

# Managing dilemmas of resource mobilization through *jugaad*: A multi-method study of social enterprises in Indian healthcare

Nivedita Agarwal<sup>1</sup>  | Ronika Chakrabarti<sup>2</sup> | Jaideep C. Prabhu<sup>3</sup> | Alexander Brem<sup>4,5</sup>

<sup>1</sup>Friedrich-Alexander-Universität Erlangen-Nürnberg, Fürth, Germany

<sup>2</sup>Lancaster University Management School, Lancaster, UK

<sup>3</sup>Cambridge Judge Business School, University of Cambridge, Cambridge, UK

<sup>4</sup>Institute of Entrepreneurship and Innovation Science, University of Stuttgart, Stuttgart, Germany

<sup>5</sup>Mads Clausen Institute, University of Southern Denmark, Sonderborg, Denmark

## Correspondence

Nivedita Agarwal, Friedrich-Alexander-Universität Erlangen-Nürnberg, Dr.-Mack-Str. 81, 90762 Fürth, Germany.  
Email: nivedita.agarwal@fau.de

## Abstract

**Research Summary:** This study focuses on the dilemmas that social entrepreneurs encounter and the practices used to manage dilemmas over time. Using a multi-method approach involving event structure analysis and an inductive multiple case study, we find that four key organizational practices—asset multiplication, leveraging human capital, building social embeddedness, and affordable quality—embody the *jugaad* elements of frugality and inclusivity. Adding to the social entrepreneurship literature, this study demonstrates that the *jugaad* approach is conceptually distinct from bricolage and relevant to the study of social enterprises' resource mobilization processes.

**Managerial Summary:** How do social enterprises encounter and manage dilemmas over time in emerging markets? The present study responds to this question, finding that social entrepreneurs mobilize resources and overcome dilemmas using the practices of *jugaad*, the “Indian method” of problem-solving. These *jugaad* practices can be used to build and allocate resources and create trade-offs among the *jugaad* elements of frugality and inclusivity. Based on our results, we recommend that social entrepreneurs pay close attention to how to proceduralize human assets,

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which would allow these entrepreneurs to build training systems that are highly task-focused and replicated across functions. We also encourage social entrepreneurs to work in rural markets and seek wider resource pools within these markets by building social embeddedness in rural communities.

#### KEYWORDS

emerging markets, event structure analysis, *jugaad*, resource mobilization, social entrepreneurship

## 1 | INTRODUCTION

Large numbers of citizens in emerging markets face unmet needs in core areas such as financial services, health, education, and energy, and a particular pressure exists to meet growing demand in the face of serious resource constraints (Prabhu, Tracey, & Hassan, 2017; Radjou & Prabhu, 2012). However, the ambiguous nature of institutional structures and the existence of weak rules and regulations hinder the solution-development process and lead to a large portion of the population being excluded from the market (Mair, Marti, & Ventresca, 2012; McMullen & Bergman, 2017; Prahalad, 2005). Under these conditions, social entrepreneurship has emerged as an alternative to address the needs of the large population at the bottom of the pyramid and drive inclusive growth (Bocken, Fil, & Prabhu, 2016; Desa & Basu, 2013; George, McGahan, & Prabhu, 2012; Mair, Marti, & Ganly, 2007).

Social entrepreneurship under these conditions has also attracted the attention of academic researchers, as it provides an opportunity to explore entrepreneurship in a different context (Desa & Basu, 2013; Lisetchi & Brancu, 2014). The existence of institutional constraints and competing resource demands, together with the hybrid nature of social enterprises, result in novel tensions and organizational dilemmas (Battilana, 2018; Desa & Basu, 2013; Short, Moss, & Lumpkin, 2009). To manage these dilemmas, social entrepreneurs engage in special institutional arrangements, trade-offs, and novel resource mobilization practices (Battilana, 2018; Santos, Pache, & Birkholz, 2015; Siegner, Pinkse, & Panwar, 2018). However, the extant literature on these dilemmas and on the corresponding management practices is sparse (Siegner et al., 2018). Specifically, there has been limited theoretical and empirical exploration of how social entrepreneurs manage these dilemmas and mobilize resources in an emerging market context. Further, a longitudinal perspective is missing on when these dilemmas occur and how these practices vary across time and context (Battilana, 2018; Davies & Doherty, 2019; Siegner et al., 2018; Wry & Zhao, 2018).

In the Indian context, dilemmas around hybrid tensions and institutional constraints are often linked to *jugaad*, a frugal, flexible, and inclusive approach to innovation and entrepreneurship (Krishnan & Prashantham, 2018; Prahalad & Mashelkar, 2010; Radjou, Prabhu, & Ahuja, 2012; Shepherd, Parida, & Wincent, 2020). However, to date, the link between resource mobilization and *jugaad* has not been systematically explored. Existing research has highlighted bricolage, but not *jugaad*, as an important resource mobilization mechanism in the emerging market context (Desa, 2012; Desa & Basu, 2013). Unlike bricolage, *jugaad* involves building frugal resources to meet social demands. Thus, we argue that studying *jugaad* is relevant to understand social enterprises' resource mobilization.

