1 Outline of the Context, Literature and Methodology

This book was inspired by substantial interest in social innovation and social entrepreneurship outside of the developed Global North and the popular use of various terms and constructs that describe forms of innovation related to social enterprises. The objective of this book is to stimulate research and policy debates about the how and why of innovation that addresses the means and ends of value creation for the many, with less. We motivate this by engaging the literature of innovation studies with basic social science questions about institutional constraint and opportunity, in the context of diverse, empirically-informed contexts to understand 'frugal innovation', an important emerging concept for innovation research, policy and practice. Our research captures the views of social entrepreneurs, who innovate under constraints. We argue for and provide new models, methods and the beginnings of a theory of frugal innovation.

Such innovation is described using a wide range of constructs, including social, frugal, inclusive, catalytic, grassroots, *jugaad* and Ghandian innovation. We do not wish to be embroiled in the debate over broad 'umbrella constructs' or to act as 'validity police' in narrowly defining issues (Hirsch and Levin, 1999). Instead, we recognise Hirsch and Levin's life cycle of scholarly constructs, which progresses from excitement to validity checks and then to an understanding of typologies, before either becoming stable constructs or disappearing from the literature. Our research instead builds on findings from the experiences of social entrepreneurs, to contribute to models of innovation that start from different assumptions about resources, process and purpose. This empirical move both connects different kinds of

evidence to the discussion and also reframes some conventional assumptions in the mainstream innovation literatures (Bamberger and Pratt, 2010; Chandy and Prabhu, 2011). We present this work as an invitation for research colleagues to experiment and decide how best to further develop frugal innovation concepts, models and theories.

In this chapter, we cite the main literature, though not exhaustively as one would typically do in a literature review chapter (for detailed literature review see Bhatti, 2014), outline the questions that arise, summarise our methodology for investigating these questions and share our main findings.

1.2 THEORETICAL FRAMING FROM THE LITERATURE

Jan Fagerberg (2005) reviews the broad area of innovation studies and identifies four emphases in the research literature: 'innovation in the making', 'the systemic nature of innovation', 'how innovation differs' and 'innovation and performance'. Our work builds out from the question of 'how innovation differs'. We know how innovation differs across sectors, types of organisations and geographical locations and among entrepreneurs, managers and other individuals. However, we know very little about the ways in which social entrepreneurs (Elkington and Hartigan, 2008; Mair and Martí, 2006; 2007; 2009), rather than commercial entrepreneurs (Austin, Stevenson and Skillern, 2006; Sarasvathy, 2001; 2006), conceptualise models of innovation (Desa, 2009a; Guillén, 1994; Mair, Battilana and Cardenas, 2013; Marinova and Phillimore, 2003; Sarasvathy, 2001). Focusing on models of innovation and specifically on social entrepreneurs and the way they understand innovation provides an opportunity to study innovation outside the status quo and in unique contexts.

Our review picks up on this point: to begin to situate innovation in a broader view of institutional opportunity and constraint. We find that some research in development studies examines the way in which innovation occurs despite the simultaneous challenges of

institutional voids and resource scarcity. We found little or no work in the fields of organisation theory or strategic management that attends to these issues. We connect this finding with research on broadly social and purposeful innovation (distinct from a conventional focus on technology innovation). Nicholls and many others propose social entrepreneurial activity as market-based innovation focused on societal change (Nicholls, 2006a; 2006b; Nicholls and Murdock, 2011). Much of the research on social entrepreneurship asks who social entrepreneurs are and what they do. This population is especially relevant to our study. In our review of the literature, we show how little is known about how social entrepreneurs conceptualise innovation in extreme contexts shaped by resource constraints and institutional voids.

Research by organisational institutionalists on social entrepreneurial ventures has only thinly been concerned with the origins of innovation (Lounsbury and Crumley, 2007). Although some studies have explored how social entrepreneurs face the challenges of institutional voids and resource scarcity (cf. Austin, Stevenson and Skillern, 2006; Dart, 2004a; 2004b; Desa, 2009a; 2009b; Grimes et al., 2012; Haugh, 2005; Mair and Martí, 2009; Mair, Martí and Ventresca, 2012; Mulgan et al., 2007a; 2007b; Seelos and Mair, 2005), few analyse how innovation is perceived or understood by social entrepreneurs.

To explore scholarly and practical examples, we connect two main streams in the literature: innovation studies and social entrepreneurship (as shown in Figure 1.1). The literature on innovation (stream 1) looks at innovation faced with a single constraint: either institutional voids or resource scarcity. Few if any studies of innovation explore more complex cases, where innovation must simultaneously grapple with institutional voids and resource scarcity. The social entrepreneurship literature (stream 2) argues that social entrepreneurs often have to function and innovate in extreme conditions shaped by both institutional voids and resource scarcity.

This study seeks to advance the models and theories of innovation by bridging a gap in the literature between studies of innovation

Literature Stream   **Literature Stream**

Innovation Studies	How to conceptualise	Social Entrepreneurs

Under Constraints	GIVEN these	Function Under Constraints

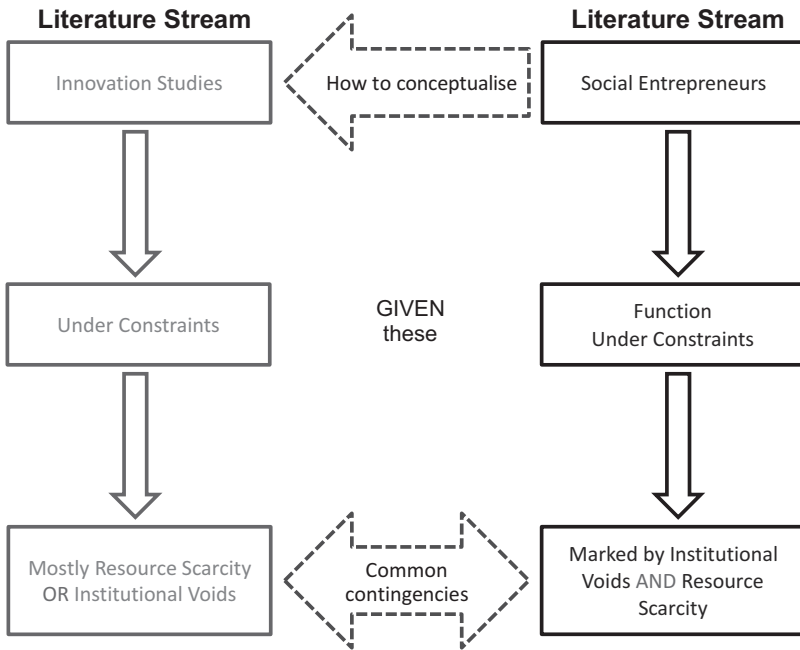| Mostly Resource Scarcity OR Institutional Voids	Common contingencies	Marked by Institutional Voids AND Resource Scarcity

