Effects of Social Capital on Start-up Outcomes

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Abstract

This thesis explores the effects of social capital on start-up outcomes. Entrepreneurs’ ability to access and utilise social capital, through bonding and bridging relationships of various types, facilitated by trust, is essential to the success of their start-ups. This study identifies and differentiates two key forms of bonding, surfacing tribal bonding as a new concept distinct from bonding as traditionally recognised. Traditional bonding depends on developing ties and trust over time, while tribal bonding is built on individuals’ inherent desire to contribute towards the value of the group. Tribal bonding requires less time than traditional bonding to develop relationships, results in reduced monitoring, and facilitates faster tacit knowledge transfer; all of these factors reduce costs relative to traditional bonding. Particularly during the start-up stage, reduced cost and faster decision making are crucial for entrepreneurs, who are typically short on cash and time as their ventures have not started generating revenues or profits.

The type of bonding extant in a given situation is also an important factor in establishing commonalities among consumers, which affects how a start-up accesses and benefits from its consumers. A start-up has a better chance of faster acceptance and more useful developmental feedback if the consumers share a tribal bond and an existing need for the product, as compared to creating a product for a target consumer segment and using marketing to persuade the consumers.

The adoption of open innovation practices and novel applications of technology have provided platforms for individuals who focus on similar causes to collaborate. Often these individuals do not know each other at the start but are connected through tribal bonding; this furnishes entrepreneurs the opportunity to access resources and support, as well as consumer tribes, through means other than traditional bonding or bridging. This shift from an individualist to a collectivist approach echoes the conceptual progress from modernism to postmodernism.

To examine the impact of various forms of social capital on entrepreneurial start-ups, this study collected primary data through interviews with 41 current and former students of universities in New Zealand, who among them had generated a total of 69 start-ups. These universities, through their curriculum-based and extracurricular entrepreneurial programmes, have created entrepreneurial ecosystems rich in social capital, facilitating student start-ups, thereby constituting an ideal environment for this study.
Abductive reasoning – a back-and-forth approach directed by theory juxtaposed with data – enabled the discovery of tribal bonding social capital, a previously unidentified form with features differing from those of bonding as traditionally conceived. Abductive reasoning further divided people who affect start-ups into two broad groups: those who affect supply and those who affect demand. The Qualitative Comparative Analysis (QCA) method, based on set theory, enabled examination of tribal bonding alongside traditional bonding, bridging, and trust. QCA identified multiple pathways to start-up outcome. The identified pathways were categorised into two major approaches, one reliant on traditional bonding and the other on tribal bonding.

This study contributes to theory through the separation of tribal bonding and traditional bonding, leading to the creation of a conceptual model indicating the relative cost implications of engaging the two types of bonding as well as a framework that differentiates the impacts of groups that affect supply from groups that affect demand.

The methodological accomplishments of this study include the successful combination of abduction and retroduction, incorporating QCA to examine the effects of tribal bonding on start-up outcomes. From a practical perspective, the derived model and framework may guide practitioners regarding how to optimally mix their interactions with various types of groups affecting start-ups, including (but not limited to) how to access required resources at the lowest cost.

Keywords: Social capital, tribal bonding, traditional bonding, bridging, trust, start-up, entrepreneur, university, QCA, abduction, retroduction
Acknowledgements

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I would like to thank my family for their continued support and encouragement.
Notice of Publication of Related Work

Some of the research described in this thesis has undergone peer review and has been published in a book and conferences. This notice serves to indicate that certain parts of the material presented here have already been described by the author in the literature, and some parts are therefore subject to copyright by either publishers or the author outside this thesis. Co-authors are in all instances the researcher’s thesis supervisors.

Book Chapter

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Australian and New Zealand Academy of Management (ANZAM)

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Academy of Management (AOM)

University-Industry Interaction Network (UIIN)
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<thead>
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<th>Description</th>
</tr>
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<tbody>
<tr>
<td>CR</td>
<td>Critical realism</td>
</tr>
<tr>
<td>CSR</td>
<td>Corporate social responsibility</td>
</tr>
<tr>
<td>csQCA</td>
<td>Crisp set QCA</td>
</tr>
<tr>
<td>eWOM</td>
<td>Electronic word-of-mouth</td>
</tr>
<tr>
<td>FDR</td>
<td>Founder. Used as abbreviation to identify founders of start-ups in this study.</td>
</tr>
<tr>
<td>FPO</td>
<td>For-profit organisations</td>
</tr>
<tr>
<td>fsQCA</td>
<td>Fuzzy set QCA</td>
</tr>
<tr>
<td>GEM</td>
<td>Global Entrepreneurship Monitor</td>
</tr>
<tr>
<td>GUESSS</td>
<td>Global University Entrepreneurial Spirit Students’ Survey</td>
</tr>
<tr>
<td>ICT</td>
<td>Information and communication technology</td>
</tr>
<tr>
<td>IP</td>
<td>Intellectual property</td>
</tr>
<tr>
<td>IT</td>
<td>Information technology</td>
</tr>
<tr>
<td>MIT</td>
<td>Massachusetts Institute of Technology</td>
</tr>
<tr>
<td>mvQCA</td>
<td>Multi-value QCA</td>
</tr>
<tr>
<td>NPO</td>
<td>Not-for-profit organisations</td>
</tr>
<tr>
<td>QCA</td>
<td>Qualitative comparative analysis</td>
</tr>
<tr>
<td>STP</td>
<td>Start-up. Used as abbreviation to identify start-ups in this study.</td>
</tr>
<tr>
<td>TTO</td>
<td>Technology transfer office</td>
</tr>
<tr>
<td>tQCA</td>
<td>Temporal QCA</td>
</tr>
</tbody>
</table>
1 CHAPTER ONE: INTRODUCTION

Technological change, increased globalisation, corporate reorganisation, increased knowledge production, higher levels of prosperity, and the end of the communist system are some of the many factors that induced a transition from the managed economy to the entrepreneurial economy (Audretsch & Thurik, 2000; Thurik, Stam, & Audretsch, 2013). The managed economy involves large corporations where economic performance is related to firm size, economies of scale, and routine innovation and production. In contrast, in the entrepreneurial economy, economic performance is based on distributed innovation and the creation and growth of innovative new ventures. This shift has triggered a need for entrepreneurial skill development inspiring this research on start-ups.

Two key factors led to this study into the effects of social capital on start-up outcomes. First is the shift from an era where large corporations fostered employment to an era where a rising number of small entrepreneurial businesses absorb employees displaced by corporate downsizing, making entrepreneurship success a topic of interest to entrepreneurs, civil society, and governments. Second is the related shift of more graduates becoming entrepreneurs instead of employees, sometimes (but not always) by choice. Given entrepreneurship as the focal topic, social capital was a natural theoretical choice for this investigation, as relationships are necessary to acquire most of a new venture’s resources, commensurate with increasing specialisation and the resulting need to collaborate.

This chapter provides an overview of how this study will contribute to a better understanding of the effects of social capital on start-up outcomes and an overall guide to the study reported in this thesis. Section 1.1 provides a background for this study. Section 1.2 elaborates on aspects of social capital that form the basis of the study. Section 1.3 details social capital aspects from an entrepreneurship perspective. Section 1.4 defines the aim of this research drawing from the previous two sections. Section 1.5 elaborates on the choice of critical realism as the research paradigm, abduction, induction, and retroduction as the research strategies, and the related methods. Section 1.6 describes the contributions of this study. Section 1.7 provides the structure of the thesis and summarises this chapter. All of this material will be covered in greater detail in subsequent chapters; terms introduced and utilised here will be defined, explored at length, and more comprehensively integrated into the study’s goals in those later chapters.
1.1 Background

Governments, industries, institutions, and voluntary organisations are making efforts to foster ecosystems in which entrepreneurs can participate while creating their new ventures. For example, the university entrepreneurial ecosystem includes entrepreneurship courses and programmes, entrepreneurship centres, facilities such as accelerators/incubators and science/research/technology parks, the presence of ‘surrogate’ entrepreneurs, and business plan competitions (Siegel & Wright, 2015). Such facilities provided by universities make them an ideal context for investigation of social capital development and utilisation in start-ups leading to the choice of university student start-ups as the context for this research. These start-ups are generated in universities with entrepreneurial ecosystems, which provide a rich environment for the formation of social capital to support entrepreneurs, which in turn furnishes a diverse environment for data collection, suitable for exploratory research. The researcher also has the advantage of experience working with university start-ups for her Master’s thesis which was instrumental in the choice of university student start-ups, which she discovered is an under-researched area.

1.2 Social Capital Theory

Social capital is the value that actors extract from social networks (Bourdieu, 1986; Lin, Ensel, & Vaughn, 1981; Portes, 1998) that facilitate actions benefiting both individuals and collectives (Adler & Kwon, 2002; Payne, Moore, Griffis, & Autry, 2011). Social capital is essential to entrepreneurship (Gedajlovic, Honig, Moore, Payne, & Wright, 2013; Jack, 2010; Slotte-Kock & Coviello, 2010) in identifying opportunities, accessing resources required by start-ups (Birley, 1985; Uzzi, 1999), fulfilling opportunities (Uzzi, 1997), and securing legitimacy (Aldrich & Fiol, 1994). The interplay of individuals and organisations within a social environment supports opportunity discovery, evaluation, and exploitation (Gedajlovic et al., 2013).

Bonding connections are typically described as strong ties among members of a homogeneous group, while bridging connections are seen as weak ties between individuals of heterogeneous groups (Putnam, 2000). While bonding provides access to redundant resources, bridging over weak ties enables access to non-redundant resources (Granovetter, 1973). Bridging over structural holes enables access to non-redundant data (Burt, 2005). Brokers build bridges over these structural holes connecting entrepreneurs to the individuals or organisations who can provide the resources required by the entrepreneurs.
Studies on social capital include analyses at both the individual level (e.g., Baron & Markman, 2003) and the collective level (e.g., Shane & Stuart, 2002). Social capital’s effects on performance have also been measured at individual (e.g., Seibert, Kraimer, & Liden, 2001), group (e.g., Oh, Chung, & Labianca, 2004), and organisational (e.g., W. Stam & Elfring, 2008) levels of analysis.

1.2.1 The Significance of Bonding and Bridging

Bonding is said to be important at initial stages of start-ups when entrepreneurs have not yet developed their network and depend on strong ties with family and friends (Brüderl & Preisendorfer, 1998; Evald, Klyver, & Svendsen, 2006). One result of bonding relationships within groups is network closure, as strong ties form between members who interact frequently (Coleman, 1988, 1990). Network closure applies to early stages of new ventures when limited external connections lead to reliance on bonding connections in the case of small businesses and self-employed individuals (e.g., Bates, Jackson, & Johnson, 2007). These within-group ties have the disadvantage of bounded solidarity whereby group members could restrict access to external resources (e.g., Lindvert, Patel, & Wincent, 2017).

However, there comes a point when the start-up may need to bridge to external groups for resources. Some start-ups, such as those in technology fields, find that bridging is necessary to acquire knowledge and support even in the initial stages (e.g., Rasmussen, Mosey, & Wright, 2015), while noting that bonding through strong ties is important for subsequent tacit knowledge exchange (e.g., Rost, 2011). Granovetter’s (1973) *strength of weak ties* and Burt’s (1992) *structural holes* are important concepts with regard to connecting to external parties that have resources required by the new venture to foster its growth. The strength of weak ties highlights that while strong ties lead to redundant resources, bridging over weak ties provides non-redundant resources (Granovetter, 1973). Brokering is representative of the value of resources resulting from links spanning across structural holes in the network (Burt, 1992, 2000).

Although bridging is crucial when new resources are required for innovation and growth, it is transactional (serving a specific purpose) in nature and bonding must follow to enable tacit knowledge exchange and reduce monitoring efforts. Consequently, the various configurations (of social capital components) leading to start-up outcomes form the basis of this research rather than considering the importance of one component over the
other. However, the use of social capital within various contexts has led to a proliferation of definitions that range from confusing to conflicting.

1.2.2 Clarifying and Extending Social Capital Terminology

A clear understanding of terminologies can help avoid research based on misleading definitions. The juxtaposition of the wide breadth of social capital perspectives, each tied to its own context, leads to the potential for research based on conflicting meanings or definitions. Advances in social capital theory are constrained by abstract definitions and varying theoretical perspectives (Payne et al., 2011). There are two aspects that are clarified in this thesis: potential ties (Section 2.8.3), which can progress to be as good as strong ties; and the misleading definition of bonding as internal and bridging as external (Section 2.8.4). Of greater significance was an insight gained during interviews leading to the uncovering of a new construct, tribal bonding (Section 2.9), which not only contributed to the clarification and positioning of the two aspects mentioned, but is also a major theoretical contribution from this study.

Potential Ties

Strong and weak ties are widely discussed in social capital literature. Strong ties are based on frequency of contact, association duration, and tie intimacy, in addition to other measures. Weak ties are more casual and involve fewer exchanges and sharing of fewer resources compared to strong ties. However, absence of ties, which are typically not addressed, are important due to the extensive use of the Internet where people do not necessarily interact with each other. Potential ties fill in this gap.

Potential ties, which are embryonic relationships that have not experienced any exchanges yet, offer firms the opportunity for new ideas and collaboration (Mariotti & Delbridge, 2012). While availability of ties does not necessarily lead to activation of ties (Kwon & Adler, 2014), potential ties stand a better chance of developing into strong ties as prospective partners are similar and have compatible strategic agendas.

Potential ties are applicable in communities of practice and networks of practice. Communities of practice are cohesive groups that have worked together and developed mutual relationships and shared understanding (Lindkvist, 2005). In comparison, networks of practice are larger geographically distributed groups of people who have a given practice in common, but may not know or meet each other face-to-face (J. S. Brown & Duguid, 2001). Relations are looser in networks of practice compared to communities of
practice and the network members may never meet each other and yet be able to share a lot of knowledge. For example, Airbnb guests link with homeowners who rent out their homes through Airbnb’s application platform (Boswijk, 2017). Guests and homeowners share potential ties, which they can activate through the Airbnb application.

**Bonding as Internal and Bridging as External**

The definition of bonding as ‘internal ties within a group’ and bridging as ‘ties external to a group’ works at a single level of analysis (Adler & Kwon, 2002) but lacks clarity when applied to multiple levels such as teams, institutions, and other collectives. Defining terms generically can be problematic when applied in an inappropriate context. This conflict was highlighted in a study, which refers to internal bridging (referring to non-bonding internal ties within a group), showing that internal bridging and external bridging lead to different results (Geys & Murdoch, 2008).

**1.3 Entrepreneurship as Context for this Study**

While the university entrepreneurial ecosystem forms the context of this research, it is important to understand the wider scope that entrepreneurship covers. Network relations, based on bonding and bridging social capital, are important for successful start-ups (De Carolis & Saparito, 2006; Liao & Welsch, 2005). The competitive advantage of organisations may be based on relationships among organisational components rather than specific abilities or resources (Black & Boal, 1994; Payne, Kennedy, & Davis, 2009). For example, results of a study into new ventures in the open source software industry revealed that the configuration of the intra-industry and extra-industry social capital of the founding team could explain effects of the entrepreneurial orientation of the firms on venture performance (W. Stam & Elfring, 2008). These results support configuration perspectives described in entrepreneurship (Wiklund & Shepherd, 2005) and network (Oh et al., 2004) literature.

Another consideration when studying entrepreneurship is the binary perspective of entrepreneurship, divided into either narrow (as an economic phenomenon) and broad view (as belonging to society, rather than only the economy) (Bridge, O’Neill, & Martin, 2009). For-profit-organisations (FPO) take a narrow view and not-for-profit organisations (NPO) take a broad view with social enterprises fitting in between the two.

Yet another consideration is the impact on firm performance of the organisation’s internal environment and its external environment separately, thereby ignoring the
interface between inner and outer environments (Sarasvathy, 2004). An entrepreneur interacts with organisations from industry, government, and community requiring a multi-level perspective (Oh, Labianca, & Chung, 2006). Unfortunately, much research on social capital has been limited to analysis at discrete levels including nations (Fukuyama, 1995), industries (Walker, Kogut, & Shan, 1997), communities (Putnam, 1993), organisations (Edelman, Bresnen, Newell, Scarbrough, & Swan, 2004), and individuals (Burt, 1992) without engaging in research integrating the different levels.

Configurations, which are commonly happening constellations of components (Meyer, Tsui, & Hinings, 1993; D. Miller, Friesen, & Mintzberg, 1984), provide an avenue to respond to the circumstances described above. In fact, the configurational approach has been of practical importance is the study of venture diversity (Payne, Zachary, & LaFont, 2014) further prompting the choice of a methodology supporting a study of possible configurations of the social capital components that lead to start-up success or failure.

This choice is further supported by both entrepreneurial and social capital research proposing the study of equifinality (Doty, Glick, & Huber, 1993; Gresov & Drazin, 1997; Payne et al., 2011; Payne et al., 2014) which is the state of achieving a particular outcome through various configurations (Gresov & Drazin, 1997; D. Katz & Kahn, 1978; Misangyi et al., 2017; Short, Payne, & Ketchen, 2008). Another point of interest within configurations is the identification of core components of social capital combined in different ways with other peripheral components to create different pathways to the same outcomes (Fiss, 2011) providing practical alternatives.

1.4 Research Aim

The aim of this research is “To determine the effects of social capital on start-up outcomes”, which will be accomplished by investigating configurations of social capital components (rather than examining the effects of individual components). Specifically, the intention is to investigate bonding and bridging connections among team, institutions, and other collectives, in conjunction with trust, to identify multiple configurations that lead to start-up success or failure (Section 2.12), leading to the first research question.

Research question 1:
How do different configurations of social capital components affect start-up outcomes?
Another perspective is the identification of consumer and customer groups (Section 2.9.3) that are crucial for start-ups to consider in addition to groups that provide support, leading to the second research question.

**Research question 2:**

*How does social capital, through the various groups (consumers, customers, critics, and support) involved, affect start-up outcomes?*

### 1.5 Methodology

Following the choice of a methodology supporting equifinality, a decision was made to pursue the critical realism paradigm which supports the study of underlying mechanisms that trigger the events, and going beyond an understanding of only observable events. This is consistent with a call for greater attention to context in entrepreneurial studies (Shane, 2012; Welter, 2011).

Two possible alternatives for explanatory science are the use of deduction and induction strategies, or through abduction and retroduction. Explanations using deduction and induction are based on causality, which relates to empirical regularities based on universal conformity to law. Table 1-1 illustrates how a dropped object follows law-like regularities.

<table>
<thead>
<tr>
<th>Conditions that explain events</th>
<th>Universal laws</th>
<th>All objects that are dropped will fall to the ground</th>
</tr>
</thead>
<tbody>
<tr>
<td>Framework conditions</td>
<td>Bottle is being dropped and there is no other object that can stop it</td>
<td></td>
</tr>
<tr>
<td>Triggering causes</td>
<td>Bottle is dropped</td>
<td></td>
</tr>
</tbody>
</table>

*Event to be explained*  
**Description of event**  
**Bottle falls to the ground**

Source: Adapted from Danermark, Ekström, Jakobsen, and Karlsson (2002, pp. 106-107)

This model, based on deduction and induction, takes an empiricist ontology, reducing reality to domains of empirical observations and events; causality is seen as “regular connections between observable events” (Danermark et al., 2002, p. 108). Only law-like relations are described without any identification of causal mechanisms.

The use of abduction with retroduction makes it possible to study underlying mechanisms. Retroduction can describe the possible mechanisms and the context (Blaikie, 2007). Abduction and retroduction, combined, are research strategies that support the
critical realism paradigm. Abduction relies on creativity to understand phenomena differently by observing, interpreting, and recontextualising them within a novel conceptual framework (Danermark et al., 2002). The outcome of the abduction exercise needs empirical support, which can be achieved through inductive and/or deductive methods or retroduction.

The choice of critical realism as the underlying philosophy guides the decision to use the retroduction strategy instead of deduction and induction (Danermark et al., 2002). Compared to retroduction, which enables the study of underlying mechanisms, deduction and induction provide explanations based on knowledge of law-like regularities. The discoveries through abductive analysis are further examined through qualitative comparative analysis (QCA), producing results of multiple configurations leading to start-up success or failure. Interviews were the preferred method of data collection as the qualitative data supported the QCA results with rich start-up characterisations (D. Miller, 2017). This study emphasises postmodernism as an epistemology (Kilduff & Mehra, 1997) in viewing the real world in a systematic way (Peirce, 1994).

1.6 Contributions

This study resulted in contributions to theory, methodology, and practice (Chapter 6). The identification of tribal bonding is a major contribution to theory and practice. Tribal bonding is a new construct uncovered in this study and is distinctly different from bonding as traditionally understood. Unlike traditional bonding, there is no expectation of reciprocity in tribal bonding leading to various possibilities in terms of start-up interactions with groups that provide support and groups related to the consumption of products and services.

A framework and a model were developed incorporating tribal bonding. The Framework of Bonding and Bridging depicts the relationships among the social capital components, ties, and motivation (Table 2-6); this framework contributes to theory and provides clarity that is expected to be helpful for researchers. The Model of the Cost Effect of Tribal/Traditional Bonding on Start-ups (Figure 5-2) depicts in a diagram how tribal and traditional bonding affect cost and is expected to be of value to practitioners. The combined use of abduction and retroduction strategies demonstrating the critical realism paradigm is a methodological contribution.
1.7 Summary

The purpose of this chapter is to provide a background for this thesis. This chapter described the motivation for this research, the lack of clarity in social capital theory, the importance of social capital in entrepreneurship, the need to study configurations of social capital components leading to multiple pathways to start-up outcome, and the necessity to consider the various groups that affect the start-up outcomes. It further presented the critical realism paradigm to guide the study and the use of abduction, retroduction, and induction research strategies to achieve the aims of this research and the contributions.

This thesis consists of six chapters (Figure 1-1).

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Chapter 1: Introduction
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Chapter 2: Literature Review
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Chapter 3: Methodology
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Chapter 4: Findings
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Chapter 5: Discussion
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Chapter 6: Conclusion
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Figure 1-1: Thesis Structure

The subsequent chapters are as follows:

Chapter Two presents the literature review in four parts. Part I (Sections 2.1 to 2.7) discusses extant literature on social capital, describing the origins, development, motivations, and sources before detailing bonding, bridging, trust, and other components of social capital and constructing an initial framework of bonding and bridging. Part II (Sections 2.8 to 2.10) integrates literature from social identity theory and the tribalism concept with social capital theory to explain the new tribal bonding concept resulting from
abductive analysis, and the subsequent expansion of the framework of bonding and bridging. Part III (Sections 2.11 to 2.14) elaborates on the importance of entrepreneurship, the context of this study, how social capital affects entrepreneurship, the configuration approach and equifinality, and the types of business organisations. Part IV (Sections 2.15 and 2.16) pulls together the research questions and provides a summary of the chapter.

Chapter Three discusses the methodology in three parts. Part I (Sections 3.1 and 3.2) establishes critical realism as the research paradigm and discusses the research strategies to support critical realism. Part II (Sections 3.3 and 3.4) elaborates on data collection (describing the research context of university student start-ups, the sample identification, and data sources), and explains the data preparation including the operationalisation of the data. Part III (Sections 3.5 to 3.7) discusses the analytical methods used in this study: abductive analysis, template analysis, and qualitative comparative analysis.

Chapter Four describes the findings in two parts. Part I addresses the first research question focusing on the configurations of social capital components on start-up outcomes. Part II (Sections 4.1 to 4.3) addresses the second research question elaborating on the difference in the effect of tribal bonding versus traditional bonding on social capital outcomes as applicable to support groups and consumer groups. Bridging is also included in Part II. Part III (Section 4.9) summarises the chapter.

Chapter Five discusses the implications of the findings for theory and subsequent research. Chapter Six concludes the thesis, covering implications for theory, practice, and methodology; limitations; and opportunities for future research. The next chapter reviews literature on social capital theory and its importance to entrepreneurship.
2 CHAPTER TWO: LITERATURE REVIEW

This chapter elaborates on the social capital theory introduced in Section 1.2 and is presented in four parts (Figure 2-1). Part I describes extant literature on social capital theory. Part II elaborates on literature examined after data collection started, impelled on the “surprise” observation of tribal bonding as split from traditional bonding. This part covers the extensive presence of bonding compared to bridging and engages social identity theory and the tribalism concept in defining tribal bonding. Part III outlines entrepreneurship, which is the context of this study, and defines the start-up stages and start-up outcomes. Part IV presents the two research questions supporting the research aim, and a summary of this chapter’s main points.

Figure 2-1: Thesis Structure Foregrounding Chapter 2
PART I: THEORY – SOCIAL CAPITAL

Social capital refers to social networks and the potential and actual value that actors extract from them (Bourdieu, 1986; Lin et al., 1981; Portes, 1998). These facilitate actions that benefit both individuals and collectives (Adler & Kwon, 2002; Payne et al., 2011). Social capital involves the dynamic inter-play among structural, relational, and cognitive dimensions (Nahapiet & Ghoshal, 1998), each reinforcing the others (Liao & Welsch, 2005).

The structural dimension involves bonding and bridging, referring to the connections between different actors, the type of ties and tie strength, and their appropriability (Coleman, 1988). *Bonding* connections are strong ties among members of a homogeneous group (Putnam, 2000), which can be family, friends, businesses, or social groups. *Bridging* connections are weak ties between individuals of heterogeneous groups (Putnam, 2000).

The relational dimension explains personal relationships that have developed over time (Granovetter, 1992), and forms the basis of approval, prestige, and sociability. Such relationships generate obligations and expectations (Burt, 1992; Coleman, 1990; Granovetter, 1985); norms, sanctions, and reciprocity (Coleman, 1990; Putnam, 1995); and trust and trustworthiness (Fukuyama, 1995). Reciprocity refers to obligations to give in response to what is received in previous interactions (Gouldner, 1960). The cognitive dimension applies to shared language and codes, as well as to shared narratives, which serve as a means of information exchange within the given context (Nahapiet & Ghoshal, 1998).

Part I of this chapter provides social capital elaboration based on a review of extant literature. Section 2.1 describes the beginnings and development of social capital. Section 2.2 discusses the needs and situations motivating social capital and the sources of social capital. Section 2.3 explains bonding social capital, the first of the structural components of social capital, elaborating on the effects of closure formed within bonding groups and the positive and negative impacts of this phenomenon. With bonding covering homogeneous connections, Section 2.4 then describes bridging social capital which is necessary to access heterogeneous resources. Section 2.5 clarifies the different possibilities of trust, Section 2.6 covers reciprocity, and finally Section 2.7 pulls together the social capital components described in Part I to form the initial framework.
2.1 Introduction to Social Capital

The fundamental concepts of social capital date back to classical theories of the eighteenth and nineteenth centuries, and can be traced back to Durkheim, Marx, Weber, and Simmel (Portes, 1998). Subsequent sections refer to their work.

Social capital covers a wide range of possibilities, from micro (individual) to macro (collective) levels. There are also multiple aspects: the basic structural aspects of the network, the sources that underlie the generation of social capital, and the many applications of social capital by different scholars. Applications include group solidarity (Portes & Sensenbrenner, 1993), involvement in civil and voluntary organisations (Putnam, 2000), and community norms (Coleman, 1990). There are both positive and negative effects of social capital. As a result of these varying perspectives, there is a lack of clarity in social capital literature, which creates a challenge (Robison, Schmid, & Siles, 2002) in using it as a research lens. This initial section attempts to clarify sufficient aspects to support this study.

Fundamentally, social capital relationships involve providers and recipients. Recipients are the individuals or collectives who need to access resources. Providers can be individuals or members belonging to a collective (based on, for example, ethnicity, age, alumni status, or organisational membership) who are acting based on the social norms of the group without necessarily being aware of the actions of the other members. Two types of links within social networks form the basic structure between providers and recipients: bonding and bridging. A social network by itself is not social capital; it enables the creation of social capital by “investment in social relations with expected returns” (Lin, 1999, p. 30).

Some social capital definitions focus on an individual or micro perspective, considering how individuals gain access to resources through investing in, or leveraging, the network (Burt, 1992; Lin, 1999). An example is how interpersonal ties generate labour market opportunities (Granovetter, 1973; Lin et al., 1981). A person’s family and friends are social resources with strong ties useful in gathering information on job opportunities and in finding a new job. Individuals other than family and friends are also important in getting better jobs, an example of the strength of weak ties (Granovetter, 1973).

Scholars also refer to social capital that is inherent within the collective or macro perspective and the credential that comes with belonging to the collective (Bourdieu, 1986; Portes & Sensenbrenner, 1993). Members of these collectives are able to access resources
based on this inherent social capital. These collectives directly or indirectly work together for a common good or area of interest. Literature on immigration and immigrant entrepreneurs (Portes, 1998) highlights how ethnic groups are sources of disciplined labour, start-up capital, and advice on business opportunities and market access. One example is the restaurant businesses in the Chinese enclave in New York City (Zhou & Logan, 1989); another is the presence of Cubans, Chinese, and Korean immigrants in the garment industry in the USA (Bailey & Waldinger, 1991). There is also the presence of first- and second-generation immigrants from countries such as China and India involved in businesses in technology and services such as consulting, law, and advertising (Kloosterman, 2010).

Mutual trust and reciprocity within the network help avoid opportunistic activities (Granovetter, 1985; Rost, 2011). However, solidarity within a network of strong ties may restrict entrepreneurs from reaching outside the network, hindering access to desired resources that are insufficient within the network (Portes & Sensenbrenner, 1993). These internal restrictions constrain information and knowledge sharing with external networks required to access heterogeneous resources to generate new ideas.

Having only strong connections among organisations is not sufficient. These strong connections initially provide the resources required, yet may restrict interaction with external organisations for resources not available within these connections. For example, a questionnaire-based study of 189 technology-based start-ups indicated that relationships among organisations with strong connections enhanced start-up performance but only to a point beyond which venture performance was negatively affected (M. C. Wang & Chen, 2016). That study adopted annual sales, or the financial index, as the measure of start-up performance.

There is another aspect of literature that addresses the sources of social capital: trust, norms, values, and solidarity that pre-exist and enable access to required resources (Coleman, 1988; Putnam, 1993). An example of this is the role played by informal institutions such as Rotating Savings and Credit Association (ROSCA), which is a microcredit programme that caters for saving and lending among people who are familiar with each other (Biggart, 2001). ROSCAs are built on strong communal ties of kinship, clan, or common identification with a native country (Roberts, 1994), creating bounded solidarity. Members of ROSCAs are typically people of equal status, often with overlapping or similar attributes. ROSCAs are embedded in existing social networks.
whereby the participants understand reciprocity rules (Vogel & Burkett, 1986). Sanctioning happens by excluding people not showing economic or social stability.

Trust can be intentionally developed to facilitate relationships among firms, such as when an entrepreneur proactively cooperates with other firms and the other firms reciprocate. Trust can also be enforced through formal institutions (such as contracts), but the parties involved must have confidence in the formal institutions, as demonstrated in a study of entrepreneurs in Vietnam (Nguyen, 2009). In that study, the lack of reliability of market institutions and effective enforcement limited the use of trust through formal institutions.

2.2 Motivations and Sources of Social Capital

The previous section explained the early depictions of social capital as observed from effects on individuals and collectives, and the nature of trust and its impacts. This section describes the types of needs that motivate social capital and the different sources of social capital.

Principled needs motivate different types of social capital (Portes & Sensenbrenner, 1993). Principled motivation occurs when situational circumstances lead to group-oriented behaviour and shared general values. This is also referred to as consummatory, because people feel obliged to behave in a certain manner (Portes, 1998), and expressive (Lin, 2008). Expressive actions are borne out of bonding relationships with people who share similar interests and are willing to support each other (Lin, 2008), and carry emotions (positive or negative) that may not be task-related (Yuan & Gay, 2006).

Instrumental motivation applies when one is expected to reciprocate a good deed at some time in the future (Portes & Sensenbrenner, 1993). These social chits are different from economic exchanges as the currency of exchange may differ from that of the initial transaction, and the exchange itself can be intangible (as in showing loyalty). Instrumental ties help access information and resources required to execute tasks (Ibarra, 1995).

Furthermore, different sources lead to the motivating factors of social capital (Table 2-1). Value introjection and bounded solidarity are due to shared values within groups (principled or expressive), and reciprocity exchange and enforceable trust are in anticipation of reciprocity (instrumental).
### Table 2-1: Motivations and Sources of Social Capital

<table>
<thead>
<tr>
<th>Sources</th>
<th>Motivation for social capital</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value introjection</td>
<td>Expressive/ Principled/ Consummatory:</td>
</tr>
<tr>
<td></td>
<td>Group-oriented and based on shared values</td>
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<tr>
<td>Bounded solidarity</td>
<td>Instrumental:</td>
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<td></td>
<td>Expectation of reciprocity</td>
</tr>
<tr>
<td>Reciprocity exchange</td>
<td></td>
</tr>
<tr>
<td>Enforceable trust</td>
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</tbody>
</table>

From a value introjection perspective, social capital can be seen as an individual’s or group’s obligation towards a professional activity characteristic of a capitalist culture (Weber, 1904/1958), with social and moral underpinnings for economic transactions which relate to non-contractual aspects of contracts (Durkheim, 1893/1984). Greed is not the motivator, and this behaviour becomes appropriable as a resource for others in the collective.

The concept of value introjection is similar to normative integration (Parsons, Shils, & Smelser, 1965), referring to moral values, which when internalised guide the behaviour of individuals (Torche & Valenzuela, 2011). For example, a study of a pooled sample from the USA, Spain, France, and the UK collected from 2004 to 2008 through the Global Entrepreneurship Monitor (GEM) project showed that business angels, who expect high returns on investment, do on occasion make investments for altruistic reasons (Klyver, Lindsay, Kassicieh, & Hancock, 2017). Research results showed that relational social capital through tie strength between investor and investee increased the likelihood of altruistic investments; possibly also caused by societal pressure.

**Bounded solidarity** is an outcome of circumstances that lead to group-oriented behaviour. An example of internal solidarity is the struggle of the working class against the bourgeoisie (Marx, 1848/1948). Bounded solidarity results from situational reaction by people faced with common issues. When these issues are sufficiently strong, solidarity arises from among the troops in accordance to norms of mutual support, which individuals can appropriate in pursuit of their own goals.

An example of bounded solidarity is cooperative groups formed among entrepreneurs due to lack of access to markets and resources available through formal institutions. Entrepreneurs who are part of this informal economy account for an estimated 17% of gross domestic product in developed economies and about 40% in developing economies (F. Schneider, 2002). The informal economy refers to illegal but legitimate activities through which entrepreneurs can exploit opportunities (Castells & Portes, 1989).
Formal institutions use organisations such as regulatory bodies and enforcement agencies to enforce regulations and laws to establish the borders of entrepreneurial activities, hence categorising opportunities as legal or illegal (Webb, Tihanyi, Ireland, & Sirmon, 2009). However, informal institutions refer to shared norms, values, and beliefs that form bounded solidarity and deem these opportunities legitimate.

*Reciprocity exchanges* apply to transactions for which return deeds are expected based on a norm of reciprocity (Portes & Sensenbrenner, 1993), building on the classic work of Simmel (1908/1955) on group affiliation. Unlike value introjection, which targets the collective level, reciprocity is purely a selfish motivation. For example, a study of entrepreneurs in developing countries showed that the entrepreneurs preferred financial intermediaries over postal savings as the postal savings are not able to reciprocate by providing loans (Vogel & Burkett, 1986). In another example, findings of a study of not-for-profit organisations, with questionnaire-based data from volunteers and charitable organisations, revealed that reciprocity (in addition to gift giving) influences volunteers to continue with not-for-profit organisations (Zollo, Faldetta, Pellegrini, & Ciappei, 2017).

*Enforceable trust* varies between formal and substantive rationality. *Formal rationality* is related to transactions based on open exchange and accepted norms, while *substantive rationality* depends on obligations to particular groups (Weber, 1947). Individuals undertake actions for the future benefit of the group(s) with which they align based on internal acceptance or sanctioning (rather than external confrontation). This concept is also based on the theory of social integration and group-based sanctioning (Durkheim, 1893/1984).

While reciprocity exchange and enforced trust are both instrumentally motivated, reciprocity exchange is individual-based and enforceable trust is within a common social structure (Portes & Sensenbrenner, 1993). With enforceable trust, the expectation of the return is not from the recipient, but from the collective to which the recipient belongs. For example, an ethnic group member who provides a scholarship to a co-ethnic student may expect respect and status within the ethnic group rather than repayment. Internal sanctioning acts as a deterrent for non-payment of a loan (for example, when a church member provides a loan without collateral).

This section described the individual and group perspectives of motivators and sources of social capital, and the related elements of trust and reciprocity, which contribute towards the relationships necessary for information and resource access for entrepreneurial
start-ups. The next section describes bonding, which is one of the two structural components of social capital.

2.3 Bonding

Bonding refers to strong (exclusive) ties between and among individuals belonging to a homogeneous group of similar background and outlook (Field, 2014; Putnam, 2000) with dense connections that enable goal achievement (Adler & Kwon, 2002). The members of the network have close relationships of trust and co-operation among actors based on a shared social identity (Szreter & Woolcock, 2004). Due to strong ties, group members generate *expressive actions* working towards common goals of communities and organisations in preserving and maintaining resources (Lin, 2001). The strength of ties depends on the time spent together, intimacy, emotional intensity, and the extent of reciprocity (Granovetter, 1973).

Lechner, Frankenberger, and Floyd (2010) highlight that although bonding enables better communication and improved tacit knowledge exchange, there are negative effects such as reduced search and unproductive reciprocity. The strength of bonding ties generates both positive and negative effects, as described in the next two sections.

2.3.1 Positive Effects of Bonding through Network Closure

*Network closure* describes environments that facilitate cooperation as a result of cohesive ties from bonding relationships, with norms and sanctions facilitating trust and cooperation (Coleman, 1988, 1990). The bonding connections of network closure are important at the initial stages of start-ups, when entrepreneurs have limited external connections (Bates et al., 2007). Entrepreneurs experience network closure in various ways including family and friends, ethnic groups, professional events, and inter-organisational cooperation

**Family and friends** are an important source of support at the early stages of new ventures for nascent entrepreneurs who do not yet have access to networks from which they can seek support. For example, an investigation of the relative importance of human and financial capital using survey data showed that financial support from parents has a major influence (Dunn & Holtz-Eakin, 2000). That study further highlighted the value of parental encouragement and the entrepreneurial experience of parents.

**Ethnic business enclaves** is an area that is rich in bonding ties and used widely by immigrants in ventures that they create (Portes, 1998) as discussed in Section 2.1 on early
research on the effects of social capital. *Enclaves* are concentrated areas where immigrant businesses that employ a dominantly co-ethnic labour force have developed a distinct physical presence.

**Professional and industry events** are other avenues for identification of opportunities and market access possibilities, and are especially important for nascent entrepreneurs who are starting with a limited network and seeking a quick way to expand that network. These events facilitate association with people interested in the same entrepreneurial topics. Conferences and tradeshows create settings for people from various organisations with diverse purposes, periodically providing opportunities to gather information and develop connections (Lampel & Meyer, 2008). Industry association membership, blogs, forums, books, magazines, alumni events, and social functions are other possible ways in which entrepreneurs develop connections.

**Inter-organisational cooperation** promotes knowledge and resource sharing. However, nascent entrepreneurs may face challenges as organisations tend to work with the same partners, or with partners’ partners, and form ties with partners of the same status (Gulati & Gargiulo, 1999), generating bounded solidarity. This phenomenon results in established firms working together, leaving new entrepreneurs to create ties at their own level (Davis & Hallen, 2016). To overcome this negative effect, entrepreneurs engage in events such as industry conferences to not only engage in topics of common interest but also to create new contacts for future collaboration. Subsequently, beyond a point, bonding can limit progress made by entrepreneurs due to limitations of the groups with which they associate, resulting in negative effects.

## 2.3.2 Negative Effects of Bonding

Accessing resources only through bonding relationships within the group may affect new venture creation if external resources are required. There are three causes of negative outcomes: (a) restricting new ideas and possibilities, (b) levelling pressures which inhibit entrepreneurs from taking advantage of opportunities, and (c) free riding by group members. The engagement of social capital to exploit in socially or economically perverse ways (Field, 2014), from greed to extreme beliefs in particular causes, is not included in this discussion as it digresses away from this study’s core areas of investigation which is about the effects of social capital on start-up outcomes.

The first cause is the restriction of generation of new ideas and alternative possibilities for a number of reasons. Group internal cohesiveness can hinder information
flow originating from outside the group (Wasserman & Faust, 1994), and norms of obligation and reciprocity (Nahapiet & Ghoshal, 1998) can encourage adherence to the group’s belief systems, leading to a lack of receptiveness to new information and different points of view (Ibarra, Kilduff, & Tsai, 2005; Nahapiet & Ghoshal, 1998). Furthermore, the voice of significant members in the group can influence attitudes of other members (Salancik & Pfeffer, 1978).

The results of studies show that restricted access to external groups inhibit venture performance. A study of 90 new ventures, with primary data from surveys, indicated that little access to external groups contributed to lower entrepreneurial orientation and performance (W. Stam & Elfring, 2008). A different survey-based study of entrepreneurs’ advice networks for a fast growing high-tech industry indicated that while trust had a positive effect on new business development, strong ties had a negative impact (Y. Li, Wang, Huang, & Bai, 2013). A recent review of published empirical evidence further emphasised the negative effects due to an over-commitment to bonding relationships, dense networks, and closure (Pillai, Hodgkinson, Kalyanaram, & Nair, 2017).

Another reason is groupthink, which occurs when members in a cohesive group forego their personal motivation to consider alternatives due to in-group pressure (Janis, 1983) potentially due to reciprocity among the members, limiting openness and diverse views from external sources (Ibarra et al., 2005; Nahapiet & Ghoshal, 1998). Groups can make poor decisions due to a desire for strong concurrence from the group members as a result of suppression of critical inquiry (Janis, 1972). Groupthink may have contributed to some of the problems and fraudulent activities at WorldCom (which is said to have committed the largest financial fraud in the history of the USA) and the resulting pressure on the employees to be part of the team (Scharff, 2005). In hindsight, the senior executives had an aura of invulnerability and took on extraordinary risks. Further, limits may be placed on an individual’s freedom by community solidarity (Simmel, 1902/1964), for example when community norms restrict members’ accessing external ideas and cultures.

The second negative outcome due to bonding is that of levelling pressures where entrepreneurs do not want to break away from their community norms to avoid being ostracised by their community (Portes & Sensenbrenner, 1993). Some groups maintain solidarity based on common adversities and retaining their downtrodden status, which maintains the morale of the community. A study of Pakistani women micro-entrepreneurs highlights the restrictions placed on the women due to bounded solidarity with their families (Lindvert et al., 2017). These women entrepreneurs are not allowed to network
with outsiders (especially men), depriving them of the opportunities to access resources, including getting loans and access to customers.

In a different context, a study of start-ups in China showed that habitual entrepreneurs (those who start up multiple ventures) with an established reputation, through bonding relationships, within the local entrepreneurial community avoid taking advantage of opportunities through bridging relationships (Batjargal, 2007). These entrepreneurs yield to levelling pressures as, in China, they would be seen as manipulators.

A third negative effect is free riders, who are members of the group expecting financial assistance and access to jobs from other successful members, creating a heavy burden for successful entrepreneurs. Although having family members may help at the initial stage of start-ups, this may not continue to be productive as family and friends may choose to live at the expense of the entrepreneurs, based on data from a group of agricultural traders in Madagascar (Fafchamps & Minten, 2002).

The restrictive nature of bonding can be overcome by bridging to other groups for resources not available within the bonding group. The next section describes bridging, which is the second of the two structural components of social capital.

### 2.4 Essential Role of Bridging

Bridging, which occurs between entities in heterogeneous groups (Putnam, 2000), is important when bonding alone is insufficient for access to information and resources (Adler & Kwon, 2002; Woolcock, 1998). Bridging focusses on the individual as the unit of analysis (Adler & Kwon, 2002) and applies to the mutual respect between people who do not share a similar social identity (Szreter & Woolcock, 2004).