This study identifies the dilemmas that social entrepreneurs encounter in emerging markets and explores how *jugaad* is used to manage these dilemmas over time. It does so in the empirical context of three social enterprises in India's healthcare sector: Aravind Eye Care System (AECS), LifeSpring Hospitals (LSH), and Ziqitza Health Care Limited (ZHL). For each of these cases, we applied a multi-method approach using event structure analysis (ESA) to

identify when social entrepreneurs encounter organizational dilemmas during the evolution process. ESA is pertinent because it helps to identify dilemmas as critical events and shows the temporal relations between them (Corsaro & Heise, 1990; Stevenson, Zinzow, & Sridharan, 2003). Subsequently, we used an inductive multiple-case study to identify practices that social entrepreneurs use to manage dilemmas. (In this context, we conceptualize “dilemmas” as hybrid tensions and pressures experienced due to institutional constraints [Battilana, 2018].) In line with the special issue’s focus, we identify and highlight four key practices—*asset multiplication*, *leveraging human capital*, *building social embeddedness*, and *affordable quality*—in which social entrepreneurs engage to manage dilemmas that occur in an emerging market setting. All four practices embody the *jugaad* elements of frugality and inclusivity.

Our study makes three key contributions: First, through an empirical analysis, it proposes *jugaad* as a theoretical lens for studying resource mobilization processes in social entrepreneurship; the *jugaad* approach is conceptually distinct from bricolage, as it focuses on both cost reduction and producing inclusive solutions (Prabhu & Jain, 2015; Radjou et al., 2012). Second, our study demonstrates manifestations of this *jugaad* approach through four induced practices—*asset multiplication*, *leveraging human capital*, *building social embeddedness*, and *affordable quality*—that social entrepreneurs use to manage dilemmas around hiring, pricing, and serving distinct customer groups in the context of emerging markets. Third, we introduce ESA as a processual approach to exploring longitudinal perspectives in social entrepreneurship.

Following this introduction, we review the literature on social entrepreneurship in emerging markets and compare the *jugaad* and bricolage approaches for resource mobilization. Next, we outline our research design in terms of setting and methodology. We then present the study findings, discussion, and conclusions and end with the paper’s limitations and recommendations for future research.

## 2 | THE CONCEPTS OF SOCIAL ENTREPRENEURSHIP AND RESOURCE MOBILIZATION

### 2.1 | Social entrepreneurship in emerging markets

Social entrepreneurship is considered a process of creating social value (Mair & Martí, 2006). Given the noneconomic orientation and involvement of activists and visionary individuals, this form of entrepreneurship is also perceived to be a social innovation of the economic entrepreneurship process (Howaldt & Schwarz, 2016; Lisetchi & Brancu, 2014). However, scholars have argued that economic entrepreneurship and social entrepreneurship are not dichotomous and can instead be conceptualized as on a continuum ranging from purely social to purely economic, striving for higher societal impact while maintaining financial independence from grants and donations (Desa & Basu, 2013; Di Domenico, Haugh, & Tracey, 2010; Short et al., 2009). This hybridity of mission is a key characteristic of social enterprises (Battilana, 2018).

Social entrepreneurship has been on the rise in the past decade (Desa & Basu, 2013; Lisetchi & Brancu, 2014) and has been explored through established theoretical lenses, including institutional theory, resource-based view, resource dependence theory, and organizational theory. Scholars have demonstrated particular interest in exploring social entrepreneurship from the institutional theory perspective (Mair et al., 2012; McKague, Zietsma, & Oliver, 2015). With an economic bent, this stream of research has highlighted the role of social entrepreneurs and social ventures as systemic agents necessary for society’s survival and development (McMullen & Bergman, 2017). By contrast, a research stream drawing on the resource-based view and resource dependence theory has focused on the different resource acquisition and mobilization approaches that social entrepreneurs adopt (Desa & Basu, 2013; Di Domenico et al., 2010).

The resource-centered research stream is more relevant to the research questions addressed in this study. Social entrepreneurs purposefully locate themselves in “unattractive” markets (Short et al., 2009) to achieve greater social impact, thus driving the societal change that can ideally lead to more inclusive markets (Agarwal, Chakrabarti, Brem, &

Bocken, 2018). However, starting an entrepreneurial venture in such resource-constrained markets poses significant challenges and organizational dilemmas (De Rassenfosse & Fischer, 2016; Prabhu & Jain, 2015). Discussed primarily in the context of hybrid tensions and institutional voids (Battilana, 2018; Davies & Doherty, 2019; Khanna & Palepu, 2010; Schuster & Holtbrügge, 2014), these challenges emerge due to internal and external pressures and institutional constraints. Internal pressures relate to the dilemmas between social and financial objectives that lead to disagreements and conflicts within the organization's activities, and external pressures arise when raising external funds or hiring individuals with a hybrid mindset (Battilana, 2018). Further deepening dilemmas are institutional constraints such as a lack of credible legal frameworks, the presence of unstable political structures, deeply closed embedded networks, and personalized exchanges (Peng, 2002; Tracey & Phillips, 2011). To manage these dilemmas, social enterprises use integrated arrangements, resource trade-offs, and novel resource mobilization strategies (Battilana, 2018; Siegner et al., 2018). Integrated arrangements facilitate combining social and commercial activities with spillover effects (Santos et al., 2015), while trade-offs and resource mobilization strategies vary across culture and time and, thus, require further exploration (Battilana, 2018; Davies & Doherty, 2019; Siegner et al., 2018; Wry & Zhao, 2018).