FIGURE 1.1 Identifying gaps in the literature

in relation to social entrepreneurship and studies that relate to institutions and resources. Posing the question of how social entrepreneurs and similar actors conceptualise and approach innovation reveals new insights into different ways of innovating (Fagerberg, 2005).

1.2.1 Why Focus on Innovation?

Studies of strategy in contexts that include institutional voids, resource constraints or scarcity have focused on multinational companies (MNCs) and large business groups (Khanna and Palepu, 1997; 2006), entrepreneurship (Puffer, McCarthy and Boisot, 2010; Tracey and Jarvis, 2007; Tracey and Phillips, 2011), social entrepreneurship (Mair and Martí, 2009) and market building (Mair, Martí and Ventresca, 2012). Analyses of actors facing constraints in innovation value chains (cf. Hansen and Birkinshaw, 2007; Roper, Du and

Love, 2008) link studies that assess the strategic responses of entrepreneurs and large businesses to institutional voids or resource constraints.

By focusing on innovation, we aim to show how social entrepreneurs perceive the interplay between these two different types of challenges. Using innovation as the unit of analysis creates a bridge between the different perspectives of entrepreneurs and large businesses when responding to institutional voids and resource constraints. We contend that a focus on innovation in context provides a more specified understanding of these challenges and can better provide insights to address them.

1.2.2 Why Focus on Institutional Voids and Resource Scarcity?

Much work on innovation has explored 'innovation under constraint'. Although such constraints take many forms, the literature has typically focused on resource constraints (Nohria and Gulati, 1996; Rao and Drazin, 2002) in the absence of formal institutional contexts (Altenburg, 2009; North, 1990). While some studies have explored the enabling effect of resource constraints on innovation outcomes, most have argued that resource constraints inhibit innovation, while slack resources support creativity and innovation (Weiss, Hoegl and Gibbert, 2011). Yet, research in creative cognition psychology has found that actors are most innovative when given fewer rather than more resources, supporting the hypothesis that 'less is more' (Gibbert, Hoegl and Välikangas, 2007, p. 16). Other work has provided evidence, albeit largely anecdotal, that remarkable (and even disruptive) innovation outcomes can be achieved with limited financial resources and a dearth of formal institutions (cf. Bold, 2011; Christensen et al., 2006; Govindarajan and Ramamurti, 2013; Hart and Christensen, 2002).

Some emerging work on innovation in the face of dual constraints points to new analytic issues, including the rising popularity of innovation in developing and emerging markets (Bhatti, Khilji

and Basu, 2013) and the more general concern with markets at the base of the pyramid (Prahalad, 2005).

The idea that resource scarcity can be an impediment to innovation as well as an enabler that identifies new opportunities and enforces efficiency makes it useful to identify perceptual norms among entrepreneurs facing resource constraints: how 'objective' conditions are mediated by entrepreneurial perceptions (Dorado and Ventresca, 2013). The idea that institutions can be formal as well as informal allows us to identify perceptual norms among entrepreneurs seeking to fill structural voids or deal with complexities in their operating environment (Mair, Martí and Ventresca, 2012).

1.2.3 Why Study Social Entrepreneurs to Inform Models of Innovation?

Much research attributes social innovation to social entrepreneurs (cf. Minks, 2011; Phills, Deiglmeier and Miller, 2008; Pol and Ville, 2009; Seelos and Mair, 2005; 2007). This work is important, though to some large degree it asserts rather than explores key steps in this process. Our reading points to one critical issue: We do not fully understand how social entrepreneurs conceptualise social or even general innovation. In addition to studying practice, it is also important to understand how social entrepreneurs conceptualise innovation, providing insights into the models of innovation favoured by social entrepreneurs (Mair, Battilana and Cardenas, 2012) to add to the list of commercial models of innovation built up by scholars over many years (cf. Chandy and Prabhu, 2011; Guillén, 1994; Marinova and Phillimore, 2003; Sarasvathy, 2001). We make use of the fact that the vocabularies used by social entrepreneurs can reveal their ways of conceptualising innovation.

Social entrepreneurs are specifically relevant as a study population because they face double-edged challenges that we want to understand. First, they function in a field that lacks complex, informal institutions. Second, they lack resources specifically allocated to social enterprise and innovation (Mulgan et al., 2007b). In addition,

they innovate in environments marked by institutional voids and complexities, where their beneficiaries reside (Mair, Martí and Ventresca, 2012), also without adequate resources (Hart and Prahalad, 2002; Prahalad, 2005; Prahalad and Hammond, 2002). This purposeful choice of informants gives us an important contrast for analysis. In the course of our literature search and review before we commenced the research, we had found almost no research on innovation as interpreted by social entrepreneurs facing both institutional voids and resource scarcity.

1.2.4 Under-Researched Assumptions about Social Innovation and Social Entrepreneurship

The ideas of social entrepreneurship and social innovation in much research are often so intertwined that it can be difficult to distinguish them. Paul Tracey and Owen Jarvis (2007) argue that social entrepreneurship is innovation that leads to positive social change. For them, the notion of trading for a social purpose is at the core of social entrepreneurship. Another prevalent view is that the primary objective of social entrepreneurs is to create social value, while a secondary but necessary objective is to create economic value to ensure financial viability (Mair and Martí, 2006).

