two sources. Firstly, future research can be used to address some of the limitations of this study. Secondly, the thesis raises new questions with regards to the theory of fields. Further research can help to address those. No research project is able to fully address the limitations introduced by the researcher, the design of research and the availability of the data. As such, further research work can be beneficial in addressing the identified issues and in providing another viewpoint into the topic of interest.

This study was motivated by the interest to explore the emergence of entrepreneurial actors who originate from a corporate redundancy programme. The study collected data from a single extreme instance of the phenomenon of interest. As such, for broader and more generalisable findings, further work should consider introducing a different contextual setting. Work moving from corporate structures to fragmented, self-organising units is not a phenomenon limited to either the ICT-sector or Finland. Repeating the study in another cultural and industry context could thus help to identify any idiosyncratic elements of the Nokia accelerator case and enable comparative analysis across the contexts.

Furthermore, given that the work of this thesis sought to understand the experience of the ventures in their emergence from the corporate redundancy programme, future work should consider expanding the understanding of the context of post-redundancy entrepreneurship by collecting data from the other actors of the context. A comparative

case of the infrastructure engagements between opportunity-driven ventures and those who originate from a corporate redundancy programme, would, for example, help to clarify how, if at all, these groups of ventures differ.

Finally, this study collected cross-sectional data three to five years after the founding of the ventures. For a better understanding of the viability of the ventures, future work could consider another round of data collection at a later date. A longer time frame could add confidence to the assessment of the viability of the ventures.

This thesis contributes towards the literature of organisational institutionalism by elaborating on the infrastructure of an entrepreneurial field. The study proposes the entrepreneurial system to divide into two subfields, both of which are theorised to exhibit their own institutional infrastructure. The separation of the infrastructure raises an interesting question regarding how closely field boundaries reflect institutional infrastructure in fields in general. May some fields share infrastructure elements beyond the regulatory ones? If so, what enables this sharing? Further, what are the implications of the sharing of the infrastructure for the members of the field? Finally, does shared infrastructure portend merging of the fields? Empirical studies of institutional infrastructure are still relatively few in number. This framework does, however, offer a promising avenue for further work in both clarifying the boundaries of fields and in studying the evolution of fields in their context.

With information and communication technology reducing the cost of organising commercial activity into smaller and, regularly, distributed units, different forms of entrepreneurial ventures can be expected to take an increasingly important role in employment alongside wage-employment models. A closer understanding of how the institutional context may support and constrain alternative forms of entrepreneurial work is thus of urgency. Much work remains to be done. With this thesis, I, however,

hope to contribute in a small way towards a framework of work that will deliver increased autonomy and democracy of employment as envisaged by Davis (2016a).

GLOSSARY

Causal asymmetry: Characteristic of causality. While the presence of an attribute results in an outcome, the absence of the attribute does not result in the absence of the outcome.

CNA: Co-incidence analysis. An algorithmic variant of QCA analysis.

Cognitive embeddedness: Increasing reliance on automatic cognitive processes that are guided by mental schemata of the context.

Conjectural causation: Characteristic of a causality. While none of the several different causal attributes alone results in an outcome, together they do.

Consistency threshold: A quality measure of QCA analysis that expresses the extent to which all of the cases of a minimally sufficient condition are aligned with the outcome. Consistency indicates how closely the association between the minimally consistent condition and the outcome is approximated.

Constitutive rules of the community: Rules that determine the roles of the community actors and provide meaning to their action.

Corporate spinoff: A new venture whose team and activities have initiated within and transition from an incumbent corporate.

Coverage: A quality measure of QCA analysis that indicates the extent to which a minimally sufficient condition accounts for the outcome. A measure of relevance of the condition.

Cultural capital: Formal knowledge, preferences and behaviours that signal affiliation with a group.

Cultural embeddedness: Internalisation and embodiment of shared community rule systems, beliefs, ideologies, and taken for granted assumptions.

Domain: see the entry on a field.

Economic capital: A form of capital that is directly convertible into money.

Ecosystem: A networked form of organising highlighting how competitive resources regularly arise within the environment of a company rather than within the company itself.

Embeddedness: The state of being affiliated to a networked community by having internalised the logic of the community and by having been recognised by the community as a legitimate member of the community.