## 2.2 | Resource mobilization: Bricolage versus *Jugaad*

Entrepreneurial resource mobilization is “a process by which entrepreneurs assemble the resources used to execute on an opportunity” (Clough, Fang, Bala Vissa, & Wu, 2019, p. 1). This process often occurs in three distinct stages—search, access, and transfer of resources—and includes both tangible and intangible resources that are conceptually grouped under financial capital, human capital, and social capital (Clough et al., 2019; Florin, Lubatkin, & Schulze, 2003; Putnam, 2001). Financial capital includes the cash or credit invested; human capital comprises the skills, knowledge, and experience of the founding members; and social capital consists of all pre-existing connections, networks, and interorganizational ties that entrepreneurs accumulate over time. However, the scarcity of these resources in an emerging market context raises dilemmas that require an efficient resource mobilization process (Desa & Basu, 2013).

The limited existing research on emerging markets demonstrates that bricolage is an important mechanism for resource mobilization and for the institutionalization of social change (Desa, 2012; Desa & Basu, 2013). Described as a necessity-driven acquisition approach, bricolage involves innovatively combining the resources at hand to fulfill current needs (Baker & Nelson, 2005; Di Domenico et al., 2010). It is associated with problem-solving behavior and is an experimental approach that social entrepreneurs employ to structure and bundle resources (Bacq, Ofstein, Kickul, & Gundry, 2015). By contrast, Di Domenico et al. (2010) raise concerns on the applicability of bricolage in its current form to social entrepreneurship due to the missing core processes required to create social ventures: social value creation, stakeholder participation, and persuasion. An extension of the concept in the form of “social bricolage” has been proposed to further develop the field of social entrepreneurship (Di Domenico et al., 2010), and bricolage has also been linked to the notion of *jugaad* under severe constraints (Bacq et al., 2015; Gundry, Kickul, Griffiths, & Bacq, 2011).

*Jugaad* is the “Indian way” of solving problems (Krishnan & Prashantham, 2018; Prahalad & Mashelkar, 2010; Radjou et al., 2012; Shepherd et al., 2020), and the literature has proposed multiple definitions (see Table 1). Across this wide range of definitions, the common features of *jugaad* that emerge are frugality (low-cost), inclusivity (social), flexibility (adapting to extreme environment, quick fix), resourcefulness, and creativity (experiential, improvised solution). *Jugaad* is linked to bricolage primarily due to *jugaad* being flexible, creative, resourceful, and experimental (Baker & Nelson, 2005; Di Domenico et al., 2010; Prabhu & Jain, 2015; Radjou et al., 2012; Shepherd et al., 2020).

However, based on prior studies (Di Domenico et al., 2010; Prabhu & Jain, 2015; Shepherd et al., 2020), we argue that *jugaad* is conceptually distinct from bricolage. The differences lie in social orientation (Di Domenico

**TABLE 1** Definitions of *jugaad*

| Authors                              | Definitions                                                                                                                                                               |
|--------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Heeks (2009)                         | <i>Jugaad</i> is an improvised quick-fix within an environment of relative poverty and resource constraints.                                                              |
| Lacy (2014)                          | It is an inherently imaginative and customer-oriented approach, which lacks a structured approach and is far from technology- or product-focused approaches.              |
| Birtchnell (2012)                    | It refers to improvised vehicles assembled by hand from carts, old cars, and spare parts used by Indian farmers.                                                          |
| Radjou et al. (2012)                 | It is the art of overcoming harsh environmental constraints by developing an effective solution using limited resources and by adopting a frugal and flexible approach.   |
| Singh, Gupta, and Mondal (2012)      | <i>Jugaad</i> can be broadly regarded as a low-cost innovation, a coping mechanism, a quick-fix solution, and sometimes an unethical way of getting anything done.        |
| Rao (2013)                           | It signifies a makeshift cart assembled in north India, under scarce resources, for handling routine chores.                                                              |
| Prabhu and Jain (2015)               | It is described as the frugal, flexible, and inclusive approach to innovation and entrepreneurship in India.                                                              |
| Ananthram and Chan (2019)            | It is described as creative innovation, low-cost innovation, know-how, quick fixes, and achieving more with fewer resources.                                              |
| Shepherd, Parida, and Wincent (2020) | <i>Jugaad</i> relies on assertive defiance, trial-and-error experiential learning, and the recombination of available resources to improvise a frugal quick-fix solution. |

et al., 2010), attitudinal and iterative dimensions (Shepherd et al., 2020), and frugality and inclusivity (Prabhu & Jain, 2015). Specifically, *jugaad* is relevant to social entrepreneurship in resource-poor settings due to its frugal and inclusive nature and its focus on producing affordable solutions for underserved and disenfranchised populations (Ananthram & Chan, 2019; Prabhu & Jain, 2015; Radjou et al., 2012). Therefore, for the present study exploring social enterprises' resource mobilization process, we drew on the *jugaad* approach and used the definition provided by Prabhu and Jain (2015, p. 846): "Jugaad is a frugal, flexible and inclusive approach to innovation and entrepreneurship emerging from India." This definition encompasses the key elements of *jugaad* and establishes the link to Indian entrepreneurship.