The terms 'socially entrepreneurial ventures', 'socially innovative entrepreneurs' and 'innovative social purpose business enterprises' are used interchangeably (Perrini and Vurro, 2006). Francesco Perrini and Clodia Vurro (2006) posit that the three key constructs are entrepreneurship, innovation and social concerns. We argue that this approach has led scholars to label the activities and outcomes of social enterprises as social innovations and their agents as social innovators. Like mainstream entrepreneurship, social entrepreneurship has often been defined as innovation-based. The traditional approach of social entrepreneurs generally emphasises social innovation, entrepreneurial activism and frame-breaking approaches to non-profit management (Dart, 2004a). Other definitions of social entrepreneurship include 'innovative, social value creating' (Austin,

Stevenson and Wei-Skillern, 2006, p. 2) and the view that 'social entrepreneurs are change promoters in society; they pioneer innovation within the social sector' (Perrini and Vurro, 2006, p. 69). Perrini and Vurro argue that social enterprises 'are characterized by altered and mixed behaviour, a strong entrepreneurial orientation and above all, an unquestionable accent on social innovation' (p. 59). Others 'define social entrepreneurship as the innovative use of resource combinations to pursue opportunities . . . that yield and sustain social benefits' (Mair and Noboa, 2006, p. 122).

Many researchers have investigated the sources of creativity among social entrepreneurs and the factors and processes that enable innovation. Yet few, if any, empirical investigations have explored how social entrepreneurs perceive or think about innovation. In a compendium of works on social innovation, for example, editors Alex Nicholls and Alex Murdock (2011, p. 3) link social innovation to social entrepreneurship in a framework of intersecting institutional logics across civil, private and public sectors by 'drawing on the cognate social entrepreneurship literature [to] suggest a further important insight into the nature of social innovation'. By studying social enterprises in four countries, contributor Janelle A. Kerlin (2011) argues that different forms of social innovation become institutionalised over time in different contexts. However, she and other contributors to the volume do not question the assumptions that social enterprises create social innovation or that the entrepreneurs who run them are social innovators.

Contributor Heather Cameron (2011) carried out an empirical study using forty-one semi-structured interviews to learn how social entrepreneurs analyse risk and position themselves within the social innovation ecosystem defined by the Skoll World Forum on Social Entrepreneurship – largely within universities. Although Cameron's study is informative, given the Focauldian style of analysis she adopts, her interviews about social entrepreneurs focus on Foucault's intellectually derived key themes: the function of the social entrepreneur, risks, measuring impact, the role of the university

and the role of the Forum. Cameron's approach does not reveal social entrepreneurs' core perceptions, conceptualisations or thoughts about innovation. Also by studying social enterprises, contributor Fergus Lyon (2011) investigates how inter-organisational relationships operate in cases of social innovation. This empirical analysis likewise assumes that social enterprises are in the business of creating social innovation; it investigates how these organisations deal with issues of trust and power when building and maintaining collaborations, implying that its findings can be extended to include social innovation. More recent work by Paul Tracey and Neil Stott (2017) posits that many things labelled as social innovation may actually have relatively little in common and that this may be overcome by better categorising different types of social innovation that have to do with social entrepreneurship, social intrapreneurship and social extrapreneurship.

What is common in these and similar studies is how many scholars assert rather than test how and under what conditions social enterprises produce social innovation and that social entrepreneurs are social innovators. We take a step back and start from the perceptions of social entrepreneurs to investigate the concept of innovation. We achieve this not by asking them about the types of innovation most often associated with social entrepreneurs. We simply ask them about innovation.

1.3   WHAT DO WE KNOW ABOUT SOCIAL INNOVATION?

Many observers argue that social entrepreneurs provide innovative leadership in social enterprises (Dees, 1996; 2011), while socially entrepreneurial organisations emphasise the role of innovation (Borins, 2000). However, like the term 'social entrepreneurship', social innovation has poorly defined boundaries, meanings and definitions (Caulier-Grice et al., 2012; Murray et al., 2010). Julie Caulier-Grice and co-authors (2010) suggest that social innovation is far broader than social entrepreneurship, and that there are both opportunities and challenges through the discovery and use of new knowledge. And

in the literature, social innovation is even more elusive than social entrepreneurship, for which concepts, definitions and analyses have been relatively well defined (cf. Mair and Martí, 2009; Nicholls and Murdock, 2011). Robin Murray, Julie Caulier-Grice and Geoff Mulgan (2010) co-authored the 'The Open Book of Social Innovation' as a result of major collaboration between NESTA (the National Endowment for Science, Technology and the Arts) and the Young Foundation, two organisations which have long espoused the role that social innovation can play in solving major concerns of our time. They define 'social innovations as new ideas (products, services and models) that simultaneously meet social needs and create new social relationships or collaborations' (p. 3). They further contend that social innovation does not have fixed boundaries – it occurs in all sectors, public, non-profit and private, and a lot of the creativity is taking place at sectoral boundaries. According to Timo J. Hamalainen and Risto Heiskala (2007) there are five types of innovation (technological, economic, regulative, normative and cultural) that together form the sphere of social innovations.

This book builds on a stream of social innovation literature that describes social innovation as the work of social entrepreneurs, emphasising the role of individuals in developing innovative solutions for difficult social challenges (Bornstein, 2004; Bornstein and Davis, 2010; Dees and Anderson, 2006; Goldsmith, 2010; Hartigan and Elkington, 2008; Hoogendoorn, Pennings and Thurik, 2010). Nicholls and Murdock's (2011, p.2) literature review shows that social innovation research focuses on 'systems and processes of change in social relations' at one extreme and on 'innovation around the conceptualization, design and production of goods and services that address social and environmental needs and market failures' at the other. Moreover, social innovation is a practice-led, contextually based field (Murray et al., 2010) and most texts have analysed successful case studies rather than the patterns and stages of social innovation (Caulier-Grice et al., 2012). Similarly, most of the literature on social innovation has focused on the process perspective and

practical concerns relating to the development and implementation of successful programmes and strategies.