New ventures based on incremental innovation (or exploitation) can start with bonding until they reach a stage when they need to seek resources through bridging to external entities (Elfring & Hulsink, 2007). In contrast, for ventures pursuing radical innovation (or exploration), bridging may be necessary at the start-up stage for new information.

Bonding is seen to involve strong ties within groups but bridging, being more transaction-based, involves weak ties between groups (Granovetter, 1973) with limited communication and weak emotional ties (Burt, 1992; Granovetter, 1973). The concepts of the strength of weak ties and structural holes highlight the benefits of acquiring resources through brokers using weak ties. Cohesion through strong ties (Coleman, 1990) also improves the possibilities of accessing resources (Elfring & Hulsink, 2007). Both of these
streams have their own advantages, disadvantages, and applicability for better returns depending on the circumstances (Ozdemir, Moran, Zhong, & Bliemel, 2016; Uzzi, 1997).

While bridging is important, there are recognised advantages of cohesive networks that characterise bonding (Obstfeld, 2005), featuring strong ties that are favourable for start-ups (Hite & Hesterly, 2001). Studies drawing on two different industries offer confirmation. First, Rasmussen et al. (2015) found that at start-up stage, university technology-based spinoffs need weak ties for opportunity discovery and refinement, which subsequently need to be transformed into strong ties that “are able to transfer more complex knowledge which is crucial for building a viable business model” (p. 446). Their study also showed that spinoffs require the assistance of strong ties for resource acquisition as they lack a record of accomplishment and credibility at the start-up stage. As the spinoff progresses, new weak ties need to be developed to access additional resources and personnel. Second, a study of inventors in the German automotive industry highlighted the role of strong ties when the tacit nature of innovations required knowledge exchange (Rost, 2011) after bridging.

The strength of weak ties highlights that while strong ties lead to redundant resources, bridging over weak ties provides non-redundant resources (Granovetter, 1973). Burt (1992, 2005) clarifies that this benefit of weak ties arises because such weak ties create a bridge over structural holes when acquiring non-redundant resources. Such structural holes are induced by a lack of connections that could facilitate resource exchange.

Brokers are individuals or organisations positioned between two or more parties that are linked by weak ties with one party requiring resources and the other having those resources (Gould & Fernandez, 1989). Brokers enjoy competitive advantage in negotiations as they are positioned between separate groups with diverse information but these groups are not well connected (Gargiulo & Benassi, 2000). As a result brokers are better aware of opportunities and able to obtain more advantageous terms.

When spanning structural holes to improve resource flow between non-redundant contacts, brokers need bonding along with bridging to capitalise on their positional advantage in the network. While structural holes connect non-redundant contacts (Burt, 2001, 2005), closure improves information access and facilitates sanctions (Coleman, 1990).

In an analysis of investment bankers, Burt and Merluzzi (2016) observed network oscillation, a process of closure followed by brokerage, then followed by closure. The
initial closure helps the broker to establish reputation and credibility while closure after brokerage reinforces the bridging connection. The concept of network oscillation supports a study by Leonard and Onyx (2003) indicating that strong ties are just as important following bridging.

Bridging connections are instrumental, with implied obligations and expectations of future reciprocal actions (Leonard & Onyx, 2003). These instrumental transactions involve acquiring resources from unknown or little known contacts taking advantage of the strength of weak ties (Granovetter, 1973).

Bridging is traditionally seen as more relevant than bonding for entrepreneurs (Adler & Kwon, 2002; Burt, 1992; McEvily & Zaheer, 1999), as bridging through diverse networks involving weak ties is conducive for resource acquisition at the initial stages of venture creation (Elfring & Hulsink, 2007). For example, the spinoff success of academic faculty is impeded by their limited access to the traditional academic network through bonding, and the accompanying lack of bridging to non-academic resources such as industry researchers and investors (Hayter, 2015).

Bridging connections are sometimes made possible through strong ties with family members who have links to external groups (Zellweger, Sieger, & Halter, 2011). Results of a study on family support for nascent entrepreneurs who are university students indicate that parents’ social bonding connections underpin external bridging connections (Edelman, Manolova, Shirokova, & Tsukanova, 2016). The study used data from the 2011 GUESSS survey, which is part of a project examining intentions and activities of founders who are university students.

While external knowledge gained through bridging can provide diverse perspectives and improve decisions (Lechner et al., 2010), excessive information can also lead to cognitive conflicts resulting in a negative side to bridging. A study of top management teams highlighted that cognitive conflict, if not well-managed, can contribute to poor firm performance (Amason, 1996).

Bonding and bridging engage different types of trust and related reciprocity. Details of these differences are discussed in the next two sections.

2.5 Trust

Trust is a psychological state comprising the intention to accept vulnerability based upon positive expectations of the intentions or behavior of another. (Rousseau, Sitkin, Burt, & Camerer, 1998, p. 395, italics in original)
Trust is fundamental in enabling collaboration and reciprocity, and is representative of the norms and values of social capital (Portes, 1998; Putnam, 1993; Woolcock, 1998). Without trust, social networks may not be formed, and resources may not change hands (Putnam, 1993). Trust is an indicator of the risk taken, reflecting the faith in the trustworthiness of the other party (R. C. Mayer, Davis, & Schoorman, 1995) and the willingness to be vulnerable (Nahapiet & Ghoshal, 1998). Depending on the extent of trust present, contracts may not be required and excessive monitoring can be avoided, which in turn can reduce transaction costs (Welter & Smallbone, 2006). However, too much trust in a self-managing team with autonomy coupled with reduced monitoring can potentially have a negative effect on performance (Langfred, 2004).

In societies of higher trust, individuals have a lesser need to protect themselves from being exploited, with a diminished need for written contracts that specify every contingency (Knack & Keefer, 1997). In a situation of lesser trust when more monitoring is required of partners, suppliers, and employees, innovation is discouraged.

An entrepreneur displays *calculative trust* when taking risks in return for an anticipated gain, objectively evaluating the potential costs and benefits (Williamson, 1993). The likelihood of trust increases if the benefits of trusting exceed the potential risk. Within institutions, there are norms and practices that provide a basis for people to behave in a trustworthy fashion even when there is no previous relationship, leading to *rule-based trust*. This applies within institutions where general rules guide entrepreneurs as they learn and seek support.

*Category-based trust* is a result of the credibility of the leadership of the organisation or collective, which bestows trustworthiness in a hereditary fashion, leading entrepreneurs to trust such entities when approaching them. For example, in a study of a community of entrepreneurs, trust was mainly fostered by establishing ties with professional associations as membership within these associations creates a bond with other members enabling access to resources while providing safety against opportunists (Sabatini, 2009).

Trust is also dependent on the social context. If a person is considered trustworthy due to past actions or has authority, then trust could be displayed. If a person’s instinct and intuition concerning another individual are positive, this could influence the display of trust towards that individual.
In effect, all bonding and bridging connections have underlying trust components that differ depending on the people and context. Trust is one of the elements of social capital that is most researched in association with the exchange of resources (Uzzi, 1996). Studies on trust show that greater trust results in better resource exchange (Tsai & Ghoshal, 1998).

Castelfranchi (2008) defines trust as “a decision to rely on the others that makes us dependent on and vulnerable to them, as well as a concrete act of reliance based on this, and a consequent social relation” (p. 61, italics in original). Based on Cialdini (2001), Castelfranchi differentiates reciprocity “as motive and reason for doing something beneficial for the other(s)” from “behavior and behavioral relation” (p. 61, italics in original). Based on these clarifications, Castelfranchi argues that to trust people means to count on them appreciating the needs of the other party and fulfilling those needs for various reasons, including altruism, fear of punishment, social approval, and others. Trust is not necessarily based on someone’s willingness to reciprocate. This study adopts Castelfranchi’s definitions of the close connections between trust and reciprocity, and includes trust as the relationship component of social capital.

2.6 Reciprocity

We owe others certain things because of what they have previously done for us, because of the history of previous interaction we have had with them. It is this kind of obligation which is entailed by the generalized norm of reciprocity. (Gouldner, 1960, p. 171, italics in original)

Economic exchange is embedded within social connections, and reciprocity is the dominant principle representing exchange in social capital literature (Nahapiet, 2009). Reciprocity is the “expectation that exchange will be mutual” and is closely linked to trust (Nahapiet, 2009, p. 212). Such reciprocity can occur either directly or indirectly.

Direct reciprocity happens when two people interact directly (Herne, Lappalainen, & Kestilä-Kekkonen, 2013), indicating that if A helps or harms B, then B will help or harm A (Stanca, 2009). For example, in a contractual agreement where rule-based trust applies, products and services are delivered for a payment in an instrumental transaction.

Indirect reciprocity involves a third party and can happen in two different forms (Stanca, 2009). Generalised indirect reciprocity refers to a situation in which an action is reciprocated to a third party who was not involved in the original interaction, for example,
A helps B, then B helps C. Social indirect reciprocity applies when the party that helps is helped in return by another party who was not the recipient of the original assistance, for example, A helps B, then C helps A.

Reciprocity can manifest in a variety of applications. Associative systems occur through voluntary arrangements of exchange or co-development of products with an instrumental orientation (Biggart & Delbridge, 2004). These can be in the form of economic alliances to reduce cost, improve strategic positioning, or share skills. Strategic alliances among multinational enterprises or business consortia sponsored by the government are examples of more durable associative systems. These alliances can be in the form of vertical networks, such as Samsung (Biggart, 1998) and the Toyota Motor Company, where these organisations control networks of small firms (Gerlach, 1992). Horizontal networks apply to independent participants, including firms, households, and individuals, to create businesses that are mutually beneficial to the participants (Biggart & Delbridge, 2004). Horizontal networks are typically based on ethnicity (G. G. Hamilton, 1997), religion (Uzzi, 1997), or the structure of an industrial sector (Saxenian, 1996).

While associative systems are of an instrumental nature, communal systems and moral systems are two systems of exchange that are not instrumental (Biggart & Delbridge, 2004). Communal systems involve a sense of belonging, while moral systems have rational agreement, usually involving interests (Swedberg, 1998).

Communal systems are based on collegial association sharing a common bond (Biggart & Delbridge, 2004), and can be connected through links such as alumni affiliation, professional identity, and ethnicity. Examples of communal systems can be observed among ethnic immigrant entrepreneurs, as described in Section 2.1.

Moral systems are based on belief in a value or substantive good, such as religious beliefs (Wuthnow, 2005) or environmentalism (Schnaiberg, 2005). Moral systems can be observed between individuals as well as among large companies. An example is the adherence of some organisations to an international standard, Social Accountability 8000 (SA8000), by not using child labour, not using forced labour, and paying them sufficiently for basic needs and not just the legal minimum among other conditions (Kaufman, Tiantubtim, Pussayapibul, & Davids, 2004). A current example is the 2030 Agenda for Sustainable Development, embraced in 2015 by member states of the United Nations, which focuses on eradicating poverty, improving health and education, reducing inequality, and encourage economic growth, and addressing climate change and preservation of oceans and forests.
The structural aspects of social capital lie in the network, with bonding and bridging forming the types of interactions. These interactions create trust and norms of reciprocity and obligation, which in turn reduces transaction costs in collaborations, making measures of bonding, bridging, and trust sufficient to study social capital effects (Van Deth, 2003).

2.7 Initial Framework

Table 2-2 summarises the key concepts discussed in Part I of this chapter. Bonding consists of strong ties enabling direct interactions, but also includes weak ties by association but no direct interaction. Bridging occurs over weak ties and also where there previously have been no ties. Bonding, based on strong ties, is typically category-based, and bridging over no ties is rule-based as there have been no interactions before. In situations of bonding based on weak ties when bridging is necessary, both rule-based trust and category-based trust are probable. Under rule-based trust, reciprocity is direct to individuals (person or organisation). With category-based trust, reciprocity is direct to collectives and indirect to individuals. (Leonard & Onyx, 2003)

<table>
<thead>
<tr>
<th>Bonding</th>
<th>Bonding</th>
<th>Bridging</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ties</strong></td>
<td><strong>Strong</strong></td>
<td><strong>Weak</strong></td>
</tr>
<tr>
<td><strong>Trust</strong></td>
<td>Category-based trust</td>
<td>Rule-based trust</td>
</tr>
<tr>
<td><strong>Reciprocity</strong></td>
<td><em>Indirect reciprocity</em></td>
<td><em>Direct reciprocity</em></td>
</tr>
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</table>

Part I, which discusses social capital, its motivation and sources, bonding, bridging, trust, and reciprocity, provided information relevant to develop the initial framework based on which an extended framework of bonding and bridging (Section 2.10) is developed. Part II explains the circumstances leading to the identification and elaboration of tribal bonding.
PART II: EXTENDING LITERATURE ON SOCIAL CAPITAL THEORY

Table 2-3 depicts the motivations underlying the different types of trust and reciprocity. As discussed in Section 2.2, instrumental motivation applies to networks developed by individuals for their specific purposes. In contrast, expressive motivation applies to groups having common aspirations that prompt members to reach out to each other. Table 2-3 is based on the elaboration of trust in Section 2.4 and reciprocity in Section 2.6.

<table>
<thead>
<tr>
<th>Table 2-3: Motivations of Bonding and Bridging</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Motivation</strong></td>
</tr>
<tr>
<td><strong>Trust</strong></td>
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<tr>
<td><strong>Reciprocity</strong></td>
</tr>
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</table>

As described in Part I, bridging is essential when a business needs resources not available within its organisation or other organisations with which it has strong ties. Some of the bridging links prove to be useful and are developed into bonding relationships of strong ties (Elfring & Hulsink, 2007).

Section 2.8 clarifies the nature and use of bonding connections, including bonding within multiple groups, online and offline bonding, and strong, weak, and potential ties. It incorporates bonding social capital with social identity theory to produce two different types bonding, traditional bonding and tribal bonding. Section 2.9 elaborates tribal bonding based on the tribalism concept and examines the use of tribal concepts in extant literature; it concludes by presenting applications of tribal bonding.

2.8 Extensive Presence of Bonding

Section 2.3 discussed bonding whilst Section 2.4 explained bridging. Bonding as a single concept does not sufficiently represent the various situations involving entrepreneurial teams, institutions, and collectives – a deficiency that will be addressed next.

Section 2.8.1 describes bonding within multiple groups by incorporating the role of social identity theory, which provides insights into viewing the nature of bonding within various groups with different functions. Section 2.8.2 explains the presence of online and
offline communities within bonding relationships and their effects on entrepreneurship. Section 2.8.2 then presents an initial framework incorporating strong, weak, and potential ties with bonding and bridging. Section 2.8.3 comments on existing terminological confusion, due to lack of clarity of the bridging definition.

**2.8.1 Bonding within Multiple Groups**

Entrepreneurs interact with multiple groups such as their immediate team, their families, other businesses, suppliers, regulatory bodies, governmental organisations, consumers, customers, and collectives that focus on shared interests. The concept of bonding social capital does not sufficiently handle interactions with these groups in many situations typical of entrepreneurial ventures, as the related type of trust and reciprocity are not apparent.

Social identity theory suggests that the groups a person belongs influences the person’s sense of who they are (Tajfel & Turner, 1986), the manner in which they act within the group, and the way they construe their connections to others and behave in social interactions (Brewer, 1991). Entrepreneurs locate themselves in various groups based on their social identities in relation to each of the groups (Simon, 1999). *Personal identity* refers to how individuals think of themselves in terms of the unique contributions they can make, *ingroup identity* results from affiliation with (or membership in) a particular group, and *collective identity* refers to the broader group within which the person’s ingroups are situated (R. M. Kramer, 2006).

The salience (condition of being prominent) of an identity varies depending on the given situation and context (McGuire & Padawer-Singer, 1976). An individual’s behaviour depends on which identity is prominent at a given moment (R. M. Kramer, 2006). When collective identity is salient, the individual acts in the interest of the collective; however, when the ingroup identity is salient, the interests of the ingroup prevail. When the individual’s personal identity takes precedence, self-interest dominates over ingroup and collective considerations. The identities trigger distinct effects on how individuals feel about their actions.

Personal identities (based on content such as traits, beliefs, ideologies, customs, and expectations) are not included in this study as the study focusses on interactions with other groups, considering that the aim is to study the effects of social capital on start-up outcomes. Social identity is “a shift towards the perception of self as an interchangeable exemplar of some social category and away from the perception of self as a unique person”
Group-based identities (referred to earlier in this section as ingroup identity) relate the manner in which individuals view themselves as part of a larger social group with similar interests. “Group identities are not forged from interpersonal relationships between and among individual group members” (Brewer, 2001, p. 119).

The individuals represent the group as a whole, making the group distinctive and cohesive. Collective identities include the group’s shared representations, the group’s common interests, and joint active engagement in the creation of a representation of a group image and the manner in which it wants to be seen. In doing so, collective identity represents achievements through collective efforts, beyond what group members individually would have contributed.

An example of collective identity is that of entrepreneurs engaging in the informal economy, referring to illegal but legitimate activities to exploit opportunities, due to inadequate support from formal institutions (Webb et al., 2009). Lack of collective identity can result in inaction and complications as seen in a longitudinal case study of an inter-organisational collaboration involving the coordination of resources from private, public, and individual activities for creation of better social outcomes in the areas of education, economic sustainability, and health (Koschmann, 2012).

Group identity is built on common bonds (connections to group members) while collective identity is dependent on common identity (direct connection to the group) (Prentice, Miller, & Lightdale, 1994). A survey-based study of virtual communities concluded that the vital driver was purposive value for communities with common identity (network-based), and interpersonal connectivity was the main driver for communities with common bonds (group-based) (Dholakia, Bagozzi, & Pearo, 2004).

An entrepreneur’s sense of belonging to different groups leads to adoption of different identities that affect the nature of social capital invoked in relationships. Social categorisation is the grouping of people based on selected criteria (Tajfel & Turner, 1986), allowing identification of the nature and behaviour of the group and definition of actions appropriate to that group. An individual typically belongs to multiple groups. Social identification is the adoption by an individual of the identity of the group, to which they belong, taking on the norms of that group. Members assign emotional significance to that identification, affecting their self-esteem, leading them to take action on behalf of one group and not the other. Social comparison is the tendency to compare one’s own group
(ingroup) with other groups (outgroup), after identifying as a member of a particular group.

Supplementing social capital theory, social identity theory provides useful insights into the nature and behaviour of founders of start-ups. For example, Gruber and MacMillan’s (2017) study on entrepreneurial behaviour using identity theories (social identity and role identity) highlighted three main types of entrepreneurs: traditional rent-seekers, those who want to help the community, and others who want to support society at large.

Social identity theory was originally defined by British social psychologists Henri Tajfel and John Turner in 1979. According to an evolutionary model of human social behaviour, people throughout history have engaged in four levels of interdependent activity (ranged from smallest to largest): dyads of two persons, teams of a small number of people working together, bands of interacting communities, and tribes characterised by a shared identity but with little face-to-face interaction (Brewer & Gardner, 1996). Dyads are subsumed with teams within this study. The groups interacting with entrepreneurs can be categorised in line with the evolutionary model; the entrepreneurial team (including families and friends) make up teams, the organisations within the defined ecosystem form institutions (in place of bands), and other groups with shared interests are collectives (instead of tribes).

Efforts to recognise multiple groups have typically been depicted in a nested arrangement of concentric circles, as shown in Figure 2-2 (Hitt, Beamish, Jackson, & Mathieu, 2007). In the nested arrangement, the larger circles subsume features of the smaller circles, which does not apply within the context of this study.

Figure 2-2: Nesting Arrangement of Multiple Groups
Adapted from Hitt et al. (2007, p. 1387)
This conceptualisation may work within hierarchical structures but not for groups in a non-nested arrangement, such as overlapping teams, institutions, and collectives of interest in entrepreneurial situations. With open innovation possible for small businesses and large corporations (H. W. Chesbrough, 2010) due to affordable access to technology, interactions among groups may not follow a hierarchical order.

In contrast to the nested model, an overlapping arrangement of social identity concepts more accurately describes extant relationships among the entities investigated in this study (Figure 2-3). These groups are neither distinctly separate nor totally overlapping (as in a nested arrangement where each smaller unit lies completely within another larger group), meaning that each of them can be distinctly separate or overlapping in various combinations.

![Figure 2-3: Overlapping Arrangement of Multiple Groups (Researcher’s model)](image)

Teams include the entrepreneurial group members, family, and close friends. Institutions are the organisations with which entrepreneurs work, including businesses, regulatory bodies, governmental organisations, and community bodies. Collectives are groups that have commonalities (shared interests including ethnic, religious, social cause, community, hobby, and professional, among others). Such overlapping arrangements of social identity concepts are applicable across industries. For example, a study of the video game industry investigated three groups with overlaps, rather than being based on a hierarchical organisational structure: (a) designers and developers with creative flare, (b) intermediaries who bring together other aspects such as distribution and financing, and (c) consumers (Tschang, 2007).

Categorising groups by characteristics has the added advantage of collapsing various groups within these three definitions of team, institutional, and collectives. In this
manner, only three groups were considered in this study rather than many individual organisations within institutions and collectives. However, the bonding construct needs to be redefined to cater for the multi-faceted types of groups.

2.8.2 Refining the Definition of Bonding

As explained in the previous sections, bonding is a complex concept compared to bridging, which serves a specific purpose. To reiterate, “bonding social capital brings together people who are like one another in important aspects (ethnicity, age, gender, social class, and so on), whereas bridging social capital refers to social networks that bring together people who are unlike one another” (Putnam & Goss, 2002, p. 11). While at a conceptual level this definition captures the essence of bonding and bridging, it becomes problematic when precise definitions are required for research (Coffé & Geys, 2007) and more than a single group is involved. Groups in nested or overlapping arrangements are examples. This section attempts to explain how the bonding concept can be made more usable.

The definition of bonding focuses on association with homogeneous groups. Within these groups, there can be strong ties, weak ties (casual acquaintances), and potential ties. The concept of strong ties in bonding as an accepted definition in social capital literature (e.g. Granovetter, 1973; Putnam, 2000) may not be capturing the essence of bonding in its totality. Strength of ties depends on relationship intensity and diversity, for example contact frequency, emotional intensity, extent of intimacy, and reciprocity between the individuals involved (Granovetter, 1995).

**Strong ties** tend to be long term relationships, which encourage trust, tacit knowledge exchange, and co-operative problem solving (Uzzi, 1996). However, strong ties risk over-embeddedness, stifling firm performance. While strong ties limit access to knowledge and experiences, weak ties with other resources and links external to the group help overcome this problem (Granovetter, 1973). Without knowing new developments, there is the danger of being **locked-in** (Johannisson, 2000), as experienced by the Ruhr industrial area of Germany (Grahber, 1993).

**Weak ties** involve infrequent contacts but have greater diversity, providing access to a variety of sources of new contacts and information (Burt, 1992; Granovetter, 1995). While weak ties are useful when seeking new information on industry and contacts, strong ties can be relied on at any time. Strong and weak ties both contribute to start-ups, with each being useful at different stages of the venture (Elfring & Hulsink, 2003).
Potential ties. There are also situations where there are no ties when people associated through some commonality may never have met. Potential ties are embryonic relationships that have not had any exchange yet (Mariotti & Delbridge, 2012). For example, a study of firms from the European motorsport industry highlighted four ways of searching for potential ties. Three of these ways are by individuals through (a) their personal ties, (b) their professional ties, or (c) informal searches that are open-ended. The fourth way is through formal organisation-led strategic searches. The findings of that study indicated that potential ties have a better chance of developing into strong ties where prospective partners are similar and with compatible strategic agendas.

Potential ties are prevalent within virtual or online communities. Information is exchanged among members who often never meet physically but interact online, and there are members who remain anonymous and have no ties with other members (Kozinets, 1999). Interactions are typically functional, but can be meaningful (Rheingold, 2000). Members of virtual communities share norms or certain practices, and intentionally form a community, co-existing and having their own standards (Komito, 1998). Within some of these communities, there is no restriction on membership, and individuals can lurk without forming any ties. Activated potential ties have the possibility to be as effective as strong ties. However, social capital studies may not be capturing the full aspects of ties if bonding due to potential ties is not captured (Jiang & Carroll, 2009).

The importance of potential ties has been highlighted in literature addressing uncertainty in new ventures as they struggle with a wide range of aspects, including products, technologies, consumers, employees, and team relationships (Sarasvathy, 2001). Entrepreneurs start out with a general purpose, such as the intention to make money, to create a legacy, or simply to pursue an idea (Sarasvathy, 2001, 2008). The newness of the various factors with which they need to deal causes uncertainty, which lies at the core of effectuation, the “logic of action under uncertainty” (Engel, Kaandorp, & Elfring, 2017, p. 36). “Effectuation processes take a set of means as given and focus on selecting between possible effects that can be created with that set of means” (Sarasvathy, 2001, p. 245, italics in original). While there has been criticism of effectuation, studies have also successfully employed it to understand how uncertainty affects outcomes (Engel et al., 2017).

Going beyond the typical focus on resource access and instrumental relationship development, entrepreneurs need to take an altruistic approach with openness to new relationships, stimulating formation and transformation of goals (Engel et al., 2017).
Instead of developing ties to achieve goals, it may be that the network forms and transforms the goals.

While the use of strong and weak ties is still necessary, under uncertainty and unpredictability it is necessary to form new ties (potential ties) to access diverse information and generate serendipity (Sarasvathy, 2008; Wiltbank, Dew, Read, & Sarasvathy, 2006). These potential ties self-select themselves based on acceptable risk and affordable loss. Connections are made more on the basis of altruism than on the extent of anticipated future profits. In the process, the goals of the venture may change.

Honda’s inroads into the motorcycle industry in the USA are an example of an effectuation strategy under unpredictable circumstances, detailed by Pascale (1996). Pascale described how the US market for motorcycles was limited prior to the 1960s, providing Honda a challenge in introducing their Honda Supercub (especially given the failure of Toyota’s attempted market entry with the Toyopet in 1958).

However, Honda pursued all possible avenues, including working with dealers and Japan’s Ministry of Finance. Ultimately, it was riding around their Honda motorcycles to run errands that generated potential ties that ultimately led to their success. Sears was interested in their products, but it turned out that sporting goods stores were the retailers that wanted to sell them, rather than the motorcycle dealers.

Latent ties, which are relationships that have been established but are not currently active, are different from potential ties where no exchange has happened (Mariotti & Delbridge, 2012) and can potentially be strong or weak ties depending on the strength of previous interactions.

In summary, with strong ties, bridging is not required as the actors know each other and will interact when required. Otherwise, bridging is required both in the presence or absence of bonding. When considering bonding (as associating with a homogeneous group and not necessarily linking to group members) together with weak ties, bridging is an extension of a bonding relationship. This description resonates with the concept of the ‘strength of weak ties’ which explains that while strong ties lead to redundant resources, bridging over weak ties provides non-redundant resources (Granovetter, 1973). Burt (1992) builds on the ‘strength of weak ties’, clarifying that the benefit arises because such weak ties create a bridge over structural holes when acquiring non-redundant resources. This simplistic view of bonding and bridging has led to confusion, which is addressed in the next section.
2.8.3 Unclear Definition of Bridging

A commonly held view of bonding as internal and bridging as external social capital (Adler & Kwon, 2002) is simplistic and inadequate when applied to sub-groups within a group (as in a nested arrangement) or in the case of multiple overlapping groups. Internal bridging applies to links within a group when heterogeneity of members within groups provides opportunities for cross-cutting ties (Stolle & Rochon, 1998), which is essentially bridging over bonding links that are not strong. External bridging refers to connections to non-overlapping groups (Paxton, 2007). The results of a study using survey data of voluntary association members showed that internal bridging and external bridging produced different results and are, in fact, different concepts (Geys & Murdoch, 2008). This leads to the conclusion that effects are different when bridging overlaps bonding connections through internal connections. Depending on the circumstances, one will be more relevant than the other. Consequently, to better articulate the breadth of meaning of the concept of bonding, the next section introduces a new concept: tribal bonding.

2.9 Tribal Bonding – A New Concept

In this study, the new concept of tribal bonding social capital is introduced. Tribal bonding has a different set of characteristics as compared to existing descriptions of bonding, which this thesis refers to as traditional bonding. Traditional bonding includes team bonding and institutional bonding, which segregate and recognise interactions with team members and with institutions. To develop this concept, the basic definition that “bonding social capital brings together people who are like one another” and “bridging social capital refers to social networks that bring together people who are unlike one another” is adopted (Putnam & Goss, 2002, p. 11).

Tribal bonding involves pursuit of an interest or cause and is driven by passion, whereas traditional bonding centres on delivery of a function that is deemed a responsibility within the given context/situation. Extant literature does not differentiate tribal bonding and traditional bonding, highlighting a theoretical gap. Table 2-4 summarises the differences between traditional bonding, tribal bonding, and bridging. A significant difference is that, in contrast to traditional bonding, tribal bonding does not involve an expectation of reciprocity.
Table 2-4: Updated Motivations of Bonding and Bridging

<table>
<thead>
<tr>
<th>Motivation</th>
<th>Tribal Bonding</th>
<th>Traditional Bonding and Bridging</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motivation</td>
<td>Altruistic</td>
<td>Expressive</td>
</tr>
<tr>
<td>Trust</td>
<td>Abstract</td>
<td>Category-based</td>
</tr>
<tr>
<td>Reciprocity</td>
<td>Non-reciprocity</td>
<td>Indirect reciprocity</td>
</tr>
</tbody>
</table>

*Non-reciprocity* occurs when there is no explicit exchange of value among the parties, as in the case of philanthropic actions (Godfrey, 2005). “*Trust is not an expectation of reciprocation; and doesn’t apply only to reciprocation situations*” (Castelfranchi, 2008, p. 49, italics in original). Gifts are considered genuine only when they are non-reciprocal (André, Bureau, Gautier, & Rubel, 2017).

If the other *gives me back* or *owes* me or has to give me back what I give him or her, there will not have been a gift, whether this restitution is immediate or whether it is programmed by a complex calculation of a long-term deferral or difference. (Derrida, 1992, p. 12, italics in original)

Underlying non-reciprocity is generalised trust, which “indicates the potential readiness of citizens to cooperate with each other and to abstract preparedness to engage in civic endeavors with each other” (Stolle, 2002, p. 397). Generalised trust applies beyond face-to-face interactions and includes people who are not known. Such attitudes are generalised when people go beyond their individual self and cooperate with others. For example, the Student Volunteer Army (SVA) of the University of Canterbury, founded by Sam Johnson, gathered in response to a Facebook appeal to clear the aftermath of the earthquake that hit Christchurch in 2011 (Lewis, 2013).

*Abstract trust*, which describes trust in a manner similar to generalised trust, will be used in this study as the term is unique and will not be confused with the various definitions of generalised trust. The use of personal and impersonal trust is not sufficient to explain the complex-natured phenomenon of abstract trust (Misztal, 1996). Abstract trust is not built upon personal relations or connections within collectives (Newton, 1997). A combination of education and mass media may be contributing to abstract trust. Education provides knowledge that forms a basis for interactions among disparate individuals, and educational institutions teach cooperation through collective learning, team games, and many other joint activities. More importantly, they inculcate values of fairness, equality, citizenship, the common good, and others. The media has produced both positive effects...
increasing levels of knowledge, interest, competence, and sophistication, and negative effects inducing fear, isolation, apathy, and low competence. Table 2-4, an update of Table 2-3, differentiates the motivations underlying traditional bonding and tribal bonding and the related types of trust and reciprocity.

A study of a mentor-driven investment accelerator involved mentors who volunteered to help start-ups instead of being paid for their services (Bernthal, 2017). Benefits were not returned directly by entrepreneurs to mentors, who instead realised gains through enhanced reputation, experience, and professional connections. Based on the behaviour of mentors involved a series of interviews held in 2015 to 2016, this research showed that informal arrangements promote altruism, resulting in volunteerism overcoming the economic aspects of mentor-entrepreneur exchanges.

Internet open source software, which is software that is distributed freely and can be modified and evolved to fit user needs (Raymond, 2001), is an example of tribal bonding through abstract trust without expectation of reciprocity. The Internet enables people who are geographically dispersed and may never meet to work collaboratively and develop products. For some this is a convenient way to an end (for example, the creation of a tool or game), which is instrumental. One identifiable tribal group within the open source software environment consists of people who collaborate in the software development because they are against commercial software and the exorbitant profits made by dominant software companies.

This notion of building on potential ties is also displayed in entrepreneurial activities when actors practice altruism, with the future possibility of self-selection (Sarasvathy, 2008). Instead of pre-deciding on partnering with a specific person, attention is paid to potential partners who are willing to self-select and pre-commit (Wiltbank et al., 2006). Consequently, in tribal bonding connections, actions can be initiated faster and less monitoring is required, resulting in reduced time and effort, and therefore less cost.

The use of technology in engaging with potential ties in creating tribal bonding is well demonstrated in the way Couchsurfing is implemented (Germann Molz, 2013). Of greater interest is the uproar from many couchsurfers who did not appreciate the organisation moving from being a NPO to a benefit corporation, which is a new type of FPO with environmental or social benefit intentions.

Section 2.9.1 probes into the basis of the tribalism concept. Section 2.9.2 differentiates tribal bonding from other tribal concepts present in the literature. Section
2.9.3 presents applications of tribal bonding not previously recognised as such in extant literature.

2.9.1 Foundation of Tribal Bonding

While social capital theory is supplemented with social identity theory in identifying tribal bonding, an explanation for tribalism is still lacking. Passion and desire are characteristics of tribalism (Maffesoli, 2016), originally conceptualised as neo-tribalism or modern tribalism by French sociologist Maffesoli in the 1980s. With tribalism, there is a shift from a culture of reason (involving planning and career development) to a culture of instinct (engaging risk, adventure, and chance). The passion for shared interests and affectual actions differentiates tribes from the contractual or rule-based actions typifying traditional groups. While the freedom seen to pervade from tribalism seems to be problematic, Maffesoli sees this as the nature of reality, with a consequent need to embrace rather than stigmatise it. Such an identity contributes to the formation of “a bond of a more emotional than rational nature. The bond of the pact rather than of the contract” (Maffesoli, 2016, pp. 746-747).

Individuals identify themselves with multiple tribes, creating a plural and at the same time coherent situation that results in fragmentation, which is the main characteristic of tribalism (Maffesoli, 2016). Sociologically, neo-tribalism is the return of the instinct of community and the desire for collective emotion, representative of postmodernity (Maffesoli, 1996). Modernity was based on individualism (with the individual as a unit) and rationalism, and “on the social contract of the Republic, united and indivisible” (Maffesoli, 2016, p. 749). Tribalism more broadly is not new, being a popular concept during pre-modern times, and more recently re-surfacing to describe post-modern times (Dawes, 2016).

The ready availability of social media and easy access to computing facilities during the post-modern era has enabled many new avenues for tribalism to thrive (Maffesoli, 2016). Moreover, the interactive nature of communication offered by the Internet has made obvious the fractal nature of tribes. People participate in multiple networks in different roles and sometimes their purposes might conflict, making choice or compromise among the needs of the roles necessary.

Past social capital literature contains instances where tribalism is present but not identified as such. For example, church members donate anonymously, members of suppressed minorities voluntarily join militant groups, and people participate in protest
marches even when they do not otherwise connect with each other (Portes, 1998). In like manner, Korean students coming from the same high school, hometown, or church formed so-called ‘study circles’ which were actually radical activist groups (Coleman, 1988). In order to avoid detection, these student groups did not meet and communicated through a representative. Within a different context, as explained earlier, immigrant groups are known to buy products and services from their compatriots in part due to a sense of solidarity as well as anticipating that the products and services are probably tailored to their taste (Boissevain et al., 1990). A shared interest or cause among group members motivates them to take action. These situations can be referred to as communal systems involving a sense of belonging or moral systems with rational agreement (Swedberg, 1998) as discussed in Section 2.6.

Tribal bonding through non-reciprocity seems to be easier to accept when it is among individuals as compared to organisations. For example when businesses provide assistance through corporate social responsibility (CSR) programmes, it can be seen as a strategic move to enhance their image contributing to generating more revenue. However, CSR programmes can be referred to as a moral system with rational agreement with intention to support worthy causes (Swedberg, 1998). In such instances, there is no explicit exchange of value among the parties involved (Godfrey, 2005). CSR is further discussed in Section 2.13.1.

The next section investigate if tribal bonding has already been identified before presenting it as a new construct.

2.9.2 Tribal Bonding and Other Tribal Concepts

This section considers extant literature (involving variations of the tribal aspect) that potentially could have defined tribal bonding before concluding that it is a new construct for further consideration in this study. While this study identified tribal bonding based on interaction of entrepreneurs with support groups, Cova and Cova (2002) refer to consumer tribes within the concept of tribal marketing. These consumer tribes display tribal bonding as they (a) do not rely on a central authority for social order or submission to collective rules, (b) are collective actors versus an institutional power, and (c) rally around emotion, passion, locality, or kinship rather than a project or a profession.

Further examples of literature listed in Table 2-5 use the term ‘tribal’ and discuss the outcomes of engaging tribal bonding but the literature does not define tribal bonding as a construct, leading to the conclusion that tribal bonding is a new construct. Tribe, as used
in this study, does not refer to tribes as discussed in anthropology, although there are significant similarities to the tribes of historical times.

References to the tribalism concept are typically based on the book ‘The time of the tribes: The decline of individualism in mass society’ by Maffesoli, originally published in French in 1988 with an English translation published in 1996. However, there have been references to tribal theory. Greenacre, Freeman, and Donald (2013) studied the fit of tribal theory and social network theory to music communities. But Cova and Cova (2002), which is their source of reference for tribal theory, use tribal as a metaphor which does not describe tribal theory. Other articles (e.g. Riley, Griffin, & Morey, 2010) that extend the tribal concept based on Maffesoli (1996) also refer to tribal theory, but did not provide a clear description of tribal theory. In the absence of a clear definition of tribal theory, this study formulates tribal bonding based on the tribalism concept. The next section describes many published applications of tribal bonding not recognised as such in extant literature.

<table>
<thead>
<tr>
<th>Authors</th>
<th>Article</th>
<th>Discipline</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barnes and Mattsson (2016)</td>
<td>Building tribal communities in the collaborative economy: An innovation framework</td>
<td>Marketing</td>
<td>Discusses formation of tribal communities among users and customers</td>
</tr>
<tr>
<td>Hardy and Robards (2015)</td>
<td>The ties that bind: Exploring the relevance of neotribal theory to tourism</td>
<td>Tourism</td>
<td>Takes a neo-tribal approach, exploring behavioural and symbolic characteristics rather than individual demographics, in segmenting tourists</td>
</tr>
<tr>
<td>K. Hamilton and Hewer (2010)</td>
<td>Tribal mattering spaces: Social-networking sites, celebrity affiliations, and tribal innovations</td>
<td>Marketing</td>
<td>Uses a tribal lens to explore opportunities in the use of Web 2.0, which provides an online environment for communication and interaction of shared interests</td>
</tr>
<tr>
<td>Cova and Cova (2002)</td>
<td>Tribal marketing: The tribalisation of society and its impact on the conduct of marketing</td>
<td>Marketing</td>
<td>Discusses use of a tribal metaphor to explain social dynamics</td>
</tr>
</tbody>
</table>
2.9.3 Applications of Tribal Bonding

Tribes form among consumers, professionals and skilled workers, and entrepreneurs as the purpose of their collectives evolves into a passion or a shared concern of high interest, beyond merely achieving the targets set for the collectives. However, consumer segments are different from consumer tribes.

Cova and Cova (2002) clarify the difference between consumer tribes and consumer segment. Consumer tribe members belong to groups of heterogeneous individuals who are connected through shared passion or emotion and its members may be more than consumers; they can also be advocates. On the other hand, consumer segments are networks of homogeneous persons but are not linked to one another, and are therefore not able to take collective action.

There are three categories of tribes that are important to start-ups; they are consumer, customer, and supporter. Consumer tribes typically form the basis of venture creation, and some of the tribe members provide feedback on use and preferences of products and services produced. Customer tribes are groups that pay for the products and services. While consumer tribes can also be customers, there are instances when customers are not the consumers. Supporter tribes work with entrepreneurs to create, maintain, and grow organisations.

Infrastructures that align well with bonding are communities of practice (CoPs) and networks of practice (NoPs). The related online versions are virtual communities of practice (VCoPs) and virtual networks of practice (VNoPs). Crowdsourcing, which has been made possible by advances in technology and social media (Schenk, Guittard, & Pénin, 2017), provides a platform for co-creation (Prahalad & Ramaswamy, 2000). The various bonding infrastructures (applicable to both tribal bonding and traditional bonding) and crowdsourcing are described first.

Bonding Infrastructures

NoPs are larger geographically distributed groups of people who have a shared practice without knowing other people in the group (J. S. Brown & Duguid, 2017). Relations are looser in NoPs compared to CoPs and although the network members may never meet each other, they are able to share knowledge. NoPs are typically linked through professional associations, newsletters, and conferences. There is little reciprocity in NoPs, with members not interacting directly, but information is shared over vast networks efficiently to large numbers and assimilated by those who receive it.
A CoP consists of “people who share a concern, a set of problems, or a passion about a topic, and who deepen their knowledge and expertise in this area by interacting on an ongoing basis” (Wenger, McDermott, & Snyder, 2002, p. 4). CoPs are cohesive communities that have practised together and developed mutual relationships and shared understanding (Lindkvist, 2005). In contrast, ‘collectivity-of-practice’ refers to a temporary group of individuals who may not have met before but are brought together because of their diverse skills that are required to implement specific tasks or solve problems. Working within tight limits of cost and time, a ‘collectivity-of-practice’ operates on minimal knowledge sharing and understanding, exhibiting traditional bonding characteristics.

CoPs are sub-sections of NoPs; members develop their own style and appropriateness norms, work closely together, and have a strong sense of reciprocity (J. S. Brown & Duguid, 2017). CoPs enable collaborative development of creative work. CoPs involve face-to-face meetings (Wenger et al., 2002), but information and communication technologies (often via the Internet) have made possible virtual communities of practice (VCoPs), enabling people to access information in a virtual environment. VCoPs are a less costly and less time consuming option compared to face-to-face meetings (Dubé, Bourhis, & Jacob, 2005). However, face-to-face meetings are still important in enhancing relationships and developing trust, even if they are used on a less regular basis (e.g. Storck & Hill, 2000).

Just as for VCoPs, the Internet has made possible virtual networks of practice (VNoPs), which are self-organising systems of shared practice composed of volunteers who are interested in the practice and are willing to collaborate in solving problems unique to the practice (Wasko & Faraj, 2005). These VNoPs can be within or outside organisations. However, since participation in these online communities is voluntary, there is no way of knowing who will respond to questions, and contributions may not be reciprocated.

Such online communities can be used for a variety of purposes of which some examples, relevant to entrepreneurs, are provided here. The presence of tribal bonding in consumer tribes is well established in marketing literature (Section 2.9.2). That support groups exhibit tribal bonding and even create new ventures is documented but not clearly attributed to tribal bonding. The factor that indicates that the groups are tribes is the expressive nature of tribal bonding. Such tribes include consumer tribes, knowledge
sharing groups, and groups that form the basis for venture creation, as described in the following examples.

The entrepreneurial team may need to interact with various CoPs depending on the nature of their requirements. Amin and Roberts (2008) explain that levels of social ties and trust vary among different types of CoPs: craft/task-based, professional, epistemic/creative, and virtual.

Craft/task-based activities, which are apprentice-based, display inter-personal trust. For example, in their study of Ubisoft, a leading firm in the videogame industry, Harvey, Cohendet, Simon, and Borzillo (2015) define unscripted activities as spontaneous activities that emerge both internal and external to the firm, but the content is not management directed. Knowing communities, which underlie these activities, are groups of people connected by common passions, interests, or practices who regularly share information, mainly in unorganised and informal ways, often crossing organisational boundaries and authority. These firms can be viewed as knowing communities with members building on the expertise, ideas, and field knowledge using both informal and formal channels (J. S. Brown & Duguid, 2017).