### 3 | METHODOLOGY

#### 3.1 | Study context and data collection

This study followed a convenience sampling strategy (Etikan, 2016) with no performance implications. We selected three social enterprises in the healthcare sector due to the accessibility of key informants who were readily available and directly working in the sector of interest. Case selection was also guided by the following criteria for social enterprises:

1. Targeting a social cause;
2. Operating for more than 10 years, to provide a well-documented longitudinal perspective (i.e., access to primary and secondary research and historical archives to verify development processes and trace events);
3. Originating in emerging markets; and
4. Operating in the social sector.

For the social sector of focus, we selected healthcare, which represents a higher share of gross domestic product than nonsocial sectors such as manufacturing or automotives (Berrisford & Lopez, 2017) and is considered important for inclusive growth in the context of emerging economies (Srivastava & Shainesh, 2015).

The three cases selected for this study include Aravind Eye Care System (AECS), a hospital network established in 1972 that offers affordable eye care services to rural communities in and around Madurai, India; LifeSpring Hospitals (LSH), a chain of maternity hospitals founded in 2005 that provides quality maternity care services to low-income women residing in peri-urban and slum areas in and around Hyderabad, India; and Ziqitza Health Care Limited (ZHL), an emergency medical service founded in 2002 that provides accessible and affordable emergency medical services across India. These enterprises were selected to represent different segments of the healthcare sector (eye care, maternity care, and emergency medical services) and ensure theoretical diversity. These cases were also deemed appropriate because they are established social enterprises, offer a consistent track record, and are well-documented in prior literature. Their consistent track record ensured an enriched data set to identify dilemmas during the entrepreneurial process. Sufficient documentation was necessary to enable processual mapping through ESA, including data on the if-then relationships between interwoven sets of events; the documentation offered a variety of perspectives and ensured the completeness of data required to unearth these links.

Following an iterative approach, we used a mix of primary and secondary data sources for data collection. Data were gathered in semi-structured interviews and through email correspondence with key informants, Skype/telephone conversations, and reviews of internal memos, company presentations, price lists, press releases, company websites, annual reports, and other archival data sources. Data collection took place from 2015 to 2016, a period chosen because each organization had exceeded 10 years of operational activity by that point. We collected 132 documents across the three cases, and two members of the research team interviewed the key informants to corroborate the data.

The first interview at each enterprise was conducted with the cofounders, the executive director, or a management team member. This led to the identification of further referrals and interview partners considered important for the study. We conducted 15 total interviews with multiple informants from each of the selected cases. Some of these informants were contacted more than once to ensure completeness of the data. Except for LSH, all interviews were Skype/telephone interviews; LSH preferred sharing information and answering questions via email. These interviews ranged from half an hour to one hour and were transcribed verbatim in English. (Details on the informants and the selected cases are provided in Appendix 1).

## 3.2 | Data analysis

Following Mair et al. (2012) and McKague et al. (2015), data analysis was conducted in two stages.

### 3.2.1 | Stage 1: Event structure analysis (ESA)

We explored occurrences of organizational dilemmas during enterprise evolution. The entrepreneurial process involves distinct stages that are complex and iterative, and understanding this process requires a process methodology (Slappendel, 1996; Van de Ven & Hargrave, 2004), foregrounded on narratives. We used ESA to identify how different types of events unfold over time (Abbott, 1990). Events are defined as happenings that are significant in understanding the history of a process (Stevenson et al., 2003, p. 43), which here is the history of social enterprises (see Appendix 2 for further details on the ESA methodology). A timeline was also created to reflect the order of events.

Then, events were entered into Ethno, which asks a series of questions about how each event relates to previous events and primarily uses a set of logical if-then rules to develop a concrete model (Heise & Lewis, 1988;

Stevenson & Greenberg, 2000). Concrete models represent a temporal relation but not the proportional amount of time that has elapsed between events (Hager, 1998). It is distinct from other qualitative approaches that rely on linear chronology because it traces the nonlinearity of social processes and visualizes how events are interconnected. Our processual mapping revealed the timing of when the enterprises encountered different dilemmas, and the three concrete models developed are depicted in Figures 1–3.

### 3.2.2 | Stage 2: Inductive multiple-case study

We conducted a multiple-case study analysis (Yin, 2009) to examine underlying practices and their links to the identified dilemmas. Using narrative data, and following Mair et al. (2012), we conducted coding analysis using an inductive grounded approach. Our approach to data reduction consisted of two steps (Vissa, 2012). In the first, we created provisional categories based on supportive narratives and identified first-order codes that closely matched our narrative data (see Gioia, Thomas, Clark, & Chittipeddi, 1994). Using NVivo 11 software, we further identified categories and similarities. In the second step, we further reduced the coding into refined second-order dimensions using an abductive approach (Dubois & Gadde, 2002) to identify emerging themes. These themes were then theorized as four key practices used by social enterprises to manage different dilemmas across social processes (see Table 2).