For example, Sandra M. Bates (2011) in, *The Social Innovation Imperative*, claims to present the first detailed, structured methodology for social innovation derived from academic models and practical experience. It offers a 'how-to' guide addressing acute or 'wicked problems' such as healthcare, education, poverty, disaster response, neglected elderly people and environmental destruction. Wicked problems are complex issues that are particularly hard to resolve, in part because they involve several different constituencies, with conflicting or competing objectives (Bates, 2011). However, this book does not explore how social entrepreneurs themselves perceive social or any other kind of innovation. Although practice is important, our working hypothesis is that understanding how social entrepreneurs think about and perceive the work of 'innovation', builds additional layers of knowledge about how innovation under constraint and scarcity may occur.

1.4 INNOVATION UNDER CONSTRAINT

When we first set out on this study, a search of the literature revealed few scholarly papers on innovation in institutional voids or with resource constraints, let alone with both constraints simultaneously. A search on *Business Source Complete* and *Proquest* revealed only two peer-reviewed papers using the search criteria [innovation AND ('institutional void' OR 'institutional voids')]. Neither paper offered empirical insight into innovation under these conditions. A similar search through both databases using the search criteria [innovation AND ('resource scarcity' OR 'resource constraint'] revealed 48 and 227 results respectively. Many of these papers were in the fields of environmental or development studies; few were in organisational or management studies. When we added the term 'social entrepreneur' or 'social entrepreneurship' to the search criteria, the search returned no papers.

Like Desa (2008), who found little research on whether entrepreneurship in resource-constrained environments was different from conventional business entrepreneurship, we found little or no literature discussing whether innovation in resource-constrained environments was different from mainstream innovation. There was some acknowledgement in the development literature of the double-edged problem of institutional voids and resource scarcity, but no in-depth studies of innovation facing both challenges simultaneously. This is surprising, given the likelihood these two constraints are both present in developing market economies or in other contexts where social entrepreneurs are active. Looking at the situations in which both factors co-occur offers a fascinating opportunity for innovation scholars to study interesting and 'extreme' contexts.

Most researchers have looked at the effects of financial resource constraints on innovation team performance (cf. Paananen, 2012; Rao and Drazin, 2002; Weiss et al., 2011). This suggests that there is potential to meta-theorise and study resources (beyond financial resources) to move the level of analysis from teams to firms. By using a combination of resource-related and institutional theories, we can take a further step and link a firm's innovation activities to its institutional environment and available resources. This pointed us to social entrepreneurship as a useful starting point for the study of innovation in a context of institutional voids and resource scarcity.

However, despite the now substantial and rich body of research published about social entrepreneurs and their relationship with innovation, we don't know how they think or talk about innovation. Indeed, there is not much knowledge about social innovation, the activity routinely attributed to social entrepreneurs (cf. Minks, 2011; Phills et al., 2008; Pol and Ville, 2009). It is important not only to observe what social entrepreneurs do, but also to understand how they talk about what they do, as this can provide insights into why and how social entrepreneurs innovate in the ways that they do.

1.5 THE QUESTION OF FRUGAL INNOVATION

Although we were motivated by the growing discourse around frugal innovation, and the role of social entrepreneurs in creating such innovation, we wanted the social entrepreneurs themselves to provide us with fundamental information about innovation models and practices. Our approach differs from most work on frugal innovation because it does not begin by asking 'what is frugal innovation?', or even assuming that such a thing exists. Instead, we go directly to the innovators and those involved with them, to ask what innovation means to them, without introducing the concepts of social or frugal innovation or other related terms.

Our approach does not lead respondents towards a particular notion or conceptualisation of innovation. For this reason, it provides a more 'grounded' (not to be construed as a purely grounded methodological approach in the sense of Barney Glaser and Anselm Strauss) and reliable understanding of innovation, where the construct does not mask the nature of innovation, as revealed by social entrepreneurs. We have merged established streams of literature from social entrepreneurship and innovation to explore an interesting research opportunity. Other relevant, emerging concepts found in the literature, such as frugal innovation, reverse innovation, grassroots innovation, inclusive innovation and *jugaad* innovation are introduced into the discussion only after our respondents have alluded to them.

The term 'frugal innovation' was coined in the late 2000s through activities by large corporations such as Tata and Nissan-Renault and through activities in large emerging markets such as in China (Gupta and Wang, 2009). The term and the idea was propagated popularly by *The Economist* in 2010 and then picked up by public policy experts and academics in the early 2010s. Two early policy reports by NESTA and the SERCO Institute in the UK attributed frugal innovation largely to social entrepreneurs (Bound and Thornton, 2012; Singh et al., 2012). Alongside, highly acclaimed work by Navi Radjou, Jaideep Prabhu and Simone Ahuja brought awareness

of this different type of innovation to global competitiveness in terms of *jugaad* (2012) and by Vijay Govindarajan and Chris Trimble to international business in terms of reverse innovation (2012). Almost ten years on, definitions abound for frugal innovation (see Pisoni, Michelini and Martignoni, 2018 for latest review). But there is still scope to contribute to clear and crisp conceptual, theoretical and operational definitions and frameworks at various micro–meso–macro levels of analysis, such as among individual innovators, organisational forms and sectoral domains. Without having the benefit of an integrative theoretical foundation, many practitioners and some scholarly publications on frugal innovation have had to rely on conceptual studies or on anecdotal evidence. Such papers have sought to promote specific objectives, such as corporate marketing of new product offerings, strategic approaches for international business or public sector reform. A recent systematic literature review in progress of published examples of frugal innovations (Hossain, 2016; 2017) reveals that most of these come from Western MNCs, with only a small amount generated locally or in developing countries. Yet, much of frugal innovation activity is associated to activities in developing or emerging market countries (Petrick and Juntiwasarakij, 2011; Zeschky, Widenmayer and Gassmann, 2011). This may well be the case because much local innovation is not recognised or made widely visible, which makes it challenging to link conceptual understanding with evidence.