Embedding: A mechanism of the 'introduction - repeated reciprocation - internalisation' loop that affiliates of a new member into a field. A long-term mechanism of embeddedness.

Equifinality: Characteristic of causality. Several different, mutually non-exclusive combinations of causal attributes may result in the same outcome.

Ex-Nokia founders: The founders of the entrepreneurial ventures that were registered as a part of the Nokia Corporation-run accelerator that operated as a part of the Nokia Corporation redundancy programme between 2011 and 2014.

Ex-Nokia ventures: The ventures that were registered as a part of the Nokia Corporation-run accelerator that operated as a part of the Nokia Corporation redundancy programme between 2011 and 2014.

Field: See institutional fields.

Human capital: Education and skills that enable people to act in new ways.

ICT sector: Information and communications technology sector.

Imprinting: A mechanism through which a transient engagement with the macro-environment instigates a long-lasting impact on an individual or an organisation. A short-term mechanism of embeddedness.

Institution: A reciprocated typification of habitual actions or interpretations that has taken a rule-like status (Berger & Luckman, 1966).

Institutional field: A bounded, dynamic cluster of actors whose social interactions are guided by the orienting principles and hierarchy of the collective (Zietsma, Groenewegen, Logue & Hinings, 2017).

Institutional infrastructure: The set of actors and structures that have a role in judging, governing or organising other actors of the field (Hinings, Logue, Zietsma, 2017).

Institutional void: Social arenas that lack the institutional arrangements to support them.

Intellectual capital: Knowledge of a social collective that enables expansion of the existing capital.

INUS condition: Insufficient but necessary part of a condition which is itself unnecessary but sufficient for the cause.

Logics: Socially constructed, historical patterns of material practices, assumptions, values, beliefs, and rules by which individuals produce and reproduce their material subsistence, organise time and space, and provide meaning to their social reality (Thornton and Ocasio, 1999: 804).

National system of entrepreneurship: A resource allocation system driven by individual-level opportunity pursuit through the creation of new ventures and regulated by country-specific institutional characteristics (Ács, Autio and Szerb, 2014: 476).

Necessary condition: A causal condition without which the outcome is not present.

Nokia accelerator: The entrepreneurial accelerator Nokia Corporation operated as a part of their global restructuring and redundancy programme between 2011 and 2014.

Political embeddedness: Internalisation of the hierarchical power structures of the context and the ability to engage these in a purposive manner.

QCA: Qualitative comparative analysis.

Redudnacy programme: Organised set of measures offering alternatives to dismissal, assistance in arranging re-employment elsewhere and compensation, whose purpose is to limit the number of dismissals and soften the impact of those which are to take place. Compulsory by law in cases in which an enterprise with 50 or more employees plans to dismiss at least 10 of them for economic reasons (European Foundation for the Improvement of Living and Working Conditions. www.eurofound.europa.eu/ efemiredictionary/redundancy-programme)

Regulative rules of the community: Values and norms that guide community action by defining the standards of behaviour.

Relational capital: Mutual trust, respect and friendship that arise from close interaction at the individual level.

R&D: Research and development.

Sensitivity period: A period that occurs during the early stage of a young animal's life and is characterised by specific openness to external influences, i.e. imprinting.

Set-theoretic method: A method that studies objects as sets.

Social capital: An obligation, goodwill or return on investment associated with social relations.

Spinoff: See corporate spinoff.

Strategic action fields: Constructed social orders that define an arena within which a set of consensually defined and mutually attuned actors with varying resource endowments vie for advantage (Fligstein & McAdam, 2012: 10). See also institutional fields.

Structural embeddedness: Situatedness within a pattern of ongoing interpersonal relations.

Sufficient condition: A causal condition that alone results in the outcome.

System of entrepreneurship: See national system of entrepreneurship.

The logic of appropriateness: See logic of the community.

The logic of the community: The regulative and constitutive rules of the community. Also logic of appropriateness.

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Appendix 1. Participant information form

Research on innovation and entrepreneurship in the context of corporate failure

Background and aims of the study

The purpose of this research is to explore the variety of developmental paths adopted by entrepreneurial companies founded by ex-corporate employees following a downturn of their employer. The research focuses on the start-up companies founded within the Nokia Bridge programme between 2011 and 2014.