## 4 | MANAGING DILEMMAS OF SOCIAL ENTREPRENEURSHIP

This section highlights specific dilemmas faced by social entrepreneurs and how social entrepreneurs manage them over time, identifying dilemmas using ESA and defining them as significant events that are critical turning points. In this context, a “significant event” is an event producing a series of successive events (Abell, 2004) or an event that we have qualitatively judged to be a critical turning point (based on the interpretive insights gathered from the narratives) at which internal or external pressures are experienced (Battilana, 2018). A detailed description of the ESA concrete models is provided in Appendix 3.

### 4.1 | Aravind Eye Care System (AECS)

AECS's concrete model has 38 events (see Figure 1, event abbreviations). AECS started in 1976 as an 11-bed hospital in Madurai. What then followed was a series of critical actions that showed three different organizational dilemmas.

### 4.2 | Dilemma 1 (AECS D1): Pricing to balance social mission and financial independence

Pricing was a significant event in which the first dilemma, related to balancing the social mission and the need for financial independence, was observed (see Figure 1, “Pricing”).<sup>1</sup> Identifying a reasonable mix of free and paying patients was critical to sustain operations and break even.

To provide stability and transparency to customers' purchasing decisions, AECS sought to serve a mix of patients and create sustainability for both. As AECS's executive director noted, “*We have fixed pricing. The patients decide themselves; there is no gatekeeping. So, in every hospital the free section is separate from the paying section.*” AECS was able to arrange fixed-pricing models for patients by using resources efficiently to improve patient throughput, limit waste, and maximize human assets. Full wrap-around services with medicine, transportation, and follow-ups were

**TABLE 2** Induction of practices from case analysis

| Enterprise/<br>dilemma | Supporting data                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | First-order codes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Second-order<br>practices                                                                                                                                                       |
|------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| AECS D1                | <p>...we tell the patient up front that this is the amount we are going to charge. Uncomplicated but fixed pricing...</p> <p>...the cost of surgery and treatment was supported by the government and by institutions such as the World Bank...</p> <p>... prices are fixed, but we maintain the quality—Third-party payers [insurance] are connected.</p> <p>... using resources efficiently entails developing processes to improve patient throughput, limiting waste, and maximizing human capital...</p> <p>...each Aravind hospital had its own set of camp organizers who planned their activities for each calendar year. Generally, each district had a camp organizer who set a target for the year based on the population...</p> <p>...what we do proactively is to partner with third parties; for example, with growing insurance, we have to empanel with third-party payers...</p> <p>...local [non-governmental organizations], Lions and Rotary clubs, local industrialists and businesspeople, and philanthropists were the sponsors...</p> <p>...camps were held usually on Saturdays and Sundays and started early in the morning...</p> <p>...each operating room allocates at least two operating tables per surgeon, which allows for fast transitions between surgeries and enables surgeons to perform 2,000 or more cataract surgeries annually. While one patient is undergoing surgery, mid-level ophthalmic personnel are preparing another on the adjacent operating table.</p> <p>...Aravind introduced a residency program, and with this, the name was changed to Aravind Eye Hospital &amp; Post Graduate Institute of Ophthalmology [and it] admitted around 30 resident doctors as of 2003. All admissions were strictly on merit, and no admission or capitation fee was collected...</p> <p>...each employee of the Aravind Eye Care System is trained at [Aravind's postgraduate institute] to perform specific tasks and processes that are highly standardized so that the system makes the most efficient use of its employees' skills...</p> <p>...Aravind Eye Care uses paramedical staff to perform most pre- and post-operative work with patients; the objective is to free up the valuable time of the more expensive experts...</p> | <p>Fixed pricing used to provide stability and transparency to customers' purchasing decisions</p> <p>Partnerships with philanthropic and government agencies</p> <p>Providing high quality at fixed prices and process efficiencies through maximizing human capital, reducing waste, and improving patient flow</p> <p>Eye camps used to identify patients in the communities for further treatment in the hospital</p> <p>Proactive process of going into the communities to identify possible patients</p> <p>Community-level resources (businesses and other sponsors) mobilized to provide transportation, publicity, and organization to the eye camps</p> <p>Eye camps on Saturday and Sunday to not interfere with patients' employment</p> <p>Efficiencies gained in standardization resulting in higher patient throughput</p> <p>Use of a postgraduate institute developing ophthalmologists</p> <p>Training provided for skill development individually and organizationally</p> <p>Use of paramedical staff to free up doctors and other highly trained staff</p> | <p>Asset multiplication</p> <p>Affordable quality</p> <p>Building social embeddedness</p> <p>Affordable quality</p> <p>Asset multiplication</p> <p>Leveraging human capital</p> |
| AECS D2                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                 |