We believe that our approach arguably presents one of the most in-depth, extensive studies of the topic, using established academic theories and research methods from the domain of social entrepreneurship and innovation to frame and build models of innovation from the perspectives of social entrepreneurs from around the world working closely with their local communities. And we seek to understand this activity in the unique features of the contexts in which they operate, often marked by challenges and constraints. We build up on and support previous work that frames these constraints as resource scarcity and institutional voids, weaknesses or complexities (Bhatti, 2012; Bhatti and Ventresca, 2013; Prabhu, Tracey and Hassan,

2017; Soni and Krishnan, 2014). Whether social entrepreneurs adhere to or associate themselves with certain constructs around innovation, we leave it to the respondents to divulge.

1.6 how does this book approach innovation differently?

We use an empirical approach to connect the little we know about social entrepreneurs' views of innovation with social and purposeful innovation, rather than adopting the status quo's focus on technology innovation. The received wisdom is that social entrepreneurial activity is market-based innovation focused on societal change (Nicholls, 2006a; Nicholls and Murdock, 2011). Fundamentally, social entrepreneurship is challenging because it attempts to merge two ostensibly contradictory organisational goals – social value creation and profit generation – in environments where even a basic institutional infrastructure may not exist (Grimes et al., 2012).

Much has been achieved in social entrepreneurship research since Perrini and Vurro (2006) argued that the main difficulty impeding systematic empirical studies in social entrepreneurship was the lack of a general framework for comparing very diverse experiences. Given that social enterprises by nature can be rather diverse, we maintain that it is premature for scholars to generalise that all of them engage in social innovation. Consequently, when researching social innovation among social entrepreneurs, we discovered a continuing shortage of empirically informed frameworks through which to compare innovations across diverse social enterprises.

Before grappling with practical concerns or defining good or bad strategies for social innovation, social scientists must pay more attention to the way social entrepreneurs conceptualise and perceive innovation as a construct, phenomenon or concept. This book moves away from practice towards a more conceptual approach, which can generate models and concepts of innovation that transcend what social entrepreneurs actually do on the ground. Some of the

unaddressed questions in social innovation research include the following: *Is social innovation collectively perceived as one construct or a varied group? To what extent do academic conceptualisations of social innovation match or differ from those of social entrepreneurs?*

Setting out to address these issues, we take a step back to explore the fundamental question: *How do social entrepreneurs conceptualise innovation broadly and specifically under constraints or in extreme conditions marked by institutional voids and resource scarcity?* The gaps in the literature suggest that this work will be a seminal study in delineating innovation into models of understanding based on the empirically gathered perceptions of social entrepreneurs. As this study aims to understand patterns and concepts of innovation, it does not seek out successful cases but rather looks at early stage social entrepreneurs, who may not yet be considered 'successful'. Furthermore, the geographical and sectoral diversity of informants in this study allows a broader perspective on innovation carried out by social entrepreneurs.

The preceding subsections have outlined the research opportunity that lies at the intersection of the innovation studies and social entrepreneurship literatures, specifically by merging institutional and resource-related theories. Note that this work does not specifically seek to address how social entrepreneurs actually innovate. Instead, it aims mainly to understand how social entrepreneurs perceive and present innovation under constraints, which may at times allude to how they actually innovate.

1.7 THE CONCEPTUAL FRAMEWORK

We have established the importance of understanding social entrepreneurship and innovation in the context of institutional voids and resource scarcity. Social entrepreneurs and innovators must devise low-cost strategies, either tapping into or circumventing institutional voids and resource limitations to innovate, develop and deliver products and services to low-income users with little purchasing power, often on a mass scale. We develop in this section an initial conceptual

framework that incorporates elements from two classic theoretical perspectives to identify and motivate our object of study: innovation, as perceived by social entrepreneurs within extreme contexts.

Miles and Huberman long ago styled a conceptual framework as a written or visual presentation that 'explains either graphically, or in narrative form, the main things to be studied – the key factors, concepts or variables – and the presumed relationship among them' (Miles and Huberman, 1994, p. 18). We envisage a conceptual framework that takes into consideration the contingency perspective from the study of organisation–environment relations to specify the context in which social entrepreneurs operate, including resources and institutions both upstream and downstream from their innovation activities. We also use a value chain innovation perspective to analyse innovation inputs and outputs both upstream and downstream of the innovation process, with attention to both institutional voids and resource scarcity.

We examine perceptions of innovation among social entrepreneurs from a contingency perspective (Lawrence and Lorsch, 1967; Woodward, 1965) because contingency theory postulates that decision-making depends on various internal and external constraints or situational factors.[1] Contingency theory is a form of foundational logic used by management scholars, which underpins many organisation and strategic management theories. Its roots can be found in works by Joan Woodward (1965) and Paul R. Lawrence and Jay W. Lorsch (1967), who argued that the variations they observed in organisational designs associated with high performance (based on various contextual factors) implied that there was not 'one best way' to organise. The contingency approach has underpinned

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[1] However, we share a word of caution here on the use of contingency theory and resource dependency theory. In the original cited works by Woodward, Lawrence and Lorsch, and their modern inheritors, the contingencies and resources were objectively measurable qualities shared by all concerned. Given the nature of research questions focusing on perceptions of social entrepreneurs, these contingencies and resources are to be seen as 'perceived contingencies' and 'perceived resources' by our informants.

institutional theories on design and change (cf. Greenwood et al., 2008; Hargrave and Van de Ven, 2006; Hinings and Reay, 2009; Thornton, Ocasio and Lounsbury, 2012). Through the contingent lens, we analyse the boundary conditions within which processes and structures of innovation pan out among social entrepreneurs. This research seeks to understand not only broader concepts of innovation, but also how relevant actors conceptualise innovation under the dual external constraints. These literature streams highlight that social entrepreneurs hold interpretive assumption about two main external constraints: resources and institutional conditions.

Another way to examine perceptions of innovation among social entrepreneurs is to visualise the innovation process in terms of the value chain. Value chain analysis has been used to study a range of innovation questions (cf. Dedrick, Kraemer and Linden, 2010; Hansen and Birkinshaw, 2007; Kaplinsky and Morris, 2001; Roper, Du and Love, 2008;). Morten T. Hansen and Julian Birkinshaw (2007) advise, 'To improve innovation, executives need to view the process of transforming ideas into commercial outputs as an integrated flow rather like Michael Porter's value chain for transforming raw materials into finished goods' (p. 3). The innovation value chain is basically comprised of a recursive process of knowledge sourcing, transformation and exploitation (Roper, Du and Love, 2008), thereby incorporating everything from inputs to outputs.