The objective of the research is to gain better understanding of the critical points of organisational development within the studies companies. By focusing on the development paths adopted during the early years, the research aims to gain insight for developing better societal support structures for young organisations like the ones being studied.

The research is conducted by Heli Helanummi-Cole,
DPhil student at Said Business School, University of Oxford.
Contact by phone +44 – 7740 282 175, by email heli.helanummi-cole@sbs.ox.ac.uk.

Why have I been invited to take part?

In order to gain a thorough and well-rounded understanding of the life of the young organisations, the research will utilise interviews, observations and archival data. You have been invited to take part in the interviews as one of the key members of the ex-Nokia start-ups. Your experiences are extremely valuable source for the research project and for better understanding of the development of young entrepreneurial companies.

Don't I have to take part?

No, you do not have to take part in this study.

It is strongly recommended that you clarify any concerns or questions about the study before deciding whether to participate. If you do decide to participate, you may withdraw yourself and your data from the study without penalty at any time by advising the researcher of your decision.

What will happen in the study?

If you are happy to take part in the study, you will be asked to sign a consent form prior to any interviews taking place. Your participation in the study will involve a one hour, semi-structured interview that may be recorded to ensure no information is lost. The interview will cover questions about the development of your organisation. Matters to be covered during the interviews only include related to the professional operations of your organisation. No personal information will be sought. The interview will take place at your office at a time suitable for you. If more convenient for you, the interview can also be conducted by phone.

Are there any potential risks in taking part?

The risks in taking part in this study are purely related to data protection. A full data protection plan is in place to ensure all data is anonymised and none of it will be exposed beyond the research team. All recordings and encrypted interview notes will be securely stored at the university. Identity codes will be used to avoid any accidental exposure of the personal identities.

What happens to the research data provided?

Only the researcher Heli Helanummi-Cole and her supervisors at the University of Oxford, currently Felix Reed-Tsochas, Professor of Complex Systems, and Teppo Felin, Professor of Strategy, will have access to any personal data. Some data collected for the study may be looked at by authorised persons from the University of Oxford to ensure that the study is being carried out correctly. All have a duty of confidentiality to you as a research participant and nothing that could reveal your identity will be disclosed outside the research team. Statements you make or information you provide will be used only on a non-attributable, confidential basis in the dissertation.

Numeric identity codes will be used to avoid any accidental exposure of the personal identities. It will not be possible to associate these codes with either the organisation or individual in question without a password-coded coding sheet that is only available to the researcher and her supervisors.

All interview recordings will be password protected and stored at the university network drive. Electronic notes of the meetings will be encrypted and stored with strong passwords on the researcher's computer as well as on the university network drive. Any handwritten notes of the meetings will be stored with the researcher and will only include identity codes. Anonymised data may be used in future projects but only by the researcher. Separate permission will be sought for using direct quotes and these will utilise identity codes, not true identities.

Data collected may include contextual anonymised photographs. The objective is not to include any persons in these. Should the pictures include any persons despite the efforts to avoid this, blurring software will be used ensure identities of the persons cannot be obtained with face recognition software. Photographs will utilise numeric codes so that no location information is shared.

Will the research be published?

University of Oxford is committed to the dissemination of its research for the benefit of society and the economy. In support of this commitment, the university has established an online archive of research materials. This archive includes digital copies of student theses successfully submitted as part of a University of Oxford postgraduate degree programme. Holding the archive online gives easy access for researchers to the full text of freely available theses, thereby increasing the likely impact and use of that research.

If you agree to participate in this project, the full research will be written up as a thesis. On successful submission of the thesis, it will be deposited both in print and online in the University archives, to facilitate its use in future research. The thesis will be published with open access which will make the thesis available to every internet user. Some of the data collected may also subsequently be included in articles published by internal-publications or peer-reviewed journals.

The anonymised data collected during this study will be stored encrypted and password-protected at the university archives for ten years. During this period it may be used for further analysis by the researcher. This work may be published. All data will be destroyed after ten years.

Who has reviewed this project?

This project has been reviewed by, and received ethics clearance through, the University of Oxford Central University Research Ethics Committee.

The project is supervised on an ongoing basis by two supervisors at the University of Oxford. The researcher will also be examined on the research plan and it progress by two independent professors of the University of Oxford twice during the conduct of the research.

Who do I contact if I have a concern about the study or I wish to complain?