**TABLE 2** (Continued)

| Enterprise/<br>dilemma | Supporting data                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | First-order codes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Second-order<br>practices                                                                                                 |
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|                        | <p>...[The] advantage in terms of cost, where it comes from, is by use of paramedics, so we have a huge pool; each year, we take about 400 to 500 high school girls from villages, put them for two-year training...<br/>                     ...the objective was to offload 60–70% of tasks for doctors and free them to focus on the higher-level activities that only they could perform.<br/>                     ...basically, we have looked at the tasks done by the doctor and pulled out the entire task, which is routine and repetitive in nature, and if it's just a measurement, these technicians do it...</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | <p>Using paramedics, selected from a large pool of young women in rural areas, to offload doctors' tasks</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                           |
| AECS D3                | <p>The cost of IOL lenses (all of which were imported) was very high, about \$80 to \$100...<br/>                     ...hence, in 1991, [AECS] set up a facility to manufacture lenses, named Aurolab...<br/>                     ...usage of these lenses brought down the cost of providing cataract surgery...<br/>                     ...while cost of lenses came down, the price of sutures remained high. This now became a need to be addressed. Hence, in 1998, Aurolab diversified into manufacturing of sutures used in the IOL surgery...<br/>                     ...Aravind Eye Care System today [consists] of our own hospitals, which is direct care giving, and also some manufacturing, which is Aurolab...<br/>                     ...they had decided on the IOL technique as the standard technique to be adopted in all cases (except in those where this could not be done).<br/>                     ...the technology was obtained from IOL International (Florida, USA), with a one-time fee paid to the company for technology transfer along with a buy-back arrangement...<br/>                     ...Aurolab serves not only Aravind but has customers worldwide...<br/>                     ...the training is considered to be excellent and is recognized in [the] USA.<br/>                     ...we have about 900 girls between our four hospitals and Aurolab. We recruit girls from rural backgrounds; generally, we do not prefer urban girls...<br/>                     ...for 6 months, they received the same training as the ophthalmic assistants, and in the next 18 months, specific training was given for manufacturing of lenses...</p> | <p>Lower unit costs of lenses providing more choice in asset management<br/>                     Aurolab establishing in-house manufacturing and offering significant cost reduction<br/>                     Aurolab diversifying to further reduce transactional costs<br/>                     AECS being a multi-tier hospital and health education system, coupled with dedicated manufacturing<br/>                     Following the standard IOL technique<br/>                     Strategic, synergistic partnership created to provide technology transfer and buy-back agreement<br/>                     Aurolab production benefiting a worldwide need for low-cost IOLs<br/>                     Training considered excellent by third parties, enhancing the value of AECS services to customers<br/>                     Rural areas selected to recruit young women into the organization's human resources<br/>                     Extended training making human resources more valuable in operational settings</p> | <p>Asset multiplication<br/>                     Affordable quality<br/>                     Leveraging human capital</p> |

(Continues)

TABLE 2 (Continued)

| Enterprise/<br>dilemma | Supporting data                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | First-order codes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Second-order<br>practices                                                                                                                                                             |
|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| LSH D1                 | <p>...LifeSpring conducted in-person training and had videos on their online learning system that nurses could watch as often [as], whenever, and from wherever they liked. This complementary approach enhanced learning while reducing overall costs...</p> <p>...they were trained to work effectively at several tasks across departments (e.g., outpatient, in-patient, wards, operation theater, [intensive care unit]) and moved around as needed...</p> <p>...because its service was routine maternity care, LifeSpring hired auxiliary nurse midwives rather than the more educated graduate nurse midwives or nurses with broad training...</p> <p>...streamlined processes and cost reduction measures, such as the bulk purchase of a limited range of equipment and medicines...</p> <p>...LifeSpring's pay was competitive for the kind of nurses it hired...</p> <p>...the hospital called upon additional nursing help, thereby converting fixed costs to variable costs and lowering overall costs...</p> <p>...during its initial phase, LifeSpring experimented with [the] cross-subsidization model...</p> <p>...owing to this learning, LifeSpring abandoned the cross-subsidization model [and] is now seeking to be profitable by serving the working poor...</p> <p>...clarifying the processes further helps in multitasking of [human resources], pushing the responsibility for tasks to the lowest possible cadre of employees...</p> <p>...LifeSpring has worked with pediatric hospitals to provide intensive care for about 2–3% of all of its deliveries, reducing operating expenses related [to] hiring full-time pediatricians and pediatric nurses...</p> <p>...LifeSpring made a strategic decision not to invest in the capital infrastructure of its hospitals...</p> <p>...we reduce the working capital by not owning the pharmacy and diagnostics. We have tried to make most of the cost variable with revenue—Which has been possible with various partnership agreements...</p> | <p>In-house training reducing costs</p> <p>Trained workforce across many functions</p> <p>Human resources cost control</p> <p>Standardized procedures</p> <p>Paying competitive wages</p> <p>Minimizing the fixed cost base in operations</p> <p>Starting the enterprise with multiple customer categories</p> <p>Focus on the low-income customer segment</p> <p>Multitasking of human resources functions</p> <p>Reducing operating costs</p> <p>Minimizing the fixed cost base in operations</p> <p>Working capital needs offset by assuming variable cost elements with partners</p> | <p>Leveraging human capital</p> <p>Affordable quality</p> <p>Asset multiplication</p> <p>Building social embeddedness</p> <p>Leveraging human capital</p> <p>Asset multiplication</p> |
| LSH D2                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                       |