Value chain analysis is a useful tool for identifying mixed constraints that are either supply- or demand-driven and occur either upstream or downstream of the value chain. Elco van Burg et al. (2012) explore a new approach to reconciling inconsistencies in the literature regarding how resource constraints affect opportunity identification by entrepreneurs. Previous studies show that resource constraints have mixed effects on how entrepreneurs identify innovation and entrepreneurial opportunity. Sometimes, resource constraints lead to identifying more opportunities; at other times, entrepreneurs see fewer opportunities. Burg et al. (2012) distinguish between supply and demand constraints and their relationship with

supply and demand opportunities. Based on a quantitative study of 219 small and medium-sized enterprises (SMEs), they find that resource constraints direct the entrepreneur's attention towards opportunities inside rather than outside the constrained domain. What is specifically relevant for this study is Burg et al.'s (2012) suggestion that researchers should simultaneously consider different types of resource constraints and sources of opportunities. We do so in this study by considering mixed resource constraints, which can represent either an opportunity or an impediment to innovation. And we extend the work of Burg et al. (2012) with this focus on perception of constraints (Gioia and Thomas, 1996).

Social entrepreneurs can encounter constraints both upstream and downstream of the innovation process. Upstream, social entrepreneurs have to deal with institutional voids (Khanna and Palepu, 1997) and complex institutional contexts (Mair, Martí and Ventresca, 2012), as well as limited resources. Downstream, social entrepreneurs have to create outputs to address the needs of the base of the pyramid (BoP), that is, the largest and poorest socio-economic segment of the population (Prahalad, 2005). They must find the means to provide access to these outputs through various institutional structures and mechanisms. Resource scarcity can mean the inability of vast populations to afford the means to address not only wants but also needs (Seelos and Mair, 2007). Some of these constraints might be viewed as threats, others as opportunities, depending on various environmental and behavioural factors.

In the 'extreme resource constrained' contexts (Mair and Martí, 2009) that social entrepreneurs often function in, resources may be scarce at all points along the value chain – meaning that affordability affects not only the end market consumer but also any firm wishing to use another firm's outcome in its own process. And that affordability itself has a negotiated character. The challenge for companies doing business, designing products and managing costs for the BoP market is that customers are willing (London and Hart, 2004; Prahalad, 2005) but often unable to pay due to income constraints (Seelos and Mair, 2007), which are another form of resource

constraint facing service providers in these environments. We depict this as a downstream resource constraint in the value chain framework. The unique social, cultural and institutional characteristics of the BoP markets mean that traditional industrial-scale products, services and management processes will not work for them (Prahalad, 2005). Affordability is not just a concern at the end point or outcome of innovation; it is a cumulative of the value creation transversal across the entire process. For this reason, we examine how all users face resource constraints upstream and downstream at every point of the value chain, in a context that includes institutional complexities or voids.

DiMaggio and Powell (1983; 1991) developed institutional theory arguments in the context of organisations and industries to account for how context models shape the form and focus of change. Extending this to the societal level, institutions are 'the humanly devised constraints that structure human interaction' through informal cultural norms as well as formal legal rules (North, 1990, p. 3). Douglass C. North's formal and informal institutions are classified by W. Richard Scott (1995; 2008) into three analytic categories: regulative, normative and cultural-cognitive. The regulative pillar includes society's state-enforced laws; the normative pillar involves the roles and expectations set for specific groups by professional societies; the cultural-cognitive pillar includes generally accepted beliefs and values shared among individuals. Each of these pillars provides a summary of relevant social sciences literatures (Hoffman and Ventresca, 2002). Together, they comprise a conceptual framework and toolkit through which to evaluate and to understand institutional architectures and action processes. We view these as general institutions.

For our analysis of contextual resource scarcity and institutional voids, we extend this institutional theory perspective with a further material consideration. The pillars approach provides us important tools to understand how cognitive models and perspectives combine to generate conventional, socially-stable understandings of

the world in practice. This approach under-specifies a focus on material infrastructure – the complex, durable institutions that enable markets to function, such as ports, roads, energy distribution systems, schools and hospitals. Rahul Tongia and Eswaran Subramanian (2006) discuss directly the analysis of such durable, material institutions, suggesting that the developing world is particularly lacking in institution rule systems, including infrastructure and capital market mechanisms. They compare commercial information and communications technology (ICT) solutions in the United States to those in the developing world; in the former, infrastructure and market mechanisms are available, while in the latter, the same institutional facilities are rare or non-existent. Ray et al. (2004) find that resources and capabilities including technical IT skills, knowledge and infrastructure flexibility can affect operational processes. However, they view infrastructure from a resource-based perspective (Arikan and Barney, 2001; Barney, 1991; Peteraf, 1993), whereby the infrastructure is held or controlled by the firm. Other tangible, material elements of infrastructure, such as ports, roads and training universities, are often provided as public infrastructure for the public good, rather than being controlled by firms. We differentiate between such infrastructure assets controlled by firms and viewed through the resource-based view (RBV) lens and infrastructure assets that are not controlled by firms but instead by governments and other authoritative professional bodies, in accordance with the institutional theory lens.

By using the contingency and value chain perspectives coupled with insights from the analysis of institutional rules, we propose the following conceptual framework for innovation in contexts shaped by institutional voids and resource scarcity, as shown in Figure 1.2. In Figure 1.3, we summarise the three main constraints that innovators have to overcome in underserved markets.