Professional activities are based on institutional trust. For example, in a study done on Alpha Chemicals, a division of Specialty Chemicals, CoPs of scientists and chemists worked together on a regular basis to handle specific problems related to their division’s core activities (Kaminska & Borzillo, 2016).

Epistemic/creative activities are based on expert knowledge, with trust based on reputation. For example, the Multiple Arcade Machine Emulator (MAME) community is a CoP of old technology aficionados who continue to use it despite the emergence of and availability of superior technology. These experts recombine old and new technologies re-conditioning old arcade videogames so that it can be played on current technology-based personal computers (Francesco & Stefano, 2014).

Epistemic proximity, which involves an enhanced shared worldview of language and meanings, bridges the cultural and contextual differences related to distant interactions, complementing relational, geographical, and cognitive proximity (Bahlmann, Huysman, Elfring, & Groenewegen, 2016). Based on their study of IT entrepreneurs, Bahlmann et al. (2016) argue that epistemic proximity motivates these entrepreneurs to go beyond their local clusters in pursuit of knowledge. Going beyond local clusters highlights the importance of virtual activities.
Virtual activities depend on the use of technology for the exploration and exploitation of knowledge and are thus based on reputational trust. For example, a study of healthcare VCoPs show that a centralised structure with dynamic leaders and use of less complex language encourages more people to join over time (Grazia, Andrea, Alessandro, & Peter, 2017). Merely setting up the technology infrastructure for a VCoP is insufficient as experienced in the study of a website set up for science and maths teachers interested in inquiry-based approach to teaching creativity (Kling & Courtright, 2003). In that study, bounded groups that were IT-supported were found to be more workable than IT-led groups.

The growing connectivity made possible by advance in technology has made possible applications (platforms) such as crowdsourcing which connects individuals to collectively contribute knowledge, information, ideas, expertise, time, or funds to a cause or project that they share a passion for.

Crowdsourcing is a type of participative online activity in which an individual, an institution, a non-profit organization, or company proposes to a group of individuals of varying knowledge, heterogeneity, and number, via a flexible open call, the voluntary undertaking of a task. The undertaking of the task, of variable complexity and modularity, and in which the crowd should participate bringing their work, money, knowledge and/or experience, always entails mutual benefit. The user will receive the satisfaction of a given type of need, be it economic, social recognition, self-esteem, or the development of individual skills, while the crowdsourcer will obtain and utilize to their advantage what the user has brought to the venture, whose form will depend on the type of activity undertaken. (Estellés Arolas & González-Ladrón-de-Guevara, 2012, p. 197)

The definition of crowdsourcing indicates that the user receives the satisfaction of a type of need, and for some people engaged in crowdsourcing activities, it is just for the sake of contributing with no expectation of reciprocity, as described in the introduction in Section 2.9. A crowdsourcing initiative involves the initiator of the crowdsourcing activity, the crowd, the task, the type of process, the request to participate, the medium, and what is obtained in return (Estellés Arolas & González-Ladrón-de-Guevara, 2012).

Crowdsourcing capitalizes on the deeply social nature of the human species. Contrary to the foreboding, dystopian view that the Internet serves primarily to isolate people from each other, crowdsourcing uses technology to foster unprecedented levels of collaboration and meaningful exchanges between people.
from every imaginable background in every imaginable geographical location. (Howe, 2008, p. 14)

**Consumer Tribes as Foundation for New Ventures**

Some tribal groups constitute the foundation for new ventures, both NPOs and FPOs. For example, a tribe focusing on environments is described in an article by Gliedt and Parker (2007) on how green community organisations with diminishing government funds (and the ensuing drop in demand for energy audits) co-operated to stimulate the need for their services by taking collaborative entrepreneurial action.

Grameen Bank was formed by Muhammad Yunus to support women who did not have enough start-up capital and were “condemned to an existence within a self-sustaining cycle: borrowing from the trader and selling to him—unable to receive the fruits of her labor” and banks were not willing to lend money to the poor as banks need collateral (Yunus, 1998, p. 50).

Airbnb, an enterprise built on a global tribal host/guest community (Barnes & Mattsson, 2016), is a collaborative consumption accommodation-sharing website that has affected the hotel industry. Their strategy enables people worldwide to share home spaces and inevitably exposes guests to the local culture. Airbnb guests constitute a tribe who appreciate an authentic experience of life lived as a local, and seek to immerse themselves in the locality while avoiding places typically visited by tourists (Boswijk, 2017). Tribes construct themselves. Airbnb’s founders thought their business would suit students like themselves (short on cash), but the tribe recreated itself as travellers wanting a different experience. Looking deeper into Airbnb reveals another tribe, that of home owners who are willing to rent out their homes for a financial return.

Just as in traditional bonding, there exists a dark side to tribal bonding, the effects of which have led to new venture creation. Some companies have taken advantage of the co-creation aspect, but return little of the value contributed to the consumers, who feel exploited as their contribution is not recognised as they pay a higher price for value that they have provided (Cova & White, 2010). Some of these online consumer tribes have rebelled not only by criticising or boycotting the products, but even by creating competing products generating a *counter-brand* community. For example, Confrontation is a *counter-brand* game created by Warhammer consumers who were dissatisfied (Cova & White, 2010).
There are *alter-brands* where the *prosumers* (consumers who both produce and consume the product) are positively motivated to create alternative products to achieve the common goals of collectives rather than because they are dissatisfied customers. For example, Couchsurfing, which is a tribe for travel and accommodation, requires its members to contribute in kind (for example, by providing accommodation and taking other tribe members around). Enabled by interactive Web 2.0, Couchsurfing is run completely by volunteers and includes peer endorsement and follow ups (Cova & White, 2010).

**Consumer Tribes as Guides for Product Development**

Consumer tribes have changed the way some entrepreneurs focus on their customer segment. Consumer tribes form when members share experiences and emotions, and identify with one another as to the type of products they consume (Cova & Cova, 2002), advocating and taking collective action for the type of products they want instead of just being guided by brands (Elliott & Davies, 2006). An example is the formation of consumer tribes through social networking sites built around celebrities (Hamilton & Hewer, 2010). An analysis of iconic celebrity sites demonstrates the enthusiasm and passion of these communities, their willingness to invest in celebrity brands, and a resulting sense of belonging.

Within consumer tribes, the consumer-to-consumer social link is more important than the product being consumed (Cova, 1997). The shift from individualism to the creation of social links virtually rejects concepts such as market niches, consumer segments, and lifestyles (Cova & Cova, 2002). While a consumer segment consists of a group of homogeneous individuals sharing the same characteristics, the individuals are not connected, and the group does not take collective action. The individuals are just consumers. Consumer segments apply to a homogeneous group of people with similar characteristics (Goulding, Shankar, & Canniford, 2013), which reflects traditional bonding. Likewise, consumer demographics and psychographics rather than consumers’ choice determine consumer segments, and consumer loyalty is achieved by interactions between the marketer and consumers.

Consumer preferences can differ by geography. For example, in a study of meanings ascribed to the miniatures strategic battle game Warhammer in the USA, Cova, Pace, and Park (2007) found that for the selected US sub-tribe the attraction revolved more around war, with creativity triggered by action and accomplishment through painting and winning. In comparison, for the selected French sub-tribe, the attraction was around
history and strategy, with creativity triggered by escapism and accomplishment through painting and playing.

There is also the possibility of heterogeneous groups forming consumer communities with their own unique variations of products from the same company. For example, in a single case study of Reino & Aino (a Finnish company producing slippers), Närvänen, Gummesson, and Kuusela (2014) discovered diverse consumption collectives resulting from heterogeneous consumer collectives. The Internet served the virtual sphere for collectives that are brand focussed, activity focussed, or idea focussed, but each held a different following. A product brand itself can become the central focus of physical place-based collectives, as in the case of Reino & Aino, where a village committee organises a road running contest only for villagers and their family and friends (Närvänen et al., 2014).

Consumer tribe members can belong to multiple tribes simultaneously, and there is a playfulness about how they flow across different identities, changing to match different circumstances (Bennett, 1999). Belonging to multiple tribes, members do not feel the zeal felt by brand community members (Muniz & O’Guinn, 2001) or the core products preferred by subcultures of consumption (Schouten & McAlexander, 1995). Value is generated by invigorating passions, followed by deconstructing and reassembling resources with little concern for products or brands (Cova, Kozinets, & Shankar, 2007). Entrepreneurs who recognise these shifting and changing requirements of consumer tribes can create products that suit the respective tribes. Reino & Aino, discussed in the previous paragraph, is an example of a business that is known to have taken advantage of various consumption patterns of its consumers.

Some business start-ups perceive the establishment and maintenance of a community of online tribal followers as strategic because the tribe members form a strong consumer market (Goulding et al., 2013). Marketers use online communities extensively, including to influence potential consumers and to monitor word-of-mouth (Kozinets, de Valck, Wojnicki, & Wilner, 2010). Understanding electronic word-of-mouth and social media networking sites can be crucial to start-ups (Kumar, Bhaskaran, Mirchandani, & Shah, 2013). A comment from a trusted source may impact the decision making of the rest of the tribe (Alexandrov, Lilly, & Babakus, 2013). Holzweber, Mattsson, and Standing (2015), in their case study of an online business, identified the need for a strong inner tribe of founders before connecting to the outer tribe of their consumers with consistent messages around consumer interests together with social values. Electronic word-of-mouth
and social media networking sites were found to be core to well-accepted communication channels, with the former having significant influence on online purchases.

For example, Lego engaged its consumers in the product development process through crowdsourcing, with fans spontaneously coordinating themselves through web forums (Schenk et al., 2017). Models and concepts proposed by fans were voted for or against, concluding with the Lego development team’s decision on whether to proceed to develop and market the product. The model creators receive 1% of revenues. One of the outcomes was Lego Mindstorms, which is used in schools in the USA to teach robotics (H. W. Chesbrough, 2011).

In the case of Hallmark greeting cards, an initiative that started as a way to gather new ideas through coupons, gifts, and other incentives evolved into a consumer community with members learning from and helping each other (Manville, 2004). This initiative progressed to generating new product ideas.

Tourism literature also recognises the value in engaging with groups displaying tribal bonding. For example, a qualitative study of tourists highlighted the usefulness of applying the tribal concept (specifically the use of intangible commonalities such as ritual and sentiment, which create tribal bonding) when segmenting tourists versus the traditional method of using tangible aspects such as demographic characteristics, income, and travel behaviour (Hardy & Robards, 2015).

**Customer Tribes**

Customers may be consumers, and vice versa, but they are not necessarily the same individuals or groups. Consumers do not always pay for the products they consume. Customers pay for products, as in the case of parents who buy products for their children. Customers buy products that consumers demand, so marketing efforts targeted at consumers and customers are from different perspectives.

For NPOs, the donors and volunteers are the customers, with donors paying for the products and volunteers providing services (M. R. Kramer, 2001), while the recipients or beneficiaries are the consumers (Battilana, Lee, Walker, & Dorsey, 2012). NPOs compete for donors and volunteers and strangely also for ‘clients’, who may choose to use another NPO (M. R. Kramer, 2001).

Corporate social responsibility initiatives of FPOs provide avenues of payments for products/services consumed by recipients or beneficiaries. Halme and Laurila (2009) categorise corporate responsibility as philanthropy, integration, and innovation.
Philanthropy focusses on initiatives such as sponsorship, charity, and employee volunteers, with the organisation receiving no monetary returns. Integration revolves around an internal focus on conducting business more responsibly, a topic not discussed further as it is not related to customers. Innovation involves new business models that solve social and/or environmental problems. Through the philanthropy option, FPOs support NPO activities through funds and employee volunteers; the activities are not related to business events. However, innovation has a potential for win-win solutions whereby product needs by NPOs can be done in collaboration with FPOs. For example, ICICI Bank provides loans to self-help groups in rural areas where the poor face difficulties in securing start-up capital (Halme & Laurila, 2009). The self-help groups manage distribution of the loans and the recovery.

A different study of CSR initiatives of Rourkela Steel Plant in India indicates its role as a customer in terms of paying for diverse programmes (Acharya & Patnaik, 2017). Through various NPOs and non-governmental organisations, Rourkela Steel Plant has provided towards village facilities such as roads, community centres, classrooms, sanitation systems, and water supply; it has also supported training and skill development to enable income generation.

**Support Tribes for Start-ups**

There are a variety of support tribes that entrepreneurs can access for generating ideas, opportunity identification, financial support, and other needs. For example, an analysis of a representative panel survey (of founders of new businesses from 1994 to 1997) indicated that entrepreneurship-specific investments in social capital, such as membership in a small business founders’ association, leads to more promising new ventures (Bosma, van Praag, Thurik, & de Wit, 2004).

Entrepreneurs can get support by participating in local community entrepreneurship programmes (Nieminen & Hytti, 2016). However, their degree of participation is based on the fit of their opportunities to the sense of their own identity (Warren, 2004). The results of a study showed that entrepreneurs actively involved in professional and entrepreneurship communities believed that such involvement may impact their image as a credible entrepreneur (Nieminen & Hytti, 2016). Entrepreneurs may feel conflict between belonging to a local programme versus other entrepreneurship and professional networks, and may move away from a local training programme or stay in its periphery (Handley, Sturdy, Fincham, & Clark, 2006).
Alumni of university entrepreneurship programmes provide mentoring and support to student entrepreneurs. For example, close bonds were formed among Halmstad University students through their project work and other activities such as travel, site visits, and invitations to external speakers on interesting topics (Berggren & Lindholm Dahlstrand, 2009). These former students remained connected with the university, as in the case of HMS founder Nicolas Hassbjer, who invited students regularly, not only to create a good impression, but also to recruit graduates as employees. They maintained research and project links with the university, and some of their own employees study there.

In a study of innovative entrepreneurs compared to executives who had not initiated any innovative ventures, idea networks provided an avenue for opportunity recognition and problem solving (Dyer, Gregersen, & Christensen, 2008). Individuals, who are within these idea networks, cross industry, geographical, and generational boundaries, and thereby offer diverse perspectives and experiences that challenge entrepreneurs’ views. The aforementioned study on innovative entrepreneurs mentions eBay founder Omidyar who referred to a philanthropists list rather than just deciding what to do in terms of his own philanthropy; and IKEA founder Kamprad who used to meet with teenagers to get different perspectives on innovating. These innovative entrepreneurs realise the need to bridge across structural holes to meet people from different social networks that can provide them diverse, and possibly contradictory, interpretations and information, advantageous to creating novel ideas. In a study using grounded theory, Meeks (2015) identified that chief executive officers engage with visionary tribes who use intuition to make strategic decisions and seek others in the same role of creating the future of their firms.

Support groups sometimes provide monetary support. For example, donor agencies provided funds to Grameen Bank targeted at expanding its programs into other countries. Social enterprises receive support from organisations such as the United States Agency for International Development (USAID), Japan International Cooperation Agency (JICA), the United Kingdom’s Department for International Development (DFID), and many other regional organisations (Hoyos & Angel-Urdinola, 2017).

Another example is the Rotating Savings and Credit Association (ROSCA), an informal microcredit programme. ROSCAs cater for social familiars with saving and lending, are based on strong communal ties, are geographically isolated with no access to formal banking facilities, demonstrate collective obligations and sanction non-repayments, and exhibit similarity in social status at ethnicity, gender, or job levels (Biggart, 2001).
Tribal bonding is also evident in the phenomenon of *crowdfunding*, an online funding model. Crowdfunding is a specific implementation of crowdsourcing whereby voluntary funding is sourced from the crowd (Estellés Arolas & González-Ladrón-de-Guevara, 2012). Crowdfunding which has emerged recently, provides another popular option for start-ups seeking funding with entrepreneurs requesting small financial contributions from a crowd (Paschen, 2017). Motivations of contributors to crowdfunding include pure donation (with no expectation of rewards), lending, and equity. A study on crowdfunding highlighted the presence of non-expectation of reciprocity (through gifts) with ventures related to childhood education, charities, performing arts, and craft food (André et al., 2017). Gifts entail giving a valued object without guaranteed reciprocation (Mauss, 1950/2011) indicates non-expectation of reciprocity.

Crowdfunding is especially suitable for entrepreneurs converting ideas into viable start-ups, which typically face challenges in securing funding due to lack of operating history, credit, and track record to present the value of their new ventures to investors (Stemler, 2013). For example, in a study of Spot.Us, which is an online platform for journalism crowdfunding, donations are made more for altruistic than instrumental reasons; the donors donate for common social goals rather than for a good story to read (Aitamurto, 2011). Journalists pitch their ideas through Spot.Us, and anyone who visits the website can donate for any of the stories they like.

In a different study of factors determining crowdfunding success, Colombo, Franzoni, and Rossi-Lamastra (2015) found that tribal bonding (which they referred to as *internal social capital* developed *within* the crowdfunding platform) leads to support by other members within the platform. Tribal bonding is fundamental in the early days of the campaign to attract backers and raise capital.

Online communities sharing industry specific knowledge play a prominent role as organisations need more than their immediate resources and access wider facilities. Wasko, Teigland, and Faraj (2009) focussed on the online discussion forum, which is a widely used form of electronic social network through which individuals share knowledge, solve problems, debate issues, and exchange experiences. Their study of an inter-organisational support network showed that knowledge exchange served a public good through generalised exchange among members.

Virtual peer-to-peer problem solving (P3) communities, whose members help each other, are often formed for practical purposes and are not brand oriented (Mathwick, Wiertz, & De Ruyter, 2007). For example, members of VirtualTourist.com assist in
solving travel-related problems encountered by other members through sharing of experiences. Individuals adhere to a norm of reciprocity in sharing knowledge and providing service, expecting that sometime in the future their kindness will be reciprocated (Onyx & Bullen, 2000). This type of generalised reciprocity prevails over direct reciprocity between individuals (Constant, Sproull, & Kiesler, 1996).

2.10 The Extended Framework of Bonding and Bridging

Table 2-6 is an expansion of Table 2-2 to include tribal bonding. Potential ties, which replace no ties, can lead to any form of bonding or bridging. Tribal bonding has inherent trust, which is built on individuals’ inherent desire to contribute towards the value of the group; here, this concept is termed abstract trust. Abstract trust is used here to clearly differentiate trust related to tribal bonding, as the term inherent (as well as generalised) trust has been applied to traditional bonding in some of the literature.

Table 2-6: Extended Framework of Bonding and Bridging

<table>
<thead>
<tr>
<th>Bonding</th>
<th>Tribal</th>
<th>Traditional</th>
<th>Bridging</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ties</td>
<td>Strong</td>
<td>Weak</td>
<td></td>
</tr>
<tr>
<td>Trust</td>
<td>Abstract</td>
<td>Category-based</td>
<td>Rule-based</td>
</tr>
<tr>
<td>Reciprocity</td>
<td>Non-reciprocity</td>
<td>Indirect reciprocity</td>
<td>Direct reciprocity</td>
</tr>
<tr>
<td>Motivation</td>
<td>Altruistic</td>
<td>Expressive</td>
<td>Instrumental</td>
</tr>
</tbody>
</table>

Motivations for interactions can be instrumental, expressive, or altruistic. Instrumental interactions help access information and resources required to execute specific tasks (Ibarra, 1995). In instrumental interactions, there is an expectation to reciprocate a good deed at some time in the future (Portes & Sensenbrenner, 1993). Expressive interactions carry emotions (positive or negative) that may not be task-related (Yuan & Gay, 2006). Expressive interactions work towards common goals of communities and organisations in preserving and maintaining resources, and reciprocity is to the collective (Lin, 2001). In altruistic interactions, individuals expect no return on the resources, effort, or time that they invest except for their feeling of contribution to other people or society (Piliavin & Charng, 1990). There is no expectation of reciprocity.

The main point that differentiates tribal bonding from traditional bonding is altruistic motivation, which manifests as individuals interacting with a feeling of
contribution for a purpose about which they care (Piliavin & Charng, 1990) without expecting reciprocity. Traditional bonding, motivated by instrumental and/or expressive transactions, expects reciprocity to an individual or to the collective. Without expectation of reciprocity, tribal bonding has four advantages as depicted in Table 2-7.

![Table 2-7: Cost Effect of Bonding and Bridging on Start-up Activities](source)

<table>
<thead>
<tr>
<th></th>
<th>Tribal Bonding</th>
<th>Traditional Bonding</th>
<th>Bridging</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time to develop relationship</td>
<td>Less</td>
<td>More</td>
<td></td>
</tr>
<tr>
<td>Response time for resource request</td>
<td>Less</td>
<td>More</td>
<td></td>
</tr>
<tr>
<td>Monitoring</td>
<td>Less</td>
<td>More</td>
<td></td>
</tr>
<tr>
<td>Time taken for tacit knowledge exchange</td>
<td>Less</td>
<td>More</td>
<td></td>
</tr>
<tr>
<td>Cost</td>
<td>Less</td>
<td>More</td>
<td></td>
</tr>
</tbody>
</table>

First, tribal bonding is based on altruism and a common motivation and takes the least amount of time to develop a relationship. At the other extreme, bridging is instrumental in nature and requires the most time as the individuals may not know each other or may be connected by weak ties and limited communication (Granovetter, 1973). Second, response time to request is lesser for the same reasons. Third, with rule-based trust of bridging and category-based trust of traditional bonding, contracts may be required increasing monitoring (Welter & Smallbone, 2006). With tribal bonding, monitoring may not be needed as there is no expectation of a return favour and contracts may not be needed. Fourth, tacit knowledge transfer is better in an environment of higher trust.

Underlying the framework (Table 2-6) is the shift towards community, which can be explained by the shift from pre-modernism (which was community focussed) to modernism (focussed on individualism) and subsequently to postmodernism (with a return to community focus) (Maffesoli, 2016). The presence of the Internet with Web 2.0 technology makes a significant difference to postmodernism as it enables individuals from anywhere in the world to interact with one another with little restriction. Table 2-8 highlights the relationship of tribal bonding to the postmodernism and modernism paradigms, reflecting the value of understanding the difference between tribal and traditional bonding.
Table 2-8: Tribal Bonding and the Shift to Postmodernism

<table>
<thead>
<tr>
<th>Paradigm</th>
<th>Postmodernism (Community)</th>
<th>Modernism (Individual)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motivation</td>
<td>Altruistic</td>
<td>Expressive</td>
</tr>
<tr>
<td>Interactions</td>
<td>Tribal bonding</td>
<td>Traditional bonding</td>
</tr>
<tr>
<td></td>
<td></td>
<td>and Bridging</td>
</tr>
<tr>
<td>Trust</td>
<td>Abstract</td>
<td>Category-based</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Rule-based</td>
</tr>
<tr>
<td>Reciprocity</td>
<td>Non-reciprocity</td>
<td>Indirect reciprocity</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Direct reciprocity</td>
</tr>
</tbody>
</table>

Trust is fundamental to collaboration (Portes, 1998; Putnam, 1993; Woolcock, 1998) and the formation of social networks and exchange of resources (Putnam, 1993). Reciprocity is an expectation of a return deed in future (Portes & Sensenbrenner, 1993). These two definitions suit traditional bonding, which can be instrumental or expressive in nature. However, in tribal bonding, trust is inbuilt within individuals who do not expect reciprocity. These individuals are altruistic and are ready to interact and help each other because they are committed to the same cause.

An important perspective is the reshaping of this study by involving postmodernism. From a postmodernist’s view, there is little value in researching established knowledge, and generalisability is not the aim of social science (Kilduff & Mehra, 1997). One of the concerns is the impossible task of isolating all contingencies affecting outcomes. Focus on paradigmatic unity is concerning as it hinders the possibility of combining diverse approaches. The focus should be on how postmodern epistemology can guide research enquiries, which is consistent with the view of Peirce (1994) in asserting the presence of a real world that can be methodically investigated. By engaging critical realism, this study has managed to involve postmodernism, which is presented together with the motivation and the types of interactions (Table 2-8).
PART III: CONTEXT – ENTREPRENEURSHIP

Entrepreneurship is about recognising opportunities of unmet needs within the firm or industry and responding with solutions, engaging the required physical, human, financial, and social capital (Shane, 2003). The creation of new businesses requires a combination of opportunities and individuals (entrepreneurs) who are able and willing to exploit these opportunities (Venkataraman, 1997) and new or improved products or processes (Casson & Giusta, 2007). Entrepreneurship, therefore, includes both start-ups and development within existing businesses. It is about recognising and addressing opportunities and taking risk, all of which apply to both the for-profit and not-for-profit sectors (Ranga & Etzkowitz, 2013).

With the “shift from the managed to the entrepreneurial economy”, particularly with information and communication technology (ICT) playing a prominent role, entrepreneurship has become crucial for economic and social development (Thurik et al., 2013, p. 303). Large corporations were the main contributors to economic performance in the managed economy, utilising routine methods of innovation and production, and having the capacity for such activities. In the entrepreneurial economy, start-ups, with their distributed innovation, are associated with economic performance (Audretsch & Thurik, 2000). Significant innovations in microprocessors and improved telecommunications access resulted in ubiquitous access to computers, enabling this organisational shift. Moreover, as large organisations outsourced or offshored their operations to decrease costs, the workforce in large organisations was being downsized, inducing entrepreneurship as another possibility to employment for displaced employees.

There was not much focus on entrepreneurship in the 1960s when large corporations were seen as the future in the belief that professional management was the answer to economic progress (Casson, 2015). The 1970s saw low-cost high-quality manufactured goods from Asia flooding the Western markets, affecting large businesses. Many professionals and managers, who lost their jobs as large corporations downsized, formed small businesses and went direct to the customers whom they had previously served on behalf of the corporations. They chose to work for no or minimal income, taking risks and depending on uncertain profits. A few start-ups such as Apple and Microsoft were very innovative, but not all start-ups are known for their extreme innovation. The growth of the venture capital market further boosted the growth of start-ups. Open
innovation made it possible for small businesses to access technology which previously might not have been accessible to them.

Open innovation is “a paradigm that assumes that firms can and should use external ideas as well as internal ideas, and internal and external paths to market, as the firms look to advance their technology” (H. W. Chesbrough, 2003, p. xxiv). Open innovation is no more the domain of only large firms; there are many advantages for SMEs through open innovation (H. W. Chesbrough, 2010). Large companies are now more interested in collaborations with small firms offering specialised skills, which accelerate the progress of the larger organisations’ initiatives. Increasingly, these large companies are looking to SMEs for assistance in developing products for their overall platforms. External networking is an important aspect of open innovation (H. W. Chesbrough, 2006). Networks enable organisations to access knowledge without incurring high cost and a long time in developing it internally (van de Vrande, de Jong, Vanhaverbeke, & de Rochemont, 2009).

There are two possibilities in the open innovation model (H. W. Chesbrough, 2011). One is outside in, where an organisation uses external technologies, ideas, and processes within its own company. The other is inside out, in which an organisation allows its own technologies, ideas, and processes to be used by other companies. For example, Amazon brings the outside in through customer reviews on Amazon.com and also by selling third party products through the Amazon website (H. W. Chesbrough, 2011). Amazon also took the inside out approach by partnering with large retailers who wanted to create websites for their own merchandise.

Widespread access to computing and the Internet has had a significant impact by facilitating access to both people who support the creation of businesses and the creation of a market for the products and services produced. The rise of online communities caused a major shift in the creation of social capital due to the ease with which such communities can be formed. Research has shown the importance of developing social networks to build social capital in the creation of new ventures (De Carolis & Saparito, 2006; Liao & Welsch, 2005), making social capital a suitable lens to study such relationships, which are crucial for start-ups in acquiring resources.

Within Part III, Section 2.11 explains the importance of social capital to entrepreneurship, elaborating on the extent of connections held by various types of start-ups and how bonding and bridging affect the start-up outcomes. Section 2.12 discusses the configurational approach and equifinality. Section 2.13 describes the various types of
business organisations (FPOs, NPOs, and social enterprises), communities, clarification of various terms introduced. Section 2.13.4 explains start-ups, which constitute the research context, and defines start-up stages and start-up outcomes.

2.11 Importance of Social Capital to Entrepreneurship

Social capital is essential to entrepreneurship (Gedajlovic et al., 2013; Jack, 2010; Slotte-Kock & Coviello, 2010) in identifying opportunities and in accessing resources required for the start-ups (Birley, 1985; Uzzi, 1999), in fulfilling opportunities (Uzzi, 1997), and securing legitimacy (Aldrich & Fiol, 1994). The interplay of individuals and organisations within a social environment supports opportunity discovery, evaluation, and exploitation (Gedajlovic et al., 2013).

Scholars of strategy and entrepreneurship agree on the importance of networks for successful start-ups (e.g., Birley, 1985). Both from the relational view (Dyer & Singh, 1998) and the resource-based view (Penrose, 1995), resource acquisition requires network relations necessary for business start-up and growth (Gulati, 1998). Resources are defined as “All tangible and intangible assets that are committed to or available for the discovery and exploitation of a new venture idea” (Davidsson, 2005, p. 115, italics in original).

Many startups face resource constraints (Baker & Nelson, 2005) which makes it necessary for entrepreneurs to engage in alternative resource acquisition strategies. Typically, start-ups acquire cash from investors to acquire resources (Winborg & Landström, 2001). However, external sources of finance are often difficult to obtain for new ventures (Cassar, 2004) leading to entrepreneurs using alternative strategies for resource acquisition to resolve resource constraint issues (Baker & Nelson, 2005).

Bootstrapping is one such strategy used by new ventures (Bhide, 1992). Bootstrapping uses innovative and resourceful ways to allow start-ups to obtain resources at little or no cost so as to minimise the extent of finance that start-ups need to raise with traditional external financiers (Ebben & Johnson, 2006). An alternative is raising finance without involving banks or equity (O. Jones & Jayawarna, 2010).

Among the bootstrapping techniques for raising funds are financial assistance from family and friends, getting advance payments, personal credit card, and cross-subsidising (from employment or other businesses) (O. Jones & Jayawarna, 2010). Bootstrapping can also be done through access to resources by borrowing or sharing equipment, sharing employees/premises, hiring temporary employees (Winborg & Landström, 2001) and also acquiring skills, knowledge, and emotional support from friends and family (Sequeira,
Mueller, & Mcgee, 2007). As discussed in Part II of this chapter, social capital is one of the key factors in start-ups compensating for limited resources (Birley, 1985) and the bonding and bridging connections enable a variety of resources required by start-ups (A. Anderson, Park, & Jack, 2007).

Initial network connections have an impact on start-up development (Greve & Salaff, 2003), but not all founding entrepreneurs have access to network connections (Hite & Hesterly, 2001). Two factors determine the type of connections required. The first is “whether the entrepreneur is an industry insider or outsider”, depending on how well the entrepreneur is connected to key players (Elfring & Hulsink, 2007, p. 1850). The second is based on whether the type of innovation tends toward incremental or radical.

While founding entrepreneurs are relative outsiders in independent start-ups, they are considered insiders in spinoffs and incubator-based companies. Spinoffs are start-ups by insiders from research organisations or established firms, using ideas and knowledge from the parent organisations. Incubator-based start-ups are indirect insiders as they can access resources through the incubator’s connections to the industry.

Radical innovations are exploratory, while incremental innovations are exploitative and less disruptive (P. Anderson & Tushman, 1990). Incremental innovations involve minor changes to current products and the exploitation of established processes and designs (Tushman & Anderson, 1986). Such innovations require exploitation of existing knowledge; this approach focuses on refinement and extension of current technologies and competencies (March, 1991). By contrast, radical innovation targets the generation of new markets with novel applications of knowledge, requiring exploration that involves the pursuit of new knowledge and experimentation with alternative possibilities (Dewar & Dutton, 1986). Innovations (in products, services, processes, or otherwise) tend to fall between incremental and radical; there are few examples at either extreme.

Tiwana (2008) linked social capital with innovation form by demonstrating that integration of knowledge requires bonding while access to new knowledge needs bridging. Start-ups based on incremental innovation can depend more on bonding than can start-ups pursuing radical innovation (Elfring & Hulsink, 2007), which requires a network of weak ties to access diverse knowledge in new combinations (Hansen, 1999). Social capital connection patterns may either start with strong ties of bonding followed by intentionally developed weak ties of bridging, or begin with bridging at emergence and subsequently develop some of these ties into bonding.
Bonding plays an important role at the initial stage of start-ups, when the entrepreneur depends more on the denser relations and strong ties with family and friends (Brüderl & Preisendörfer, 1998; Evald et al., 2006), reflecting embeddedness (Coleman, 1990). For example, a study of 100 of the fastest growing firms (based on the 1989 Inc. 500 list) in the USA indicated that founders faced significant financial constraints, and to supplement their personal savings they borrowed from family and friends (Bhidé, 2000). Many pre-existing relationships are strong, with embedded ties with high network closure and cohesion (Coleman, 1990; Walker et al., 1997), and a need to evolve into calculative networks as they diversify and require a broader range of resources (Hite & Hesterly, 2001).

In contrast, entrepreneurs who pursue radical innovations depend on bridging over weak ties to access inner circles of the industry to search for information and business opportunities (Elfring & Hulsink, 2007). Entrepreneurs establish weak ties through Internet searches and attending conferences, among other activities. Connecting to a single prominent player provides access to a wide range of relevant ties. Compared to independent start-ups pursuing radical innovation, spinoffs and incubator-based start-ups have the advantage of establishing ties through existing connections.

Cohesive networks with strong ties have the advantage of greater trust and less monitoring, achieving greater productivity and reducing transaction costs (Welter & Smallbone, 2006). A negative consequence of such strong ties is that bounded solidarity (group-oriented supportive behaviour) may result in the failure to access external ideas and resources which may be the source of innovation and growth possibilities. Entrepreneurs with more weak ties than strong ties have the opportunity to receive different types of resources that are not available within their teams (Granovetter, 1973). Hence, the strength of weak ties (Granovetter, 1973) along with bridging over structural holes (Burt, 1992) provides opportunities for accessing different resource requirements. Limiting interaction to known groups also has the consequence of limiting access to potential customers, suppliers, and other useful entities.

Bridging results in calculative networks, which are motivated by economic gains, unlike identity-based networks, in which the social identity of ties take precedence over economic gains (Hite & Hesterly, 2001). Hence, calculative networks involve a greater number of weak ties, which are more likely sparse and less redundant and therefore better at bridging structural holes, which is necessary to conduct business transactions.
Trust is fundamental to entrepreneurial interactions (R. C. Mayer et al., 1995); it is referred to as the glue or lubricant holding together relationships (A. R. Anderson & Jack, 2002). Different relationships reflect different types of trust, as discussed in Section 2.4. The components of social capital (bonding, bridging, trust, and reciprocity) can occur in different combinations or configurations.

2.12 Configurational Approach and Equifinality

It is necessary to understand social capital from a configuration perspective, for instance, the overall combinations of relationships that enable maximum impact (Oh et al., 2006). Much prior research using the configurational approach used multivariate regression analysis with discrete variables competing to explain the variation instead of combinations of variables that lead to various outcomes (Kask & Linton, 2013). Such an approach can identify only a single configuration estimated for all cases and is not able to consider equifinality (Drazin & Van de Ven, 1985; Fiss, 2007). Equifinality describes the situation where a particular outcome may be attained through a variety of configurations of input variables (Gresov & Drazin, 1997; D. Katz & Kahn, 1978; Misangyi et al., 2017; Short et al., 2008).

For example, three start-up configurations were identified revealing different patterns of personality characteristics in a study of the entrepreneurial personality within the start-up process (Korunka, Frank, Lueger, & Mugler, 2003). A different study highlighted that a configurational approach provides a better understanding than a contingency approach (Wiklund & Shepherd, 2005). In this study, use of a contingency model indicated that dynamic environments have an insignificant effect on performance, which was inconsistent with another study that found dynamic environments could enhance performance (Chandler & Hanks, 1994). However, with a configurational approach, Wiklund and Shepherd (2005) found that the relationship between environmental dynamism and performance depends on a venture’s entrepreneurial orientation and access to financial capital. The results of this study were consistent with that of Dess, Lumpkin, and Covin (1997), demonstrating that a configurational model was more applicable than contingency models in investigating relationship between entrepreneurial strategy and performance.

Both social capital and entrepreneurial research propose studying equifinality (Doty et al., 1993; Gresov & Drazin, 1997; Payne et al., 2011; Payne et al., 2014) in which start-ups can adopt different configurations of social capital components to achieve similar
outcomes. The competitive advantage of organisations may be based on relationships among organisational components rather than specific abilities or resources (Black & Boal, 1994; Payne et al., 2009). Equifinality motivates this study as it enables identification of alternative routes that entrepreneurs can take to achieve success.

Configurations are constellations or combinations of components (Meyer et al., 1993; D. Miller et al., 1984). Research on configurations describes groups of firms based on similarities of important dimensions rather than measures of firm-level dimensions such as size and age (Short et al., 2008). For example, from a social capital perspective, a study could focus on similarities within configurations, and study differences among groups of configurations. A study by Maurer and Ebers (2006) identified configurations of social capital components that were more or less favourable during the start-up stage and the later business growth stage.

Network relations, based on both bonding and bridging social capital, are important for successful start-ups (De Carolis & Saporito, 2006; Liao & Welsch, 2005). Of practical importance is the diversity (Payne et al., 2014) attainable through possible configurations of the social capital components that lead to start-up success or failure.

For example, results of a study of new ventures in the open source software industry revealed that the configuration of the intra-industry and extra-industry social capital of the founding team could explain effects of positive and negative performance of the entrepreneurial orientation of the firms (W. Stam & Elfring, 2008). These results support configuration perspectives described in entrepreneurship (Wiklund & Shepherd, 2005) and network (Oh et al., 2004) literature.

Another point of interest within configurations is the identification of core social capital components combined in various ways with peripheral components to creating diverse pathways to the same outcomes (Fiss, 2011), thereby providing practical alternatives. Identification of core components and peripheral components is useful in deciding strategic directions in engaging components (Fiss, 2011). Core components have a strong causal relationship while peripheral components have a weaker relationship with the outcome. Organisational literature describes core components as having a high interdependency with other components (Siggelkow, 2002). Core components are essential to outcomes and peripheral components , being less important, are potentially expendable or exchangeable (Fiss, 2011). Different peripheral conditions can combine with a given core condition to achieve similarly effective levels of performance. Examples of the use of the terms core and peripheral can be found in literature on social network analysis (e.g.,
Entrepreneurs create FPOs, NPOs, and social enterprises. The next section discusses these types of organisations, explaining how social capital components affect them in different ways.

2.13 Types of Organisations

Among the multiple perspectives that may be taken to examine entrepreneurship, one that is particularly relevant in the current context is the split between a narrow view and a broad view (Bridge et al., 2009). The narrow view conceives of entrepreneurship as an economic phenomenon to find and exploit opportunities and to create something new to satisfy market demand. The broad view refers to entrepreneurship as belonging to society and not just the economy, creating something new to satisfy societal needs and demands. The narrow view is typically related to FPOs and the broad view to NPOs and social enterprises. Crowdfunding (discussed in Section 2.9.3) options applies to FPOs, NPOs, and social enterprises, and can be grouped into donations, rewards-based, lending, or equity (Mollick, 2014).

Business organisations include FPOs, NPOs, and social enterprises. Because engagement in traditional bonding and tribal bonding by these various types of organisations varies, it is appropriate to differentiate them. This section describes the two primary types of business organisations: FPOs for private gain at one extreme and NPOs for public good at the other extreme. Social enterprises fit in between the for-profit and not-for-profit continuum. Social capital is seen as a resource obtained by individuals for their personal benefit (Burt, 1997), and is also seen as a resource for public good (Burt, 1997; Putnam, 1993) when it creates resources not owned by individuals but available for use by members of the broader community.

While both FPOs and social enterprises are profit-oriented, social enterprises do not return profits to shareholders. FPOs and NPOs have different characteristics as shown in Table 2-9.
Table 2-9: Types of Business Organisations

<table>
<thead>
<tr>
<th>Focus</th>
<th>For-profits</th>
<th>Not-for-profits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Focus</td>
<td>Profit</td>
<td>Social value</td>
</tr>
<tr>
<td></td>
<td>Private gain</td>
<td>Public good</td>
</tr>
<tr>
<td>Shareholders</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Stakeholders</td>
<td>Employees</td>
<td>Beneficiaries</td>
</tr>
<tr>
<td></td>
<td>Customers</td>
<td>Employees</td>
</tr>
<tr>
<td></td>
<td>Society</td>
<td>Volunteers</td>
</tr>
<tr>
<td></td>
<td>Environment</td>
<td>Donors</td>
</tr>
<tr>
<td>Philanthropic actions</td>
<td>Through CSR</td>
<td>Through serving the cause</td>
</tr>
</tbody>
</table>

Source: Gamble and Moroz (2014, p. 82)

In the creation of start-ups, entrepreneurs interact with other business organisations in the form of FPOs, NPOs, and social enterprise, and also with communities formed by individuals who share a common interest or cause. In addition to elaborations of FPOs (Section 2.13.1), NPOs (Section 2.13.2), and social enterprises (Section 2.13.3), this section also includes explanation on communities (Section 2.13.4) followed by clarification of how the various terms relate to each other (Section 2.13.5).

### 2.13.1 For-profit Organisations

FPOs are also known as commercial enterprises and are the traditional type of profit-oriented organisations. FPOs focus primarily on maximising profits for their owners and shareholders, but also contribute to social good through corporate social responsibility (CSR) initiatives.

There are four kinds of social responsibility: economic, legal, ethical, and philanthropic (Carroll, 1991; re-emphasised in Carroll, 2016). The economic layer focusses on maximising profits, while the legal layer ensures adherence to the law, forming the basis of traditional businesses. As part of ethical responsibility, businesses do what is right, fair, and just, and ensure that no harm comes to stakeholders (employees, customers, society, the environment, and others).

Some businesses take it a step further through philanthropic actions by providing resources and improving the quality of life of the community. Unlike the economic layer and legal layer, which are required by society, and the ethical layer, which is expected by society, the philanthropic layer is desired by society and is voluntary (Carroll, 2016).
Philanthropy is not mandatory or required by law, nor is it expected of businesses from an ethical perspective.

Corporate philanthropy refers to unconditional transfers of assets or cash by private firms in a voluntary non-reciprocal manner to other organisations for public good (Financial Accounting Standard Board, 1993). Non-reciprocity is the differentiating word in making the actions philanthropic; there is no explicit exchange of value among the parties as in the case of cause-related marketing (Godfrey, 2005). Philanthropic actions can demonstrate good citizenship through community-oriented actions such as monetary gifts, donations of products and services, and volunteerism (Carroll, 2016).

From a time when corporate philanthropy was considered misappropriation of shareholder wealth (Friedman, 13 September 1970), it is now interpreted to be a tool that executives use to achieve business goals related to areas such as marketing and reputation management (Lee, 2008). While corporate-led initiatives are top-down and instrumental, bottom-up initiatives led by employees engage an element of empathy and altruism, which can lead to collective efforts affecting type and scale of corporate philanthropy (Muller, Pfarrer, & Little, 2014).

For example, 2017 was the 23rd year that the Ford Motor Company has been a sponsor of the Susan G. Komen Race for the Cure® in its efforts against breast cancer (Komen, 2018a). Ford has contributed more than US$133 million towards this cause. In 2015, Ford received the 360 – Degree Award for involving its employees, customers, vendors, dealers, and leadership in supporting Komen (Komen, 2018b).

2.13.2 Not-for-profit Organisations

NPOs are self-governing private organisations, that is they are separate from the government (Salamon, 2012). NPOs, such as those supporting the environment, the arts, health care, and higher education, contribute to social justice, environmental stewardship, economic development, and the quality of life of communities (McDonald, Weerawardena, Madhavaram, & Sullivan, 2015). NPOs do not distribute profits to the individuals (such as directors, officers, members, or trustees) who control it (Hansmann, 1980).