If you have a concern about any aspect of this project, please contact either the researcher or one of her supervisors at the University of Oxford who will do his/her best to answer your query.

Researcher	Heli Helanummi-Cole		+44 - 7740 - 282 175
Supervisors	Felix Reed-Tsochas	Professor of Complex Systems	+44 - 1865 - 288 502
	Teppo Felin	Professor of Strategy	teppo.felin@sbs.ox.ac.uk

The researcher should acknowledge your concern within 10 working days and give you an indication of how he/she intends to deal with it. If you remain unhappy or wish to make a formal complaint, please contact the chair of the Research Ethics Committee at the University of Oxford who will seek to resolve the matter in a reasonably expeditious manner:

Social Sciences & Humanities Inter-Divisional Research Ethics Committee
Research Services, University of Oxford
Wellington Square
Oxford OX1 2JD
United Kingdom
email: ethics@socsci.ox.ac.uk

Appendix 2. Participant consent form

Research on innovation and entrepreneurship in the context of corporate failure

RESEARCHER DETAILS:
Heli Helanummi-Cole, DPhil student,
+44 – 7740 – 282 175
heli.helanummi-cole@sbs.ox.ac.uk

PURPOSE OF STUDY: The purpose of this research is to explore the variety of developmental paths adopted by entrepreneurial companies founded by ex-corporate employees following a downturn of their employer. By focusing on the development paths adopted during the early years, the research aims to gain insight for developing better societal support structures for young organisations like the ones being studied.

Tutkimus innovaatiosta ja yrittäjyydestä suuryrityksen irtisanomisten kontekstissa

TUTKIJAN YHTEYSTIEDOT:
Heli Helanummi-Cole, DPhil student,
+44 – 7740 – 282 175,
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TUTKIMUKSEN TARKOITUS: Tutkimuksen tavoitteena on kartoittaa suuryritysten työtekijöiden aloittamien start-up yritysten kehitysvaiheita. Tutkimus keskittyy ennen kaikkea yrityksiin, jotka aloittivat toimintansa Tampereella vuosina 2011 - 2014 osana Nokian Bridge ohjelmaa. Syventämällä ymmärrystä nuorten yritysten nykyisistä haasteista ja kriittisistä kehitysvaiheista tutkimus edesauttaa näiden yritysten kasvun tukemiseksi tehtävää työtä.

1. I have read the study information sheet and had the opportunity to ask questions.
Olen lukenut tutkimuksen tiedotteen ja minulla on ollut mahdollisuus kysyä tarkemmin tutkimuksesta sen tutkijalta.

2. I understand that this project has been reviewed by, and received ethics clearance through, the University of Oxford Central University Research Ethics Committee.
Ymmärrän, että tutkimusprojekti on tarkastettu ja hyväksytty eettisesti oikeelliseksi Oxfordin Yliopiston Tutkimusetiikan Komiteassa.

3. I understand that my participation is voluntary and that I am free to withdraw myself or my data at any time, without giving any reason, and without any adverse consequence.
Ymmärrän, että osallistumiseni tutkimukseen on vapaaehtoista ja voin vetäytyä tutkimuksesta ilman syytä koska vain.

4. I understand who will have access to personal data provided.
Ymmärrän kenellä on pääsy tutkimukseen liittyvään henkilökohtaiseen haastattelumateriaaliin.

5. I understand that personal data will be stored according to the Data Protection Act. No personal identity information will be stored.
Ymmärrän että henkilökohtainen haastattelumateriaali tallennetaan yksityisyydensuoja määräysten mukaan. Henkilökohtaista identiteetti tietoa ei tallenneta.

6. I understand that some of the anonymised data may be used by the researcher in future projects.
Ymmärrän, että tutkija voi käyttää anonyymia tutkimusmateriaalia tulevissa projekteissa.

7. I understand how research will be written up and published.
Ymmärrän, että tutkimus tullaan kirjoittamaan väitöskirjaksi ja julkaisemaan.

8. I understand how to raise concerns or make a complaint.
Ymmärrän miten voin tehdä valituksen tutkimukseen liittyen.

9. I consent to being audio recorded.
Annan luvan nauhoittaa haastattelun.

10. I consent to the researcher accessing my LinkedIn profile including my contact network.
Anna luvan LinkedIn profiilini tarkasteluun mukaan lukien yhteysverkostotietoni.