We see this interpretation of value chain analysis as a conventional analytical tool well-grounded in management practice may help to increase cases of innovation by social entrepreneurs from
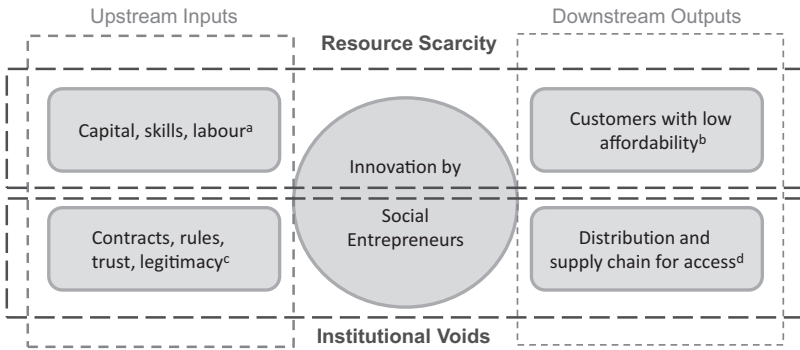
FIGURE 1.2 Conceptual framework

a Upstream, social entrepreneurs lack capital, skills and labour resources;
b Downstream, clients or customers are resource-deficient with low purchasing power;
c Upstream activities take place in environments in which institutional complexities or voids affect conventions about contracts, rules, trust and legitimacy;
d Downstream, there is not much institutional supply-chain and distribution infrastructure, such as roads, ports or transportation capacity.

the odd example here or there to standard practice. Although the unit of observation is the entrepreneur, the unit of analysis is the value chain through which the social entrepreneur seeks to innovate. And the framework we propose introduces perceptions of the actor at each point in the process. The above conceptual framework is a starting point to access this extensive work, which seeks to build models of innovation by empirically revealing the perceptions and views of social entrepreneurs.

Models as abstract conceptualisations have been used widely to make sense of how things are or will be. Examples include economic, policy, business, geographic and biological models. However, lessons learnt from over-reliance on econometric modelling suggest that pure reductionism does not do justice to the complexity and plurality of
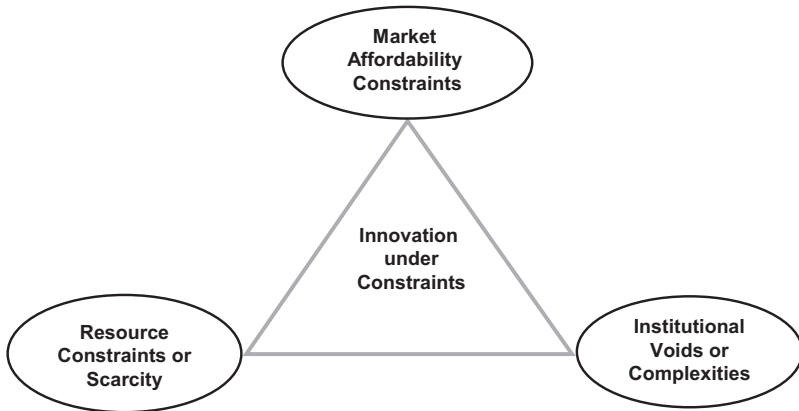
FIGURE 1.3 Main constraints on innovation in underserved markets

realities (Sen, 1986; Stiglitz, 2015; Toole, 1990). To avoid such risks, we refrain from using purely economic models and focus more on conceptual models of innovation to better understand the wide range of perspectives that social entrepreneurs bring to innovation.

1.8 RESEARCH QUESTIONS

We use this framing to take up the question of how actors conceptualise innovation generally and specifically in unique, extreme contexts marked by resource scarcity and institutional voids. The main question is: *How do social entrepreneurs conceptualise innovation generally and specifically under constraints or extreme conditions marked by institutional voids and resource scarcity?*

We develop the following three sub-questions to motivate the research:

1. How do social entrepreneurs conceptualise innovation?

Objective: To investigate through exploratory and descriptive analysis how social entrepreneurs think about innovation and claim to do, as opposed to what they 'really' do on the ground.

Significance: Contributes to and broadens key features of innovation models relevant to management theory and policy by specifying actor perceptions.

2. How do social entrepreneurs conceptualise innovation within institutional voids?

Objective: To include actor perceptions of institutional voids, or related ideas about institutions, in available models of innovation

Significance: Contributes to the literature and options for policy, showing how contextual conditions based on institutional rules and conventions shape models of innovation.

3. How do social entrepreneurs conceptualise innovation in a context of resource scarcity?

Objective: To include actor perspectives shaped by resource scarcity or constraints in available models of innovation.

Significance: Contributes to the literature on how contextual conditions based on resources-based arguments shape models of innovation.

Questions 2 and 3 together provide the substantive advance for a theory of innovation under constraints by creating a bridge between existing innovation models and methods and the insights for institution- and resource-related theories.

1.9 APPROACH AND METHOD

This study uses qualitative methods to study two communities of social entrepreneurs, many of whom are motivated by the potential for social impact to build technology- and science-based ventures. These informants are globally networked and formally recognised social entrepreneurs, identified through a process where they have applied to a prestige global 'boot camp' programme. These sample are not random, but rather represent highly stylised sets of social entrepreneurs, articulate about what they do and why.

We analyse innovation and value chains at the meso level, while micro-level observations incorporate business plan summaries,

interviews with entrepreneurs, investors and academics and observations made at an annual, intensive social entrepreneurship and innovation 'boot-camp'. The lead author conducted two international fieldwork trips spanning four months, collecting 81 interviews and 163 archival documents. We have used thematic content analysis (TCA), in particular the technique of template analysis, in order to assemble and digest evidence from these data sources.

The suitability of a qualitative research methodology derives from the nature of the social phenomenon studied (Morgan and Smircich, 1980), namely, how social entrepreneurs talk about innovation. According to Louis Cohen and Lawrence Manion (1980, p. 27), 'the purpose of social science is to understand social reality as different people see it and to demonstrate how their views shape the action which they take within that reality'. Our research objective calls for an in-depth, detailed study that explores the ways in which social entrepreneurs perceive innovation in context.

We developed a descriptive, qualitative research design to collect data that describes how social entrepreneurs think about innovation. This design suits the relatively limited knowledge available about actor conceptualisations of innovation. Acknowledging the risks and limitations of building theory based on innovation as socially constructed, we chose not to pursue a purely inductive, field-based, grounded theory approach (Glaser and Strauss, 1967). Instead, we adopted the methodological approach of retroduction (Ragin, 1994; Ragin and Amoroso, 2010), which supports the iterative use of deduction based on current knowledge and of induction based on emerging evidence. Retroduction is gaining use in management and entrepreneurship research, with the growth in interest of pragmatist philosophy of management and organisations sciences research (Farjoun, Ansell and Boin, 2015).