Socially conscious individuals have responded to social problems in both developing economies facing resource scarcity and corruption (Prahalad, 2005) and developed countries where they handle nagging social problems using innovative and cost-effective solutions when traditional solutions do not work (Cox & Healey, 1998). Planned Lifetime Advocacy Network (PLAN) is an NPO in Canada that was founded by the
parents of children with disabilities (Westley, Antadze, Riddell, Robinson, & Geobey, 2014). It creates a lifelong network around each individual to enable a future that is secure both socially and financially. Mothers Against Drunk Driving (MADD) is an NPO that endeavours to stop drunk driving, supports people affected by drunk driving, works towards preventing underage drinking, and strives for stricter policies on impaired driving be it from alcohol or drugs (Fell & Voas, 2006).

NPOs fulfil a need that neither the profit-oriented business sector nor the public sector serve (Etzioni, 1972). In a review of studies on NPO governance, Wellens and Jegers (2014) indicate the need for managing the collaborative efforts of various stakeholders, including “government, beneficiaries, private donors, board members, management, volunteers, and non-managerial staff members” (p. 223). To deliver goods and services, NPOs intentionally engage multiple stakeholders because overdependence on a few stakeholders can leave an NPO vulnerable if any key stakeholder can no longer provide funds (Weerawardena, McDonald, & Mort, 2010).

NPOs rely on charitable contributions, grants from private foundations and government, and in-kind gifts and volunteers (R. L. Fischer, Wilsker, & Young, 2010). In the typical situation where FPOs do not find the activities of NPOs profitable, while the public sector does not receive sufficient public support for government to act and to expend taxpayer funds, NPOs are left to deal with societal needs in an unprofitable situation and with little support from the public sector (McDonald et al., 2015). With reduced government and private funds, NPOs have come to depend on commercial income from product sales, service fees, and other profit-making ventures (Eikenberry & Kluver, 2004).

Further, governments are shifting away from grants to contracts with performance-based measurements (unlike cost-imbursement contracts) to ensure results can be achieved, and have started outsourcing to FPOs (W. P. Ryan, 1999). The resulting competition for government contracts has left NPOs in a disadvantaged position as FPOs with more capital can engage in greater risk. Lichtsteiner, Gmüer, Giroud, and Schauer (as cited in Blankenburg, 2018) list a few areas in which NPOs face competition: volunteers, employees, donations, political influence, government grants, and even markets for their products and services. NPOs face competition from both other NPOs providing similar services and FPOs.

There exists a double-standard in considering value creation between FPOs and NPOs. Pallotta (2012) argues that stakeholders do not object to FPOs spending money on
marketing to generate revenue, which is a measure of their success. In contrast, NPOs are expected to spend the money directly to support the needy, although marketing can generate more money for the needy. A similar dilemma exists for overhead costs. NPOs are expected to minimise costs so that funds go direct to the needy, when it has been found that investing in overhead costs such as software to improve efficiency or buying a car to travel to more communities can actually provide better services (Glassman & Spahn, 2012). With FPOs encroaching into NPO turf, can the NPOs compete with the FPOs, given the challenges described? W. P. Ryan (1999) argues that NPOs are adjusting to survive competition from FPOs, but whether NPOs will be able to do so without compromising that which differentiates them from FPOs is the question.

NPOs have also started to engage in marketisation to counter these issues of reduced funding, increased costs, and increased competition (Weerawardena et al., 2010). Marketisation encourages NPOs to attain competitive market efficiency in order to enhance their social performance (Zahra, Ireland, Gutierrez, & Hitt, 2000). For example, in a study of ten successful NPOs, Weerawardena et al. (2010) found that these NPOs develop innovative practices and proactively seek new opportunities.

Reduced funding for social needs (Lasprogata & Cotten, 2003; Wolverton, 2003) and increased costs of delivering services (Leadbetter, 1997) have encouraged NPOs to adopt entrepreneurial strategies (Zahra, Gedajlovic, Neubaum, & Shulman, 2009). McDonald et al. (2015) proposed three strategies for NPOs to reduce costs and increase revenues: (a) generate more revenue through service fees, commercial ventures, sponsorship, contract fees, and membership subscriptions; (b) increase donations through creation of own foundations to raise funds, engage in relationship fundraising, encourage identity-based donations, conduct fundraising events, apply for grants, and through marketing communications; and (c) reduce costs through increasing volunteerism, in-kind donations, attaining cost efficiencies, and developing strategic alliances.

When NPOs work with corporations in cause-related alliances, corporations agree to take actions that are intended to benefit the NPOs (Andreasen, 1996). A study by Nowak and Washburn (2000) highlights that cause marketing alliances with strong corporate sponsors enhance the credibility of the NPOs’ programmes, often making it mutually beneficial to both NPOs and corporations. Among the types of partnerships with corporations are “corporate philanthropy, corporate foundations, licensing agreements, sponsorships, transaction based promotions, joint issue promotions, and joint ventures” (Wymer & Samu, 2003, p. 3).
Corporations forming relationships with NPOs have potential to generate novel products/services and increase service delivery opportunities. A study of governance relationships of NPOs and corporations indicated potential for success but possible complexity due to differences in outlook between the two types of organisations and the need to be cognisant of such differences when collaborating (Tsarenko & Simpson, 2017).

NPOs face many challenges with reduced funding and also competition. The need for NPOs to be sustainable from a financial, as well as social sense, has led to the formation of social enterprises, described in the next section.

### 2.13.3 Social Enterprises

Social enterprises focus on profits to support their operations rather than to return to shareholders. Just like other enterprises, social enterprises choose to create businesses based on the concepts of Schumpeter, Kirzner, and Hayak (Zahra et al., 2009). There are three key types of social entrepreneurs based on these concepts.

Social Bricoleurs usually focus on discovering and addressing small-scale local social needs. Social Constructionists typically exploit opportunities and market failures by filling gaps to underserved clients in order to introduce reforms and innovations to the broader social system. Finally, Social Engineers recognize systemic problems within existing social structures and address them by introducing revolutionary change. (Zahra et al., 2009, p. 519)

Schumpeter’s (1942) *creative destruction* guides social engineers in their pursuit of newer and more suitable structures and processes in the production of enterprises that make a significant influence on society. Creative destruction describes the situation where some innovations destroy older industries or institutions. This definition of entrepreneurship is often narrowed to high-growth start-ups as an important source of innovation (Mason & Brown, 2014). Schumpeter (1934) equated entrepreneurship with innovation: new products, new sources of supply, new markets, new organisational forms, and new methods or processes. Schumpeter highlights that the entrepreneur is not (necessarily) the inventor.

For example, Grameen Bank is a social enterprise, an FPO responding to a social cause, created by a social engineer. Mohamad Yunus, founder of Grameen Bank, saw the widespread poverty in Bangladesh, the reluctance of banks to lend to the poor, and the poor being trapped into indebtedness to moneylenders (Bornstein, 1996). In order to conserve the independence of the bank, he deviated from many established norms of
accessing development funds from the government, United Nations, or World Bank and instead maintained the independence of the bank (Yunus, 1998).

Kirzner (1973, 1997) highlights the alertness of social constructionists in spotting and exploiting opportunities that current providers do not serve, while overcoming inefficiencies through optimising existing products and services. Prior experience and knowledge can help individuals spot such opportunities (Shane, 2000).

Sam Johnson, the founder of the Student Volunteer Army (SVA) of the University of Canterbury (Lewis, 2013), is an example of a social constructionist, but SVA is a not-for-profit organisation and not a social enterprise. A student at the university when the first earthquake in Christchurch occurred on 4th September 2010, Johnson used Facebook to gather students to clear the aftermath. After the second earthquake on 22nd February 2011, Johnson roped in more volunteers from other student organisations to handle a number of requirements including handling a call centre, calling businesses for the donation of resources, and collecting cash donations for resources that required payment. In addition to Facebook, Twitter, Gmail, and Google Maps, the SVA used technology to handle resource allocation, developing and adjusting code to respond to new requirements.

Hayek (1945) focussed on the role of contextual information and local knowledge in the creation of non-profits. Social bricoleurs use whatever resources are available to achieve their goals, without depending on external funding. External actors do not have sufficient local knowledge to affect the kind of changes possible for social bricoleurs. However, such non-profits may not have the viability to upscale into much larger organisations due to their limited local application. An example of a social bricoleur is Furniture Resource Centre in Liverpool, England (Domenico, Haugh, & Tracey, 2010). From its humble beginnings of distributing unwanted furniture to homes that needed furniture, the organisation evolved into a social enterprise to generate profits to serve it original mission of providing affordable furniture to low income homes (FRC Group, 2015).

Another example of a social bricolage project is Marcia Ventura’s education and extracurricular programme for many children in São Paulo, Brazil, who would otherwise spend much time on the streets without adult supervision (Sunduramurthy, Zheng, Musteen, Francis, & Rhyne, 2016). She transformed a downtown public square by offering theatre, music, and dance in addition to reading classes, moving on to creating group houses as shelters for use by the children. This programme has since expanded to cover other cities.
Founders may engage in both resource-seeking and bricolage at start-up stage (Baker, Miner, & Eesley, 2003). As compared to resource-seeking networking, network bricolage refers to the use of existing personal and professional networks by founders. Similar to how professionals found new jobs through their personal networks (Granovetter, 1973), founders’ networks were sources of resources and information (Kirzner, 1997). However, when progressing from start-up to growth young firms may transition from network bricolage to resource seeking (Hite & Hesterly, 2001).

University student start-ups include FPOs, NPOs, and social enterprises. These start-ups interact not only with other businesses but also with communities discussed in the next sub-section.

2.13.4 Communities through Online and Offline Bonding

Communities are collectives of people who have a bonding relationship through shared interest, belief, or experience (Putnam, 2000) with both online and offline communities. Entrepreneurs connect with many different organisations or communities such as suppliers, distributors, and competitors, in addition to their customers (B. Brown & Butler, 1995), investors, benefactors, and mentors, to access resources in order to achieve their business goals.

Online interactions occur through media such as blogs, forums, and social network services. Offline interactions occur through face-to-face interactions such as meetings, social events, conferences, seminars, and other functions. This section first describes online and then offline communities.

Online or Virtual Communities

Online communities are collectives of individuals who do not necessarily know each other but who share common interests; taking care of their own needs and that of the collectives (Hercheui, 2011; Sproull & Arriaga, 2007) using the Internet (Sproull & Arriaga, 2007). Other terms for online communities are virtual communities, communities of interest, or computer-mediated communities. In an online community, social capital is embodied in informational social support (Baym, 1998). The connections are an outcome of the reciprocity within the community and these connections can be between two people or indirectly as part of a group. Support can range from information sharing, exchange, and at the top tier, it involves storing, evolving, and dissemination of information (Hersberger, Murray, & Rioux, 2007). For example, in a study of small worlds, Fleming, King, and
Juda (2007) report that trust and collaboration spawn among inventors within dense clusters, and strong ties improve extent and ease of information flow within these clusters. Small-world networks are defined as “clusters of locally dense interaction connected via a few bridging ties” (Fleming et al., 2007, p. 938).

Virtual communities, through unlimited geographical access, can unearth specialised knowledge through weak ties (Sankaran & Demangeot, 2017). Online media have made information exchange and knowledge collaboration possible in previously unknown ways (Faraj, Jarvenpaa, & Majchrzak, 2011). Online interactions are more than responding to a question in a forum or posting a blog, having evolved to include the co-creation of software, music, and resolving issues in a collaborative manner.

Entrepreneurs use social media to interact with other people (E. Fischer & Reuber, 2014). Social media enable information sharing among firms, and firms increasingly have a presence in LinkedIn, Facebook, and/or Twitter (von Krogh, 2012). Social network sites such as Facebook and LinkedIn help develop weak ties (Morse, Fowler, & Lawrence, 2007) and improve strong ties (Sigfusson & Chetty, 2013). Entrepreneurs are able to access the masses more effectively through such social network sites, which would be a time-consuming effort with offline networks (C. Smith, Smith, & Shaw, 2017). Engaging people on common subjects and leveraging shared knowledge, nurtures weak ties to become strong ties.

The potential value of customer involvement in innovation is well acknowledged (Prahalad & Ramaswamy, 2000). Social media provide an avenue for new product ideas and improvements to existing products (Schlagwein & Hu, 2017), and facilitate customer participation in new product design and development (Frow, Nenonen, Payne, & Storbacka, 2015).

Social media use is an attractive option for SMEs, which typically lack organisational and financial resources to connect and interact with external sources, considering the ease-of-use and low-cost access to knowledge external to the organisation (Candi, Roberts, Marion, & Barczak, 2018). For example, Avalara, a tax software firm, uses social media to engage with its community by posing questions for its members. The ensuing communication builds relationships and fosters Avalara’s credibility among its consumers.

A study by E. Fischer and Reuber (2014) highlighted the use of Twitter by entrepreneurial firms as an alternative communication approach to conventional personal interactions and prospectuses. Supplements to previous authoritative texts (Kuhn &
Putnam, 2014) can be conveyed through Twitter messages enhancing differentiation of the firm and mitigating uncertainty. The study suggests that for effectiveness, there must be frequent communications speaking of the firm’s quality and distinctiveness, with signals indicating positive effect.

Compared to the limited nature of socially embedded ties, virtually embedded ties are more important for organisations with high frequency of institutional, technological, and environmental changes; and high organisational turnover (Fowler, Lawrence, and Morse (2004). Embeddedness involves both economic structures and social structures (Dacin, Ventresca, & Beal, 1999; Granovetter, 1985). Socially embedded ties are economic relationships that are direct social links with other involved actors (Granovetter, 1973, 1985; Uzzi, 1999). Virtually embedded ties are created and maintained among organisations by providing differentiated solutions for similar needs using electronic technologies, but addressed by social embeddedness (Fowler et al., 2004). While socially embedded ties develop gradually and generally require third-party referrals and high personal interactions (Andersson, Forsgren, & Holm, 2001; Honig & Lampel, 2000; Uzzi, 1996, 1997), virtually embedded ties incur less cost and time as organisations mainly rely on existing communication networks. Moreover, exit costs of virtually embedded ties are lower than that of socially embedded ties, which feature higher investment in social and economic resources. The lower cost and improved access to information, together with globalisation, have transformed the way economic activities are conducted (Bettis & Hitt, 1995).

Online communities appear to face conditions of opportunism and uncertainty, but this is mitigated by increased transparency rather than through development of trust (Fowler et al., 2004). Socially embedded strong bonding ties generate high trust and reduce the risk of opportunism (Granovetter, 1985; Putnam, 1995; Uzzi, 1996). Although strong bonding ties do not guarantee trust, they do provide the background for the formation of trust followed by reciprocity (Uzzi, 1999) as compared to arm’s length ties (Fukuyama, 1995). Opportunistic behaviour is reported easily to the virtual community through online facilities such as forums and newsgroups. While opportunistic behaviour will damage specific relationships in socially embedded ties, in virtually embedded ties it can degrade firms’ reputations and their efforts in establishing new relationships with the partners, consumers, as well as their suppliers. Just as in social linkages, not all virtual linkages lead to embeddedness.
Online communities have become a *groundswell*, defined as “A social trend in which people use technologies to get the things they need from each other, rather than from traditional institutions like corporations” (C. Li & Bernoff, 2008, p. 9). People can buy from others on eBay, find jobs through Craigslist instead of looking at newspaper advertisements, and work together to create an operating system such as Linux.

In their study of online consumers, involving netnography (an ethnography of a group of Internet users) and an online survey of the same virtual community, Chan and Li (2010) found that while efficient online systems may facilitate reciprocity, consumers appreciate the enjoyment that they derive from social connections generating greater commitment to co-shopping. Co-shopping involves consumer groups who coordinate volume purchases at lower costs or purchase products for those who lack access to the virtual community (Gao, 2008). The interactivity of virtual communities make it possible to move from good marketing to good conversation with an “ability to put a more human face on marketplace exchanges without losing the scale economies of mass marketing” (Deighton, 1996, p. 151).

Different needs relating to consumers, professions, hobbies, conditions, concerns, and collaborations trigger the formation of online communities (Sproull & Arriaga, 2007). Online communities can be socially constructed, volunteer oriented, or business sponsored (Hunter & Stockdale, 2009), and respond to individuals who are looking for emotional support, interest-based support, product purchases, or engagement in fantasy through gaming (Armstrong & Hagel, 1996).

For example, NPOs can potentially use virtual communities to boost their volunteer recruitment. A study using an online questionnaire with volunteers of the German Red Cross showed a positive correlation between commitment of volunteers and volunteering-related Internet use, but not with leisure-related activities, suggesting that NPOs can improve commitment of volunteers by promoting their activities through the Internet (Emrich & Pierdzioch, 2016).

**Offline Communities**

Despite the widespread existence of online communities, offline communities continue to serve a purpose, many in tandem with online engagement. Face-to-face interactions happen through conferences, association meetings, industry events, workshops, seminars, competitions, social clubs, and civic clubs, amongst others. For example, Garud (2008), based on his attendance at three conferences on cochlear implants,
suggests that conferences provide an avenue for actors from emerging fields to interact, discuss different possibilities, and exchange information.

Community gatherings, social events, and sports activities also provide opportunities for offline communities. Offline media such as print, magazines, and television continue to have effects on trust and civic participation. A study of two Nordic media organisations indicated different practices guide their strategy on how the organisations manage the print and online environments (Järventie-Thesleff, Moisander, & Villi, 2014).

Furthermore, various media were shown to affect the social capital trust component. A secondary analysis using data from DDB Life Style Studies from 1998 and 1999 showed that motives underlying media usage, age differences in media usage patterns, and community/communication differences affect interpersonal trust (Shah, McLeod, & Yoon, 2001). Print media, magazines, and newspapers had positive effects on trust and civic participation. Broadcast media findings indicated that the viewing of specific content rather than overall viewing affects participation and trust. While news had no effect, viewing dramas was related to civic participation, and viewing sitcoms was associated with less participation but higher trust.

Offline communities also form around books and other media. Reading and book clubs engage readers in small and large groups both in private and public spaces with a boom created in the USA following their promotion by the Oprah Winfrey show (Bikos & Papadimitriou, 2017). Multi-cultural media, which includes radio/television, newspapers, and magazines, play an important part in responding to the needs of racial minorities and ethnicities, challenging injustices, fostering culture, and advancing the well-being of the community – enabling the development of social capital (Fleras, 2009).

Information technology (IT) companies also engage in offline communities. An example is Noldus, an IT company producing software and hardware solutions and services (Elfring & Hulsink, 2003). Its founder, Lucas Noldus, was part of an offline community within an incubator, where he benefited through discussions with other entrepreneurs. Noldus engages in marketing when he meets researchers, practitioners, and engineers at business and academic conferences.

Although virtual teams are a norm in the IT industry, it is recognised that occasional face-to-face interactions are still necessary to achieve their objectives (Jonsen, Maznevski, & Canney Davison, 2012). Rich media communication (such as video conferences) are deemed better than lean media (such as emails) (Klitmøller & Lauring,
However, the cultural and linguistic nature of collaborations still require attention as rich media can potentially cause stereotyping creating a negative effect on knowledge exchange. This issue may not arise with lean media where the task allocation and instructions are clear. However, when there are language barriers and multicultural team composition, trust development is slower (Cheng et al., 2016). Despite the cost and time savings resulting from reduced travel, face-to-face interactions may still be necessary (Andres, 2002).

For specific groups, for example investors, online community support may display lower social capital than offline social capital under certain conditions, as shown in a study of individual investors using online communities for investment informational support (Tan & Tan, 2012). Investors use different combinations of information sources depending on the extent of offline and/or online social capital. Investors with offline social capital vary in their access to offline resources. Those with low social capital rely on small subgroups for information: Family members are mainly accessed by investors with small offline social capital, while friends and colleagues are also useful for investors with large offline social capital. Investors high in online social capital have a higher possibility of seeking online advice. Investors with a high-investment risk profile typically access both offline and online communities.

Contacts made through associations such as chambers of commerce, breakfast clubs, industry associations (Martínez & Aldrich, 2011), professional associations, and social clubs (Cooke, Clifton, & Oleaga, 2005) contribute towards social capital. Considering the breadth of terms that have been introduced, the next sub-section attempts to provide clarity.

### 2.13.5 Clarification of Terms

This section clarifies the relationship between various terms including organisations, communities, institutions, stakeholders, and tribes. To do this, Figure 2-4 draws on the two dimensions of institutional bonding and tribal bonding to illustrate how business organisations and communities are positioned.

By institution, we consider “systems of established and prevalent social rules that structure social interactions” (Hodgson, 2006, p. 2) with “multifaceted, durable social structures, made up of symbolic elements, social activities, and material resources” (Scott, 2014, p. 57). Institutions determine the rules of the ‘game’ and organisations are the players, with the possibility of organisations influencing the rules (North, 1990). While all
business organisations and communities are subject to institutional rules, not all organisations respond in the same manner. Tribal bonding, as defined in this thesis, is the extent to which members will take action without expectation of reciprocity.

**Tribal Bonding**

<table>
<thead>
<tr>
<th>High</th>
<th>Low</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social enterprise</td>
<td>FPO</td>
</tr>
<tr>
<td>Stakeholders</td>
<td>NPO</td>
</tr>
<tr>
<td>Communities</td>
<td></td>
</tr>
</tbody>
</table>

**Figure 2-4: Clarification of Terms**

Within this framework, social enterprise and FPOs are both high in institutional adherence and a focus on profit generation. However, social enterprise is high in tribal bonding as compared to FPOs reflective of focus by social enterprises in supporting their operations with profits generated rather than return profits to shareholders (Section 2.13.3). NPOs with less institutional adherence are lower than social enterprises with no focus on profitability but high in tribal bonding. Communities are the lowest in institutional adherence the extent of tribal bonding varies depending on the reasons the communities are formed. Stakeholders, defined as “any group or individual who can affect or is affected by the achievement of the organization’s objectives” (Freeman, 1984, p. 46), therefore apply to all the business organisations but not to communities, within the context of this study. The wide variety of groups or individuals that are stakeholders can display the breadth of tribal bonding.

**2.14 The Research Context: Start-ups**

This section provides details of the research context, which focusses on start-up outcomes. The five stages of the business life cycle by Churchill and Lewis (1983) provided the basis on which to (a) exclude cases that were still at start-up stage, and (b) identify the point at which measurements for this study would be taken to investigate start-up outcomes as some of the cases might be further along the growth path. Additional literature was reviewed to identify success possibilities other than growth.
2.14.1 Start-up Stages Defined

All three types of business organisations described in the previous section are included in this study, which focuses on success and failure of the start-ups. This section describes all the business life cycle stages before identifying the stages relevant to this study.

Business life cycle stages (Table 2-10), as defined in Churchill and Lewis’s (1983) organisation life cycle model, provide the basis for defining the start-up stage. Developed for small businesses, this model continues to be referenced in organisational studies (e.g. Pillai et al., 2017; Strobl & Kronenberg, 2016).

<table>
<thead>
<tr>
<th>Stages</th>
<th>I: Existence</th>
<th>II: Survival</th>
<th>III: Success/Failure</th>
<th>IV: Take off</th>
<th>V: Resource Maturity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Progress of business</td>
<td>Viability of products and services and customer base</td>
<td>Enough initial customers; think of revenue and expenses</td>
<td>Growth or disengagement (complete or partial)</td>
<td>Rapid growth</td>
<td>Consolidation and control</td>
</tr>
</tbody>
</table>

Source: Adapted from Churchill and Lewis (1983)

At stage I, the existence stage, the business is concerned about having viable product(s) or service(s), a customer base, and the ability to provide minimal service. The organisation is simple, consisting of just the entrepreneur and the team, and features minimal formal planning, with the entrepreneur leading and providing direction.

At stage II, the survival stage, the business has enough customers sufficiently satisfied with its products to indicate its viability, and now needs to move from existence to consideration of revenues and expenses. Can the business break even or at least have enough cash flow to survive? The number of employees may increase, minimal systems will be developed, and strategic planning will still focus on survival. The business still revolves around the entrepreneur.

Stage III is the turning point for success or failure. If the business succeeds, the entrepreneur may decide to grow the business or disengage for reasons such as recapturing the investment, poor financial outlook, a change in motivation, or family or health issues. The entrepreneur can disengage by selling the business, merging it with another entity, or just discontinuing the business.
At stage IV, the take-off stage, the key concern is how to achieve rapid growth and how to finance that growth. At stage V, the resource maturity stage, the main concerns are consolidation and control of the financial success, and maintenance of the entrepreneurial spirit while introducing new tools to eliminate inefficiencies resulting from earlier stages. The business life cycle stages are used to define start-up outcomes.

2.14.2 Start-up Outcomes

Start-up outcomes are broadly categorised as success or failure, with multiple situations being considered a success. A variety of literature addresses the categorisation of success or failure. While exiting from a business has been used in many studies to indicate failure (Strotmann, 2007), academic and practice-oriented literatures do not share this point of view (Knott & Posen, 2005). For example, in a survey of UK entrepreneurs, some ventures that exited considered themselves a success (Ucbasaran, Westhead, & Wright, 2006). Entrepreneurs are encouraged to test opportunities rapidly at a low cost before scaling up their business (Ries, 2011); and, in fact, early exit from ventures that are not showing promise is a key strategy for entrepreneurs who focus on growth rather than merely extending survival (Wennberg & DeTienne, 2014).

Based on past research (e.g. Birley & Westhead, 1993; G. Ryan & Power, 2012), exits include bankruptcy, closure, IPO, acquisition, independent sale, management buyout/early buyout, and family succession (Wennberg & DeTienne, 2014). Firms under liquidation have also been termed a ‘success’ in a study representative of US entrepreneurs (Bates, 2005; Headd, 2003). Pursuing lifestyle preferences and opting-out are also alternative success options (Scase & Goffee, 1980). In lifestyle entrepreneurship, an individual aligns entrepreneurial pursuits to fit their personal lifestyle and circumstances, without necessarily having aspirations for growth (Kaplan, 2007). Typically, lifestyle businesses are created primarily to provide sufficient income for the entrepreneurs and their families. Among businesses not oriented towards growth are those created for social purposes rather than financial return maximisation (Bridge et al., 2009). Alternatively, ventures can choose to stay in survival mode or discontinue.

For this study, all start-up cases in stages I and II as defined in the business lifecycle stages of Churchill and Lewis’s (1983) model are excluded. Next, cases considered failures are identified. The venture is considered a failure if it became bankrupt or insolvent, or there was a partnership breakup leading to dissolution. Measures for all other success outcomes are taken for stages III, IV, and V. Taking into consideration the
various possibilities, the following success categories have been identified: disengage, discontinue, growth, take off, and resource maturity (Figure 2-5).

![Figure 2-5: Start-up Outcomes Relevant to this Study]

Entrepreneurs choose to discontinue or disengage for personal, professional, or financial reasons (Table 2-11). Personal reasons include change in motivation, family issues, and health issues. Professional and financial reasons include recapturing investment, opting out from a managerial role, poor outlook, and intentional planned exit.

<table>
<thead>
<tr>
<th>Success Category</th>
<th>Description</th>
<th>Reasons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disengage</td>
<td>• Sell the venture</td>
<td>• Intentional and could have been the plan</td>
</tr>
<tr>
<td>Discontinue</td>
<td>• Merge with another entity</td>
<td>• Recapture investment</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Poor outlook for financial returns</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Opting out of a managerial role</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Change in motivation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Family/health issues</td>
</tr>
<tr>
<td>Growth</td>
<td>• Invest to grow the firm value to provide returns to the investors or reinvest</td>
<td></td>
</tr>
<tr>
<td>Take off</td>
<td>• Rapid growth</td>
<td></td>
</tr>
<tr>
<td>Resource maturity</td>
<td>• Consolidation and control</td>
<td></td>
</tr>
</tbody>
</table>

Source: (Churchill & Lewis, 1983)

Having defined the various social capital components and start-up outcomes in Part III, Part IV presents the framework underpinning this research, pulls together the research questions, and summarises Chapter 2.
PART IV: RESEARCH QUESTIONS and SUMMARY

2.15 The Research Questions

Two research questions support the overall research aim introduced in Chapter 1:

*To determine the effects of social capital on start-up outcomes.*

Section 2.12 explained that core components are essential to outcomes with peripheral components being exchangeable or expendable (Fiss, 2011). Configurations can be grouped based on core components leading to the first research question.

**Research question 1:**

*How do different configurations of social capital components affect start-up outcomes?*

While the original purpose of the research was to investigate groups that provide support to start-ups, literature reviewed in Section 2.9 highlighted the effects of consumers and customers leading to the second question.

**Research question 2:**

*How does social capital, through the various groups (consumers, customers, critics, and support) involved, affect start-up outcomes?*

2.16 Summary

This chapter described social capital components and how they affect start-up outcomes, it was presented in four parts. Part I explained the various views of social capital theory as it developed, factors that motivate and sources of social capital, and the components of social capital. It covers social capital from both individual and collective perspectives, whilst exploring the role of trust within social capital. Value introjection and bounded solidarity result from the expressive nature of collectives, while reciprocity exchange and enforceable trust are based on the instrumental nature of interaction between individuals and direct reciprocity. The basic components of bonding, bridging, and trust were detailed.

Part II highlighted the insufficiency of bonding, which was realised during the back-and-forth between theory and data analysis. This led to generation of an extension to the types of bonding in social capital theory, highlighting the presence of tribal bonding as differentiated from traditional bonding. Social capital theory was supplemented with social identity theory and the tribalism concept to differentiate tribal bonding’s characteristics of
inherent abstract trust and non-expectation of reciprocity, as compared to trust developed over time and reciprocity in traditional bonding.

Part III described entrepreneurship, which is the context of the study, and the importance of social capital relationships to entrepreneurship. The configurational approach and equifinality helped identify multiple configurations of social capital components that contribute to successful outcomes. Social capital aspects are applicable to FPOs, NPOs, social enterprises, and communities. The initial stage of a start-up ends when a venture has passed the existence and survival stages, at which point it either succeeds or fails. Success can be achieved through growth, disengagement, or discontinuance. Beyond growth, the venture can take off with rapid growth or reach resource maturity. Part IV defined the two research questions based on the research aim.
3 CHAPTER THREE: METHODOLOGY

Although it is always useful to know what a Weber or Coleman has said about some social phenomenon, it is more important for the individual sociologist to have knowledge of a type that allows her to theorize and to solve theoretical problems as these emerge during the process of research. (Swedberg, 2017, p. 200)

This study has presented arguments for a deeper understanding of social capital and a wider perspective of entrepreneurial start-ups. This is achieved here by: (a) developing an in-depth understanding of bonding social capital through the exploration of tribal bonding; (b) looking beyond observable events to underlying mechanisms; and (c) investigating multiple pathways to start-up outcomes, also known as equifinality, using the configurational approach.

The first consideration is to evaluate support for the new concept of tribal bonding, which has been put forward to deal with handling the multiple levels of social capital by engaging a philosophy that will look ‘under the hood’. There is a consequent need to study how splitting bonding into traditional and tribal affects entrepreneurial start-up outcomes. The need for such a study is further emphasised by social capital literature indicating that networks (the structural component of social capital) providing required resources may be a more important consideration than entrepreneurial traits and resource availability (Aldrich & Zimmer, 1986).

Second, there is a need to look beyond observable events, and to start questioning why these events happen, and to study underlying mechanisms that trigger events when studying social capital and entrepreneurship. This is reflected in the call for greater attention to context in entrepreneurial studies (Shane, 2012; Welter, 2011). Context refers to situations, conditions, circumstances, or environments that facilitate or constrain the phenomenon of interest (Welter, 2011, p. 167).

Third, the link between social capital components and start-up outcomes warrants investigation. Using the configurational approach to achieve this has the advantage of studying different circumstances of how core conditions and peripheral conditions combine to produce outcomes – and which of these may lead to the desired outcomes (equifinality). Core conditions have a strong causal relationship while peripheral conditions have a weaker relationship with the outcome.
Entrepreneurship literature has highlighted the uncertainty faced by start-ups as they attempt to access different networks for opportunity identification and resource acquisition (Engel et al., 2017). A context with an unpredictable future and underspecified goals requires a research paradigm that can deal with uncertainties. This study has adopted the critical realism (CR) paradigm, which enables the study of mechanisms that trigger events, going beyond merely studying relationships. Such an approach echoes the call to challenge existing assumptions and not just spot gaps in literature (Alvesson & Sandberg, 2011). A study of SMEs by Braidford, Ian, and Stone (2017) encouraged looking beyond positivism to consider other epistemologies that can provide more comprehensive explanations for performance and growth, and demonstrated this through the use of CR to capture multi-layered modes of explanation.

The CR paradigm and abductive reasoning, central to the methodology for this study, are detailed in this chapter. Each choice made in completing this research will be explained in corresponding sections later in this chapter; in this section, these choices are briefly introduced and summarised.

Figure 3-1 depicts the overall flow of this chapter in relation to the literature review, findings, and discussion chapters. As the figure indicates, there was constant reference back to literature and data throughout the various steps as new insights surfaced.
This chapter is presented in four parts (Figure 3-2). Part I presents the research paradigm and research strategies (abduction, retroduction, and induction) engaged in this study; Part II describes the collection and preparation of the interview data; Part III explains the three data analysis steps used in this study, and Part IV is a summary of this chapter.

![Diagram of chapter structure]

**CHAPTER 3: METHODOLOGY**

**PART I: RESEARCH PARADIGM AND STRATEGIES**
3.1 The Research Paradigm – Critical Realism
3.2 Research Strategies

**PART II: DATA COLLECTION AND PREPARATION**
3.3 Data Collection
3.4 Data Preparation

**PART III: DATA ANALYSIS**
3.5 Step 1: Abductive Analysis
3.6 Step 2: Template Analysis
3.7 Step 3: Qualitative Comparative Analysis

**PART IV: SUMMARY**

![Diagram of chapter structure]

Figure 3-2: Thesis Structure Foregrounding Chapter 3
PART I: Research Paradigm and Strategies

Part I presents the philosophical aspects of the research. Section 3.1 describes the features of CR and how it differs from pragmatism. Section 3.2 explains the choice of using retroduction following abduction, instead of the more common choices of induction and deduction.

3.1 The Research Paradigm – Critical Realism

This study adopts the CR paradigm subscribing to ontological realism and a constructivist epistemology. Ontology refers to the nature of phenomena while epistemology deals with knowledge about the phenomena (Easterby-Smith, Thorpe, & Jackson, 2012; Gioia & Pitre, 1990). Based on the research questions of this study, positivism is inadequate as it only concerns itself with what is already known, whereas constructivism is based on what is observed but does not study the underlying mechanisms. Positivism, based on theory and causes, is able to conclude on the effects, while constructivism suggests theory based on causes and effects. However, both fail to explain the reason for causes leading to effects, which requires an understanding of mechanisms that trigger the causes.

CR, which goes beyond an understanding of observable events and into the realm of underlying mechanisms that trigger the events, fulfils the needs to delve deeper in researching social capital theory and entrepreneurial start-ups. Sayer (2000) writes:

We need to know not only what the main strategies were of actors, but what it was about the context which enabled them to be successful or otherwise. This is consistent with the realist concept of causation and requires us […] to decide what it was about a certain context which allowed a certain action to be successful. Often the success or failure of agents’ strategies may have little or nothing to do with their own reasons and intentions. (p. 26)

CR, which is influenced by the original concepts of Roy Bhaskar (1975/2008) followed by the work of Andrew Sayer (2010), aims at the ‘how and why’ versus the positivist’s concern for ‘who, what, and where’ (Easton, 1995). As Sayer (2000) pointed out, “what causes something to happen has nothing to do with the number of times we have observed it happening” (p. 14). Causality is about determining the underlying generative mechanisms rather than just confirming the regularity of causation (Blaikie, 2007) and how the underlying structures and mechanisms affect outcomes or events (Sayer, 2010). The next section provides explanations of some key terminologies with
meanings specific to CR: structure, mechanisms, causal powers, stratification, and emergence.

**Structure, Mechanisms, and Causal Powers**

Structure describes the composition of an object, for example an entrepreneurial network that builds on interactions among individuals. The object has causal powers, which are “potentials, capacities, or abilities to act in certain ways and/or to facilitate various activities and developments” (Lawson, 1997, p. 21) as in the case of entrepreneurial network forming ventures (Johannisson, 2000). Mechanisms refer to how an object’s causal powers are triggered. When mechanisms cause events that we can experience (concrete phenomena), they are sometimes referred to as generative. Other conditions may need to be present to activate the causal powers. Hence, “A particular mechanism can produce completely different actions at different times, and inversely the same event can have completely different causes” (Danermark et al., 2002, p. 58). This can be seen when two entrepreneurs have similar capacities but only one succeeds due to different conditions, for example different institutional environments. Likewise, similar events can be the result of different combinations of causes, as in the success of start-ups being investigated in this study.

Understanding the contingent relationships that exist between mechanisms underpins CR’s perspective of causation, as represented in Figure 3-3.

![Figure 3-3: Critical Realist View of Causation](image)

(Sayer, 2000, p. 15)
**Stratification and Emergence**

CR maintains that the social world is made up of real objects existing independently of our concepts or knowledge, with their structures, mechanisms, conditions, and powers often not observable. This can be seen in everyday experience when people refer to ‘what is behind’ an observed event.

There are three levels in critical reality: the real, the actual, and the empirical (Bhaskar, 1975/2008) (illustrated in Figure 3-4). People experience and interpret outcomes at the empirical level, which is ontologically separate and different from the actual level. The events occur at the actual level irrespective of whether humans experience them. This can explain why studies produce different explanations for similar topics. The real level consists of mechanisms with inherent properties acting as causal forces to produce events. Although mechanisms cannot be observed, they cause events to happen; these events can be experienced by people, leading to comments such as ‘something is going on here’ (Danermark et al., 2002). The real level differentiates CR from the flat ontologies often related to interpretivist and empirical realist philosophies of science. Considering only that which can be observed confines research based on these philosophies to direct experiences (Sayer, 2000). Entrepreneurs’ accounts of their start-up journey are therefore merely starting points to an understanding of what lies beneath.

![Figure 3-4: Critical Realist Stratified Ontology](image)

**Figure 3-4: Critical Realist Stratified Ontology**

Source: Modified from Saunders, Lewis, and Thornhill (2016, p. 139)

In entrepreneurship research, a single stratum investigation (such as into the effect of psychological traits on venture success) is unlikely to be satisfactory (cf. Aldrich & Zimmer, 1986; Low & MacMillan, 1988). The question then arises as to how strata
properties interact with each other. CR’s emergence refers to the unfolding of new objects or phenomena with new properties (for instance structures, mechanisms, and causal powers) that depend on, but cannot be reduced to, those of the constituents (Danermark et al., 2002; Sayer, 2000).

The choice of CR as the underlying paradigm guides the choice of a model combining abduction and retroduction strategies as opposed to combining deduction and induction; the latter is referred to as the deductive nomological or Popper-Hempel model, in which explanations are based on knowledge of law-like regularities (Danermark et al., 2002). CR was chosen for this research as it facilitates the study of mechanisms or structures that cause events to occur, rather than remaining at the more basic level of understanding relationships.

### 3.2 Research Strategies

A discussion considering research strategies is necessary to support the choice of CR. Four research strategies are summarised in Table 3-1: abduction, induction, deduction, and retroduction.

<table>
<thead>
<tr>
<th></th>
<th>Abduction</th>
<th>Induction</th>
<th>Deduction</th>
<th>Retroduction</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Aim:</strong></td>
<td>To describe and understand social life in terms of social actors’ motives and understandings</td>
<td>To establish descriptions of characteristics and patterns</td>
<td>To test theories, to eliminate false ones and corroborate the survivor(s)</td>
<td>To discover underlying mechanisms that can explain observed regularities</td>
</tr>
<tr>
<td><strong>Start:</strong></td>
<td>Discover everyday lay concepts, meanings, and motives</td>
<td>Collect data on characteristics and/or patterns</td>
<td>Identify a regularity to be explained</td>
<td>Document and model a regularity</td>
</tr>
<tr>
<td><strong>Process:</strong></td>
<td>Produce a technical account from lay accounts</td>
<td>Produce descriptions</td>
<td>Construct a theory and deduce hypotheses</td>
<td>Describe the context and possible mechanisms</td>
</tr>
<tr>
<td><strong>Finish:</strong></td>
<td>Develop or build on a theory and elaborate it iteratively</td>
<td>Relate these to the research questions</td>
<td>Test the hypotheses by matching them with data</td>
<td>Establish which mechanism(s) provide(s) the best explanation in that context</td>
</tr>
</tbody>
</table>

Source: Modified from Blaikie (2007, p. 68)
Following the abduction stage, a combination of induction and deduction strategies is widely used. While a matured theory is better suited for deduction methods and induction methods better serve nascent theory, cycling between induction and deduction is preferred for intermediate theory (Edmondson & McManus, 2007). However, a combination of induction and deduction only considers law-like relations. Danermark et al. (2002) note that the conditions that explain events include universal laws, framework conditions, and triggering causes that lead to the events (Table 3-2). A combination of induction and deduction is limited as it considers only the events and empirical observations but excludes the underlying mechanisms. Causality is considered as typical connections between events that can be observed. The explanation merely describes law-like relations without identifying causal mechanisms.

**Table 3-2: Illustration of Law-like Regularities**

<table>
<thead>
<tr>
<th>Conditions that explain events</th>
<th>Universal laws</th>
<th>All objects that are dropped will fall to the ground</th>
</tr>
</thead>
<tbody>
<tr>
<td>Framework conditions</td>
<td>Bottle is being dropped and there is no other object that can stop it</td>
<td></td>
</tr>
<tr>
<td>Triggering causes</td>
<td>Bottle is dropped</td>
<td></td>
</tr>
<tr>
<td>Event to be explained</td>
<td>Description of event</td>
<td>Bottle falls to the ground</td>
</tr>
</tbody>
</table>

Source: Adapted from Danermark et al. (2002, pp. 106-107)

In CR, the focus is also on mechanisms, not solely events. CR highlights the limitations of empirical observations in understanding reality as only the empirical layer is observable; it may not be possible to capture all events, not all actual events may manifest during the research period, and some mechanisms may be dormant during the study, removing the possibility of observing related events. The deductive nomological model builds on deduction and induction to show how empirical laws relate to particular events. This model adopts an empiricist ontology, reducing reality to domains of empirical observations and events; causality is seen as “regular connections between observable events” (Danermark et al., 2002, p. 108). Only law-like relations are described, without any identification of causal mechanisms.
The use of abduction with retroduction (as selected for this research) makes it possible to study underlying mechanisms. Retroduction can describe the possible mechanisms and the context (Blaikie, 2007). Abduction combined with retroduction strategies support the CR paradigm. Abduction relies on creativity to understand phenomena in new ways by observing, interpreting, and recontextualising within a new conceptual framework (Danermark et al., 2002). The outcome of the abduction exercise needs empirical support, which may be obtained through induction, deduction, retroduction, or a combination thereof. The choice of CR as the underlying philosophy guides the decision to use the retroduction strategy instead of deduction and induction (Danermark et al., 2002).

3.2.1 Abduction

Building on Peirce’s original definition, abduction is a source of inquiry starting with an unexpected insight and working backwards to explain the surprise:

Abduction is the process of forming an explanatory hypothesis. It is the only logical operation which introduces any new idea; for induction does nothing but determine a value, and deduction merely evolves the necessary consequences of a pure hypothesis.

Deduction proves that something must be; Induction shows that something actually is operative; Abduction merely suggests that something may be.

Its only justification is that from its suggestion deduction can draw a prediction which can be tested by induction, and that, if we are ever to learn anything or to understand phenomena at all, it must be by abduction that this is to be brought about. (Peirce, 1994, p. CP 5.171, italics in original)

Peirce (1994), who originated and described the term abduction, referred to it as “an act of insight” (p. CP 5.181), and Dubois and Gadde (2002) extended his definition to include the next stage in research, defining it as an “unexpected empirical finding plus theoretical insights”. Subsequently, Alvesson and Kärreman (2007) and Van Maanen, Sørensen, and Mitchell (2007) have referred to this unexpected insight as a surprise. As the method for abductive analysis in the present study is adapted from the methodology suggested by Alvesson and Kärreman (2007), this study uses the term surprise in the rest of this thesis document in order to maintain consistency with current usage.
In this definition, abduction introduces a new idea that is typically tested using induction and deduction, an increasingly popular research strategy combination often used by pragmatists who find the use of either induction or deduction alone to be too restrictive. Pragmatism “is nothing else than the question of the logic of abduction” (Peirce, 1994, p. CP 5.171). Pragmatists begin with a problem and the intention to provide practical solutions (Saunders et al., 2016) using appropriate methodological choices (Nastasi, Hitchcock, & Brown, 2010) including, but not necessarily limited to, mixed methods.