11. I consent to having contextual photos taken.
Anna luvan kontekstiin liittyvien valokuvien ottamiseen.

12. I understand that audio recordings / photos will be used in research outputs, e.g. academic conferences, journal publications, research archives.
Ymmärrän, että haastattelunauhoja/kuvia voidaan käytttää tutkimuksen tulosten esittämisessä esimerkiksi akateemisissa konferensseissa, tutkimusjulkaisuissa ja tutkimusarkistoissa.

13. I agree to take part in the study.
Olen halukas osallistumaan tutkimukseen.

Name of Participant:

Signature:
Date:

Name of Researcher: Heli Helanummi-Cole

Signature:
Date:

CUREC REF NO. SSH_SBS_C1A_15_055

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Said Business School, Park End Street, Oxford OX1 1HP

Appendix 3. Example of the archival data coding scheme

DB ASSIGN	SOC	OCC	TK description
Founders, partners, entrepreneurs	10	OWN	Self-employed persons
Freelancers	23	FRE	Own-account workers
Creative professionals	24	CRE	Self-employed persons in liberal professions
Board members	30	BOA	Upper-level employees with administrative, managerial, professional and related occupations
C-suite, MD, GM, VP	31	CSU	Senior officials and upper management
Directors, heads (technology)	32	DRS	Senior officials and employees in research and planning
Teaching professional	33	TCS	Senior officials and employees in education and training
Directors, heads	34	DRS	Other senior officials and employees
Managers, supervisors, team leaders	41	MGS	Supervisors
Professionals	42	POS	Clerical and sales workers, independent work
Associates	43	AOS	Clerical and sales workers, routine work
Trainee	49	TPS	Lower-level employees, unspecified
Students	60	STS	Students
Manual workers	50		Manual workers
Unknown level	59		Workers, unspecified
Not in work	81		Long-term unemployed

Classification occupational groups by keywords.

OCC											
EXE	FIN	HRE	LEG	SMR	PRO	TEC	OPS	CRE	CUL	TEA	SUP
1120	1121			1122		1123	1124				
1127									2620	2310	4000
1210	1211	1212	1219	1221	1220	1223	1320		2641	2350	
						1330			2642	2359	
2420	2410	2423	2610	2430	2310	2500	2529	2166	2642		
					2434			2359	2643		
					2529			2659	2651		
3300	3310	3339	3342	3320		3500	3130	3435	2652		
410	411	413	421	414	414	7xx	7xx	21x	22x	111	10x
KEYWORDS											
analys	accounting	capability	corporate counsel	account	business solutions	acceptance	after sales	animator	author	docent	admin
area	analyst	coach	ipr	acquisition	category	accessibility	assembly	art	copywriter	dosent	assist
area counsel	business	competence	law	advert	connected life	acoustics	build	creative	dj	faculty	courier
branch development	capital	ergo	legal	brand	feature	antenna	buy	deco	editor	head master	reception
business	cash	headhunt	patent	campaign	go to market	application	capacity	design	library	instruct	secretary
consultant	controller	hr		commerce	go-to	architect	care	graphic	photographer	lectur	sihteeri
corporate	econom	human		commercial	gotomarket	asic	configuration	illustrator	publisher	opettaja	switchboard
csr	f&c	kouluttaja		communicatio	mycompositio	audio	contracting	industrial	reporter	post	
document	fico	leadership		communit	package owner	cad	delivery capability	interface	translator	professor	
executive	financ	learning		consumer	places	chipset	demand	media design	violinist	reach	
forcasting	fraud	mentor		country	portfolio	computing	devops	ui		reseach	
forecasting	fund	recruit		crm	product	concept	erp	usability		research assistant	
increment planning	insurance	talent		customer	requirement	connectivity	export	user engagement		researcher	
industry relations	investment	train		digital services	roadmap	content	ict	user experience		scholar	
only planet	palkka	vocation		europ	services	convergence	information	ux		school	
cont.	cont.	cont.		cont.	cont.	cont.	cont.	cont.		cont.	