**TABLE 2** (Continued)

| Enterprise/<br>dilemma | Supporting data                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | First-order codes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Second-order<br>practices                                                                 |
|------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|
| LSH D3                 | <p>...motivating such women to register themselves with LifeSpring Hospitals...</p> <p>...realizing that the real decision-makers are usually the pregnant woman's mother...</p> <p>...With visits to the homes of prospective and current customers, they became recognized members of the communities...</p> <p>...its marketing team utilizes the clinical health information management system to track pregnant women...</p> <p>...campaigning in the community to identify newly pregnant women and pregnant women who have not [had] antenatal examinations so far.</p> <p>...LifeSpring Hospitals are the most accessible and affordable option conducting camps at the community...</p> <p>...Often, they come from the very communities that they serve...</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <p>Outreach workers building awareness as a function of marketing services to women</p> <p>Key decision-makers addressed in directed outreach with affordability message</p> <p>Recognition in the community providing improved communication and customer loyalty</p> <p>Tracking technology allowing for directed outreach to women who need services</p> <p>Trained community health workers providing education on pre- and postnatal needs</p> <p>Community-level camps</p> <p>Women hired as outreach workers for the communities from which they were hired</p> <p>Transparent pricing allowing lower-income families to budget for expenses</p> | <p>Building social embeddedness</p>                                                       |
| LSH D4                 | <p>By making prices transparent and holding the prices for over 2 years, LifeSpring enables the working poor communities to plan for their hospital expenses related to maternity.</p> <p>...our quality improvement initiatives have simultaneously increased operational efficiency, leading to a reduction in our operating costs...</p> <p>...[the Institute for Healthcare Improvement's] expertise in clinical quality improvement has helped decrease our rates of maternal and neonatal morbidity...</p> <p>...standardization of processes and specialized provision of maternal and child services, including antenatal care, postnatal care, deliveries, family planning services, medical termination of pregnancy, pediatric care (including immunization), diagnostic services, and pharmacy services.</p> <p>...3 years ago, LifeSpring decided to adopt a cluster approach of having multiple hospitals in the city and relocated three of its hospitals...</p> <p>...operating out of leased premises, flexi-staffing (an optimum patient-to-staff ratio is maintained on the basis of the number of deliveries done), and short-term transfers to sister facilities have also helped to keep the costs down...</p> | <p>Quality improvement initiatives increasing operational efficiency and partnerships</p> <p>Forming strategic partnerships with the Institute for Healthcare Improvement</p> <p>Standardizing procedures</p> <p>Minimizing the fixed cost base in operations by relocating</p> <p>Sharing ambulances, flexi-staffing, and outsourcing pharmacies</p>                                                                                                                                                                                                                                                                                                   | <p>Building social embeddedness</p> <p>Affordable quality</p> <p>Asset multiplication</p> |

(Continues)

TABLE 2 (Continued)

| Enterprise/<br>dilemma | Supporting data                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | First-order codes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Second-order<br>practices                                                                                             |
|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|
| ZHL D1                 | <p>...the founders pooled their personal savings to the tune of \$120,000...</p> <p>... [The Ambulance Access for All] Foundation, a non-profit with similar vision, donated six ambulances to ZHL...</p> <p>...the founding team met with Dr. Sam Pitroda. This led to the development of sliding pricing strategy...</p> <p>For 1298, ZHL initially decided that people would be given the option to pay depending on their ability to afford.</p> <p>...15–20% of services were free or subsidized.</p>                                                                                                                                                                                                                    | <p>Personal investments to buy ambulances for piloting</p> <p>Co-development of resources with like-minded partners</p> <p>Sustainable pricing model formulated with help of external consultant</p> <p>Initial pricing model based on affordability</p> <p>Both low-income and middle-income segments reached</p> <p>Purpose and reputation providing access to funding/<br/>investment</p> <p>Acumen investing \$1.5 million</p> <p>Resources deployed to expand service delivery and coverage area</p> <p>LHS founded</p> | <p>Asset multiplication</p> <p>Building social embeddedness</p> <p>Affordable quality</p> <p>Asset multiplication</p> |
| ZHL D2                 | <p>...for competence, as well as incorruptibility, ZHL gained the attention of the Acumen Fund...</p> <p>...[The] Acumen Fund agreed to make an initial investment...</p> <p>...The infusion of capital was used to expand the fleet...</p> <p>...since recruiting trained medical staff is challenging in India, and there is virtually no concept of ambulance paramedics, [the] Life-Supporters Institute of Health Sciences (LIHS), Mumbai's premiere emergency care training center, was started...</p> <p>...ZHL provides [emergency medical services] training modules for its doctors...</p> <p>...ZHL has also specifically targeted alternative medicine doctors due to the scarcity of conventional doctors...</p> | <p>LIHS providing training for ZHL's doctors and paramedics</p> <p>Symbiotic development/use of doctors of alternative medicine</p> <p>ZHL competing for and winning a public-private partnership</p>                                                                                                                                                                                                                                                                                                                        | <p>Leveraging human capital</p> <p>Asset multiplication</p> <p>Affordable quality</p>                                 |
| ZHL D3                 | <p>...[the] Rajasthan government had signed a three-year agreement in 2010...</p> <p>... partnered with London Ambulance Service as a guiding business model to maintain high-quality service standards and make them accessible to all customers.</p> <p>...[the] Bihar government approached Ziqitza with a unique proposal...ZHL agreed to run the pilot, as it was focused on the underprivileged segment, dispatching five basic and advanced ambulances...</p> <p>...[the] strength of its commitment to [emergency medical services], its track record, and the fact that it had emerged as the lowest-cost bidder...</p>                                                                                              | <p>Using partnerships to maintain quality standards for all customer segments</p> <p>Reputation for quality leading to unique operational offer</p> <p>Efficiency allowing ZHL to be the low-cost bidder</p>                                                                                                                                                                                                                                                                                                                 | <p>Affordable quality</p>                                                                                             |