“Whenever one reacts with the feeling *that’s interesting*, that reaction is a clue that current experience has been tested against past experience, and the past understanding has been found inadequate” (Weick, 1989, p. 525, italics in original). Abduction relies on creativity to understand phenomena in a new way by observing, interpreting, and recontextualising within a new conceptual framework (Danermark et al., 2002); this is the essential difference between abduction as opposed to induction and deduction. Abduction involves critical reasoning with conjectures following surprises, with some conjectures explaining the surprises better than others, moving the inquiry forwards (Van Maanen et al., 2007).

I want to argue that one reason we theorize poorly about what matters most is because we use discourse that makes it hard to capture living forward. Living forward is a blend of thrownness, making do, journeys stitched together by faith, presumptions, expectations, alertness, and actions—all of which may amount to something, although we will know for sure what that something may be only when it is too late to do much about it. Unsettled, emergent, contingent living forward contrasts sharply with our backward-oriented theoretical propositions that depict that living as settled, causally connected, and coherent after the fact. (Weick, 1999, p. 135)

Good theory is the result of engagement with real world problems rather than gaps in literature (Kilduff, 2006). A situation rich in empirical data and with ideas that challenge the conventional understanding, offers an opportunity for theory development using abduction (Alvesson & Kärreman, 2007). This type of theory development using abduction involves three steps: (a) use of a theory (or an established rule), (b) observation of a surprising empirical phenomenon related to the theory, and (c) expression of a new interpretive rule that reconciles the surprise. “The researcher must call upon or actively try to obtain empirical material that can produce, or inspire the construction of, a variety of alternative ‘stories’” (Alvesson & Kärreman, 2007, p. 1269). Abduction is a suitable
strategy for theorising (Swedberg, 2017), which is how theories are developed; theorising covers a wider area than conventional theory, and is about the process rather than just the resulting theory itself (Sutton & Staw, 1995; Weick, 1995).

Abductive imparity describes events that are explained partly by multiple theories with none individually being able to fully explain the phenomenon (Folger & Stein, 2017), as seen in the use of social identity with social capital theory to define traditional bonding (team bonding and institutional bonding) and tribal bonding. In addition, addressing an associated phenomenon (such as a start-up outcome) via multiple theories that depend on a common explanatory factor such as bonding, is one way of successfully integrating theory (K. J. Mayer & Sparrowe, 2013). Abduction is a ‘guess’, which must be tested; in order to do so, this study uses retroduction, which is the appropriate research strategy for the CR paradigm.

3.2.2  Retroduction

Complementing abduction in its initial creative phase of observing patterns, retroduction takes a further “logical step in the control of necessary and contingent relations between events” (Bertilsson, 2004, p. 385). Retroduction involves explanation of events by reconstructing the structures and mechanisms that can produce them (Blundel, 2007; Danermark et al., 2002), and concerns moving from a phenomenon of interest backwards to identify mechanisms that could have triggered the phenomenon (Lawson, 1997).

Retroduction is the key epistemological process that leads to identifying mechanisms that explain the causes of particular events (Easton, 2010). This does not mean that mechanisms are induced from data about events. Induction and deduction are forms of inference different from retroduction. Deduction is concerned with movements from the particular to the general, and induction vice versa.

The methodological steps for retroduction are different from those for induction and deduction. For example, when studying growth of entrepreneurial firms, inductive inference involves moving from similar observations of firms to deriving empirical generalisation; deductive inference involves moving from a set of premises to a conclusion. Retroductive inference moves from description and abstract analysis of the firm growth process towards reconstructing the basic conditions that make it possible.
3.2.3 Induction

Although abduction with retrodaction play a central role in the methodology, an inductive approach was taken in analysing the data using template analysis. As indicated in Table 3-1, the inductive approach focusses on establishing descriptions of patterns and characteristics related to the research questions. Thus, induction plays a supporting (rather than primary) role in this thesis.
PART II: Data Collection and Preparation

Part II centres on the data used in this study. Section 3.3 delves into the details of the selection of a sample that meets the research requirements of entrepreneurial start-ups in an environment rich in social capital. Section 3.4 defines the unit of observation, the unit of analysis, and the conditions and outcomes required for analysis using Qualitative Comparative Analysis (QCA).

3.3 Data Collection

Qualitative data allows for the exploration of a subject in circumstances that are as real as possible, enabling the capture of rich, thick data (Saunders et al., 2016) and can lead to insights that help to progress beyond early conceptions and revise or create new conceptual frameworks (Miles, Huberman, & Saldana, 2014). While qualitative data involves the collection of information in non-standardised form, quantitative data collection results in standardised, numerical data. In qualitative analysis, meanings are typically derived from words from interviews, making it possible to review interview transcripts multiple times from different perspectives, as opposed to the more singular and objective nature of numbers in quantitative data.

New empirical data from interviews in this current study provided insights which when further researched prompted the search for complementary theories and concepts in a back-and-forth manner. Thereby enabling discovery of new perspectives to the research problem, which contributed to the expansion of the framework (Dubois & Gadde, 2002) and improved data collection.

This section explains the choice of university start-ups as context and describes the types of curriculum-based programmes and extracurricular programmes included in the study. It also provides details about how the participating New Zealand universities were selected, and how the student entrepreneurs asked to participate in this study were identified. The section concludes by elaborating on the primary and secondary data sources utilised.

3.3.1 University Start-ups as Context

The current focus on start-ups as a contributor to the economic wellbeing of nations and regions has prompted government, education, and industry initiatives to provide knowledge and support for entrepreneurial activities, bringing resources (human, financial, knowledge, and physical) to support them. Human resources in the form of mentors,
educators, role models, financiers, subject matter experts, and experienced entrepreneurs form the relationship layer of social capital in this context. Entrepreneurial programmes associated with universities (D. J. Miller & Acs, 2017) and regions (E. Stam, 2015) are two contexts within which such social capital is intentionally generated.

The university entrepreneurial ecosystem constitutes a unique context of people and organisations that provide social capital to assist entrepreneurs in accessing the knowledge, skills, and other resources required in the creation of start-ups, making it a suitable context within which to study the effects of social capital on start-ups. Universities have taken on a third mission of economic and social development, in addition to their two more established roles of teaching and research (Etzkowitz & Leydesdorff, 2000; Sam & van der Sijde, 2014); this third mission includes fostering start-ups in addition to generating patents, licensing, consulting, and contracting (Perkmann et al., 2013).

The university, government, and industry are key stakeholders of the entrepreneurial university, as depicted in the Triple Helix model (Etzkowitz & Leydesdorff, 1995; Ranga & Etzkowitz, 2013). Civil society has been recently added as a fourth stakeholder to form the Quadruple Helix model (Carayannis & Rakhmatullin, 2014; Ivanova, 2014). Universities have started programmes that support student start-up initiatives (Hoppe, 2016; Walter, Parboteah, & Walter, 2013), including both curriculum-based and extracurricular programmes. In addition, academic research involving PhD students is also another source of university student start-ups.

The next three sub-sections describe (a) the university entrepreneurial ecosystem, and the result of universities taking on an entrepreneurship role; (b) the various types of curriculum-based entrepreneurship programmes introduced by universities; and (c) the extracurricular programmes run by universities as well as external programmes they support.

**University Entrepreneurial Ecosystem**

A widely accepted definition of “the entrepreneurial ecosystem is a set of interdependent actors and factors coordinated in such a way that they enable productive entrepreneurship” (E. Stam, 2015, p. 1765). Entrepreneurial ecosystems rely on voluntary relationships with various agents, with some type of understanding and acceptable governance (D. J. Miller & Acs, 2017). Entrepreneurship courses and programmes, entrepreneurship centres, accelerators/incubators and science/research/technology parks, surrogate entrepreneurs on campus to stimulate start-up creation, business plan
competitions, and alumni participation as sources of funds are some of the elements of a university entrepreneurial ecosystem (Siegel & Wright, 2015; Wright, Siegel, & Mustar, 2017).

Academic and student entrepreneurship programmes bring together one or more universities, local government organisations, industry, and the community to form a university entrepreneurial ecosystem in order to provide knowledge, skills, mentoring, coaching, funding, and sometimes the market for new ventures (Wright et al., 2017). Academic entrepreneurship refers to start-ups resulting from technologies resulting from university research (Abreu & Grinevich, 2013; Hayter, Lubynsky, & Maroulis, 2016b; Shane, 2004; Urbano & Guerrero, 2013). This present study investigates student start-ups resulting from university entrepreneurial programmes and academic-led university research.

Although the entrepreneur is central to an entrepreneurial ecosystem, the context itself is also important (E. Stam, 2015), with both regional and local context influencing start-up initiatives by students (Bergmann, Hundt, & Sternberg, 2016; Hayter et al., 2016b). Both in response to student demand and in alignment with economic development goals, universities have introduced entrepreneurial education and extracurricular programmes (Hayter, Lubynsky, & Maroulis, 2016a; N. M. Morris, Kuratko, & Pryor, 2014). Government support enters the picture when the entrepreneurial activities are deemed to contribute to economic development. These programmes help develop skills for entrepreneurship as well as employability (Fayolle, 2013; M. H. Morris & Kuratko, 2014) and are considered to be quite popular (C. Jones, Matlay, & Maritz, 2012; Kolvereid & Moen, 1997; McMullan & Gillin, 1998). Entrepreneurship education is deemed necessary to support technology start-ups (Rizzo, 2015). With the introduction of such programmes, students, programme coordinators, faculty, local authorities, local businesses, and investors co-create the student entrepreneurial ecosystem (Wright et al., 2017).

**Curriculum-based Programmes**

Curriculum-based programmes on entrepreneurship started in business schools in the 1970s (Kuratko & Morris, 2018). The first MBA concentration was launched in the University of Southern California in 1971 followed by the first undergraduate concentration in 1972. Babson College initiated their entrepreneurship programmes in 1975. The late 1980s and 1990s saw strong growth of entrepreneurship courses as the focus shifted from teaching management of small business to high-potential ventures based
on innovation and new technologies. From single digit growth in the 1970s, there are now more than three thousand colleges and universities worldwide delivering entrepreneurship-related courses (Kuratko, 2017). Majors, minors, concentrations, master’s, and sometimes PhD programmes are offered in many universities (M. H. Morris, Kuratko, & Cornwall, 2013).

While entrepreneurship education was located exclusively in business schools in the past (Finkle, Menzies, Kuratko, & Goldsby, 2013; Solomon, 2007), this has since changed with programmes spreading across the campus (Kuratko, 2017; M. H. Morris & Kuratko, 2014; Thorp & Goldstein, 2013). Initially, courses taught in business schools were opened as electives to students in other disciplines, with those other areas subsequently setting up entrepreneurial programmes tailored to suit their specific needs (Hulsey, Rosenberg, & Kim, 2006), covering fields such as engineering, agriculture, arts, and science (J. A. Katz, 2003). For example, Chalmers University of Technology introduced a master’s programme in entrepreneurship for engineering students in 1997 (Lindholm Dahlstrand & Berggren, 2010). The University of Gothenburg started a master’s programme in entrepreneurship in 2000 targeting students with a bachelor’s degree from non-business disciplines.

An example of a curriculum-based programme that intentionally created social capital is Halmstad University’s Innovation Engineering programme, initiated in 1979 (Lindholm Dahlstrand & Berggren, 2010). By working together with established companies to solve industrial problems, students in this three-year bachelor’s programme (with an optional fourth year) are actively involved with external organisations. At the University of Brasilia and Pontifical Catholic University of Rio Grande del [sic] Sul, entrepreneurial training is provided to all students; not just the business students (Etzkowitz, 2014).

**Extracurricular Programmes**

Extracurricular programmes provide an avenue for all university students to engage in entrepreneurial activities, not just students who attend curriculum-based programmes. Both types of programmes engage actors from industry, government, and community, providing an environment that supports the formation of social capital. This section first provides general information on extracurricular programmes, followed by examples where such programmes have generated social capital that has affected start-up performance.
Extracurricular programmes serve two different purposes: exploratory learning that is less intensive and provides entrepreneurship awareness, and more intensive experiential learning to develop entrepreneurial skills (Hulsey et al., 2006; Pittaway, Rodriguez-Falcon, Aiyegbayo, & King, 2011). Seminars, workshops, and clubs deliver exploratory learning. Business plan competitions, venture incubators, and internships deliver experiential learning. Members of the community provide support through funding, providing advice via advisory boards, coaching, mentoring, judging at competitions, and offering internship opportunities. Participating in entrepreneurship programmes affords students access to networks where they may pursue resources that they require (Hoang & Antoncic, 2003). Prizes for participation in business plan competitions are intended to trigger student interest. Extracurricular programmes are an alternative for students who do not attend curriculum-based programmes, with the added advantage of not requiring lengthy approval processes (Hulsey et al., 2006).

Business plan competitions are also useful in technology ventures, as in the case of student entrepreneurs who took part in the MIT Venture Mentoring Service (Lubynsky, 2013). Aalto University’s Aalto Entrepreneurship Society, a not-for-profit society run by and for both undergraduate and postgraduate students, develops social capital with the regional start-up community who support them in establishing Aalto as an entrepreneurship hub (Graham, 2014). Auckland University’s Spark (now called Velocity) programme includes courses, events, and competitions, involving members of the local community to support the activities, including as mentors and judges.

**Financial Support**

The university entrepreneurial ecosystem can provide various sources of funding in addition to guiding entrepreneurs on how to access external funding. Since the 1990s, the University of Chicago has supported student entrepreneurship (D. J. Miller & Acs, 2017). In addition to funding the programmes, alumni provide time and talent to coach and mentor the student entrepreneurs. Support from business leaders and funding from philanthropists continue to be underlying features that support their entrepreneurial ecosystem. In addition, space is also provided in the campus incubator, removing the need for financial support to pay for students’ use of facilities off campus.

In New Zealand, the Tertiary Education Commission has initiated a competitive fund to attract leading international entrepreneurial researchers to among other aims, drive
innovation and entrepreneurship through university-led cutting edge research (Tertiary Education Commission, 2017).

**Incubators and accelerators**

Incubators and accelerators, which may be owned and run publicly or privately, support start-ups by developing the business ideas (Wright et al., 2017). Services provided by incubators have evolved from mainly office space and office support services to support in evaluating market opportunities, knowledge access, product development support, access to networks of entrepreneurship support and financial support (Bruneel, Ratinho, Clarysse, & Groen, 2012). Accelerators aim to speed up the process of venture creation by providing services focussed on mentoring and education over a limited duration of an intensive programme (Pauwels, Clarysse, Wright, & Van Hove, 2016).

### 3.3.2 Sample Identification

Current and former university students (from New Zealand universities), who had created new ventures, constitute the population targeted for this research. This section describes the relevance of participation in entrepreneurial programmes and how the sample for this study was drawn from the target population.

The unit of analysis is start-ups, and the unit of observation is current and former students. The choice of the unit of observation is based on the kinds of data of interest, which vary primarily across students (who may generate more than one start-up, which may result in different outcomes). Semi-structured interviews were chosen as the best method to collect individualised data, encouraging participants to tell their story.

Interviews with sample members focussed on the start-ups they created after attending university entrepreneurial programmes (curriculum-based and/or extracurricular). By participating in these programmes, the student entrepreneurs had access to the social networks surrounding these programmes, ensuring that the study participants were situated in an environment with the potential for them to create social capital of use to their venture(s). The universities were identified first, followed by entrepreneurs who are current and former students of the selected universities.

Interviews with the entrepreneurs provided information on the start-ups; each start-up is referred to here as a case. The use of the word ‘case’ in this instance serves a different purpose from its use in the term ‘case study’. A case is an item in the sample, while a case study is a “research strategy that involves the empirical investigation of a
particular phenomenon within its real-life context, using multiple sources of evidence” (Saunders et al., 2016, p. 711). In this study, student start-ups are cases.

Purposive sampling was conducted to identify a sample that best answered the research questions (Saunders et al., 2016). Choice of a purposeful sample is consistent with Qualitative Comparative Analysis practice to examine common features across cases with the same outcome (Greckhamer, Misangyi, & Fiss, 2013), and is guided by the research question(s) and the theoretical basis, which is appropriate for small-N sample (Rihoux & Ragin, 2009). In purposive sampling, the researcher’s judgement is used to select the cases in the sample in order to best address the research question(s).

Sample size is dependent on the research objectives and research questions, specifically on what to find out, its usefulness, credibility, and what can be done with the available resources (Patton, 2015). Unlike in probability sampling, calculations do not guide sample size considerations in purposive sampling for qualitative research. Data saturation, the stage at which additional data collection does not lead to novel insights, normally guides the number of cases. QCA typically uses a purposeful sampling method to examine common features across cases with the same outcome (Greckhamer et al., 2013).

Selection of New Zealand Universities with Entrepreneurship Programmes

As a first level of qualification, the websites of New Zealand universities were viewed to identify whether they had implemented entrepreneurship programmes and to examine any published profiles of students who had created start-ups. There are eight universities in New Zealand (Universities New Zealand - Te Pōkai Tara, 2016); participants were garnered from seven thereof. The presence of entrepreneurship programmes (a prerequisite selection criterion) was not apparent on the website of the eighth university, which focussed on supporting existing businesses rather than generating start-ups. There were also no student start-ups profiled on the university website or identifiable in the public domain. Table 3-3 lists the curriculum-based programmes (as at 2015) and Table 3-4 lists the extracurricular programmes available in the seven selected universities. In some of the universities, entrepreneurship was also incorporated as a subject in non-business programmes.
<table>
<thead>
<tr>
<th>University</th>
<th>Curriculum-based programmes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auckland University of Technology</td>
<td>Creative Entrepreneurship minor - Bachelor of Design or Bachelor of Visual Arts</td>
</tr>
<tr>
<td>Massey University</td>
<td>Bachelor of Business (Entrepreneurship and Small Business)</td>
</tr>
<tr>
<td>University of Auckland</td>
<td>Postgraduate Certificate and Master of Commercialisation and Entrepreneurship programmes</td>
</tr>
<tr>
<td>University of Canterbury</td>
<td>Bachelor of Commerce - Strategy and Entrepreneurship major degree plan</td>
</tr>
<tr>
<td>University of Otago</td>
<td>Master of Entrepreneurship</td>
</tr>
<tr>
<td></td>
<td>Entrepreneurship as a minor subject</td>
</tr>
<tr>
<td>University of Waikato</td>
<td>Bachelor of Entrepreneurship</td>
</tr>
<tr>
<td></td>
<td>Entrepreneurship can also be taken as a second major within most degrees</td>
</tr>
<tr>
<td>Victoria University of Wellington</td>
<td>Course on Innovation and Entrepreneurship</td>
</tr>
</tbody>
</table>
## Table 3-4: Extracurricular Programmes by University

<table>
<thead>
<tr>
<th>University</th>
<th>Extracurricular programmes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auckland University of Technology</td>
<td>AUTEL Innovation Challenge</td>
</tr>
<tr>
<td></td>
<td>AUT Venture Fund Kickstart Competition</td>
</tr>
<tr>
<td></td>
<td>Co.Starters</td>
</tr>
<tr>
<td></td>
<td>Startup Weekend</td>
</tr>
<tr>
<td>Massey University</td>
<td>Go Innovate (innovative ideas competition)</td>
</tr>
<tr>
<td></td>
<td>ecentre (innovation ecosystem)</td>
</tr>
<tr>
<td></td>
<td>Startup Weekend</td>
</tr>
<tr>
<td>University of Auckland</td>
<td>Velocity (formerly Spark)</td>
</tr>
<tr>
<td></td>
<td>Startup Weekend</td>
</tr>
<tr>
<td>University of Canterbury</td>
<td>Entré</td>
</tr>
<tr>
<td></td>
<td>85K Challenge</td>
</tr>
<tr>
<td></td>
<td>UC Innovators’ Start-Up Scholarship</td>
</tr>
<tr>
<td></td>
<td>UC Centre for Entrepreneurship</td>
</tr>
<tr>
<td></td>
<td>Incubator, Bootcamp, Summer Start-up</td>
</tr>
<tr>
<td></td>
<td>Startup Weekend</td>
</tr>
<tr>
<td>University of Otago</td>
<td>Audacious</td>
</tr>
<tr>
<td></td>
<td>Start-up Space</td>
</tr>
<tr>
<td></td>
<td>Startup Weekend</td>
</tr>
<tr>
<td>University of Waikato</td>
<td>Startup Weekend</td>
</tr>
<tr>
<td>Victoria University of Wellington</td>
<td>Victoria Entrepreneurship Club</td>
</tr>
<tr>
<td></td>
<td>Victoria Entrepreneur Bootcamp</td>
</tr>
<tr>
<td></td>
<td>VicLink</td>
</tr>
<tr>
<td></td>
<td>Startup Weekend</td>
</tr>
</tbody>
</table>

Startup Weekend and Co.Starters are external programmes that some of the student entrepreneurs had attended. Startup Weekend is a 54-hour event run over a weekend (Friday to Sunday), when business managers, developers, enthusiastic individuals, and more gather to pitch ideas for start-ups, form teams, develop working prototypes, demonstrate them, and present their ideas to judges on the Sunday evening. The programme is managed by a non-profit organisation based in Seattle, Washington (USA). Workers and students participate, providing an opportunity for the university to interact with the business community.

Co.Starters is a nine-week programme that prepares enthusiastic entrepreneurs with skills, insights, tools, and relationships to turn their ideas and passion into start-ups. The
intending entrepreneurs meet for three hours one evening per week, led by a facilitator who is an experienced business owner from the community.

Beyond these initial programmes, there are accelerators and incubators, which some students subsequently attend. Five entrepreneurs participated in the Lightning Lab, an accelerator situated in Christchurch.

*Identification of Student Entrepreneurs (Unit of Observation)*

Four techniques were used to search for student entrepreneurs. The first was by searching the university websites, which publish stories of students who started up businesses following their participation in university entrepreneurship programmes. The second was by contacting key persons responsible for the universities’ entrepreneurship programmes and activities, requesting them to provide names of student entrepreneurs. The third was by using LinkedIn to identify individuals who had attended universities in New Zealand and participated in entrepreneurship programmes while at university. Finally, snowballing allowed interviewees to recommend other participants. Forty-one of the fifty-two university student entrepreneurs invited accepted to participate in the study, a response rate of 79%. Table 3-5 provides the breakdown of the forty-one entrepreneurs from New Zealand universities.

<table>
<thead>
<tr>
<th>University</th>
<th>Number of participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>University of Otago</td>
<td>17</td>
</tr>
<tr>
<td>University of Auckland</td>
<td>10</td>
</tr>
<tr>
<td>Victoria University of Wellington</td>
<td>5</td>
</tr>
<tr>
<td>Massey University</td>
<td>3</td>
</tr>
<tr>
<td>University of Canterbury</td>
<td>3</td>
</tr>
<tr>
<td>Auckland University of Technology</td>
<td>2</td>
</tr>
<tr>
<td>University of Waikato</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>41</strong></td>
</tr>
</tbody>
</table>

The participants were selected based on the following criteria: (a) attendance at one or more university entrepreneurship programmes, and (b) creation of one or more start-ups while or after attending the university entrepreneurship programme(s). Table 3-6 provides a breakdown of the entrepreneurs by academic discipline demonstrating the participation
of start-ups by students from a wide range of disciplines but with more participants from commerce and science.

Table 3-6: Number of Student Entrepreneurs by Academic Discipline

<table>
<thead>
<tr>
<th>Academic discipline</th>
<th>Number of entrepreneurs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commerce</td>
<td>18</td>
</tr>
<tr>
<td>Science</td>
<td>11</td>
</tr>
<tr>
<td>Engineering</td>
<td>4</td>
</tr>
<tr>
<td>Medicine</td>
<td>2</td>
</tr>
<tr>
<td>Law</td>
<td>2</td>
</tr>
<tr>
<td>Humanities</td>
<td>1</td>
</tr>
<tr>
<td>Education</td>
<td>1</td>
</tr>
<tr>
<td>Arts</td>
<td>1</td>
</tr>
<tr>
<td>Music</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>41</strong></td>
</tr>
</tbody>
</table>

3.3.3 Data Sources

Semi-structured interviews were conducted to collect primary data for use in qualitative analysis, aligning with the exploratory and explanatory nature of this research (Saunders et al., 2016). While structured interviews tend to lose valuable descriptive data, unstructured interviews tend to overlook or miss key information needed for theory-driven research; hence, the need for semi-structured interviews.

This section discusses secondary data first as it was a preparatory step preceding the interviews for primary data collection. While primary data involves collecting data for the specific purpose of the research, secondary data is available from research previously conducted or from publicly available data.

**Online (Secondary data)**

In this study, secondary data was accessed from publicly available websites to collect information on the universities and participants involved in this research. At the initial stage, online information on curriculum-based and extracurricular programmes of the eight universities in New Zealand confirmed that seven out of the eight universities provided entrepreneurship programmes (Table 3-4). In most cases, university websites, LinkedIn, and other related news sites, provided participant profiles. Information on some
entrepreneurs and their business ventures was available on their universities’ websites. Online searches using the entrepreneurs’ (or their ventures’) names also provided information.

LinkedIn was the primary means of collecting information on entrepreneurs’ backgrounds. Notes were made for reference during the interviews. This preparation gave good insights that proved useful in conducting the interviews, providing a strong start to the interviews and avoiding the need to spend more time than necessary to obtain and confirm background information. As the interviewees went through their story, it was easy to develop rapport as in a way the researcher was already familiar with the interviewee. Online information also provided a means of data triangulation.

**Interviews (Primary Data)**

Ethical approval (Appendix A) from the University of Otago Human Ethics Committee was obtained before interviews were conducted. Data collection occurred through semi-structured interviews with the 41 selected participants representing 69 start-ups. With semi-structured interviews, the researcher was able to access in-depth data by probing on the interviewees’ responses (Rubin & Rubin, 2012). The length of interviews ranged from thirty to ninety minutes, overall averaging an hour.

After a short briefing on the purpose of the research, the interview started with an open-ended statement to allow the interviewees to tell their story as they see it instead of using specific questions:

*Tell me about the start-up and subsequent progress of your business.*

The intent was to avoid providing any jargon to which the interviewees would respond instead of telling their own story. By telling their stories, participants feel encouraged to talk about abstract or sensitive subjects (De Geer, Borglund, & Frostenson, 2004). Another concern was researcher bias resulting from leading questions or suggestions or behaving in a way that influences the way the interviewee responds (Saunders et al., 2016). Making an open-ended statement allowed the interviewees to provide their own renditions of their journey in the creation of their ventures. One question, focussed on social capital, was prompted at a later stage if the interviewee had not talked about people and organisations with whom they worked:

*Who were the people and organisations that you connected with in the process?*

A checklist of predetermined questions was used to confirm if the required information for the study had been gathered while still maintaining the overall quest to let
the interviewee speak (Berg, 2012). Examples of these questions (to elicit information on interactions from which to extract social capital perspectives) are:

*In growing the business, who are the people that provided guidance or assistance?*

*Did you already know these people or were they introduced by others?*

*Who were the people you already knew and what kind of help did they give?*

*Who were the people who were introduced by others and what kind of help did they give?*

*To what extent did the university student programme contribute to your business growth?*

*Were there any other changes that happened in the business that resulted in growth (other than expansion into new markets and introduction of new products)?*

*Were there any other changes that happened in the business that resulted in growth?*

Typically, many of the checklist questions were answered as the entrepreneurs told their stories, with some questions becoming irrelevant depending on the stage of the start-up. The researcher used her list of questions that were not yet answered to prompt along the way or to ask specifically in the last part of the interview. Further questions were phrased within the context of the discussion; some additional questions were noted to be raised later in the interview, so as not to interrupt the flow. New participants were added to the interview data collection process until saturation was reached, that is, until no new insights arose from further data gathering.

All interviews, except for one which was conducted through email, were audio-recorded. Audio-recording allowed attentive listening, including being alert to questions that had already been answered and for questions to be raised at appropriate later points. Although the interview was being audio-recorded, some notes were taken during the interview to make brief notes for follow up questions at a later point during the interview instead of interrupting the flow of the interview (King & Horrocks, 2010). A follow-up email was subsequently sent to participants to thank them.

The researcher personally transcribed each interview shortly after it was conducted, enabling in-depth understanding and insights. In addition to improving subsequent interviews based on insights gained from earlier interviews, transcribing in parallel to the interviewing process made the transcription process less daunting (Cassell, 2015). Start-up founders were assigned identifiers for use in the transcription to protect anonymity and confidentiality (Saunders et al., 2016).
In transcribing, this study adhered to denaturalism where attention was paid to listening and being engaged in the interview. Transcription practices can range from naturalism to denaturalism (Oliver, Serovich, & Mason, 2005). With naturalism, language is representative of the real world and the transcription is transcribed verbatim from speech (Schegloff, 1997) but denaturalism suggests that there are perceptions and meanings within speech (Cameron, 2001). Naturalism involves transcription of every utterance in detail but in denaturalism idiosyncratic speech elements (such as pauses, nonverbal, and stutters) are not included. For approaches such as constant comparative analysis (which is central to this research), the contents of the interviews are the focus rather than how they are presented, being based on language as the means of communication (Sandelowski, 1994).

Upon listening to the earliest interviews while transcribing, the researcher took note of her participation throughout the interview, and for subsequent interviews let the interviewee speak freely for at least half of the interview unless there were specific questions posed by the interviewee. In general, the interviewees had no problem explaining the reasons why they started their ventures and describing their progress. The start-ups (cases) identified through the interviews were then prepared for data analysis.

3.4 Data Preparation

Section 3.4.1 identifies the conditions (social capital components) and start-up outcome. Section 3.4.2 extracts the cases which did not match the outcome definitions of this study. Data preparation requires a number of QCA activities (Section 3.7) briefly mentioned here to provide an overall understanding. The data calibration exercise contributes to the creation of a data table containing conditions and outcome of the start-up cases (Section 3.7.3). The truth table created from the data table (Section 3.7.4) helped identify and remove inaccuracies in the data definition and calibration.

3.4.1 Social Capital Components and Start-up Outcomes

This section defines the basis for data analysis using QCA, the social capital components (which constitute the mechanisms), and the start-up outcomes.

Social Capital Components

Chapter 2 concluded with a framework that identified two types of bonding, traditional and tribal which are conceptual terms that need to be presented in a manner that enables this research. Within the context of this study, traditional bonding was split into
team bonding and institutional bonding. Team bonding reflects more personal connections that are present in relationships with family, friends, and team members. Institutional bonding represents the more formal relationships.

Table 3-7 defines the social capital components used in calibrating the data for use in QCA (Section 3.7.3), for template analysis (Section 3.6), and subsequently referenced in Chapter 4 on Findings and Chapter 5 on Discussion.

<table>
<thead>
<tr>
<th>Concept</th>
<th>Operational Definition</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bonding</td>
<td>• Bonding refers to strong (exclusive) ties between and among individuals belonging to a homogeneous group of similar background and outlook with dense connections that enable goal achievement.</td>
<td>(Putnam, 2000)</td>
</tr>
<tr>
<td></td>
<td>• Bonding varies depending on the social identity of individuals based on the group with which they identify.</td>
<td>(Adler &amp; Kwon, 2002)</td>
</tr>
<tr>
<td></td>
<td>• Tribal is characterised by altruistic motivation, no expectation of reciprocity, and abstract trust rather than rule-based or category-based trust.</td>
<td>(Tajfel, 1978)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(Caporael &amp; Brewer, 1995)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>As defined in this study.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(Maffesoli, 2016)</td>
</tr>
<tr>
<td>Bridging</td>
<td>• Bridging refers to loose ties between heterogeneous groups with less frequent contact, and is important when bonding alone is insufficient for access to new information and resources.</td>
<td>(Putnam, 2000)</td>
</tr>
<tr>
<td></td>
<td>• Strength of weak ties: bridging over weak ties to acquire non-redundant resources.</td>
<td>(Adler &amp; Kwon, 2002)</td>
</tr>
<tr>
<td></td>
<td>• Bridging over structural holes when there is a lack of connection to acquire non-redundant resources.</td>
<td>(Woolcock, 1998)</td>
</tr>
<tr>
<td></td>
<td>• Bridging connections internal to defined ecosystem</td>
<td>(Granovetter, 1973)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(Burt, 1992)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>As defined in this study.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>As defined in this study.</td>
</tr>
<tr>
<td>Internal bridging</td>
<td></td>
<td></td>
</tr>
<tr>
<td>External bridging</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**Concept**

<table>
<thead>
<tr>
<th>Concept</th>
<th>Operational Definition</th>
<th>Source</th>
</tr>
</thead>
</table>
| Trust      | • Trust is an indicator of the risk taken, reflecting the faith in the trustworthiness of the other party, and the willingness to be vulnerable.  
• Applies within institutions where general rules and norms guide entrepreneurs seeking support. | (R. C. Mayer et al., 1995)  
(Nahapiet & Ghoshal, 1998)  
(R. M. Kramer, 1999) |
| Rule-based |                                                                                       |                                             |
| Category-based |                                                                                      |                                             |
| Abstract | • Trust based on belonging to an organisational or social collective  
• Produces a shared social consciousness and willingness to work together to help people in general, promoting altruistic values, and encouraging people to participate in good causes such as volunteering for charitable activities. | (R. M. Kramer, 1999)  
(Brehm & Rahn, 1997) |
| Reciprocity | • “Expectation that exchange will be mutual” and is closely linked to trust.  
• Happens when two people interact directly.  
• Involves a third party. Reciprocity is directed to a third party who did not provide any service previously. Or reciprocity received from a third party for whom a previous service was not provided. | (Nahapiet, 2009, p. 212)  
(Herne et al., 2013)  
(Stanca, 2009) |
| Direct     |                                                                                       |                                             |
| Indirect   |                                                                                       |                                             |
| Non-reciprocity |                                                                                      |                                             |

**Start-up Outcome**

A few clarifications are needed to be able to measure start-up outcome. First is to identify and exclude cases that are at the initial stages of existence and survival based on the business life cycle model of Churchill and Lewis (1983) as discussed in Section 2.14.1. Both of these stages can lead to success or failure. Cases at these two stages were excluded as QCA requires a case outcome to be either success or failure.

Next is defining success and failure for start-up outcomes. Many studies exploring outcomes of organisations focus only on financial performance and firm level survival (Ucbasaran, Westhead, & Wright, 2001). This study includes firm-exit reason in...
measuring success as financial measures may not be applicable at the start-up stage; the firm is taken as the unit of analysis.

Start-up outcome is not just a dichotomous measure of success or failure as entrepreneurs seek exit options from ventures for various reasons (Wennberg & DeTienne, 2014). Adapting the Churchill and Lewis (1983) model, success as defined in this study has the possibilities of growth or disengagement, take off, and resource maturity while failure equates to closure of the venture (with no other possible choice).

While some may consider failure as success in terms of learning experience, such a definition encourages poor decision making and has negative impacts on the economy (Coad, 2013); it is termed failure in this study. This is in contrast to a conscious decision to exit, rather than persevere until there are no other options.

Early entrepreneurship research has tended to conclude that firm exits are due to firm performance (Boden & Nucci, 2000). However, recent studies show that entrepreneurs decide to exit the firm, or withdraw the firm from the market, for a number of reasons (DeTienne & Cardon, 2012; Sarasvathy, Menon, & Kuechle, 2013) which do not necessarily imply failure. Firm exits can be categorised as success if they are voluntary, and failure if involuntary (Justo, DeTienne, & Sieger, 2015).

Voluntary exits can be for personal reasons or for pursuit of other professional or financial opportunities. Personal reasons for voluntary exit include a shift in motivation (van Praag, 2003), family issues (for instance childcare issues, aged parents, marriage, or divorce) (Marlow & Swail, 2014), or health issues (Harada, 2007). These exits are not due to firm performance. Voluntary exit due to professional or financial reasons include recapturing investment in the venture (Watson & Everett, 1996) and choosing to opt out rather than play just a managerial role (Boeker & Karichalil, 2002).

H. Chesbrough (2004) highlighted early-stage technology exits due to challenges of technical compounded by market uncertainty when early-stage technology targets unpredictable markets. Not only is the capability of an early-stage technology not clear, but also how the customers will use the technology and how it benefits the customers. Some businesses choose to exit from funding such projects, moving on to other promising opportunities. Entrepreneurs also take initial steps to evaluate the viability of their ventures and if they can achieve their goals or may decide to exit if a similar product exists or for a variety of different reasons (DeTienne, 2010) including poor financial outlook and if the product does not match market requirements (based on empirical data from this study).
Involuntary exit is defined as failure; this may occur due to bankruptcy or insolvency. A specific definition of failure is bankruptcy emphasising poor financial performance (Shepherd & Haynie, 2011). Business failure can also occur due to reduced revenue and/or increased expenses to a degree that the business becomes insolvent and is not able to attract funding or debt (Shepherd, 2003).

Figure 3-5 depicts start-up outcomes and Table 3-8 provides a breakdown of success and failure sub-outcomes used in this study. The reasons are based on literature and empirical data.

![Figure 3-5: Start-up Outcomes Relevant to this Study](image)
(Repeat of Figure 2-5 reproduced here for convenient reference)

<table>
<thead>
<tr>
<th>Start-up Outcome</th>
<th>Firm-exit</th>
<th>Start-up Sub-outcome</th>
<th>Reason</th>
</tr>
</thead>
<tbody>
<tr>
<td>Success</td>
<td>Not applicable</td>
<td>Growth</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Take off</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Resource maturity</td>
<td></td>
</tr>
<tr>
<td>Voluntary exit</td>
<td>Discontinue</td>
<td>Disengage</td>
<td>Personal:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Change in motivation</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Family issues</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Health issues</td>
</tr>
<tr>
<td>Failure</td>
<td>Involuntary exit</td>
<td>Bankruptcy</td>
<td>Professional/ Financial:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Recapture investment</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Opt out from management role</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Mismatch – market</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Early stage technology</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Insolvency</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Partnership breakup</td>
</tr>
</tbody>
</table>

Source: Based on Table 2-11
3.4.2 Case Extraction

Only cases that were a success or failure after the start-up stage were included in the final analysis using QCA, as the study is on start-up outcomes. For this reason, seven cases in the existence stage and three cases in the survival stage were excluded (Table 3-9) since success or failure is defined after these two stages, as it is not clear yet whether they will lead to success or failure. Of the 69 start-ups, seven were in the existence stage and three in the survival stage, leaving 59 cases for analysis. In the descriptions, the prefix STP represents start-ups. The prefix FDR indicates founders, and the same number used with FDR and STP connects the founder to the start-up(s). For example, in Table 3-9, FDR39 founded STP39A and STP39B.

**Table 3-9: Survival and Existence Cases**

<table>
<thead>
<tr>
<th>Case Number</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>STP01A</td>
</tr>
<tr>
<td>2</td>
<td>STP23A</td>
</tr>
<tr>
<td>3</td>
<td>STP31A</td>
</tr>
<tr>
<td>4</td>
<td>STP32A</td>
</tr>
<tr>
<td>5</td>
<td>STP32B</td>
</tr>
<tr>
<td>6</td>
<td>STP32C</td>
</tr>
<tr>
<td>7</td>
<td>STP38A</td>
</tr>
<tr>
<td>8</td>
<td>STP07B</td>
</tr>
<tr>
<td>9</td>
<td>STP39A</td>
</tr>
<tr>
<td>10</td>
<td>STP39B</td>
</tr>
</tbody>
</table>

Of the 59, two cases (STP08A and STP08B) were failures. The remaining 57 cases were successes with various success states and related reasons (Table 3-10).

Having discussed the collection and preparation of the data, Part III describes the four steps for data analysis.
### Table 3-10: List of Start-ups with Outcome

<table>
<thead>
<tr>
<th>Case Number</th>
<th>Status</th>
<th>Success State</th>
<th>Reason</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>STP01B</td>
<td>Success</td>
<td>Growth</td>
</tr>
<tr>
<td>2</td>
<td>STP02A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>STP03A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>STP04B</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>STP05A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>STP07A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>STP08C</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>STP09A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>STP09B</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>STP10A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>STP10B</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>STP11A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>STP13A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>STP13B</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>STP14A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>STP15B</td>
<td></td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>STP16A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>STP16B</td>
<td></td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>STP16C</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>STP17A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>STP18A</td>
<td></td>
<td></td>
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<tr>
<td>22</td>
<td>STP18B</td>
<td></td>
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<td>23</td>
<td>STP19A</td>
<td></td>
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<td>24</td>
<td>STP20A</td>
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<td>25</td>
<td>STP21A</td>
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<td>STP21B</td>
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<td>27</td>
<td>STP22A</td>
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<td>28</td>
<td>STP23B</td>
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<td>STP24A</td>
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<tr>
<td>30</td>
<td>STP25B</td>
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<tr>
<td>31</td>
<td>STP25C</td>
<td></td>
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<tr>
<td>32</td>
<td>STP26A</td>
<td></td>
<td></td>
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<tr>
<td>33</td>
<td>STP26B</td>
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<tr>
<td>34</td>
<td>STP27B</td>
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<tr>
<td>35</td>
<td>STP28B</td>
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<tr>
<td>36</td>
<td>STP28C</td>
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<td>STP29A</td>
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<td>STP35A</td>
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<td>41</td>
<td>STP36A</td>
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<td>42</td>
<td>STP37A</td>
<td></td>
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<td>43</td>
<td>STP37B</td>
<td></td>
<td></td>
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<tr>
<td>44</td>
<td>STP37C</td>
<td></td>
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<tr>
<td>45</td>
<td>STP38B</td>
<td></td>
<td></td>
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<tr>
<td>46</td>
<td>STP38C</td>
<td></td>
<td></td>
</tr>
<tr>
<td>47</td>
<td>STP41A</td>
<td></td>
<td></td>
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<tr>
<td>48</td>
<td>STP42A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>49</td>
<td>STP43A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>50</td>
<td>STP46A</td>
<td>Success</td>
<td>Discontinue</td>
</tr>
<tr>
<td>51</td>
<td>STP28A</td>
<td></td>
<td>Change in motivation</td>
</tr>
<tr>
<td>52</td>
<td>STP33A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>53</td>
<td>STP37A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>54</td>
<td>STP46B</td>
<td>Success</td>
<td>Disengage</td>
</tr>
<tr>
<td>55</td>
<td>STP15A</td>
<td></td>
<td>Change in motivation</td>
</tr>
<tr>
<td>56</td>
<td>STP33B</td>
<td></td>
<td></td>
</tr>
<tr>
<td>57</td>
<td>STP34B</td>
<td></td>
<td>Early stage technology</td>
</tr>
<tr>
<td>58</td>
<td>STP08A</td>
<td>Failure</td>
<td>Partnership breakup</td>
</tr>
<tr>
<td>59</td>
<td>STP08B</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
PART III: Data Analysis

Competent analysis of qualitative data draws more value out of the data (Miles et al., 2014, p. 12). Part III discusses the data analysis steps employed to extract maximum value from the qualitative data collected through interviews: (a) abductive analysis, (b) template analysis, and (c) qualitative comparative analysis. Abductive analysis enabled the uncovering of ‘surprises’, whist template analysis was used to code the data for subsequent use in QCA.