Appendix 4. Interview protocol

OVERALL OBJECTIVES

To explore the venture founders' experience regarding the utility of embeddedness. Specifically

- What role have the different modes of embeddedness (cognitive, cultural, political, structural) played in their entrepreneurial development.
- How has embeddedness in the corporate domain influenced their entrepreneurial development?
- How have they embedded themselves in the entrepreneurial domain?
- How does the utility of embeddedness differ between corporate life and entrepreneurial life?

HOUSEKEEPING

Confidentiality and anonymity

Confirm that the interviewee has read the participant information sheet and understands

- who has access to the interview materials.
- how the materials will be handled and stored.
- how the research findings may be published.

Recording

Confirm that the interviewee is happy for the discussion to be recorded and explain that the recording can be stopped at any time.

Consent form

Ensure the consent form is signed.

[Start of recording]

Luottamuksellisuus ja yksityisyyden suoja

Varmista, että haastateltava on lukenut osallistujien tiedotteen ja ymmärtää

- kenellä on pääsy haastettumateriaaleihin.
- miten haastattelumateriaalia tullaan käsittelemään ja säilyttämään.
- miten tutkimustulokset tullaan julkaisemaan.

Nahoitus

Varmista, että haastateltava hyväksyy keskustelun nauhoituksen. Selitä, että nauhoitus voidaan keskeyttää koska vain haastattelun aikana mikäli haastateltava näin haluaa.

Suostumuslomake

Varmista, että haastateltava on allekirjoittanut suostumuslomakkeen.

[Aloita nauhoitus]

Purpose of the study

Explain the purpose of the study to "***explore the developmental paths of the firms founded within the Nokia Bridge Programme between 2011 and 2013".***

Tutkimuksen tarkoitus

Selitä, että tutkimuksen tarkoituksena on selvittää ***"Nokian Bridge ohjelman puitteissa vuosina 2011-2013 perustettujen yritysten kehitysuria".***

i. Warm-up / FOUNDING & TODAY

1. How did you come to join the Bridge Programme?

2. How has the path of your venture diverged from the original plan that you had for it?

i. YRITYKSEN PERUSTAMINEN & TÄMÄ PÄIVÄ

1. Miten perustajatiiminne päätyi hakemaan Nokian Bridge-ohjelman yritystukea?

2. Miten yrityksenne kehitys on poikennut siitä suunnitelmasta, jolla lähditte yritystä perustamaan?

ii. EMBDDEDNESS

3. What role has your prior education and professional experience played in your transition to entrepreneurship?

Where has education/professional experience helped?

Where has been a hindrance?

How has the way that you have utilised your education and prior experience differed from the way that you would have used them to support your work at Nokia?

ii. SULATUMINEN

3. Mikä rooli koulutuksellasi ja aiemmalla työkokemuksellasi on ollut siinä miten siirtymäsi yrittäjyyteen on tapahtunut?

Missä asioissa koulutuksestasi ja aiemmasta kokemuksestasi on ollut erityisesti hyötyä?

Missä asioissa näistä on ollut harmia?

Miten se miten olet hyödyntänyt aiempaa koulutustasi ja kokemustasi yrittäjänä on eronnut siitä miten käytit näitä Nokialla?

4. What role has the fact that you came from Nokia played in your transition to entrepreneurship?

What are the aspects of entrepreneurship in which the time at Nokia has helped?

What are the aspects in which it has been a hindrance?

How does your utilisation of the Nokia experiences differ from the way that you would have used these to support your work at Nokia?

4. Mikä rooli sillä että siirryit yrittäjyyteen Nokialta on ollut siinä miten tämä siirtymä on tapahtunut?

Missä asioissa Nokia ajastasi on ollut hyötyä yrittäjyydessä?

Missä asioissa siitä on ollut haittaa?

Miten se miten olet hyödyntänyt Nokia kokemustasi yrittäjänä on eronnut siitä miten hyödynsit tätä kokemusta Nokialla?

5. What role has your broader industry experience played in your transition to entrepreneurship?

What are the aspects of entrepreneurship in which your broader industry experience outside Nokia has supported you?

What are the aspects in which this experience has been a hindrance?

How has the way that you have utilised your broader industry experience in entrepreneurship differed from the way that you would have used these to support your work at Nokia?

5. Mikä rooli kokemuksellasi teollisuudessa Nokian ulkopuolella on ollut siinä miten siirtymäsi yrittäjyyteen on tapahtunut?