We identified two social entrepreneurship programmes convened in Silicon Valley, California as our source of social entrepreneurs. The Global Social Benefit Institute (GSBI®), which is part of Miller Center for Social Entrepreneurship at Santa Clara University

and the Design for Extreme Affordability (DEA) programme, which is part of d.school (Hasso Plattner Institute of Design) at Stanford University. The former is a professional programme that seeks to accelerate growth for existing social entrepreneurs from around the world, while the latter is a university degree module that serves as an incubator for enrolled students. The focus on participants and alumni of these programmes gave us access to a globally and sector diverse group of social entrepreneurs and textual sources (business plans), as well as the opportunity to carry out in-depth interviews and observations.

We were drawn to these two programmes because they have both produced widely recognised examples of social entrepreneurship and impact, including ventures such as Kiva, Whirlwind Wheelchair, Anudip, Toughstuff, Thrive, MIT OpenCourseWare, Vision Spring, Jaipur/ReMotion Knee, Embrace and D-Light. Our initial reasons for choosing these California-based programmes were logistical – both programmes were ongoing, with high credibility and with well-documented activities and participants. They offered access to historical documents in the form of business plan summaries from multiple social entrepreneurs, whom we could also meet in person. Both programmes have extensive networks that span global networks in social entrepreneurship community; their members originate all over the world and focus on diverse markets – mainly in emerging and developing economies but also developed. The well-networked programmes offered a concentrated, accessible opportunity to collect extensive and diverse data during the span of time an early career research project allows. The international profile of these universities solved one set of logistics: how to speak to social entrepreneurs from many countries where social enterprises were being established. This choice presented a different challenge: how to interpret the findings from this 'select' set of social entrepreneurs, a topic we return to in the discussion of findings.

At the start of this chapter, we identified our object of study as the conceptualisation of innovation, and specifically the models of

innovation held by and animating the actions of social entrepreneurs. The subjects of study were individual social entrepreneurs and the experts who worked with them, including academics, mentors and investors. These informants, who represent diverse geographical locations and sectors, provided direct and indirect data sources (interviews, business plans and other commentary) for this analysis of how social entrepreneurs perceive innovation. Because the respondents come from many geographical and market sectoral categories, there is much variation in the data. We used this variance to develop greater understanding of innovation that takes into account complex constraints.

This is a brief overview of the research methodology, its strengths and weaknesses. We provide a more detailed version of the design, data and methods in Appendix C. After exploratory fieldwork, negotiating access and collecting data, we drew most heavily on the GSBI programme data analysis and findings. We also made use of rich but more limited data from the edea site to perform an external validity and limited generalisability test, also summarised in Appendix C.

1.10 CONTRIBUTION TO ORGANISATION THEORY AND STRATEGIC MANAGEMENT

Despite growing interest, the current scholarly understanding of innovation among social entrepreneurs is based largely on the assumption that social innovation is produced by social entrepreneurs. This assumption, while common, has so far not been empirically tested. It lacks a unified and coherent framework that captures the unique constraining environment in which social entrepreneurs innovate. Our work investigates empirically how social entrepreneurs conceptualise innovation. We use these empirical insights to propose a theoretical model useful for further research on frugal innovation, as carried out in or for challenging contexts.

Models of innovation derived from the perceptions of social entrepreneurs add directly to wider efforts to specify how such actor perceptions shape innovation process and outcomes. Our contribution progresses such models, challenging and extending current assumptions about social innovation and other emerging concepts, including frugal, grassroots and reverse innovation, all frequently associated with social entrepreneurship. This study foregrounds the perceptions of entrepreneurs and the 'models' of innovation in complex content, in the specific ways shown in Table 1.1.

Table 1.1 *Summary of main findings*

On innovation:	1. Social entrepreneurs are involved in more than social innovation.
	2. Social entrepreneurs use a combination of existing models of innovations.
	3. Social entrepreneurs are more likely to be concerned about institutional and social innovation than about technology innovation.
	4. Social entrepreneurs pack combinations of innovations into new emerging concepts, such as frugal innovation.
On constraints to innovation:	5. Social entrepreneurs and their customers and complementors face a combination of constraints to innovation – institutional voids and resource and affordability constraints.
	6. Social entrepreneurs are more focused on resource challenges, while investors are more focused on institutional challenges.
On methods:	7. Extreme contexts marked by constraints are not unique to developing or emerging markets but also exist in developed markets though differently distributed or recognised.
	8. This is one of a few qualitative studies to use and acknowledge the value of retroduction (or abduction), as opposed to a purely inductive or deductive approach.

Overall, this study reveals the ways social entrepreneurs perceive conceptual drivers and determinants and key features of innovation. To describe our findings, we structure and report on the insights of our respondents as frugal innovation in more complex contexts. This grounded approach starts with the basics: how social entrepreneurs conceptualise innovation. It provides a major large-scale, evidence-based set of results showing what frugality is in innovation, what is innovative about frugal innovation, what motivates social entrepreneurs and other frugal innovators to adopt this approach to innovation and what strategies they use to achieve such purposeful innovation.

In the next two chapters, we report on the results from content analyses and thematic coding. We propose two models of innovation based on these findings. Model 1 (views of innovation among social entrepreneurs) is the focus of Chapter 2; Model 2 (innovation under constraints; the views of social entrepreneurs) is the focus of Chapter 3. In Chapter 4 we integrate lessons from these two models of innovation to propose a theory of frugal innovation. In Chapter 5, we assess the models and the proposed theory and its applicability by reviewing ten published examples of innovation popularly cited in support of emerging innovation concepts. In Chapter 6, we review some of these emerging concepts in innovation and discuss how the findings from this study mainly contribute to the literature on frugal innovation. In Chapter 7, we outline some implications and relevant lessons from this empirical project for theory, practice, policy and future research.