Theoretical triangulation, which was achieved through abductive analysis, requires the researcher to engage multiple ways to interpret the phenomenon (Denzin, 1989). Abductive analysis focusses on reframing empirical findings, as opposed to using existing theories to generate novel theoretical insights (Timmermans & Tavory, 2012). Data analysis using an abductive approach (Hahn & Ince, 2016) moves among data, conceptualisations, and literature (Timmermans & Tavory, 2012; Van Maanen et al., 2007). In this study, social capital theoretical concepts provided the starting point from which abductive analysis was conducted. As explained in Chapter 2, social capital theory, social identity theory, and the tribalism concept were used to explain the tribal bonding phenomenon. Engaging abduction in this research was pivotal to identifying tribal bonding, which is a major contribution of this research.

Section 3.5 describes the abductive analysis process. Section 3.6 explains template analysis, which precedes QCA. Section 3.7 follows and details the QCA method.

3.5 Step 1: Abductive Analysis

This section interprets and redescribes the different social capital components based on theory (Danermark et al., 2002). The objectives of this study were developed within new contexts. Various theoretical interpretations and explanations are presented, compared, and integrated with one another.

Abduction was key to the early discovery of tribal bonding as a new concept that reframed the uncovering of tribal bonding contrasting it to the existing definition of bonding (Timmermans & Tavory, 2012). Resulting from this awareness of tribal bonding and the empirical data, four groups (founders, consumers, customers, and supporters) displaying tribal bonding were identified.

There are three steps in the abduction process (Alvesson & Kärreman, 2007) which is referred to here as abductive analysis. The first is the application of a theory or an interpretive rule; second, in light of the theory, is the observation of any surprising...
empirical phenomena; and third is the articulation of a possible new theoretical extension that explains the surprise.

Analysis of the data at an early stage highlighted a surprise in which an entrepreneur displayed deep trust in an expert with whom he interacted online. He trusted the feedback enough to persistently work at his start-up, which took a few years to be established. Trust in traditional bonding is typically measured through tie strength defined by the number of interactions and the closeness of the relationship, which is quite unlike the trust shown in this instance. The key differentiating factor here is that there was no expectation of reciprocity by the expert.

This discovery of the tribal bonding concept led to further reviews of literature to find information that depicted similar behaviour and at the same time probe into the theoretical concepts present in such situations. More instances of tribal bonding were uncovered as more interviews were conducted.

Alvesson and Kärreman (2007) suggested a research methodology around discovery of mysteries followed by solving the mysteries. Table 3-11 summarises the steps together with notes from this research.
**Table 3-11: Abductive Analysis Steps**

<table>
<thead>
<tr>
<th>Process</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Step 1</strong></td>
<td>Ask wide questions such as ‘what is going on here’ instead of focussing on narrow themes, all the while with focus on the chosen theory and context but not blinded by what is already written about them.</td>
</tr>
<tr>
<td><strong>Step 2</strong></td>
<td>Identify breakdowns in the context when compared to theory.</td>
</tr>
<tr>
<td><strong>Step 3</strong></td>
<td>Articulate an early interpretation of a theoretical contribution through broader relevance of the empirical findings with critique of existing theory.</td>
</tr>
<tr>
<td><strong>Step 4</strong></td>
<td>Engage in systematically uncovering new understanding/theory.</td>
</tr>
<tr>
<td><strong>Step 5</strong></td>
<td>Propose a solution to the mystery by developing a new idea that offers an interpretation of the surprise phenomenon.</td>
</tr>
<tr>
<td><strong>Step 6</strong></td>
<td>Develop a resolution for a wider relevance and position it clearly within other theories.</td>
</tr>
</tbody>
</table>

Source: Adapted and extended from Alvesson and Kärreman (2007)

Identification of tribal bonding initiated an awareness of this phenomenon in different groups, including in ways that affect start-up performance, as shown by the empirical data collected in this study. At the same time, further review of literature provided support for these identified groups.

Abductive analysis of interview data uncovered a bonding condition, which had different characteristics to the traditionally defined bonding. Additional literature review
(described in Section 2.2) of social identity and tribalism led to the splitting of the bonding construct into traditional bonding and tribal bonding. Examining construct behaviour within this study enabled recognition of different dimensions of the construct resulting in splitting the construct and hence contributing to theory advancement (Fisher & Aguinis, 2017). Splitting into multiple dimensions enhances the scope and validity of the construct and it is easier to explain the outcomes of interest when considering the different dimensions (Bacharach, 1989).

However, abductive conclusions cannot be taken as proof of theory and have to be evaluated (Erzberger & Prein, 1997). QCA was used to find evidence to examine the abductive conclusions. The research results are hence validated by different methods that confirmed they produce convergent findings. The validity of the proposed theory has been enhanced by surviving tests using different methods.

3.6 Step 2: Template Analysis

Template analysis, a subset of thematic analysis useful for analysing qualitative data for specific purposes, guided coding of the interview transcripts (King & Brooks, 2017). It balances structure and flexibility during data analysis, starting from an initial set of codes; this is unlike thematic analysis, in which the complete transcripts are coded (King, 2012). Template analysis combines aspects of, and processes from, content analysis and grounded analysis. In content analysis, data is interrogated using codes generated from theory and the context of the study, while in grounded analysis the researcher lets the data speak for itself, allowing intuition to guide the generation of In Vivo codes (Easterby-Smith et al., 2012). In Vivo codes use short phrases or words from the data which reflect the language and culture of the participants (Miles et al., 2014).

Coding is used to identify themes and patterns. For the coding exercise, broad themes were developed followed by data coding (Grbich, 2013). Common types of coding are: (a) inductive coding (codes based on data), (b) deductive coding (theory or literature-directed codes), and (c) abductive coding (surprise moments arising from concepts seen in data, and insights based on inductive or deductive reasoning processes) (Onwuegbuzie & Combs, 2010).

This study started with deductive coding by engaging with literature on social capital theory to prepare the first set of themes, which were bonding, bridging, and trust. The a priori social capital components were used to construct the initial template. Other studies have also used literature-directed codes for initial code templates (e.g. Dickmann &
Cerdin, 2014; Fernando & Cohen, 2011; Lips & Eppel, 2017). Upon early data analysis with back-and-forth references to literature and engaging abductive coding, bonding was split into traditional bonding and tribal bonding (Table 3-7). Traditional bonding was further split into team bonding and institutional bonding (Section 3.4.1) to capture the difference in the dynamics of interactions among individuals within a team and within in the institution (referring to the entrepreneurial ecosystem). Inductive coding was used to identify the categories for each of the themes, given that the literature provided too many possible definitions for each of the themes.

Literature, the researcher’s previous experience in research on student entrepreneurs (Section 1.1), and the empirical data from the interviews contributed towards the definition of the criteria for each of the conditions. These conditions and criteria were the basis for the finalised code template used in this study. Possible bias due to influence of researcher’s previous experience is discussed in Sections 3.7.3 and 3.7.4.

Open coding, which involves disaggregation of data to form conceptual units that are given labels used for other similar data units (Saunders et al., 2016), can provide a more detailed view and other possible conditions (Tóth, Henneberg, & Naudé, 2017). However, this study was theory-focussed and template coding was a practical choice that aligned with QCA as the method of choice.

Further, not having an initial code template may lead to the inability to identify the same conditions for all the cases, which is required to be able to study the configurations of conditions (Tóth et al., 2017). The code template was modified as necessary to add new codes based on concepts emerging from the data, deleting codes that are not reflected in the data, and collapsing or expanding codes (Grekhamer et al., 2013) depending on whether pre-identified codes were too narrow or broad. Notably, team bonding, institutional bonding, and tribal bonding replaced the code bonding. Table 3-12 contains the finalised code template. Coding was done using QDA Miner Lite software (Saunders et al., 2016), capturing conditions, criteria, and verbatim quotes.
<table>
<thead>
<tr>
<th>Themes (Social capital components)</th>
<th>Categories (Indicators)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Team bonding</td>
<td>Support of family</td>
</tr>
<tr>
<td></td>
<td>Support of friends</td>
</tr>
<tr>
<td></td>
<td>Team skills and cooperation</td>
</tr>
<tr>
<td>Institutional bonding</td>
<td>Support from governmental organisations</td>
</tr>
<tr>
<td></td>
<td>Support from entrepreneurial support organisations</td>
</tr>
<tr>
<td></td>
<td>Support from local businesses</td>
</tr>
<tr>
<td></td>
<td>Support within university</td>
</tr>
<tr>
<td></td>
<td>Support from students</td>
</tr>
<tr>
<td></td>
<td>Support within programme</td>
</tr>
<tr>
<td></td>
<td>Support from network resulting from programme</td>
</tr>
<tr>
<td>Tribal Bonding</td>
<td>Founders</td>
</tr>
<tr>
<td></td>
<td>Supporters</td>
</tr>
<tr>
<td></td>
<td>Customers</td>
</tr>
<tr>
<td></td>
<td>Consumers</td>
</tr>
<tr>
<td>Bridging</td>
<td>Bridging internal to ecosystem</td>
</tr>
<tr>
<td></td>
<td>Bridging external to ecosystem</td>
</tr>
<tr>
<td>Trust</td>
<td>Rules-based</td>
</tr>
<tr>
<td></td>
<td>Category-based</td>
</tr>
<tr>
<td></td>
<td>Abstract</td>
</tr>
<tr>
<td>Reciprocity</td>
<td>Direct reciprocity</td>
</tr>
<tr>
<td></td>
<td>Indirect reciprocity</td>
</tr>
<tr>
<td></td>
<td>Non-reciprocity</td>
</tr>
</tbody>
</table>

The indicators (categories) for detection of social capital components (themes) are based on literature, the researcher’s experience through involvement in entrepreneurial programmes, and the empirical data from the interviews. The indicators for traditional bonding (team and institutional) are based on entrepreneurs’ interactions with team members, other individuals, groups, or organisations for information and resources.
Although tribal bonding may also involve interactions, a similar type of indicator does not suit tribal bonding as the outcome is affected more by groups (rather than the interactions as in traditional bonding) such as supporters, customers, consumers, and founders. In traditional bonding, interactions affect start-up outcomes. In contrast, it is groups (formed through tribal bonding) that contribute to start-up outcomes. Dividing bridging as internal and external to the ecosystem was sufficient for the purpose of this study, as this indicates whether institutional bonding played an important part.

Of the various types of trust described in extant literature, rules-based, category-based, and abstract trust best suited the objective of this study (Section 2.5). Rules-based trust depends on institutional norms and standards, category-based trust is based on trustworthiness within collectives, and abstract trust generates a shared social consciousness that inspires people to work together to serve good causes.

Reciprocity was the last social capital component relevant to this study (Section 2.6). Direct reciprocity occurs when two people interact and reciprocate directly between each other. Indirect reciprocity occurs in collective situations when a favour done may be returned by someone else in the collective. However, non-reciprocity means that nothing is expected in return for a favour done.

Having identified the social capital components and start-up outcomes, the next section describes the analysis of data in preparation for qualitative comparative analysis.

3.7 Step 3: Qualitative Comparative Analysis

As discussed in Section 2.9, a configurational approach and the ability to consider equifinality are useful in understanding social capital. A configurational approach considers combinations of relationships, and equifinality is the state of achieving different configurations of conditions resulting in similar outcomes (C. Q. Schneider & Wagemann, 2012). Qualitative comparative analysis (QCA) is suitable for analysing configurations (Greckhamer, Misangyi, Elms, & Lacey, 2008; Woodside, 2013) and its ability to examine equifinality is important.

QCA takes a qualitative approach, considering each case holistically as a configuration of conditions and outcome, making it a case-sensitive approach but also displaying some strengths of the quantitative approach (Rihoux & Marx, 2013). QCA is mid-way between the case-oriented approach and the variable-oriented approach (Ragin, 1987) combining the in-depth case analysis and extensiveness of variable-based methods in a single method analysis (Ragin, Shulman, Weinberg, & Gran, 2003). It is based on an
iterative process of a qualitative nature even though the QCA procedure is quantitative (Befani, Ledermann, & Sager, 2007).

QCA is designed for a medium number of cases, too little for variable-based methods and too many for intensive case-oriented analysis. The comparative case-based approach enables investigating multiple causal configurations (Byrne, 2009), which in this study will help identify different configurations of social capital conditions that generate positive and negative student start-up outcomes.

QCA is an innovative method that applies set theory, using Boolean algebra, to permit comparison of qualitative attributes typically found when researching social phenomena (Ragin, 1987, 2000). QCA enables focus on set relations and not correlations. QCA, developed by Ragin (1987), focusses on systematic comparisons of cases to generate explanations. Case, as used in this study, applies to a combination of social capital conditions and its related outcome of a start-up. As discussed previously, each start-up is referred to as a case.

Case-oriented research views cases as singular configurations of structures and events (Ragin, 2004). Initial research criteria guide purposeful selection of cases, from which some cases may be dropped if they do not exhibit the required criteria. Sifting of the cases happens in conjunction with formation and elaboration of concept as the boundary of the relevant cases is revised and refined.

For QCA analysis, reciprocity was not included as preference is for a lower number of components, and not including reciprocity did not affect the QCA results. Section 4.5 on Findings provides explanations for reciprocity together with trust. Within the QCA section, the term condition will be used instead of component (or theme used in template analysis) as QCA uses the term conditions in place of components.

### 3.7.1 Variants of QCA

Crisp set (csQCA) and fuzzy set (fsQCA) are the two primarily used forms of QCA (C. Q. Schneider & Wagemann, 2012). Crisp sets contain dichotomous values, fuzzy sets allow values between 0 and 1, and multi-value allows multiple discrete values (for example, 0, 1, 2, or 3). The difference between the two main variants depends on the type of sets they operate on. Crisp-set QCA (csQCA) operates on sets in which cases are either members or non-members indicated by scores of ‘1’ or ‘0’ respectively. In contrast, fuzzy-set QCA (fsQCA), cases can also be partial members, with membership scores falling between full non-membership of ‘0’ to full membership of ‘1’. Fuzzy sets enable the
capture of data that may not always be a full member or non-member. fsQCA is flexible and can include fuzzy sets and crisp sets. While crisp sets establish difference in kind, fuzzy sets also indicate difference in degree.

There are other QCA variants. Multi-value QCA (mvQCA) is a multinomial categorical data which can have multiple values (Cronqvist & Berg-Schlosser, 2009) such as for the indication of various countries. Another variant is temporal (tQCA) (Ragin & Strand, 2008) with an aim to include temporal order of the occurrence of the conditions as it might be causally relevant.

fsQCA was chosen for this study as social capital conditions are measured in degree with values between ‘0’ and ‘1’ and require fuzzy sets. However, start-up outcomes use crisp set with values ‘0’ and ‘1’ as degrees of success or failure was difficult to ascertain. Use of fuzzy logic introduces rigour in the study of cases and getting familiar with the data; QCA handles the complex causal structures and generates precise solutions analysing the similarities and differences between cases (C. Q. Schneider & Wagemann, 2010).

### 3.7.2 Necessary and Sufficient Conditions

QCA studies the necessary and sufficient relations between sets and the outcome (Ragin, 1987, 2008; C. Q. Schneider & Wagemann, 2010).

#### Necessary Conditions

A condition is *necessary* if it must be present for the outcome to happen. In other words, start-up outcome will happen only if the condition is present. A condition (X) is considered necessary if X is always present when the outcome Y is present; otherwise stated as Y implies X. For a condition to be considered necessary, its *consistency* value must exceed the threshold value of 0.9 (Rihoux & Ragin, 2009, p. 45). Consistency applies to how strongly the condition is related to the outcome (C. Q. Schneider & Wagemann, 2012).

*Coverage* evaluates the extent to which a configuration accounts for occurrences of an outcome (Ragin, 2006); considering empirical relevance and not theoretical importance, with a lower score explaining fewer cases of the outcome (Legewie, 2013). Coverage is assessed only if the condition meets the consistency test and helps distinguish trivial and non-trivial necessary conditions (Ragin, 2008). Trivial necessary conditions are strongly
present in most cases, whether outcomes are displayed or not. High coverage values indicate the non-trivial nature of conditions if coverage exceeds 0.5 (Legewie, 2013).

**Sufficient Conditions**

A condition (X) can be considered *sufficient* if its presence across cases always implies the presence of the outcome (Y) in these cases; this statement can be expressed as X implies Y (Ragin, 1987, 2008; C. Q. Schneider & Wagemann, 2010). However, this does not mean that the absence of X across cases implies absence of Y in the same cases, stated as ¬X implies ¬Y. The *asymmetric* nature of set relations makes cases with ¬X logically irrelevant for consideration of sufficiency of X. X and ¬X are qualitatively different phenomena and potentially play different roles in the generation of the outcomes. The minimum threshold value for consistency is 0.75 (Ragin, 2008).

### 3.7.3 Data Calibration

Data calibration, the assignment of fuzzy set or crisp set membership values to the conditions and outcome of the individual cases, is a core activity in QCA (Wagemann, Buche, & Siewert, 2016). The raw data (conditions and outcome) is converted into values ranging from ‘0’ (full non-membership) to ‘1’ (full membership) (Ragin, 2007; Woodside, 2013). Membership scores must interpret data based on the underlying concept as much as possible (Ragin, 2008).

Table 3-13 defines the conditions (social capital components). Due to its extensive presence, bonding has been split into three conditions. Tribal bonding is a new concept introduced in this study. Traditional bonding has been split into team bonding and institutional bonding to differentiate the dynamics within teams (venture team members, and family and friends) and among institutional bonding interactions. Bridging and trust did not exhibit complexity to require splitting of the conditions.
### Table 3-13: Conditions for Use in QCA

<table>
<thead>
<tr>
<th>Conditions</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Team bonding</td>
<td>Bonding with entrepreneurial team, family, immediate friends.</td>
</tr>
<tr>
<td>Institutional bonding</td>
<td>Bonding with people in the university entrepreneurial ecosystem (university, local businesses, governmental organisations, community).</td>
</tr>
<tr>
<td>Tribal bonding</td>
<td>Bonding with people with a passion or deep interest in a cause or purpose. Displayed through non-reciprocity.</td>
</tr>
<tr>
<td>Bridging</td>
<td>Connection to another party to access resources through an intermediary.</td>
</tr>
<tr>
<td>Trust</td>
<td>An indicator of the risk taken, reflecting the faith in the trustworthiness of the other party.</td>
</tr>
</tbody>
</table>

Data calibration was done using themes, categories, and related interview quotes from the template analysis. To be consistent with QCA terms, the themes are referred to as conditions within the QCA section. The conditions, categories, and related quotes from the coding analysis exercise were recorded based on the Generic Membership Evaluation Template by Tóth et al. (2017) to capture the interview moments that led to the value assigned for the condition or outcome. Documenting the criteria (for the conditions) with supporting quotes enabled a rigorous calibration at the criteria level before evaluating it at the condition level.

Studies often use quantitative anchors (for instance frequency of meetings) for qualitative data with mention of qualitative consideration but with little or no discussion (Verweij, Klijn, Edelenbos, & Van Buuren, 2013; W. Wang, 2016). While systematically conducting a within-case analysis (Basurto & Speer, 2012) is an improvement, it must be noted that qualitative in-depth interviews typically do not specifically capture sufficient quantitative measures. It is also not preferable to decide measures based on anchors, as in the first instance, fixing anchors may constrain the purpose of exploratory research with the interviewer having preconceived target measures. Furthermore, measuring against set anchors makes it difficult to incorporate other considerations that emerge from the data.

There are challenges in pursuing this mode of calibration as the anchor points may need adjustments if subsequent data does not fit well with the predefined anchor points. Furthermore, the data needs evaluation against pre-set descriptors for the anchor values. Having interview questions reflecting the pre-set descriptors will constrain the interviews and negatively affect the value of using qualitative techniques to explore.
The choice of set membership categories are typically 4-value sets (see Basurto & Speer, 2012; Verweij et al., 2013) or 6-value (see Basurto, 2013), or sometimes a mix of both (see P. Schneider & Sadowski, 2010). Both qualitative (in kind) and quantitative (in degree) must be considered when calibrating the membership set values (Ragin, 2009). It is theoretical and empirical (case) knowledge about the universe of cases that drive the decisions and restricted by the sample. This study uses a 4-value set, which is sufficient to capture the information, as a 6-value set will lead to artificial differentiation (Tóth et al., 2017).

The values were set based on theoretical and in-depth case knowledge of all the cases. An even number value-set was chosen firstly because setting a mid-point value raises issues when using fsQCA as it is neither in nor out. This study adapted the technique employed in the *generic membership evaluation template* which embraces the nature of qualitative data without imposing synthetic measures that cannot capture in-depth meaning of the phenomenon, while providing a mechanism to evaluate the data and have it documented for traceability (Tóth et al., 2017). This technique provides a balanced approach where minimal or no quantifiable information is available, and calibration is based on information from the conversation. This study uses a four-category qualitative scale as shown in Table 3-14. Constant comparison among cases raised questions on meanings applied by the researcher requiring re-reading of the interview transcriptions to confirm a consistent understanding. In some instances, previously calibrated data were revised. Such a process provided an avenue to check for researcher bias.

<table>
<thead>
<tr>
<th>Membership</th>
<th>The observation is</th>
<th>Fuzzy set value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full membership</td>
<td>In</td>
<td>1.00</td>
</tr>
<tr>
<td></td>
<td>More in than out</td>
<td>0.67</td>
</tr>
<tr>
<td></td>
<td>More out than in</td>
<td>0.33</td>
</tr>
<tr>
<td>Full non-membership</td>
<td>Out</td>
<td>0.00</td>
</tr>
</tbody>
</table>

The indicators for deciding the calibrated value were defined for each of the conditions and the outcome. Table 3-15 depicts the outcome and five conditions of one of the cases with notes and related references.
Table 3-15: Membership Calibration Report

<table>
<thead>
<tr>
<th>Case: STP02A</th>
<th>Fully in (1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>This venture revolves around a personal financial application based on the entrepreneur’s own financial management concept. Having started the venture with his friends, the team took on jobs while they got the venture up on its feet. The confidence they got from feedback from a famous technology blog gave them the confidence that they had the makings of a good product.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Team Bonding</th>
<th>Fully in (1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>The team members, who had worked together before, were skilled and cooperated in keeping the business afloat at the early stages…</td>
<td></td>
</tr>
<tr>
<td><strong>Team skills and cooperation</strong></td>
<td>Fully in (1)</td>
</tr>
<tr>
<td>… the three of us worked at a company before …</td>
<td></td>
</tr>
<tr>
<td>… while we were working on STP02A, we also did contract work on the side to earn money…. It wasn't enough to pay ourselves a salary but it was enough to keep the business running.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Institutional Bonding</th>
<th>More out than in (0.33)</th>
</tr>
</thead>
<tbody>
<tr>
<td>The new venture creation environment was not yet developed yet to support this fledgling business.</td>
<td></td>
</tr>
<tr>
<td><strong>Support from local businesses</strong></td>
<td>Fully in (1)</td>
</tr>
<tr>
<td>We did present to banks. We arranged appointments with some of the local branches and they were kind enough</td>
<td></td>
</tr>
<tr>
<td><strong>Support from entrepreneurial support organisations</strong></td>
<td>More out than in (0.33)</td>
</tr>
<tr>
<td>So we tried going to the Chamber of Commerce events, but we felt out of place because we were three people with a fledgling business that had no revenues that people didn't really understand yet. There were other people here who were looking to serve the local market, but we were looking to build global business. So, there was quite a disconnect. We didn't have the right kind of peer support from that group.</td>
<td></td>
</tr>
</tbody>
</table>

Case number and calibration.
Description of the case.
Refer Section 3.4.1 for start-up outcome explanation.
Refer Section 3.7.3 for explanation on data calibration.

Subsequent rows:
Description of the condition and calibration.
Followed by interview quotes to support the assigned calibrated values.
Fuzzy set values are assigned for indicators under each condition and then evaluated for the final calibrated value for the condition.
Tribal Bonding  Fully in (1)
A contact from Silicon Valley appraised their software and encouraged them, saying they had the beginnings of a good application.

Supporters  Fully in (1)
We spoke to one of the rock stars of Silicon Valley over Skype, who looked at our product and spoke to us about it. He said maybe we have about ten percent of where we need to be. “But I really love it … I just wish I had it … five years ago.”

Bridging  Out (0)
No bridging was required as the team did all the work by themselves

Bridging internal/external to ecosystem  Out (0)
No bridging support.

Trust  Fully in (1)
There was strong trust within the team who were willing to hold other jobs while starting the business. There was also abstract trust exhibited by the technology company.

Abstract  Fully in (1)
We were right here in a small bedroom in Dunedin and we have just connected with Silicon Valley. So that gave us a lot of encouragement to then push ahead and build the product and then continue to tell the world about it.

Category-based  More in than out (0.67)
The three of us worked at a company… I was also the CEO of the company and we were working hard… this was a listed company. The board sold, agreed to sell it and it was acquired and we left with a little bit of money.

Source: Modelled on Tóth et al. (2017, p. 6)

Table 3-16 includes the final list of 59 cases with the five conditions and outcomes of success or failure. Seven cases at the ‘existence’ stage and three cases at the ‘survival’ stage had been removed. Fuzzy values are listed for all five of the social capital condition. Outcome values use crisp set of ‘fully in’ (1) for success and ‘fully out’ (0) for failure. The numerical values represent the data patterns underlying the dataset, and not reduction of the qualitative interview data (Van der Heijden, 2017). Although QCA uses numerical symbols, it is a qualitative method.
<table>
<thead>
<tr>
<th>Startup</th>
<th>Team</th>
<th>Institutional</th>
<th>Tribal</th>
<th>Bridging</th>
<th>Trust</th>
<th>Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>STP91B</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>STP92A</td>
<td>1</td>
<td>0.33</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>3</td>
<td>STP93A</td>
<td>0.67</td>
<td>1</td>
<td>0.67</td>
<td>0.33</td>
<td>0.67</td>
</tr>
<tr>
<td>4</td>
<td>STP94B</td>
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<td>0.67</td>
<td>0.67</td>
<td>0.67</td>
<td>0.67</td>
</tr>
<tr>
<td>5</td>
<td>STP95A</td>
<td>1</td>
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<td>0.67</td>
<td>0.33</td>
<td>1</td>
</tr>
<tr>
<td>6</td>
<td>STP96A</td>
<td>0.67</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>7</td>
<td>STP96B</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0.67</td>
</tr>
<tr>
<td>8</td>
<td>STP97A</td>
<td>0.67</td>
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<td>0.67</td>
<td>0.67</td>
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<tr>
<td>9</td>
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<td>0</td>
</tr>
<tr>
<td>10</td>
<td>STP98C</td>
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</tr>
<tr>
<td>11</td>
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<td>1</td>
</tr>
<tr>
<td>13</td>
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<td>1</td>
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</tr>
<tr>
<td>14</td>
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</tr>
<tr>
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<td>0.67</td>
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<td>0</td>
<td>1</td>
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</tr>
<tr>
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<td>0</td>
<td>0.67</td>
</tr>
<tr>
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<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
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</tr>
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</tr>
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<td>0.67</td>
</tr>
<tr>
<td>38</td>
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<td>0.67</td>
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</tr>
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</tr>
<tr>
<td>41</td>
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<tr>
<td>42</td>
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<td>0.67</td>
<td>0.67</td>
<td>0.67</td>
</tr>
<tr>
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<td>1</td>
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<td>1</td>
</tr>
<tr>
<td>44</td>
<td>STP131A</td>
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<td>0.33</td>
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<td>0.67</td>
</tr>
<tr>
<td>45</td>
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<td>0.67</td>
<td>0.33</td>
<td>0.33</td>
<td>0.67</td>
</tr>
<tr>
<td>46</td>
<td>STP134A</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>47</td>
<td>STP134B</td>
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<td>0</td>
<td>0.67</td>
<td>0.67</td>
</tr>
<tr>
<td>48</td>
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<td>1</td>
<td>0.67</td>
<td>0</td>
<td>0.67</td>
</tr>
<tr>
<td>49</td>
<td>STP136A</td>
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<td>1</td>
</tr>
<tr>
<td>50</td>
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<td>0</td>
<td>0.67</td>
</tr>
<tr>
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<td>1</td>
</tr>
<tr>
<td>52</td>
<td>STP137C</td>
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</tr>
<tr>
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<td>0.67</td>
</tr>
<tr>
<td>54</td>
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<td>1</td>
<td>1</td>
</tr>
<tr>
<td>55</td>
<td>STP141A</td>
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<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>56</td>
<td>STP142A</td>
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<td>0.67</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>57</td>
<td>STP143A</td>
<td>1</td>
<td>1</td>
<td>0.67</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>

Table 3-16: Start-up Cases with Calibrated Values
3.7.4 Truth Table

A truth table is a core concept of QCA. Truth tables provide an efficient way to analyse sufficiency. Unlike a data matrix, in which each row is a different case, the rows of a truth table contain configurations of conditions. The truth table contains $2^k$ (2 to the power of k) number of rows where k is the number of conditions and the number two denotes presence or absence of the conditions. Not all the configurations necessarily are empirically possible.

To create a truth table, first, list all $2^k$ possible configurations of conditions, second, assign each case from the data matrix to a row in the truth table in which it has the highest membership, and third define the outcome value. Configurations with no empirical data are referred to as logical remainders (C. Q. Schneider & Wagemann, 2012). Limited diversity, which is the presence of logical remainders, consists of configurations that have either not enough or no empirical evidence.

The number of causal conditions is an important consideration in QCA studies. With every new condition, the number of truth table rows doubles, amplifying the possibility of more rows without empirical data referred to as limited diversity. The risk is of having too little variation from the available cases. Increasing the number of cases may also not always help, as more cases may cluster within the same rows of the truth table rows. Reciprocity was not included as it would have doubled the number of rows resulting in limited diversity.

In preparing the truth tables, there can be configurations that have both possible outcomes, referred to as contradictions. There are a few ways to resolve contradictions. The first way is to add a condition, that will resolve the contradiction, to the truth table (C. Q. Schneider & Wagemann, 2012). This will cause the row to split and hence resolve the contradiction. However, all other rows also split in two causing the truth table rows to double. A second option is to redefine the outcome or condition(s). The third option is to redefine the population of interest, which will result in adding or dropping cases with theoretical and substantive arguments supporting the strategy. Once any contradictions have been handled, the data matrix is ready to be processed using fs/QCA 3.0 software.

Handling contradictions helped reduce bias (due to researcher’s experience in entrepreneurship) when configurations led to both success and failure. Investigating these contradictions led to fine tuning of the definitions of the conditions and outcome which subsequently required all cases to be reviewed and recalibrated when needed.
QCA is made up of three steps: (a) prepare the truth table to identify contradictions and to resolve if any contradictions exist, (b) identify necessary conditions, and (c) analyse start-up outcomes through analysis of sufficient conditions. The term conditions is used in place of components in the QCA sections, as conditions is the term traditionally used in QCA.

Table 3-17 is the truth table created from the raw data matrix (Table 3-16) of 59 cases with outcomes of success or failure. There were no contradictions. As there were no contradictions, it was not necessary to consider including reciprocity. Twelve of the 32 possible configurations are present among the cases and the remaining rows of logical remainders are due to limited diversity of the data.

### Table 3-17: Truth Table (No Contradictions)

<table>
<thead>
<tr>
<th>Conditions</th>
<th>Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Team</td>
<td>Inst.</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>4</td>
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</tr>
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<td>5</td>
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<tr>
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<td>8</td>
<td>1</td>
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<td>1</td>
</tr>
<tr>
<td>11</td>
<td>0</td>
</tr>
<tr>
<td>12</td>
<td>0</td>
</tr>
<tr>
<td>13-32</td>
<td>Logical remainders</td>
</tr>
</tbody>
</table>

### 3.7.5 Analysis of Necessary Conditions

The data was analysed to identify if any of the five conditions are necessary for start-up performance. A condition is necessary if it must be present for the outcome to happen (Ragin, 2008; C. Q. Schneider & Wagemann, 2012). The fsQCA 3.0 software was used to analyse the necessary conditions and sufficient conditions.

Table 3-18 shows the analysis of the necessary conditions for success and failure of the start-ups. Except for one condition, all other conditions are not necessary as their
consistency values are less than 0.9 (C. Q. Schneider & Wagemann, 2012). The exception is the absence of tribal bonding for failure, which has a consistency value of 1.00, but its related coverage is less than 0.5, hence making it also not a necessary condition.

None of the conditions are necessary as their consistency values are less than 0.9 (C. Q. Schneider & Wagemann, 2012).

**Table 3-18: Analysis of Necessary Conditions for Start-up Outcomes**

<table>
<thead>
<tr>
<th></th>
<th>Success</th>
<th></th>
<th></th>
<th>Failure</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Consistency</td>
<td>Coverage</td>
<td>Consistency</td>
<td>Coverage</td>
<td></td>
</tr>
<tr>
<td>team</td>
<td>0.78</td>
<td>0.99</td>
<td>0.17</td>
<td>0.01</td>
<td></td>
</tr>
<tr>
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<td>0.22</td>
<td>0.88</td>
<td>0.84</td>
<td>0.12</td>
<td></td>
</tr>
<tr>
<td>inst</td>
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<td>0.99</td>
<td>0.33</td>
<td>0.01</td>
<td></td>
</tr>
<tr>
<td>~inst</td>
<td>0.12</td>
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<td>0.67</td>
<td>0.16</td>
<td></td>
</tr>
<tr>
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<td>0.00</td>
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<td></td>
</tr>
<tr>
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<td>1.00</td>
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<tr>
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<td>0.97</td>
<td>0.34</td>
<td>0.03</td>
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</tr>
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<td>0.54</td>
<td>0.96</td>
<td>0.67</td>
<td>0.04</td>
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</tr>
<tr>
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<td>0.84</td>
<td>0.99</td>
<td>0.17</td>
<td>0.01</td>
<td></td>
</tr>
<tr>
<td>~trust</td>
<td>0.16</td>
<td>0.85</td>
<td>0.84</td>
<td>0.15</td>
<td></td>
</tr>
</tbody>
</table>

*Note.* Team bonding (team), institutional bonding (inst), tribal bonding (tribal), bridging (bridge). The symbol ‘~’ indicates absence of the condition.
3.7.6 Analysis of Sufficient Conditions

The next step involved performing an analysis of sufficient conditions of the 59 remaining cases. Of the 32 truth table rows, 12 contain empirical data. The number of cases indicate how many start-ups best fit the configuration of conditions.

Table 3-19 presents the truth table generated for successful outcomes. Two thresholds were set for selecting the configurations for the analysis. A frequency threshold of one case was set as the total number of cases is not large (Ragin, 2008; C. Q. Schneider & Wagemann, 2012). For small- to medium- N studies (about 1 to 100 cases), a frequency threshold of one per row is typical (C. Q. Schneider & Wagemann, 2012). Second, a consistency threshold was set for the configurations. While the minimum recommended consistency is 0.75, higher consistencies are more rigorous (Ragin, 2008). A consistency threshold of 0.9 was set as the next consistency level is 0.71 which is below the threshold of 0.75. With the consistency criteria set at 0.90, two cases were excluded, both of which are cases with failure as outcome. fsQCA was run again for unsuccessful outcomes but all consistency values were below the minimum of 0.75. The output report from processing of the remaining 59 cases is presented in Table 4-1 in the next chapter on findings.

Table 3-19: Truth Table from fsQCA 3.0

<table>
<thead>
<tr>
<th>Conditions</th>
<th>Number of Cases</th>
<th>Raw Consistency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Team</td>
<td>Inst.</td>
<td>Tribal</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>3</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>4</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>5</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>6</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>7</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>8</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>9</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>10</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>11</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>12</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>13-32</td>
<td>Logical remainders</td>
<td></td>
</tr>
</tbody>
</table>
PART IV: Summary

This chapter on Methodology was presented in four parts. Part I addressed critical realism as the chosen research paradigm, supported by abduction, retroduction, and induction research strategies. Part II elaborated on how data was collected (using interviews for primary data and online secondary data) and prepared for use in fsQCA. Part III presented analyses of the data conducted in three steps, consisting of abductive analysis, template analysis, and qualitative comparative analysis (QCA). This final part of the chapter provides a brief summary of the processes involved in obtaining and managing the data that underlie the research.

Critical realism (CR) was chosen because it allows the research to go beyond an understanding of observable events and into the realm of underlying mechanisms that trigger the events, fulfilling the need to delve deeper in researching social capital theory and entrepreneurial start-ups. By focusing on mechanisms, rather than solely events, CR highlights the limitations of empirical observations in understanding reality. The choice of CR as the underlying paradigm guided the choice of a model that combined abduction and retroduction strategies rather than the more usual combination of deduction and induction. QCA, which focusses on systematic comparisons of cases to generate explanations (Ragin, 1987) using abduction with retroduction, makes it possible to study underlying mechanisms and structures that cause events to occur, rather than remaining at the more basic level of understanding relationships (Bergene, 2007).

University start-up environments were chosen as the research context due to their richness in social capital and their intentional focus on developing start-ups through multiple types of programmes, both curriculum-based and extracurricular. The sample of entrepreneurs (and their start-ups) was obtained from seven of the eight universities in New Zealand. Primary data was collected through interviews with 41 entrepreneurs, representing 69 start-ups. Secondary data was obtained from online sources. Data were prepared for analysis in QCA using template analysis, following the conceptual framework established in Chapter 2 and further developed in Table 3-12.

QCA was selected as the principal analytical tool for this study as its configurational approach facilitated comparison of multiple combinations of components of social capital that could lead to comparable outcomes (equifinality). The outcome of QCA formed the basis for the next chapter on Findings.
CHAPTER FOUR: FINDINGS

This chapter has three parts (Figure 4-1). Part I addresses research question 1 using the fsQCA results and. Part II addresses research question 2 elaborating on the effect of the new construct of tribal bonding on social capital outcomes, comparing and contrasting it with traditional bonding as applicable to support groups and consumer groups. Bridging, although used to a lesser extent as compared to bonding, is an important component and included in Part II. Part III is a summary of this chapter. Both research questions were discussed in Section 2.15. Discussion based on the empirical evidence provided in this chapter will be presented in Chapter 5.

Figure 4-1: Thesis Structure Foregrounding Chapter 4
The unit of analysis for this study was start-ups by students, who had attended university entrepreneurship programmes at universities in New Zealand.

Cases were extracted in line with definitions of success and failure (Section 3.4.1). Once processed through fsQCA, remaining cases were all successful start-ups. Hence all the evidence provided are for successful start-ups (Section 3.4.2).

In the descriptions, the prefix FDR indicates founders, and the prefix STP represents start-ups. The same number used with FDR and STP connects the founder to the start-up(s), for example, FDR09 founded STP09A and STP09B.

The entrepreneurial ecosystem around these universities, along with the entrepreneurial programmes, provided an environment with an increased presence of social capital, forming a suitable context for the study (described in Section 3.3.1 under the chapter on Methodology). The mix of individuals from the universities, industry, governmental organisations, and community brought together through the programmes provided a context for the generation of increased social capital.
PART I: QCA Results

Table 4-1 contains results of the fuzzy set analysis for successful start-up outcomes. The two start-ups with failure as outcome were rejected due to low consistency of the related configuration (Table 3-19). Table 4-1 uses the notation introduced by Ragin and Fiss (2008). These notations are provided as notes with the table. Core conditions referred to in notes are causal conditions that have a strong causal relationship to the outcome, while peripheral conditions have a weaker causal relationship with the outcome (Fiss, 2011).

Table 4-1: Configurations for Successful Start-up Outcomes

<table>
<thead>
<tr>
<th></th>
<th>Traditional 1a</th>
<th>Traditional 1b</th>
<th>Tribal 2</th>
<th>Traditional &amp; Tribal 3a</th>
<th>Traditional &amp; Tribal 3b</th>
</tr>
</thead>
<tbody>
<tr>
<td>Team bonding</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Institutional bonding</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Tribal bonding</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Bridging</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Trust</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Raw coverage</td>
<td>0.39</td>
<td>0.67</td>
<td>0.55</td>
<td>0.60</td>
<td>0.33</td>
</tr>
<tr>
<td>Unique coverage</td>
<td>0.02</td>
<td>0.11</td>
<td>0.04</td>
<td>0.07</td>
<td>0.02</td>
</tr>
<tr>
<td>Consistency</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Solution coverage</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.84</td>
</tr>
<tr>
<td>Solution consistency</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
</tbody>
</table>

Note. Black circles represent that a condition is present; there were no instances of total absence. Blank spaces indicate that a condition may be present or absent, otherwise referred to as ‘don’t care’. Large circles represent core conditions; small circles represent peripheral conditions. Consistency refers to the extent that the configuration corresponds to the outcome. Raw coverage indicates the proportion of the membership within the configuration. Unique configuration accounts for proportions of cases that are explained only by one configuration.

Table 4-1 indicates that five solutions (configurations of conditions 1a, 1b, 2, 3a, and 3b) result in successful start-up outcomes responding to the first research question.

Research question 1: How do different configurations of social capital components affect start-up outcomes?

The solution consistency of 1 indicates that the configurations strongly relate to the outcome. The solution coverage of 0.84 indicates high empirical importance in arriving at the outcome. The five configurations are individually sufficient to cause the outcome. The
fsQCA results indicate that institutional bonding and tribal bonding are core conditions (or components) and team bonding, bridging, and trust are peripheral conditions.

Considering core conditions, solutions 1a and 1b show institutional bonding combined with trust as a peripheral condition is sufficient for a successful outcome. Within these two solutions, combinations with peripheral conditions of bridging or team bonding can be viewed as alternative pathways. Solution 1b, with a higher raw coverage of 0.67 and unique coverage of 0.11, interacts more with team bonding; potentially the result of the university entrepreneurial programmes encouraging working within teams. Solution 1a, with a lower raw coverage of 0.39 and unique coverage of 0.02, combines institutional bonding with bridging, highlighting the connections to hence unknown resources to the student entrepreneurs.

An example of solution 1b is STP16B in which a team consisting of friends worked well together that even when one of the members left, the team was strong enough to carry on. Solution 1a is depicted by STP26B whose founder, through his connections to an international industry association, managed to bridge to a contact in France. These solutions are grouped under traditional bonding as institutional bonding displays traditional bonding features.

In contrast, solution 2 shows tribal bonding combined with peripheral conditions of team bonding and trust as sufficient for a successful outcome. An example is STP02A’s team that did not depend on institutional bonding as this team had worked together previously and had the necessary experience and knowledge to engage tribal bonding to an external organisation for advice. Solution 2 with a raw coverage of 0.55 and unique coverage of 0.04 is a reflection of student entrepreneurs with strong teams that depend less on institutional support and are also knowledgeable of external resources with whom they can exercise tribal bonding.

Solutions 3a and 3b depict institutional bonding combined with tribal bonding as sufficient for successful outcomes. Within these two solutions, team bonding with bridging or trust provide alternative pathways for successful outcomes. STP30A, an instance of 3a, had great trust in his two mentors, one from the industry and the other his entrepreneurship programme coordinator. An instance of 3b is STP38B, which had a strong team and also knew how to make bridging connections to get additional resources. Solution 3a combined with trust has a higher raw coverage of 0.60 and unique coverage of 0.07 and solution 3b with team bonding and bridging has a raw coverage of 0.33 and unique coverage of 0.02.
PART II: Traditional Bonding and Tribal Bonding

Part II responds to the second research question:

Research question 2: 
How does social capital, through the various groups (consumers, customers, critics, and support) involved, affect start-up outcomes?

While a large focus of Part II is in elaborating on tribal bonding and contrasting it to traditional bonding, bridging is also discussed as it plays a lesser but important role.

As indicated in Table 2-6 on the Extended Framework of Bonding and Bridging, traditional bonding is based on rule-based trust resulting in direct reciprocity or category-based trust generating indirect reciprocity. In direct reciprocity, there is an expectation of a direct return of work done for another person. Indirect reciprocity applies to a group, whereby work is done for an individual in the group may be reciprocated when a favour is received from another person in the group. In contrast, there is no expectation of reciprocity in tribal bonding.

Both tribal bonding and traditional bonding can occur simultaneously. Depending on the context and the salience of identity, one of them dominates and influences the decision. In a start-up, consumers, customers, critics, and support groups can exhibit different types of bonding. For clarity, the two types of bonding are presented as a dichotomy. In some cases where one develops into another, they are presented separately. Presentation of the findings is structured according to groups that affect start-ups (Figure 4-2).