Missä asioissa ajastasi teollisuudessa Nokian ulkopuolella on ollut hyötyä yrittäjyydessä?

Missä asioissa siitä on ollut haittaa?

Miten se miten olet hyödyntänyt laajempaa kokemustasi teollisuudesta yrittäjänä on eronnut siitä miten hyödynsit tätä kokemusta Nokialla?

6. What role has your social network played in your transition to entrepreneurship?

What are the aspects of entrepreneurship in which your social network has supported you?

What are the aspects in which the network has not been of help?

How has the way that you have utilised your social network in entrepreneurship differed from the way that you would have used it to support your work at Nokia?

6. Mikä merkitys sosiaalisella verkoistoillasi on ollut siinä miten siirtymäsi yrittäjyyteen on tapahtunut?

Missä asioissa sosiaalisesta verkostostasi on ollut hyötyä yrittäjyydessä?

Missä asioissa se ei ole ollut hyödyksi?

Miten se miten olet hyödyntänyt sosiaalista verkostoasi yrittäjänä on eronnut siitä miten hyödynsit sitä Nokialla?

iii. ROLE EMBEDDEDNESS

7. How distinct do you consider the world of entrepreneurship to be from that of work in a corporate?

What makes the worlds distinct from each other?

What are the commonalities?

iii. YRITTÄJÄN ROOLI

7. Miten erillisenä koet yrittäjän maailman suuryrittäjän työntekijän maailmasta?

Mikä erottaa nämä toisistaan?

Mitä näillä on yhteistä?

8. What do you think are the key characteristics of an entrepreneurial venture that are valued by the entrepreneurial world?

What are the characteristics of an entrepreneur that are valued?

How are these different from what is valued in business in employees?

8. Millaisia yrityksen ominaisuuksia yrittäjien maailmassa arvostetaan mielestäsi tänä päivänä?

Millaisia ominaisuuksia mielestäsi arvostetaan yrittäjässä?

Miten nämä eroavat siitä mitä yrityselämä arvostaa työntekijässä?

9. Where do you see yourself on the scale between entrepreneurship and corporate employment today?
[Use scale drawing]
How do you envision your future as an entrepreneur?
How has your view of you as an entrepreneur changed from the time of the founding of the company?

9. Jos ajatellaan janaa yrittäjyyden ja suuryrityksen työtekijänä toimimisen välillä, missä näet itsesi tällä janalla tänään?
[Käytä janapiirustusta]
Miten koet tulevaisuutesi yrittäjänä?
Miten näkemyksesi on muuttunut ajasta jolloin perustit yrityksenne?

10. Network print
As part of this study I am exploring how the structures of entrepreneurial social networks vary. Would you be willing to share you a print of your LinkedIn contacts for these purposes. The print, as our whole conversation is fully confidential. The network print is not used for identification of any individual contacts. Rather, the sole purpose of the exercise is for me to be able to construct an image of the support networks utilised by entrepreneurs.

10. Sosiaalisen verkoston kuvaus
Osassa tätä tutkimusta tarkastelen yrittäjien sosiaalisten verkostojen rakennetta. Oilsiko halukas jakamaan kanssasi oman verkostosi kuvan? Tämä tieto, kuten koko keskustelumme, on täysin luottamuksellista. Verkostotietoja ei käytetä kontaktien identifioimiseen vaan vain ja ainoastaan yrittäjien verkostorakenteen tutkimiseen.

11. Is there anything else that you feel would be important to discuss and that we have not covered?

11. Onko joku asia, jonka koet tärkäksi mutta jota emme ole käsitelleet?
Osassa tätä tutkimusta tarkastelen yrittäjien sosiaalisten verkostojen rakennetta. Oilsiko halukas jakamaan kanssasi oman verkostosi kuvan? Tämä tieto, kuten koko keskustelumme, on täysin luottamuksellista. Verkostotietoja ei käytetä kontaktien identifioimiseen vaan vain ja ainoastaan yrittäjien verkostorakenteen tutkimiseen.

CLOSING

Thank you
Thank the participant for his/her time and openness.

Clarifications
Check if the interviewee has any questions they would like to clarify.

Follow-up
Confirm that the interviewee is happy with possible follow-up contact.

Confidentiality
Reiterate confidentiality and anonymity.

[End of recording]