**Figure 4-2: Framework of Groups Affecting Start-ups**
Figure 4-2 was developed based on literature on tribal bonding (Section 2.9.3) and observations from the findings. On the demand side, while consumers and customers were discussed in Section 2.9.3, critics as a separate group were not clearly defined. Typically consumer or customer feedback is considered in product improvement and development. However, feedback from non-consumers and non-customers is not considered in the initial literature review. An example is the lobbying for taxes on soda drinks to reduce consumption as it was contributing to a severe obesity problem, and the subsequent drop in sales of soda drinks (Rosenberg, 2015). Entrepreneurs also need to consider the possibility of harm that their products may cause which is not recognised by consumers or customers, but by a third party.

Literature regarding groups providing support (Section 2.9.3) were discussed generally. For clarity, groups supplying support to start-ups have been categorised to address knowledge, finance, human, and physical resources.

4.1 Groups Affecting Demand

There are three groups affecting demand (Figure 4-2). *Consumers* use products and often but not always, pay for the products. For clarity, the term *customers* is used to describe the entities that pay for products. This differentiation is clear for NPOs, where consumers are the beneficiaries and customers are those who fund the products/services provided to the beneficiaries, but it is not as clear for FPOs.

The existence of both consumers and customers is necessary for start-ups. *Critics* provide feedback and recommendations on products, and may even lobby for, or against, the products. Consumers, customers, and third parties can be critics. All of the cases in this study include consumer groups and customer groups covering multiple sectors, with some cases involving critics. A number of selected cases will be presented to demonstrate tribal bonding and traditional bonding within these three groups.

As discussed in Section 2.9.3, a consumer segment (reflective of traditional bonding) involves a group of homogeneous individuals sharing similar characteristics but are not connected. With a consumer tribe (reflective of tribal bonding), it is the purpose of products that connects individuals who may not necessarily interact with each other. Similar differentiation applies to customers and critics.
4.1.1 Consumers

Table 4-2 is a summary of a selected set of start-ups with consumers that could be segregated as engaging tribal bonding, traditional bonding, or having migrated from traditional to tribal bonding. Start-ups that involved consumer tribes created products that were already needed, and therefore achieved faster consumer acceptance. In contrast, entrepreneurs, who created unique new products without an identified consumer tribe, had to use the traditional approach to gain consumer acceptance through marketing efforts taking a longer time to establish the products in the market and find suitable consumer segments. Start-ups addressing needs and wants of consumer tribes achieve success (getting past the survival stage discussed in Section 2.14.1) sooner due to the faster consumer acceptance of the products. Therefore, they incur less cost due to reduced time and effort in marketing the products and are able to generate revenue sooner. Excerpts from some of these start-ups are provided.

Table 4-2: Consumers Based on Traditional and/or Tribal Bonding

<table>
<thead>
<tr>
<th>Sector</th>
<th>Tribal Bonding (Consumer Tribes)</th>
<th>Traditional Bonding (Consumer Segments)</th>
<th>Traditional to Tribal Bonding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Education and tutoring services</td>
<td>STP38B</td>
<td>STP09A</td>
<td>STP09B</td>
</tr>
<tr>
<td></td>
<td>STP09A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Financial literacy</td>
<td>STP38C</td>
<td></td>
<td>STP14A</td>
</tr>
<tr>
<td>Understanding illnesses</td>
<td>STP21A</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>STP21B</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Financial application</td>
<td></td>
<td></td>
<td>STP02A</td>
</tr>
<tr>
<td>Food &amp; beverages</td>
<td>STP13B</td>
<td>STP13A</td>
<td></td>
</tr>
<tr>
<td></td>
<td>STP06B</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Installation services</td>
<td>STP30A</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Tribal Bonding

FDR09 became a school teacher upon graduation and found that students had a tough time performing well in school. These students could not understand lessons the way they were being taught in schools. FDR09 had an idea for a different mode of learning, which showed quick success due to its acceptance by students. He provided this mode of learning through STP09A.
There are so many students who worked very hard, but made small silly mistakes and the examiner thought it was stupid which was horrible. Confidence is destroyed. I had an idea about how I can do that with video tutorials, resources, and things like that. So, I created and launched that in October that year for just Year 1 level. And about 10% ended signing up in the next six weeks. Really surprising and exciting! [FDR09]

A teacher’s unique approach to financial education was the inspiration for STP38C. In talking to her brother, FDR38 realised that a different mode of learning from paper-based to online would be more relevant for the times and that it can be made widely available for use in schools. Further, compared to the paper-based approach, the online approach will take up less of the teachers’ time.

The problem was that it was all paper-based and when I was talking to my brother, obviously he was learning amazing things. Just that they weren’t that relevant because they were dealing with a cash economy and we are largely cashless now and automated and also from what it sounded like it took up a lot of the teacher’s time. So, that’s where the idea to digitalise came from. [FDR38]

STP38C confirmed the presence of a consumer tribe of teachers who liked the product based on the response to a free trial of the application software. FDR38 said “A lot of the times schools will start on our free trial and I’ll be getting emails saying ‘I love it’”.

From a health perspective, STP21A focussed on children who could not understand what was happening to them when they had health issues. The children needed simple explanations, which STP21A delivered through comics.

I came up with the concept of STP21A which involves super heroes who explain medical information to children…. I realised there is a huge gap in the global markets of how to explain medicine to the children. [FDR21]

Adults also started reading the health-oriented comic books meant for children. This led to the creation of a new venture STP21B with new products catering for this emerging sub-tribe of adults.

We explain medicine to everybody because what we found is that the older people were reading the comics and learning and understanding from them, and it wasn’t
just children who are confused about medical concepts. It was people across the board. [FDR21]

In the area of food and beverages, STP06B found a need for fresh and affordable food ingredients delivered to the doorsteps of university students. Having noticed other food-related delivery services, FDR06 created STP06B to deliver food products to university students.

We were very frustrated with product and quality and price from the local supermarket. And we saw a butcher from the other of part of town do some recurring deliveries. So we went out and knocked on doors all over North Dunedin, sort of student area, signed up people just for really basic service. For a set amount every week and we will deliver them…. this is mid-2012…. effectively signed up 40 or 50 flats. 2013….launched the business again… employed a sales team…. Send them around door knocking and signed up around 200 flats and started that year. And then held on to most of those and ended up expanding out around into the rest of the Dunedin. [FDR06]

FDR30 was working part time selling outdoor furniture when a customer approached him to set up a do-it-yourself (DIY) product for a fee. This request led to the creation of STP30A.

I was working part time at Bunnings Warehouse…. I was working in outdoor furniture, the seasonal department. I sold barbeques, outdoor furniture and garden sheds and things. One customer asked me to assemble his purchased item and offered me a $100 to do it, and I decided to do it. That was the turning point…. That’s where I came up with the idea because I saw the problem. I decided I was going to start this business and I bought $10 worth of business cards and $300 worth of tools and just started from scratch. [FDR30]

The presence of a consumer tribe for services provided by STP30A and the success of this venture was obvious based on its growth and expansion.

When we first started, our first month’s sales would have been about $300. Now we are doing about $300,000 a year. And growing. We just set up our first franchisee.
We have achieved our big milestone which was becoming a franchise organisation. [FDR30]

FDR43 was alerted to a consumer tribe of gamers when a visually impaired person told him that no one creates games for them. FDR43 created STP43A and when they launched the product, they found that there were more downloads by the sighted rather than the visually impaired identifying a sub-tribe for the same product.

“Nobody makes games for us” were the words of a blind gamer that launched this collaborative project, aimed at bringing the fun of video games to the nearly 300 million visually impaired around the world, as well as the many more who want to play by sound rather than sight…. After releasing the first interactive audiobook … we discovered something amazing – 95% of downloads came not from visually impaired but from sighted users. This gave us an idea that everybody can enjoy good interactive audio story. [FDR43]

Traditional Bonding

FDR02 entered a competition with a financial application based on his own idea of how to manage money, a perspective that worked for him. Given that there were already other products in the market, and not having done market validation, FDR02 faced many challenges.

The product we have today is not the product that we necessarily started up with. The idea that I submitted was “the calendar”. It was only because I myself manage money in a calendar.... will put in predicted expenses and incomes but then I would have to manually calculate how much money I will have in itself. And I thought I could just make a program that does this.... We were very much an upside down business and for many reasons we shouldn’t exist today because we made all the mistakes that entrepreneurs make. We started off without doing any market validation. We started out without an understanding as to what to price the product for. [FDR02]

Without market validation, market research, or understanding of how to price the product, it took a while before STP02A established itself as a viable business. STP02A took a longer time to achieve success by pursuing a traditional approach. Fortunately the venture managed to stay afloat in the initial years with income from "one contract with
recurring monthly income” and their “own consulting on the side to feed ourselves” [FDR02].

FDR13 created his own coffee liqueur product for which there was no established consumer base, and took a traditional approach of identifying and marketing to consumer segments. There were many challenges and it took longer to establish STP13A, but FDR13 succeeded.

You just have to learn it through experience. That is the hardest time because you get knocked down all of the time. You know you go into a bar and they just tell you to bugger off. And you have made this product. You spend a year working on it. They don’t even try it. They are not interested…. I just actually went in and became a customer, because when you are a customer, they can’t kick you out. So, if I bought a drink and sit at the bar, then I can sit at the bar for as long as I was drinking. [FDR13]

Since then FDR13 has successfully launched STP13B, which used a by-product from the production of the coffee liqueur. FDR13 knew the consumer base that will like this product but also realised that it may need a change in coffee drinking culture for this product to succeed in New Zealand.

It became something that we produce in excess. And actually the coffee that we got out of it is called cold brew coffee in the States…. I noticed that in the States, cold brew coffee is absolutely huge…. And the same thing in Australia…. I figured it would be a pretty good time to launch a cold brew coffee in New Zealand…. it’s a very niche product still. So, we’re working on changing the culture of coffee drinking around that. [FDR13]

Traditional to Tribal Bonding

FDR09 (who had started up STP09A earlier) created a second start-up, STP09B, to provide online English language competency courses for students from China who were considering attending universities in New Zealand. Following a traditional approach, the students would have paid for the language courses. However, STP09B discovered that these students were more interested in knowing about living in a country like New Zealand before they decided to enrol in a university in New Zealand. STP09B modified the product to suit the consumer tribe.
Another start-up that moved from a traditional to a tribal approach is STP14A which provided face-to-face delivery of financial literacy classes. FDR14 was concerned about the impact on high school students who do not understand the implications of running up debts on credit cards and how it will impact their lives subsequently. Students who do not do any accounting or economics in school are not exposed to financial literacy and then “go to university and you have credit cards and overdrafts and anyone can just sign up…. And people think it’s free money because they don’t understand what they are signing up for” [FDR14]. STP14A originally planned to be an FPO following a traditional approach of charging the students for the classes. However, the financial crash that occurred at that time highlighted a social need for financial literacy and STP14A morphed to become an NPO to cater for a consumer tribe of high school students before they go out into the world pursuing different paths.

*We had entered it as a kind of “I am going to charge people to do workshops” and then I think it was just before the financial crash and then when the crash happened and then we realised that actually this is quite a big problem socially….We don’t think that these students should be taken advantage of. As a result of the mistakes that they make now, there will be lifelong impact on them…. they should be made aware. And that we should do it for free. So, that’s how we changed the idea.* [FDR14]

**Targeting Multiple Consumer Groups**

FDR16 took a different approach of targeting different consumer groups using a similar core product but different front-end representation. This made it less costly to test multiple consumer groups as the initial efforts and costs for the core product have already been accounted for. In this way, FDR16 can afford to target both consumer tribes and consumer segments as the cost is spread over multiple possible ventures.

“All the products we develop are very similar on the development side, but often very different on the sales side. So like when our company is selling to pharmaceutical or medical research institutes, we trade under a name, STP16C. If we are selling promotional apps or something along those lines, it will be branded as STP16B. And if we are selling games, then we will be selling as STP16A…. They are all the same technology. Just branded in health area, promotional marketing, or gaming. But they are all identical.” [FDR16]
4.1.2 Customers

Table 4-3 is a summary of a selected set of start-ups with customers that could be segregated as engaging tribal bonding, traditional bonding, or using both types of bonding. Tribal bonding involves a common purpose without expectation of reciprocity as compared to traditional bonding which is transactional with expected direct or indirect reciprocity; these two extremes form a continuum. The findings show that some of the start-ups in this study obtained financial support from government funding (both national and international), or corporate funding through CSR initiatives. These are referred to as a moral system with a rational agreement to support worthy causes (Section 2.6) with no explicit exchange of value (Section 2.13.1).

<table>
<thead>
<tr>
<th>Tribal Bonding</th>
<th>Traditional Bonding</th>
<th>Traditional and Tribal Bonding</th>
</tr>
</thead>
<tbody>
<tr>
<td>STP15B</td>
<td>STP09B</td>
<td>STP25B</td>
</tr>
<tr>
<td>STP14A</td>
<td></td>
<td>STP38C</td>
</tr>
<tr>
<td>STP41A</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Tribal Bonding**

STP15B, a start-up based in Vietnam, received Official Development Assistance (ODA) from the Finland government. The role of ODA is to promote economic development (with resulting improvements in welfare) in developing countries (Development Assistance Committee, 2008).

*We got a grant from the Finland government.... they provided ODA... like a grant from the government of a developed country to government of developing countries.... they fund the start-up. [FDR15]*

STP14A and STP41A received funds through grants or sponsorships from government bodies or businesses (Table 4-3). Although it can be argued that the assistance provided will in some ways be reciprocated, this study treats this as tribal bonding as there is no reciprocity in financial terms back to the funding bodies. However, accountability will be expected to ensure that the funds are used for the agreed purposes.
STP14A is a charitable trust run by university students to promote financial literacy among high school students. Originally this venture was going to charge attendees for the financial programme, a traditional approach. With the change to focus on a social cause, costs for running the programmes was covered by customers who shared a common purpose of supporting the programme. Support was received from a governmental organisation, funding from a trust, as well as sponsorship.

... grant funding from the Council and also from the Fletcher trust.... And then after that we were very lucky to be put in touch with BNZ by the university, who then came on board as a lead sponsor. [FDR14]

Reciprocity is not expected in terms of monetary returns to the funding organisations. However, accountability is ensured through good management through engagement of the stakeholders and regular meetings.

STP14A is completely student-run. It’s run by a management team at the university and we have a Board. We have people from the BNZ team, we have people from the University of Auckland, we have the founders and a couple of alumni who used to work with STP14A sitting on the board advising the management team. And we have monthly meetings to keep track of how it’s going. [FDR14]

FDR41 started a venture that focused on capturing memories for cross-generational communication using digital technology. Funding for this venture came through a governmental organisation who shared a common view in terms of preserving history.

One of the grants that we had applied for was Youth Fund run by the Ministry of Youth Development. We were successful and they gave us about $6,000 to work with young people to preserve our history. [FDR41]

**Traditional Bonding**

STP09B (discussed in 4.1.1) modified its product from providing online English language competency courses to information about living in New Zealand (Table 4-3). While the students would have paid for the language courses, the university (the customer) paid for the services for the modified product because this initiative contributed to student recruitment. In this case, the customer took a traditional approach as student recruitment reciprocates for the recruitment cost.
We kind of figured out that really it was student attraction ... the people who really benefit are the institutions.... And then started realising through the conversation that there were clear recruitment benefits. We might not have to pay them anything because there are genuine benefits. Now what we aim to do is that we come in and take all their applicants and our value is in increasing the conversion rate of the students. [FDR09]

**Traditional and Tribal Bonding**

STP25B is a charitable trust board with an aim of eradicating poverty through the efforts of university students and young professionals (Table 4-3). This venture is supported by grants and through revenue generation from events. Their website showed that they also raise funds through crowdfunding (source: STP25B’s website, not listed to retain anonymity).

At the initial stages, the founder depended on grants and revenue generating events to pay for the services provided by STP25B. In this case, organisations providing grants exhibited tribal bonding as they did not expect any monetary returns. FDR25 said “the operational costs of the organisation will pretty much run on grant money”.

However, the events were based on traditional bonding as these customers were directly reciprocity through knowledge and networking in return for the fees they paid for the events. The element of tribal bonding is present for attendees who are happy to pay for the event knowing that the money received is spent on a worthy cause. In fact, FDR25 started with the traditional approach of charging the customers. STP25B established its credibility before applying for grants.

Day one wasn’t to get a grant. Our goal was actually to just do events that we could get membership with. The early events were actually just like campaign events. Like we did a pay forward campaign. Then after that we ran a conference ... which will happen again this year. Charge not a lot like 50 bucks, but enough to collectively cover the cost of the venue and whatever we needed to do.... my thinking is that that actually helps because once you can show people that you’re creating value (we were running events, we had a big membership base) and then you apply for grants, you are going to be more successful. Overall starting on your own with your own volition and not dependent on especially big bureaucracy, which can really slow you down, is actually pretty important when you are first starting. [FDR25]
STP38C, a social enterprise, produced an online education programme that teaches financial literacy to school children. There are charges for access to the programme and essentially schools should be the purchasers as the programme is used in classrooms, which is a traditional approach. However, the process of budgeting and funds acquisition pose a challenge for schools in paying for the product for use by the students. This problem was alleviated through the tribal bonding approach with philanthropic CSR initiatives of other organisations, who became the customers paying for the programme.

Our purchaser in essence is schools and schools are restricted by budgets often given to them by the government…. So we had to look elsewhere and that’s where our partnerships with various big organisations around New Zealand came into play. [FDR38]

4.1.3 Critics

Table 4-4 is a summary of a selected set of start-ups with critics that could be segregated as engaging tribal bonding or traditional bonding. Interestingly, in addition to improvements to products/services, there were also new venture creations based on feedback

<table>
<thead>
<tr>
<th></th>
<th>Tribal Bonding</th>
<th>Traditional to tribal Bonding</th>
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</thead>
<tbody>
<tr>
<td>Improvements</td>
<td></td>
<td>STP02A</td>
</tr>
<tr>
<td></td>
<td></td>
<td>STP11A</td>
</tr>
<tr>
<td>New Venture</td>
<td>STP05A</td>
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<td></td>
<td>STP38B</td>
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</tbody>
</table>

**Tribal Bonding**

Critics are now engaged even before ventures are launched. STP05A was a result of FDR05’s experience as a university student who did not “always get it when the lecturer explains to you the first time around” [FDR05]. Having been a university tutor herself, her opinion of the course provided for tutors was that what the university taught the tutors was not “in fact, what the students want” [FDR05].

FDR05 understood the plight of some university students based on her own learning experience, saying “you don’t always get it when the lecturer explains to you the first time around. I think it took me 3 years in university to actually learn how to do
university... It wasn’t until I found what worked well for me that everything started to improve and change” [FDR05]. During all of her undergraduate years, FDR05 provided tuition for university students, describing how she had students contacting her; “I didn’t have to advertise... I just started to build up a reputation maybe by word-of-mouth... students would just text me” [FDR05]. This shows that there was a ready consumer tribe. STP05A was launched when FDR05 was doing the Masters of Entrepreneurship.

Whilst I was studying my undergraduate degrees, I tutored for the university... for the disability service .... I was approached by a lot of students for private tuition. They might not be working at their class speed. So, they wanted me to go slow with them.... other students who were really very bright but were lost on where to go in the course. So, I started doing a lot of private tuition and at one point ... I tutored through 54 hours over a five-day period for four weeks straight. [FDR05]

FDR38 was a residential assistant looking after students at a residential college when she discovered a tribe of students who required that last revision before the examinations. This need led to the creation of STP38B.

When you are looking after hundreds of first year students, it becomes pretty obvious around exam time that perhaps they are not as prepared as they should be and they are very stressed about this.

So I decided there was something I can do here.... I just set up a little bit of a tester ... and the appetite there was insatiable. So, it really proved a market pretty quickly. We ran about 10-15 courses a semester and majority of them were selling out. The demand side equation was super easy and the supply side as well. [FDR38]

**Traditional to Tribal Bonding**

FDR02 highlighted the lack of readiness of the consumers for STP02A’s initial product design which had taken the traditional approach of creating a product and then finding the market for it.

We were very early to the market here in New Zealand in particular. And people weren’t very comfortable with managing their money online in 2008. [FDR02]
However, this situation changed with the consumers started taking on a tribal approach in providing feedback that helped STP02A co-create the subsequent versions of the product.

*So I talk about how consumer attitudes have changed quite dramatically from when we started to where we are now.* [FDR02]

The consumers started demanding new features that reflected the increased online banking trend, and the changing tribal approach being taken by the consumers.

*When we started, we didn’t actually do any bank transactions at all. You had to manually input stuff and they weren’t transactions, they were just predicted expenses and income. And then in 2009, based on some customer feedback ... what’s the point of having this if we don’t have our bank statements as well? So we allowed people to upload them.*

However, even in a tribal approach, there will be varying feedback from the consumers.

*But even at that point there were a lot of people who were very uncomfortable about uploading their files. They said “why are you uploading my transactions to the cloud? Are you crazy?” Today they say “if you don’t connect directly to my bank, I will not use your service”.*

The challenge is in understanding the potential shift in attitudes to adopting technology and taking a traditional approach in product improvements to be ready when the consumers begin to adopt the new features.

*So it’s a complete 180 degree turn. And uploading files is considered the safe alternative, would you believe it? ... in the past, “upload my files? You are crazy. I am not going to do that”. So there’s been one big shift. We find that people are increasingly getting more comfortable with using the web, web services. Mobiles now have overtaken web in terms of growth and adoption so we are moving very quickly to make it relevant on mobile.*

FDR02 talked about the days when consumers had concerns about data security and “there were a lot of people who were very uncomfortable about uploading their files” to a time when they started saying “if you don’t connect directly to my bank I will not use
"your service". Although the consumers did not interact with each other, they had similar requirements and concerns in mind, characteristics of a consumer tribe.

FDR02 made an interesting observation that this mode of responding to consumers is reactive. He discussed the need to understand different categories of consumers: those who want to save, those who want to get out of debt, or even those who need a better relationship with money. This perception may align well with the concept of consumer tribes.

We will understand where they sit in their demographics in terms of salary and willingness to pay and all that. But beyond that, we will put them into user personas. To say that this is someone who wants to save money, this person is trying to get out of debt, this person doesn't understand money but wants to build a better relationship with it. And then you can target the product to serve each of these people. So, it's almost as if when they come in, the experience is tailor-made for them. [FDR02]

Like FDR02, FDR11 also created a product based on his personal needs. He said “I actually made the product for myself when I was in High School”. STP11A used this product as a basis to create an online education service for school students. It took a while before it matched the students’ needs but engaging teachers and students in evolving the product developed a good reputation of the vendor’s willingness to respond to consumer feedback.

When we started our first product for STP11A, there was a lot of negative feedback. .... I kept refining the product and the business model over about 18 months before we actually made our first sale to the first couple of schools. It was so well refined and presented.... Ended up with the vast majority of schools in the next 18 months. It was word of mouth and everyone said these guys are listening and are doing really well. [FDR11]

FDR11 so aptly described the tribal approach referring to consumers whose feedback is used in improving the product.

They are paying us to listen to them and do something to make the product more useful for them. And I think that the businesses that are successful are the ones that are listening to what their target market is trying to do. [FDR11]
FDR11 compared the need for the business to take the tribal approach of listening to consumer needs rather than the traditional approach of developing products to make money.

*And they always help the target market to achieve their own goals as opposed to businesses that are just trying to develop products to make money.* [FDR11]

### 4.2 Groups Affecting Supply

Entrepreneurs interact with supporter groups to access, directly or indirectly, various required forms of support, including knowledge, finance, human, and physical resources (Figure 4-2). Building start-ups within the university entrepreneurial ecosystem is an advantage, as external organisations that are part of this ecosystem are often willing to support start-ups. This section describes instances of tribal bonding and traditional bonding demonstrated in the start-ups of this study.

#### 4.2.1 Knowledge Resources

Table 4-5 is a summary of a selected set of founders of start-ups that had accessed knowledge support through tribal bonding, traditional bonding, as well as traditional and tribal bonding.

<table>
<thead>
<tr>
<th></th>
<th>Tribal Bonding</th>
<th>Traditional Bonding</th>
<th>Traditional and Tribal Bonding</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>University entrepreneurial programmes</strong></td>
<td></td>
<td>All cases in this study</td>
<td></td>
</tr>
<tr>
<td>Online resources</td>
<td>FDR30</td>
<td></td>
<td>FDR08</td>
</tr>
<tr>
<td></td>
<td>FDR36</td>
<td></td>
<td>FDR21</td>
</tr>
<tr>
<td>Conferences</td>
<td>FDR25</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Tribal Bonding**

Tribal bonding was observed through conferences and online interactions where individuals with similar interests interacted and exchanged information. FDR30’s attempt at acquiring software and services made him realise that paying more for products and
services does not always lead to the desired results, and there are some actions that can be done successfully on his own.

*I paid $1,200 or something for our first website. I didn't like the second one either. And then I paid 100 bucks for a website development membership and developed my own, and that's the website we have now. Easier to do on your own. You know what you want. Nobody else knows what's in your head.* [FDR30]

The experience with the website development led to FDR30 engaging online, tribal bonding with other people who shared knowledge in various areas. As discussed in Section 4.3.3, FDR30 used various online sources to learn how to manage his employees.

FDR36 had specific needs as his venture dealt with bees. He connected online to a source for information.

*There is a guy from US, scientificbeekeeping.com, he does some really good resource and I use them quite a bit for information about how people feel about mite.* [FDR36]

Meanwhile he connected online to sources within New Zealand to get resources. FDR36 said “I used mostly a New Zealand forum to try to get access to some resources”.

*Traditional Bonding*

Traditional bonding was demonstrated by individuals who provided knowledge support through university entrepreneurship programmes and who are paid for delivering these programmes as part of the direction taken by universities. These programmes are discussed Section 4.2.

Research conducted by PhD students (a traditional approach delivered by universities) is another basis of some of the start-ups investigated in this current study. FDR35 had been working for three years when he knew he was not going to be happy continuing to be an employee. Fortunately he had worked in a company which was related to his PhD research. During this time he became aware of a problem that affects honey bees and how he could use his PhD research to develop solutions which later led to the formation of STP35A.

*I had a job with Company A [pseudonym] for three years but I knew that I wasn't going to be happy with a job and I had an idea to start a business. When working, I*
realised that there is a pest that affects honeybees. I realised how serious the problem is and I had an idea to try to use my knowledge from my PhD to try to develop new solutions and I talked to some people I know and they were supportive. [FDR35]

**Traditional Bonding and Tribal Bonding**

There are also offline events used by entrepreneurs to access knowledge. FDR08 attended a conference, joining other entrepreneurs in learning and exchanging information on growing and scaling up their ventures, exhibiting tribal bonding.

... about how to scale and grow your start-up.... actionable steps on how to increase your user base, how to do online advertising. [FDR08]

FDR21 prepared a prototype and attended a book fair where she could spread the idea and also network with people in the publishing industry. The conferences provided an opportunity to meet people with similar interests.

... put together a prototype of what the first book might look like and then also to go over to the Frankfurt book fair to be able to socialise the idea among the industry. [FDR21]

However, these same conferences can also involve traditional bonding when attendees look for connections that involve direct or indirect reciprocity.

### 4.2.2 Human Resources

In this current study, human resources support was provided in two forms: mentors for the founders and employees or volunteers to work within the start-ups is described in this section. Table 4-6 is a summary of a selected set of start-ups that had received human resource support following the tribal approach or the traditional approach.
Table 4-6: Human Resource Support

<table>
<thead>
<tr>
<th></th>
<th>Tribal Bonding</th>
<th>Traditional Bonding</th>
<th>Traditional Bonding and Tribal Bonding</th>
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<tbody>
<tr>
<td>Mentors</td>
<td>FDR10</td>
<td></td>
<td>FDR22</td>
</tr>
<tr>
<td></td>
<td>FDR34</td>
<td></td>
<td></td>
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<tr>
<td>Start-up employees/</td>
<td>STP14A</td>
<td>STP14A</td>
<td></td>
</tr>
<tr>
<td>volunteers</td>
<td>STP25B</td>
<td>STP38A</td>
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<td></td>
<td>STP34A</td>
<td></td>
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<tr>
<td></td>
<td>STP03A</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Tribal Bonding**

In this study, some of the entrepreneurs who had developed their entrepreneurial skills in university programmes subsequently reciprocated by serving those programmes after leaving the university. FDR10, who enjoys engaging in discussions with those interested in entrepreneurship, has returned to mentor at an entrepreneurship programme.

*I have always liked being involved in that space and so I have ended up mentoring like at Startup Weekends. I’ve ended up meeting people who are trying to start businesses and giving them ideas and feedback.* [FDR10]

FDR034 serves on the board of Chiasma, a student organisation promoting an enterprising spirit among the biotechnology student community (Medical and Health Sciences, 2017).

*I think I started with Chiasma in my first or second year at University ... my intention at that time was to use Chiasma as a way of understanding what's happening with the biotech industry. Because I wanted to see where my degree was going to lead me to.... I am still in the board of Chiasma now, it's definitely shaped a lot of my career planning.* [FDR34]

University students provide support through the tribal approach as they share in the social causes promoted by start-ups. STP14A, which provides financial literacy classes to high school students, “is completely student-run. It’s run by a management team at the university” [FDR14].
STP25B, which focusses on eradicating poverty, engages students from New Zealand universities. Its founder FDR25 said “Day one wasn’t to get a grant because a lot of it was volunteer run and we didn’t have a lot of any capital cost initially”.

STP34A organised and conducted its first conference with the help of students from Malaysia, Germany, Belgium, Australia, Romania, and the USA. In addition, STP34A attracted thought leaders from the industry, chief executive officers of pharmaceutical companies, heads of government research, Nobel Prize winners, and science journalists to attend the conference and “debate with these young people about what are the gaps currently in the biotechnology industry and what sort of solutions should we be developing” [FDR34].

Many of these people are brought together through tribal bonding through a shared concern for the future. However, it can be argued that some of the attendees are looking for future business opportunities based on the topics discussed and also developing social networks that will further their business interests.

At the start-up stage, additional human resource support besides the team (who mostly will not charge for their services) is not so affordable. Tribal bonds are shared with family and friends who are another source of support without incurring any cost. For example, FDR03 said:

> Getting help is just hard.... Mostly what I have been doing at the moment is relying on people I know to help me and I have been sucking up to friends and family, trading my skills (often babysitting) for their assistance, instead of more formal methods like paying a professional for their help. [FDR03]

**Traditional Bonding**

Human resource support that is provided through the university entrepreneurship programmes is considered as traditional approach as it is a responsibility that participating individuals are performing. Businesses who are part of the entrepreneurial ecosystem also provide human resource support, as in the case of STP14A where “we have people from the BNZ team ... sitting on the board advising the management team” [FDR14] who sit on the board of STP14A.
Students also exhibit traditional bonding through salaried human resource support for ventures such as tuition centres. For example, STP38B, a start-up focused on preparing students for exams, did not have a problem sourcing for tutors as “There was a glut of experienced tutors” [FDR38].

Traditional Bonding and Tribal Bonding

The entrepreneurs have access to formal mentors (traditional bonding) as in the case of FDR22 who said “So I had a formal mentor through Entré and she was really good. Connecting us with the people or ideas”. FDR22 also developed informal mentors of various individuals, involved in industry and governmental organisations, who participated in the entrepreneurship programmes and were willing to share their knowledge and expertise. While these informal mentors were individuals belonging to the ecosystem, they went beyond traditional bonding and formed tribal bonds with FDR22, who said:

But I’ve also developed informal mentoring relationships. So, there’s about 2 or 3 people I kind of regularly meet for coffee, who have kind of shown an interest. They have got their own companies and done quite well. I just go and ask them for advice and things like that. I have met them all through the various university programmes that I was involved in over this year. [FDR22]

4.2.3 Financial Resources

Table 4-7 is a summary of a selected set of founders that had received financial resource support through connections exhibiting traditional bonding and tribal bonding. Financial support provided discussed in this section applies to funding to support the creation of start-ups. The student entrepreneurs in this study received financial support through grants, prizes won in business plan competitions, incubator programmes, and their families. Being participants in university entrepreneurship programmes helped the student entrepreneurs access some of these financial support avenues. The incubator programmes in this study also provided financial support to all of the participants they accepted.
Table 4-7: Financial Resource Support

<table>
<thead>
<tr>
<th></th>
<th>Tribal Bonding</th>
<th>Traditional Bonding</th>
</tr>
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<tbody>
<tr>
<td>Family</td>
<td>FDR26</td>
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<tr>
<td></td>
<td>FDR22</td>
<td></td>
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<tr>
<td>Crowdfunding</td>
<td></td>
<td>FDR43</td>
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<tr>
<td>Competitions</td>
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<td>FDR14</td>
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<td>FDR22</td>
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<td></td>
<td></td>
<td>FDR43</td>
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<tr>
<td>Incubator</td>
<td></td>
<td>FDR09</td>
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<td></td>
<td></td>
<td>FDR43</td>
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</tbody>
</table>

**Tribal Bonding**

Tribal bonding was exhibited through family support by providing cash or letting the entrepreneur reduce expenses by moving in with the family (discussed in Section 4.1.2).

FDR43 used crowdfunding to raise funds from people who associate themselves with the gaming product that STP43A produced. FDR43 said that he had considered “getting crowdfunding through Kickstarter”, which he did as indicated in his company website (source: STP43A’s website, not listed to retain anonymity).

**Traditional Bonding**

The study findings show that prize money won through entrepreneurship competitions run by universities helped start-ups in various ways: equipment procurement, prototype preparation, trip funding, and hiring of developers, among other activities.

For FDR14, the prize provided “$5000 seed capital to use towards the idea… paid for basically the capital cost”, helping to pay for projectors, computers, and other expenses to run their financial literacy programmes for high school students. The prize money helped FDR43 hire employees to develop applications.

FDR21’s prize money was pivotal in the preparation for STP21A’s product of comic books, as she used it to “put together a prototype of what the first book might look
like”. The money also contributed towards attendance at an industry conference in Frankfurt, Germany.

FDR22’s prize also helped fund a trip, but for a different purpose. She made a trip to India where “she visited organic cotton farms” and “spent a few weeks working in the factory where our shirts are made” [FDR22]. The venture she created, STP22A, sells business shirts and uniforms to corporations in New Zealand, with materials sourced from organic farms and made into clothing in India. The ability to connect corporations to these projects in India through a story of the origins of the products and their indirect support for social causes is important to this venture, making this trip significant for STP22A.

The entrepreneurial ecosystem includes incubators such as Lightning Lab, which provides mentorship over a three-month period. Accepted students receive financial support during the course of the programme. For STP09, “that gave me enough money to quit [my job], get a few people to help me so we could see if we could really go somewhere or not. And so, I got three other people… At the end of the line we can raise more money from the investors” [FDR09]. STP43 shared a similar sentiment, as he used the incubator support money to pay his employees: “I got it from the Lightning Lab programme…. I use this money to pay my employees” [FDR43].

4.2.4 Physical Resources

Tribal Bonding

STP15A was a social enterprise selling handicrafts at the weekend market and were not charged fees for the stall facilities provided. This shows tribal bonding by the organisers of the market.

So, I start by selling in March with a lot of support from the Stadium Market. They gave us a table. We didn’t have to pay fees for a long time and so on. [FDR15]

Traditional Bonding

Work space is provided through traditional bonding for the student entrepreneurs under the various entrepreneurship programmes. Some of these facilities are internal to the universities and others are external. Office space is normally provided for student start-ups. Examples are the Startup Space and Distiller for student entrepreneurs from the
University of Otago (Startup Dunedin, 2018), the Unleash Space of the University of Auckland (Centre for Innovation and Entrepreneurship, 2018), and space provided as part of the Hatchery programme by the University of Canterbury (UC Centre for Entrepreneurship, 2018). The Distiller provides collaborative space in Dunedin and Auckland (The Distiller, 2018). Some of the student entrepreneurs also had access to physical workspace through external programmes such as Lightning Lab.

FDR10 had access to the Distiller while in Dunedin and subsequently when he moved to Auckland.

*University was extremely supportive with the Distiller. They gave us a free space. We were really well supported. And then when we launched in Auckland, it was the same with the Distiller in Auckland.* [FDR10]

FDR22 appreciated the work space provided which had an advantage of working with other entrepreneurs and an opportunity to discuss ideas.

*... providing space which is really good, being around other people that are starting up their own businesses as well. We get so much more done from just sitting in there.* [FDR22]

### 4.3 Bridging

It is necessary to consider bridging, which although not used as extensively as bonding, is an important social capital component. Bridging is required to access non-redundant resources which are not available through bonding relationships. Relatively few bridging connections were observed in the findings of this study. This situation may be the result of various individuals and organisations being available to the entrepreneurs through the entrepreneurship programmes. In these instances, bonding connections would have replaced possible bridging connections. Individuals to whom access would have required bridging, became available through bonding connections as various organisations were brought together by the entrepreneurship programmes. For example, FDR02 connected direct to experts in the Silicon Valley to get feedback on their application software instead of connecting to an expert through a bridging link. Extant literature identified two types of bridging. Internal bridging applies to bridging links within the university entrepreneurial ecosystem and external bridging to links external to the ecosystem.
4.3.1 Internal Bridging

FDR09 found internal bridging can be in a simple matter like finding out that a graduate from the science discipline could enrol for the Masters in Entrepreneurship. It was by bridging through a friend that he discovered this possibility.

*I didn’t realise that not having a business background, I could apply.... a friend of a friend said that they applied for the course without a business background a few months earlier. So, I subsequently applied and did the course.* [FDR09]

In the case of FDR04, internal bridging directly involved the start-up, STP04B. FDR04 invented hardware to hold multiple cameras to create a very specific type of image. They needed a potential customer and their supervisor connected them to a prospect, who not only became their customer, but also provided early payment that helped purchase and sort out the technicalities of their equipment. He said:

*She was our supervisor for our masters. So when she saw our idea, she put us in contact with Tim. He was amazing. He paid us in advance.... He gave eight months in advance of the actual work. He gave us the money to get the equipment.... He was an angel in that sense. Really enabled what I was doing.* [FDR04]

In this situation, where traditional bonding might have been expected of money paid upon delivery of services, the buyer paid in advance so that the team could buy the equipment to deliver products, reflective of tribal bonding.

4.3.2 External Bridging

The current study showed that the bond created by FDR19 with his mentor (within the university entrepreneurial ecosystem) was used to bridge to external resources. When FDR19 required funding at an early stage for STP19A, it was his mentor who connected him with people in China, where she had worked before.

*My mentor has six year work experience in China. So she introduced some people, some investors to me.* [FDR19]

FDR21 was also introduced to potential investors but in this case by her employer, given the credibility of having won an entrepreneurship competition while studying at the
university. This external bridging connection was useful especially when just joining the workforce after graduating.

“Well, I think this idea has merits because it’s been given credibility through winning this award. So maybe you can put me in touch with someone I can talk to about it.” And he introduced me to my first investor. [FDR21]

After a successful start of STP08C, FDR08 was considering setting up an office in the USA. It was a former faculty member from her master’s programme who linked her to someone outside the university entrepreneurial ecosystem.

*He put us in touch with an ex-Apple executive in San Francisco and we hired him as a consultant to help us figure out whether we want to do this US thing or not. [FDR08]*

FDR34 took a marketing approach to connect to people in the industry relevant to STP34A. Although placed under external bridging, some of these connections possibly were tribal bonding connections among people who were passionate about a similar cause. By sharing the passion through a story, FDR34 might have created some tribal bonds.

*... part of it is having a story of what makes your venture unique and going and telling people about it and sharing that passion on why we need to do something like this ... started off with talking to friends, talking to academics in Cambridge, talking to well-connected biotech entrepreneurs in Cambridge to talking to media people and using systems like LinkedIn to talk to strangers who are perhaps very senior in the industries.... from finding Nobel Prize winners in Cambridge to talk about the scientific issues to talking to media organisations like the Economist, the Financial Times, Nature, to talk about what are the media or publication issues when it comes to commercialising or publishing science.... Being close to London helped quite a bit because there were lots of consulting firms and financial firms.... and I guess it was a bit of as you know with networking from one person to another. One person thought this idea is really good and introduced you to two more people. [FDR34]*
PART III: Summary

This chapter addressed research question 1 providing supporting evidence on the different configurations of social capital components, and research question 2 elaborating on how traditional bonding and tribal bonding affect start-up outcomes. The two types of bonding were presented based on groups identified in this study. Groups affecting demand include consumers who form the basis for venture creation, customers who pay for the products, and critics who provide feedback on products leading to product improvements and in some instances creation of new ventures. Supporter groups provide knowledge, finance, human resource, and physical resource support for the creation of the ventures. Supporting evidence on bridging is also included in this chapter.
5 CHAPTER FIVE: DISCUSSION

The discussion in Chapter Five is based on the findings elaborated in Chapter 4 which answered two research questions. Research question 1 focuses on the effects of configurations of social capital components on start-up outcomes. With research question 1 also identifying the core conditions affecting start-up outcomes, research question 2 takes a practical route in understanding the differences in how traditional bonding and tribal bonding affect start-ups when interacting with support groups (affecting supply) and consumer (affecting demand) groups.

Tribal bonding and traditional bonding (institutional bonding displays traditional bonding characteristics) were the core conditions in the formation of configurations of social capital conditions that led to start-up success (Table 4-1). The differences between these two types of bonding lead to advantages that ultimately enable entrepreneurs launch their products/services sooner and at a lower cost when utilising tribal bonding. However, tribal bonding alone is not always enough to attain start-up success; the traditional approach still has a role to play. This chapter concludes with a model of the Cost Effect of Tribal/Traditional Bonding on Start-ups (Figure 5-2), and elaborates on the differences of engaging the two types of bonding.
This chapter has six sections (Figure 5-1). Section 5.1 discusses the impact of configurations of social capital conditions on start-up success. Sections 5.2 and 5.3 compare and contrast the effects of tribal bonding and traditional bonding on start-up outcomes. Section 5.12 discusses groups affecting the demand side of start-ups and Section 5.33 addresses the supply side of start-ups. Section 5.44 describes the smaller but important role that bridging plays as a peripheral component. These first four sections include insights into the involvement of trust and reciprocity within bonding and bridging. Section 5.55 discusses how to maximise on the combined use of tribal bonding and/or traditional bonding. Section 5.66 summarises this chapter.

![Diagram of Thesis Structure Foregrounding Chapter 5]

Figure 5-1: Thesis Structure Foregrounding Chapter 5
5.1 Impact of Configurations of Social Capital Components

While extant research covers the effects of individual components for maximum impact (Gresov & Drazin, 1997; D. Katz & Kahn, 1978; Misangyi et al., 2017; Short et al., 2008), this study significantly progresses the literature by identifying multiple configurations of social capital components leading to start-up success. This approach is consistent with a renewed perspective which considers configurations that enable maximum impact (Oh et al., 2006) with this research demonstrating the potential in considering configurations of conditions (rather than individual conditions) to theoretical development. In contrast, much prior research using the configuration approach engaged multivariate regression analysis with individual variables competing to explain the variation instead of configurations of variables that lead to various outcomes (Kask & Linton, 2013). Only a single configuration can be estimated for all cases with such an approach (Drazin & Van de Ven, 1985; Fiss, 2007) as compared to equifinality through which various configurations can result in a particular outcome (Gresov & Drazin, 1997; D. Katz & Kahn, 1978; Misangyi et al., 2017; Short et al., 2008).

Engaging fsQCA to capture multiple configurations of conditions indicates an important advance (Fiss, 2011) offering further insights into the effects on start-up outcomes. The findings indicate distinct configurations leading to start-up success (Table 4-1) with student entrepreneurs having engaged different pathways to creating start-ups. The study findings resonate with the call to study equifinality from both social capital and entrepreneurial research (Doty et al., 1993; Gresov & Drazin, 1997; Payne et al., 2011; Payne et al., 2014).

Start-ups which had institutional bonding as a core condition engaged mainly either with team bonding or bridging. This is consistent with extant research on new ventures that pursue incremental innovation with relevant support and resources available through traditional bonding (Solution 1b) as compared to explorative ventures that require bridging to seek resources (Solution 1a) (Elfring & Hulsink, 2007). This finding also aligns with literature highlighting the importance of bridging when bonding alone is insufficient to access resources and information required (Adler & Kwon, 2002; Woolcock, 1998) by the start-ups.

Findings also showed that start-ups engage tribal bonding (Solution 2). Based on shared interest or cause, tribal bonding can exist without interactions and is in contrast to
extant literature indicating that social capital is generated through interactions residing within the network and by being part of the network (A. Anderson et al., 2007).

Further, the results of the present study called attention to differences in start-ups that maximised with both institutional bonding and tribal bonding. Trust in the advice given by mentors contributed to the success of some start-ups (Solution 3a) which is consistent with extent literature highlighting that mentors may have the technical knowledge but trust is crucial and just going through the motions is not sufficient for success (Cull, 2006). Other start-ups (Solution 3b) had to engage bridging when tribal bonding connections were inadequate to access to insufficient resources, a phenomenon that is consistent with extant literature (Adler & Kwon, 2002; Woolcock, 1998) with the important exception that tribal bonding is also engaged besides bridging.

The findings focus attention on the importance of tribal bonding playing a role similar to bridging in accessing resources but without an intermediary. This is reflected in extant literature on seeking resources for a task and attracting like-minded individuals to volunteer, with crowdsourcing increasingly providing a platform for such activities (Estellés Arolas & González-Ladrón-de-Guevara, 2012). Another example is Internet open source software which also engages the tribal bonding concept through some people who collaborate in the software development without receiving anything in return (Raymond, 2001). The present results are significant in highlighting the distinctly different characteristics of tribal bonding compared to traditional bonding, and the ensuing access to like-minded people who share a similar enthusiasm for the subject area under consideration.

5.2 Bonding - Groups Affecting Demand

5.2.1 Consumers

This study identified four findings related to consumers when comparing the use of tribal with traditional bonding: (a) tribal bonding achieved market acceptance sooner than traditional bonding leading to quicker start-up success, (b) emerging sub-tribes that created more opportunities for generation of new products and/or new ventures, (c) engaging consumer segments to surface consumer tribes, and (d) launching multiple ventures.

Comparing successful start-ups, consumer tribes (based on the tribal approach) had pre-existing needs and therefore accepted the products/services if they were well-developed. In contrast, the traditional approach created new products/services for
consumer segments which may or may not need the products. Therefore these products had to be marketed to consumers, hence requiring a longer timeframe in establishing these new products/services.

**Faster Consumer Acceptance**

The current study provided evidence that start-ups engaging in tribal bonding (through consumer tribes) rather than traditional bonding (through consumer segments) garnered market acceptance faster (Section 4.1.1). This finding is consistent with extant literature. As discussed in Section 2.9, consumer tribes are networks based on a shared existing passion or emotional need for the products/services (Cova & Cova, 2002). In contrast consumer segments, based on demographics or psychographics (Goulding et al., 2013), requires development of a direct relationship with the consumer (Cova & Cova, 2002) therefore taking a longer time to establish acceptance (Canniford, 2011).

A finding in this present study involving development of products based on entrepreneurs’ imagination is the use of the traditional bonding in marketing to their related consumer segments (STP02A and STP13A in Section 4.1.1). Such ventures took a longer time to get market acceptance for their products and extra effort by the founders; overall requiring a longer time to attain start-up success. The need for a longer time to achieve success at the venture level could be explained by a similar phenomenon at an industry level. Compared to entrepreneurs in a recognised industry, entrepreneurs entering a new industry need to interact with sceptical customers (as well as suppliers, creditors, and other resource providers) and develop their acceptance and trust (Aldrich & Fiol, 1994). While there is a push for innovation and creativity in the drive for new ventures, entrepreneurs must be aware that if there is a consumer tribe ready for the product, success will be achieved sooner.

However, findings from this current study show that engaging consumer segments through online communities helps in confirming product features and identifying new features. This process surfaces consumers that belong to a tribe that appreciates the product and in the process the entrepreneurs develop good relations with the tribe members. This supports the concept of effectuation which plays a role under uncertainty through potential ties by consumers self-selecting themselves (Sarasvathy, 2008) through tribal bonds. Honda took an initial traditional approach in working through dealers when entering the motorcycle industry in the USA and did not succeed (Pascale, 1996). It was
the use of the Honda motorcycles to run errands that attracted the attention from a different tribe, the sporting goods stores rather than the dealers.

Salomon, a traditional brand specialising in winter sports equipment, took a tribal approach to entering the snowboarding market and managed to secure the third position in the snowboarding French market (Cova & Cova, 2002). Subsequent focus on the in-line rollers with a similar approach saw Salomon penetrate the market and have a better consumer acceptance than Rossignol and Fila, which used the traditional approach starting with a product offer and faced poor sales.

**Emerging Sub-tribes**

An important finding was the emergence of new sub-tribes for an established product (STP43A in Section 4.1.1). This finding is consistent with the identification of a second tribe in the case of Airbnb, which was initially targeted for a consumer tribe of travellers with limited cash but could not afford hotel prices (Boswijk, 2017). Interestingly, Airbnb’s analysis showed that the typical Airbnb guest has a higher than average income, travels frequently, and is looking for a new experience by living like a local rather than taking the route of a typical tourist. As Cova and Cova (2002) explained, tribes are focussed on elements that connect its members, creating products that hold together the tribe members.

The current study also found that variations of the main products can be creatively crafted for different sub-tribes (STP21B in Section 4.1.1). Reino & Aino (a Finnish company producing slippers) created variations of its products for consumer sub-groups based on their diverse consumption needs (Närvänä et al., 2014).

Emerging sub-tribes create opportunities for new products/services and sometimes also new ventures. In this instances, the consumers want the products/services and a faster pace to a successful outcome.

**Launching Multiple Ventures**

An interesting finding is the creation of multiple start-ups based on the same core technology and product foundation (STP16A, STP16B, and STP16C in Section 4.1.1). This finding supports the use of effectuation processes for an entrepreneur to build multiple different types of start-ups in disparate industries (Sarasvathy, 2001). Sarasvathy (2001) says “Given the exact same starting point—but with a different set of contingencies—the entrepreneur might end up building one of a variety of businesses” (p.
247). U-Haul, a moving firm formed in 1945 in the USA, is an example which used effectuation to create a network of alliances by targeting multiple aspects within a single business (Silver, 1985). Instead of raising money to buy trucks for the moving business, the founder got family, friends, and customers, to make down payments on trucks which are lent back to U-Haul. Instead of setting up multiple locations, U-Haul engaged service stations to market trailer rentals instead of having their own marketing outlets. In effect, they created an early day franchise model. With just US$ 5,000 and hardly any employees, the business thrived and in four years had a nationwide business and at that point captured 100% market share with his do-it-yourself moving industry.

**Moving from Traditional to Tribal Bonding**

An important finding from this study is the engagement with online communities to co-create products that will match the consumers’ need, and in the process develop consumer tribes (STP02A in Section 4.1.3). The potential value of involving consumers in innovation is well acknowledged (Prahalad & Ramaswamy, 2000) and by going beyond getting feedback to co-creating products with consumers, businesses can move from traditional bonding to tribal bonding.

Social media plays a key role as an avenue for creation of ideas for new products and enhancements to existing products (Schlagwein & Hu, 2017), and enable consumer participation in the design and development of new product design (Frow et al., 2015). Online media has enabled information exchange and collaboration leading to co-creation (Faraj et al., 2011). Unlike time-consuming efforts required through the offline mode, online media has unleashed a powerful way for entrepreneurs to access their potential consumers (C. Smith et al., 2017).

This finding is consistent with the experiences of other businesses. Hallmark greeting cards initially sought new ideas through gifts and coupons but subsequently evolved it into a consumer community progressing to generate new product ideas (Manville, 2004). Lego used crowdsourcing to involve its fans to propose models and concepts that were subsequently voted for by the fans (Schenk et al., 2017).

**5.2.2 Customers**

The study found four types of customers (those who pay for the services that others consume): government bodies supporting social and environmental causes, FPOs through
the philanthropic aspect of CSR, marketing alliances with FPOs, and crowdfunding (Section 4.1.2).

Of the four types of customers discussed below, the first two practice tribal bonding and can be categorised under programmes practicing a moral system with rational agreement to support worthy causes (Swedberg, 1998) with no explicit exchange of value among the parties involved (Godfrey, 2005). However, NPOs can also engage in traditional bonding through marketing alliances with FPOs, in which case there clearly is a gain on the part of the FPOs. The fourth type of customer occurs within crowdfunding where both tribal bonding and traditional bonding can apply depending on the whether reciprocity is expected.

**Grants and Funds from Governmental Organisations**

The current study found that NPOs and social enterprises received grants from governmental organisations (STP14A and STP41A in Section 4.1.2) and assistance from foreign governments (STP15B in Section 4.1.2). These organisations are paying for products/services used by the beneficiaries of the NPOs or social enterprises. This finding is consistent with that of R. L. Fischer et al. (2010), who state that potential sources of revenue for NPOs include grants from government. Such grants are considered to be tribal in nature as reciprocity in terms of monetary returns are not expected.

**Philanthropic CSR Support from FPOs**

Findings from the current study also indicated that NPOs and social enterprises received sponsorships from FPOs (STP14A and STP38C in Section 4.1.2). These findings are in line with Halme and Laurila (2009) who describe this aspect as the philanthropy perspective of CSR with corporations providing funds but without expectation of monetary returns. These findings are also in agreement with those obtained by Acharya and Patnaik (2017) whose study reported Rourkela Steel Plant in India paying for improvement in village facilities, and training and skill development to enable income generation. As NPOs and social enterprises serve social purposes, there is no reciprocity expected in return reflecting tribal bonding.

**Support through Marketing Alliances with FPOs**

Cause-related marketing alliances of NPOs collaborating with FPOs was not observed in this present study. Such alliances are based on traditional bonding as the FPOs enjoy monetary gains from related transactions. Partnerships can range from licensing,
joint issue promotions, and transaction-based promotions (Andreasen, 1996). Logos and names of NPOs can be licensed to corporations for a percentage of revenues or for a fee. Literature indicates cause-related alliances between American Express and arts organisations located in San Francisco from as early as 1982 (Andreasen, 1996). Further, Nowak and Washburn (2000) highlight that credibility of NPOs can be enhanced through cause-related marketing alliances with strong corporate sponsors. Shrewd engagement through this type of traditional bonding activities provides NPOs with more avenues of funding for their programmes. Andreasen (1996) highlights the importance of choosing an FPO that represents values that the NPO subscribes to, failing which negative press about the FPO will affect the NPO’s reputation (Andreasen, 1996).

**Crowdfunding**

The findings of this current study also indicated instances of crowdfunding (STP25B in Section 4.1.2 and STP43A in Section 4.2.3) engaged in the student start-ups. Crowdfunding is popular with entrepreneurs requiring financial contributions from a crowd (Paschen, 2017) especially when they lack operating history and track record to support the value of their start-ups to investors (Stemler, 2013).

### 5.2.3 Critics

The findings of this study highlight the important role played by online engagement with consumers for the improvement of existing products and developments of new products (STP02A and STP11A in Section 4.1.3). These findings corroborate Alexandrov, Lilly, and Babakus’s (2013) concept that positive feedback from a trusted source can have an impact on the decision making of other consumers. The tribal bonds, due to the shared interests, existing among the consumers propels the online exchange towards better acceptance of products by the consumers. These findings reflect extant literature on the use of online communities by marketers to monitor electronic word-of-mouth and also to influence potential customers (Kozinets et al., 2010). A study of Hokey Pokey (an ice cream retailer) showed that, with the use of positive electronic word-of-mouth, the company was able to increase its sales of ‘custom creations’ proportionate to its overall sales (Kumar et al., 2013).

Another important finding is the creation of new ventures, as an alternative to existing products/services, resulting from consumer dissatisfaction of existing products (STP05A and STP38B in Section 4.1.3). A sub-tribe emerges with their requirements not
met by the original product creating an opportunity for a differentiated product. This finding reflects that of Cova and White (2010) who highlighted the creation of counter-brands as in the case of Confrontation by a breakaway consumer group of Warhammer (Cova & White, 2010). Another possibility of alter-brand in which the producers are also the consumers (for example, Couchsurfing) was not detected in any of the start-ups in this study.

Generally, targeting a consumer tribe triggers tribal bonding with feedback from the consumers as they already have an interest in the product. However, entrepreneurs who are leading with innovative approaches and/or new technology choose to take the traditional approach of marketing to consumers. Although there is a possibility of the product failing, some entrepreneurs are willing to take the risk as they will be ahead of the crowd if their gamble on their new products for which there no consumer tribes yet succeeds. It may then be a matter of engaging consumer segments (traditional bonding) to actively critique products that in co-creating the products, developing consumer tribes (tribal bonding) (Faraj et al., 2011).

Online communities can be formed around consumer needs and concerns (Sproull & Arriaga, 2007) and can be business sponsored (Hunter & Stockdale, 2009), and respond to individuals who are looking for interest-based support (Armstrong & Hagel, 1996). Entrepreneurs may also find it useful to engage in online communities that share industry specific knowledge, discuss issues, learning through posting questions and responding to questions, and exchange experiences (Wasko et al., 2009).

5.3 Bonding - Groups Affecting Supply

5.3.1 Knowledge Resources

Given the context of a university entrepreneurial ecosystem, curriculum-based programmes and extracurricular programmes were conducted or supported by the universities, providing for knowledge and skill development. These programmes provide an environment for institutional (traditional) bonding within the universities and with other organisations within the university entrepreneurial ecosystem. In the present study, formal entrepreneurship programmes involved engaging governmental bodies (for example, city councils and chamber of commerce), businesses, and community organisations to provide knowledge exchange, mentoring, and funding support. This is consistent with extant literature regarding support provided by the university entrepreneurial ecosystem.
(Perkmann et al., 2013; Wright et al., 2017). A number of the student entrepreneurs interviewed in the current study also received extended guidance through incubators and accelerators.

The current study found the use of online resources for knowledge on entrepreneurship as well as specialised knowledge (FDR30 and FDR36 in Section 4.2.1) based on start-up needs (Wasko et al., 2009). The current study also found that some entrepreneurs attended conferences (FDR08 and FDR21 in Section 4.2.1) to exchange knowledge (Lampel & Meyer, 2008).

An important finding of the current study was the identification of a start-up based on academic research conducted by PhD students (FDR35 in Section 4.2.1). While the integration of the outcome of academic research towards start-up creation reflects literature on academic entrepreneurship (Abreu & Grinevich, 2013; Urbano & Guerrero, 2013), the importance of this finding is in university entrepreneurship programmes being the catalyst for start-up formation from academic research.

### 5.3.2 Human Resources

A finding from this current study was the participation of individuals from corporations and governmental organisations that support the university entrepreneurship programmes (STP14A in Section 4.2.2). Wright et al. (2017) described this feature as one of many that reflect the emerging ecosystem of student start-ups. Individuals participating in such activities can generally be said to display traditional bonding as these activities are a part of their job responsibility in delivering services on behalf of their organisations. However, it is possible that some of these individuals are personally motivated to promote entrepreneurship among students, in which case, tribal bonding applies. The salience (condition of being prominent) of the individual’s identity determines whether the actions are motivated by traditional bonding or tribal bonding.

A finding from the present study that exhibits tribal bonding is the return of the alumni of university entrepreneurship programmes to support the current programmes but do not get paid for it (FDR10 and FDR34 in Section 4.2.2). This finding is also observed in the study of the University of Chicago from a perspective of the campus as an entrepreneurial ecosystem (D. J. Miller & Acs, 2017).

The current study found that university students engaged in activities through tribal bonding by volunteering their time for worthy causes with expectation of little or nothing in return (STP14A and STP34A in Section 4.2.2). This reflects Lewis’s (2013) study of the
Student Volunteer Army engaging student volunteers to support a social cause. However, the present study showed that the traditional approach also applies with students receiving a salary for work done.

In this current study, friends and family were found to be another source of tribal bonding support that entrepreneurs could engage without incurring any cost (FDR03 in Section 4.2.2). Although not specifically for student entrepreneurs, this finding was also reported by Wadhwa, Aggarwal, Holly, and Salkever (2009).

5.3.3 Financial Resources

While, as can be expected, financial resources through the entrepreneurial ecosystem were observed, the findings also confirmed that parents still provide such support. The present study found that financial resources for university student entrepreneurs were available through the university entrepreneurial programmes, accelerators and incubators, and support from government and corporate sponsors. Extant literature confirms the availability of seed funds and grants through the university, financial support through accelerators and incubators, and support from the government and corporate or other sponsors (Wright et al., 2017).

Findings of the present study also highlighted the effective use of prize money from competitions by the student entrepreneurs for initial start-up activities (FDR14, FDR21, and FDR22 in Section 4.2.3). While extant literature discussed the increase in amounts of prize money, they do not specifically indicate the use of the money for start-up development (e.g., D. J. Miller & Acs, 2017; Wright et al., 2017). However, Wright et al. (2017) highlight how the French government is supporting student start-ups through the issuance of awards by a jury for innovative start-ups. Of these, three receive prizes only upon creation of the ventures, and with three grand prizes for the most promising projects.

The current study also found that parents were a source of financial assistance (FDR26 and FDR22 in Section 4.2.3). This finding matches that of previous studies by Dunn and Holtz-Eakin (2000) and Wadhwa et al. (2009). The findings from the present study also indicated that some of the students drew out of their own savings, which is consistent with results of a study showing founders’ personal savings as the most important funding source (Wadhwa et al., 2009). However, previous literature does not discuss parents and own savings as funding sources from the perspective of student entrepreneurs. It is anticipated that these two funding modes will be required to a lesser
degree for student entrepreneurs given the variety of funding sources made available to university student entrepreneurs.

5.3.4 Physical Resources

As typical of university entrepreneurial ecosystems, the present study finds that workspace and office facilities are made available for the student entrepreneurs (Section 4.2.4). Findings also indicated that some of the entrepreneurs have access to accelerator facilities. These findings are consistent with extant literature on facilities made available to student entrepreneurs that range from work space with basic support to organised education, mentoring, and an intensive programme over a short period of time (Bruneel et al., 2012; Pauwels et al., 2016; Wright et al., 2017). These facilities are provided by the institutions and are traditional bonding in nature.

The current study also indicated the presence of tribal bonding when the local community provided physical space for start-ups to conduct their business (Section 4.2.4). D. Smith (2009) showed that this also true for organisations, such as Lotus and Dyson, which had used work space under special arrangements.

5.4 Essential Role of Bridging

In this present study, bridging was observed primarily with access to resources after the initial bonding connections (Section 4.4.2). This is because of the extent of support through bonding connections initially provided by the organisations within the ecosystem. This finding is consistent with extant literature in that bridging relations are required at later stages, if not at the initial stage, for incremental innovation (Elfring & Hulsink, 2007).

However, the view of bonding as internal and bridging as external social capital (Adler & Kwon, 2002) is too simplistic and not relevant as there are multiple groups that entrepreneurs belong to and depending on which group the entrepreneur is referring to, the same interaction can be internal or external. Such confusion has been avoided in this study by splitting bonding into team bonding, institutional bonding, and tribal bonding.

For the same reason internal bridging (Stolle & Rochon, 1998) and external bridging (Paxton, 2007) are also not relevant and addressing bridging as a single construct is deemed sufficient. It is possible that this explanation and a review of the findings using the definitions used in this study may explain the different results produced by Geys and Murdoch’s (2008) study involving internal bridging and external bridging.
In addition, bridging is transitional in nature and bonding is required to strengthen the relationships created through bridging. Previous research has shown that combining bonding and bridging interactions should result in creative potential for ventures (Maria, 2010; Slotte-Kock & Coviello, 2010). While bridging is an important component, it is not as extensive as bonding.

5.5 Maximising on Tribal and Traditional Bonding

Entrepreneurs can select to engage in traditional bonding or tribal bonding with their potential consumers and customers – and can transition between them, as well as balance their uses of each approach. Both the types of bonding have their merits, drawbacks, and relative advantages, and offer different utilities at different points in the development process, aligned with the type of innovation and market being addressed. There are related cost implications, which may be summarised in a model drawing on analyses presented in Table 2-6 and Table 2-7. Figure 5-2 presents the new summary model which depicts tribal bonding and traditional bonding in relation to reciprocity and cost.

The norm of reciprocity is set on the basis of obligations to be repaid because of previous favours (Gouldner, 1960; Portes & Sensenbrenner, 1993). For example, voluntary arrangements of product co-development and knowledge exchange with instrumental motivation through economic alliances help reduce costs, share skills, or improve strategic positioning (Biggart & Delbridge, 2004). This is consistent with extant literature on reciprocity involving mutual exchange (Nahapiet & Ghoshal, 1998; Portes & Sensenbrenner, 1993) directly between two parties (Herne et al., 2013) or indirectly within a group involving a third party (Stanca, 2009).

![Figure 5-2: Cost Effect of Tribal/Traditional Bonding on Start-ups](image-url)
Surprisingly, findings from this study highlighted the willingness of some individuals to share their knowledge with others without expectation of reciprocity, which this study has termed as tribal bonding (Table 2-6). For example, in this current study, experienced entrepreneurs attended gatherings of student entrepreneurs sharing their knowledge and mentoring the student entrepreneurs (FDR10 and FDR34 in Section 4.2.2). The nature of the action is not based on the action itself. It depends on the salience of an individual’s identity within a given situation and context (McGuire & Padawer-Singer, 1976). Whether experienced entrepreneurs are displaying traditional or tribal behaviour depends on which identity is prominent (R. M. Kramer, 2006). Mentoring, a job responsibility, starts with traditional bonding but an inherent desire to share can lead to tribal bonding.

Driven by a common motivation, tribal bonding takes the lowest amount of time to develop relationships (Section 2.10). In contrast, traditional bonding is instrumental in nature and requires more time as the individuals may not know each other. The same reasons contribute to a reduced time in responses to requests. In addition, there is a higher requirement for monitoring when reciprocity is expected (Welter & Smallbone, 2006) as compared to non-reciprocity of tribal bonding. Further, tacit knowledge transfer is better in an environment of non-reciprocity.

At initial stages of start-ups, entrepreneurs typically have minimal funds. Therefore, the less-cost tribal bonding may be preferred. However, working with a consumer tribe that has already established its requirements for a possible product restricts entrepreneurs from creating variations of existing products, new products, or new markets of their own volition. In a similar manner, using tribal bonding may also limit access to other groups which could support more innovative product development directions. Although traditional bonding is considered the more-cost option, it is still useful for ventures intending to explore wider possibilities, leading to the creation of new products and new markets. Relying solely on a tribal bonding, while avoiding traditional bonding, is likely to limit the growth potential of a venture.

On the demand side, consumers are the crucial element as without them there is no need for the product or service. Tribal bonding would be appropriate for consumer tribes whose members already share similar preferences, allowing an entrepreneur to exploit an existing market. By contrast, entrepreneurs intentionally pursuing new products should adopt traditional bonding as there are no previously identified existing consumer tribes. Engaging the more-costly traditional bonding may generate new markets without
established competition, as more time and effort are required to create a viable new market than to break into an existing one.

While using traditional bonding to persuade consumers to use products created by businesses suffers from limited certainty of consumer acceptance, social media and crowdsourcing are two platforms that have changed how this game is played. This study provided insights into the use of such platforms as avenues for entrepreneurs to create tribal bonds with new consumer segments, hence lowering the cost. Social media engage potential consumers in the co-creation of new products and improvements to existing products. This process encourages entrepreneurs to improve their products while leading those consumers who engaged in providing feedback to form tribal bonds with the ventures, sometimes even becoming advocates for the products. Crowdsourcing has enabled entrepreneurs to initiate an open call for resources to which self-selected individuals respond, in the process potentially forming support groups and tribes of consumers.

5.6 Summary

This chapter started with describing the effects of the tribal versus the traditional bonding on groups affecting demand and groups affecting supply followed by the essential role of bridging. Tribal bonding and traditional bonding, and reciprocity were brought together to develop the Cost Effect of Tribal/Traditional Bonding on Start-ups (Figure 5-2). Three ways of engaging this model to lower the cost of start-up activities were discussed.
6 CHAPTER SIX: CONCLUSION

The aim of this research, to determine the effects of social capital on start-up outcomes, was supported by the following research questions.

Research question 1:
How do different configurations of social capital components affect start-up outcomes?

Research question 2:
How does social capital, through the various groups (consumers, customers, critics, and support) involved, affect start-up outcomes?

The findings related to the first question supported the presence of tribal bonding, a new social capital component, which is distinctly different from traditional bonding. In addition, various configurations with these two forms of bonding as core conditions identified multiple pathways to start-up success. The second question investigated start-up involvement with groups that affected start-up outcomes in different ways, providing insights into different perspectives that entrepreneurs should consider.

The following chapters delivered the details of this study. Chapter 1 provided the background that prompted this research and the research questions. Chapter 2 set forth the extant literature on social capital theory, progressing to highlight its shortcomings and engaging social identity theory and the tribalism concept to derive new concepts to address the shortcomings. This chapter also elaborated on entrepreneurship, types of organisations (FPOs, NPOs, social enterprises, and communities), and the impact of online or virtual communities on the creation and growth of organisations. Chapter 3 described the research paradigm, research strategies, and methods used to examine the new concept of tribal bonding and also identified the major social capital approaches that support start-up outcomes. Chapter 4 presented findings supporting the two research questions, whilst Chapter 5 synthesised the findings with theoretical and empirical literature.

This final chapter of the thesis summarises the findings and contributions of the study, presents the study’s limitations, and then examines potential areas for future research. Hence, Section 6.1 describes the research background, Section 6.2 discusses the theoretical, methodological, and practice contributions of the study, Section 6.3 indicates some limitations of the present study and provides suggestions for future research, and finally, Section 6.4 summarises the chapter.
6.1 Research Background

With the ongoing shift from many large corporations with a large number of employees to fewer large corporations and many small enterprises each employing fewer people, entrepreneurship is a topic of interest to entrepreneurs, government, and civil society. Generating new ventures requires interactions by entrepreneurs with various groups of people for access to resources that entrepreneurs do not have at their disposal and social capital enables these interactions.

The university entrepreneurial ecosystem, with its ability to generate social capital through its engagement with various organisations, including industry, government, and community-based, provided the research context. Student entrepreneurs from this ecosystem were the participants of this study, which was further motivated by the researcher’s interest in the need for university graduates to develop entrepreneurial skills, in addition to academic skills. Only universities in New Zealand were chosen for this research to ensure that both governing policies and philosophies were similar, while also ensuring a sufficient sample size was attainable. Relevant research strategies were identified to support the research aim.

Three research strategies supported the critical realism (CR) paradigm that underpins the present study: abduction, induction, and retroduction. The ‘surprise’ discovery of tribal bonding was subsequently supported by empirical data and the identification of multiple configurations leading to start-up success. Further analysis highlighted the differentiated effects of tribal bonding and traditional bonding (institutional bonding exhibits features of traditional bonding) in support groups, consumers, customers, and critics.

The findings from this research have produced contributions to theory, methodology, and practice.

6.2 Contributions of the Study

Table 6-1 summarises the contributions from this study.
Table 6-1: Summary of Contributions

<table>
<thead>
<tr>
<th></th>
<th>Theory</th>
<th>Methodology</th>
<th>Practice</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identification of tribal bonding</td>
<td>●</td>
<td>●</td>
<td></td>
</tr>
<tr>
<td>Framework of Bonding and Bridging</td>
<td>●</td>
<td>●</td>
<td></td>
</tr>
<tr>
<td>Model of Cost Effects of Tribal versus Traditional Bonding</td>
<td>●</td>
<td>●</td>
<td></td>
</tr>
<tr>
<td>Use of retroduction (instead of deduction and /or induction) following abduction</td>
<td></td>
<td>●</td>
<td></td>
</tr>
</tbody>
</table>

6.2.1 Theoretical Contributions

This study makes three contributions to social capital theory. The first is the expansion to social capital theory through identification of the new concept of tribal bonding which has no expectation of reciprocity compared to traditional bonding which involves the extent of reciprocity. Being supported by literature and empirical findings, tribal bonding is theoretically generalisable and applicable not only within the context of this study but to any context where social capital is of relevance, making it a significant contribution to theory.

The second contribution is the Framework of Bonding and Bridging (Table 2-6) which incorporates the social capital components with strong, weak, and potential ties. This framework will bring clarity to the abstract definitions and vague theoretical perspectives of social capital that potentially limit advances in social capital theory (Payne et al., 2011). Further, the terms of bonding and bridging have been simplified overcoming vague definitions such as internal bridging and external bridging (Geys & Murdoch, 2008), and bonding as internal and bridging as external (Adler & Kwon, 2002).

The third contribution is a Model of Cost Effect of Tribal versus Traditional Bonding (Figure 5-2) which depicts how the two types of bonding along the cost and reciprocity dimensions providing a simple model for use in practice. While the framework positions all the relevant aspects that define social capital, the model links tribal bonding and traditional bonding to cost, giving another perspective to the effect of tribal bonding.

6.2.2 Methodological Contributions

Engaging QCA (led by the choice of the critical realism paradigm) has a number of implications. Significant among the implications is equifinality (a feature of QCA) which identifies multiple configurations of social capital components rather than a single configuration applicable to all cases. These multiple configurations provide an avenue for
teasing out how each configuration differs from another, offering unique insights into multiple ways of achieving success under different circumstances. In this manner, emerging possibilities that appear as outliers and ignored in single configuration methods, are included in QCA widening the learning from the research.

From a practical perspective, the use of QCA simplifies the process of constant comparison through data calibration focusing only on one case at a time. This ability to focus together with the use of fuzzy logic introduces rigour in analysing the cases. Furthermore, calibrating data one case at a time makes it possible to study a large number of cases which is a challenge when compared to thematic analysis.

6.2.3 Practice Contributions

The Model of Cost Effect of Tribal/Traditional Bonding on Start-ups (Figure 5-3) is of use for entrepreneurs when considering cost effects and the related activities. In looking for support, entrepreneurs should start looking at support groups sharing tribal bonds and when not possible to then move towards traditional bonding and then to bridging. The approach is different for interactions with consumers, customers, and critics. Identifying consumer groups (referred to as consumer tribes) with tribal bonds provides a ready market for products besides the advocacy of the products by the tribe members. When tribal bonding does not exist, entrepreneurs can engage the consumers in co-creation of products, hence developing an allegiance with consumers. Attempts at co-creation may also alert the entrepreneurs to lack of a market for their products. Entrepreneurs should engage with online communities and crowdsourcing in spurring tribal bonding engagement as they provide an environment where people with similar interests are seeking to engage apart. Furthermore, geographical restrictions are avoided.

Customer groups (those who pay for the products and may be different from consumers) are a separate consideration as seen in FPOs sponsoring NPO. Corporate social responsibility (CSR), which is construed to be an image-builder to generate more revenue, is actually an optimum manner for FPOs to deliver to common good. CSR is an optimal solution whereby FPOs get to contribute to charitable activities and NPOs are able to carry out activities supporting the common good. With an increasing awareness of the greater good and responsibility to society and environment, critics are an important consideration. Critics, groups with tribal bonds supporting a greater good, can destroy efforts of entrepreneurs whose start-ups go against the principles of common good.
The various actors within the entrepreneurial ecosystem play a significant role in guiding and coaching student entrepreneurs, and it is important that they go beyond ticking boxes in fulfilling entrepreneurship programme objectives and work towards gaining the trust of student entrepreneurs and contributing towards their success.

6.3 Limitations and Future Research

This section addresses theoretical, methodological, and practice limitations along with future research potential. These limitations are mostly related to scoping the study to ensure useful results that can form the platform for future research and were guided by the timeframe available.

6.3.1 Lack of Theoretical Focus on the Entrepreneur

In investigating only interactions with groups that support start-ups, the needs of the entrepreneurs as a group were not a focus in this study, but surfaced in the findings. Of interest is the isolation and loneliness that entrepreneurs feel. Future research on support for entrepreneurs needs in terms of isolation and loneliness will be helpful for entrepreneurs, especially since entrepreneurs are seen as confident and passionate, characteristics they portray and maintain. This limitation was by design as the focus was on social capital on start-up outcomes, and the study focus was therefore on the start-up and not the entrepreneur.

6.3.2 Methodological Limitations

Among the methodological limitations is the restriction of the sample to only university students in New Zealand. Researcher bias, participant bias, and generalisability also pose limitations.

Restricted Sample

The context of the current study was limited in a few ways. The first was limiting the study to university student start-ups and excluding students from other educational institutions, senior citizens, and other groups. The second limitation revolved around restricting the study to the New Zealand context. The last limitation was the exclusion of start-ups that are not exposed to an entrepreneurial ecosystem.

Limiting the scope was necessary for two reasons. First, to identify a small enough context, which would still allow exploration of new concepts and the re-explaining of known concepts, whilst enabling the creation of a framework and a model that can be used
as the starting point for subsequent studies. The other contexts can be considered for future studies to build upon the findings from this study. Widening the context would have increased the complexity of the study and reduced the thoroughness of engagement with literature and empirical data.

Scoping the study in such a manner also helped in completing the study in a reasonable timeframe but still providing sufficient time for the creation of a model and a framework that can be used in future studies. Future research can follow a similar series of steps, with improvements to the methodology.

Another limitation was selection of the sample based on student entrepreneurs (from New Zealand universities) who had successful ventures, as the sample list was extracted from university websites, university programme coordinators, and searching through LinkedIn. All these sources reported successful ventures. Again, a practical choice was made on studying the successful start-ups as the study outcome will be of greater practical use in terms of guiding entrepreneurs on how to succeed with their start-ups. There was the possibility of some selected entrepreneurs who had early failed start-ups before succeeding, but only two were such cases.

Despite these restrictions, this study produced a model and a framework that have the potential to be a springboard for future research investigating each of the contexts that were not included in this study.

**Researcher Bias**

The researcher’s previous experience working with university start-ups for her Master’s thesis and participation in some of the university extracurricular programmes could have been a source of bias through construing meaning of interview data based on personal experience and through asking leading questions. One way of managing bias was through triangulation using online news articles on the start-ups used in this study, and the LinkedIn profiles of the study participants. Researcher bias during the interview stage through leading questions or suggestions was avoided through the use of an open-ended request instead of specific questions (Section 3.3.3). Further checking for bias was done during the data calibration process (Section 3.7.3) and in handling contradictions that surfaced during the truth table creation (Section 3.7.4).
**Participant Bias**

There were two possibilities of participant bias. The first is interviewee bias, whereby interviewees want to present themselves in a socially desirable way, or interviewees respond based on interviewee perception of the interviewer’s approach (Saunders et al., 2016). Typically, entrepreneurs are portrayed as heroes (Gumpert & Boyd, 1984) and may want to live up to that expectation; this phenomenon was observed in some of the interviews. The second is hindsight bias, whereby the participant, in hindsight, may re-interpret past activities based on their current knowledge (e.g. Cassar & Craig, 2009).

An understanding of the different perspectives based on theoretical concepts, empirical data, and the continued learning from previous interviews provided the researcher a basis to handle these biases. Appropriate questions were prompted that enabled the interviewee to break away from any self-restrictions they may have placed upon themselves or interpretations.

**Generalisability**

Unlike the better known empirical generalisation which applies to the study of a setting typical of a larger aggregate, theoretical generalisation involves drawing conclusions about social science theory from findings observed and described (Hammersley, 1992). Tribal bonding, uncovered in this study and supported by literature and empirical findings, is therefore theoretically generalisable not only to other entrepreneurial contexts but to any context where social capital is of relevance.
References


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Informal economy: Studies in advanced and less developed countries (pp. 11-37). Baltimore, MD: Johns Hopkins University Press.


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Appendix A: Ethics Approval Letter

19 April 201

Professor A Everett
Department of Management
Division of Commerce
School of Business

Dear Professor Everett,

I am again writing to you concerning your proposal entitled “Impact of university student curriculum-based and extra-curricular programmes on university start-ups and growth - A social capital perspective”, Ethics Committee reference number 15/082.

Thank you for your email of 14th April 2016 with attached revised Information Sheet for the above study.

The Committee accepts and approves the revisions made and we have updated our records accordingly.

Your proposal continues to be fully approved by the Human Ethics Committee. If the nature, consent, location, procedures or personnel of your approved application change, please advise me in writing. I hope all goes well for you with your upcoming research.

Yours sincerely,

Mr Gary Witte
Manager, Academic Committees
Tel 479 8256
Email: gary.witte@otago.ac.nz

c.c. Professor S Grover Department of Management
Appendix B: Maori Consultation

University Student Business Startup and Growth

Principal Investigator 1

Name: Prof Andre Everett
Department: University of Otago
Campus: DUNEDIN
Email: andre.everett@otago.ac.nz  Telephone: Not Supplied

Is this Otago District Health Board research?
No

Does this research involve human participants?
Yes

Description in lay terms of the proposed research
This PhD thesis research investigates the impact of university student curriculum-based and extracurricular programmes on student business startups and growth from a social capital perspective.

Description in lay terms of the potential outcomes of the area of research
This study is to gain an understanding of (a) how university, industry, government, and society can engage in supporting student startups; and (b) how such collaborations affect the conditions that contribute to student business startup and growth.

Potential areas that are of interest to or of concern for Māori
No specific interest.

Collaborations in this area of research
Not applicable

Potential funding bodies
No external funding

Location
Dunedin New Zealand

Other relevant information
Not applicable

Relevance Score

Reference
Appendix C: Consent Form

University Student Business Startup and Growth
CONSENT FORM FOR PARTICIPANTS

I have read the Information Sheet concerning this project and understand what it is about. All my questions have been answered to my satisfaction. I understand that I am free to request further information at any stage.

I know that:

1. My participation in the project is entirely voluntary;
2. I am free to withdraw from the project at any time without any disadvantage;
3. Personal identifying information (audio recordings) may be destroyed at the conclusion of the project but any raw data on which the results of the project depend will be retained in secure storage for at least five years;
4. This project involves an open-questioning technique regarding the startup and progress of my business, and the people and organisations with whom I worked during the process.

The precise nature of the questions which will be asked has not been determined in advance, but will depend on the way in which the interview develops. In the event that the line of questioning develops in such a way that I feel hesitant or uncomfortable I may decline to answer any particular question(s) and/or may withdraw from the project without any disadvantage of any kind.

5. A summary of the research outcomes will be offered to me if requested, but this should not be construed as a payment or reward;
6. The results of the project may be published and will be available in the University of Otago Library (Dunedin, New Zealand) but every attempt will be made to preserve my anonymity should I choose to remain anonymous.

7. I, as the participant:  a) agree to being named in the research,   OR;
       b) would rather remain anonymous

I agree to take part in this project.

...........................................................................................................  ...........................................
(Signature of participant)   (Date)

...........................................................................................................
(Printed Name)
Appendix D: Information Sheet

Reference Number: 15/082
12 April 2016

University Otago
NEW ZEALAND

University Student Business Startup and Growth

INFORMATION SHEET FOR PARTICIPANTS

Thank you for showing an interest in this project. Please read this information sheet carefully before deciding whether or not to participate. If you decide to participate we thank you. If you decide not to take part there will be no disadvantage to you and we thank you for considering our request.

What is the Aim of the Project?
The aim of this project is to study the impact that the university’s curriculum-based and extracurricular programmes have on the formation of business startups and their growth. This research project involves interviews with participants to understand how these programmes help students develop a social network that provides the links through which business owners can access resources (information, knowledge, facilities, human resource, etc.) that assist in the startup and growth of their businesses. It also involves identification of members of the social network, including members of the university, local businesses, local government, intermediaries, and other community organisations.

This project is being undertaken as part of the requirements for Regina Maniam’s Doctor of Philosophy (PhD) in Management at the University of Otago.

What Type of Participants Are Being Sought?
Participants are selected based on their participation in curriculum-based and extracurricular programmes run by universities in New Zealand, and the subsequent startup of businesses. Other participants include those involved in the network that supported the businesses, including representatives from other businesses, support organisations, and the respective universities. More participants will be identified during the initial interviews.

It is anticipated that about 50 participants will be interviewed. There will be no payments made to participants. However, all participants will be offered a report summarising the results of the research once it has been completed.

What Will Participants Be Asked to Do?
Should you agree to take part in this project, you will be asked to participate in one interview, anticipated to be one hour, involving only the researcher and the interviewee. After the initial interview, subsequent interviews or email exchange may be required for clarifications or for gathering further information.

Please be aware that you may decide not to take part in the project without any disadvantage to yourself of any kind.

What Data or Information Will Be Collected and What Use Will Be Made of It?
The interviews will be audio taped, to allow the researcher to listen to the interview and transcribe it. No personal information will be collected, other than the interviewee’s name and position / role / job title information. The thesis supervisors will have access to the information.
Appendix E: Interview Guide

Name: __________________________  Date: __________________________

Organisation: ____________________  Time: __________________________

Venue

Before the interview:

- Provide background information of research study
- Provide hardcopies of information and confirmation sheets for participant review and provide any clarifications
- Request for consent form to be signed
- Reconfirm use of audio recorder

_______________________________________________________________________________

After the interview:

- Request permission for follow up questions/clarifications through telephone, email, or face-to-face.

Start of the interview:

Tell me about the start-up and subsequent progress of your business.

Another possible question during the interview.

Who were the people and organisations that you connected with in the process?

Checklist of questions to confirm if required information is provided.

In growing the business, who are the people that provided guidance or assistance?

Did you already know these people or were they introduced by others?

Who were the people you already knew and what kind of help did they give?

Who were the people who were introduced by others and what kind of help did they give?

To what extent did the university student programme contribute to your business growth?

Were there any other changes that happened in the business that resulted in growth (other than expansion into new markets and introduction of new products)?

Were there any other changes that happened in the business that resulted in growth?
Appendix F: fsQCA Results

<table>
<thead>
<tr>
<th>Outcome variable: outcome</th>
<th>Outcome variable: ~outcome</th>
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</thead>
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<td>Conditions tested:</td>
</tr>
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<td>Consistency Coverage</td>
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</tr>
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</table>

******************************
*TRUTH TABLE ANALYSIS*
******************************

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Algorithm: Quine-McCluskey

--- COMPLEX SOLUTION ---

frequency cutoff: 1
consistency cutoff: 1
raw unique
coverage coverage consistency
-------- -------- -------
team*inst*trust 0.66807 0.105614 1
team*tribal*trust 0.550702 0.0350877 1
inst*tribal*trust 0.603684 0.0703508 1
inst*bridge*trust 0.392632 0.0233334 1
team*inst*tribal*bridge 0.32807 0.0233334 1
solution coverage: 0.837894
solution consistency: 1

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*TRUTH TABLE ANALYSIS*
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Algorithm: Quine-McCluskey

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consistency cutoff: 1
raw unique
coverage coverage consistency

229
Cases with greater than 0.5 membership in term inst: EN001B (1,1), EN003A (1,1), EN035A (1,1), EN036A (1,1), EN006A (1,1), EN006B (1,1), EN011A (1,1), EN008C (1,1), EN043A (1,1), EN009B (1,1), EN010A (1,1), EN010B (1,1), EN037C (1,1), EN041A (1,1), EN013B (1,1), EN014A (1,1), EN015A (1,1), EN042A (1,1), EN016A (1,1), EN016B (1,1)

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*TRUTH TABLE ANALYSIS*

--- INTERMEDIATE SOLUTION ---

File: C:/PhD Drafts/Data File for fsQCA 180327.csv
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Algorithm: Quine-McCluskey

--- INTERMEDIATE SOLUTION ---
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EN010A (0.67,1), EN015B (0.67,1), EN020A (0.67,1),
EN022A (0.67,1), EN027B (0.67,1), EN028A (0.67,1),
EN028C (0.67,1), EN036A (0.67,1), EN037B (0.67,1),
EN038B (0.67,1)