**TABLE 2** (Continued)

| Enterprise/<br>dilemma | Supporting data                                                                                                                                                                                                                                                                                                                                                                                                                           | First-order codes                                                                                                                                                                                                        | Second-order<br>practices                             |
|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|
| ZHL D4                 | <p>For its public relations efforts, [the] Dial 1298 team relied heavily on media coverage.</p> <p>...ZHL ran training programs in schools and colleges in Mumbai...</p> <p>Outreach efforts were planned with a more grassroots-level, mass-appeal program that had ZHL's phone number and key messages displayed on local rail pass covers, poster boards, and on cinema slides. The company ran an extensive "Hoardings Campaign."</p> | <p>Targeted marketing for both low-income and middle-income segments</p> <p>Targeted messaging on the need for ambulance services for the middle-income segment</p> <p>Outreach to community a key driver of success</p> | <p>Affordable quality</p> <p>Asset multiplication</p> |

included in the pricing model for eye camp patients (low-income customers in remote areas), and AECS adopted a basic model in which no surgeries were performed at the eye camp sites; instead, patients needing surgery were brought to the main hospital, where their treatment was provided free of charge. This engendered high-quality surgical outcomes for all customer segments. Furthermore, partnerships with philanthropic and government agencies supported an association with quality, as the cost of surgery and treatment was supported by the government, the World Bank, and third-party payers.

From a social resource standpoint, AECS built trust through eye camps to identify patients in local communities needing further treatment at the hospital. These camps proactively accessed low-income individuals and offered transportation, publicity, organization, and mobilization of community-level resources from businesses and other sponsors, building trust with third parties who provided financial support (i.e., local non-governmental organizations, Lions and Rotary clubs, local industrialists, businesspeople, and philanthropists). In addition, AECS mobilized low-cost telemedicine in its clinics for outreach activities.

### 4.3 | Dilemma 2 (AECS D2): Acquiring human resources in a financially sustainable way

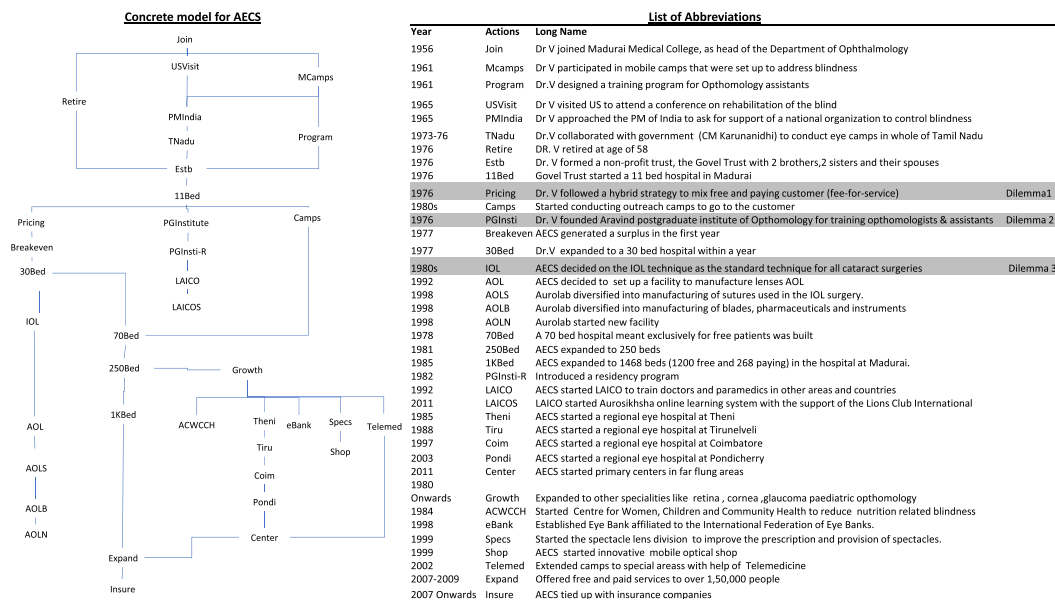
The second dilemma (see Figure 1, "PGInstitute"), related to India's low doctor-to-patient ratio—which is even lower in rural areas. In such situations, hiring ophthalmologists and support staff is both difficult and expensive, which created a dilemma for AECS: To what extent should AECS match market prices to hire ophthalmologists and support staff given its limited financial resources? The data show that AECS addressed this dilemma by creating arrangements to sustainably support and retain human resources such as ophthalmologists and assistants. This involved developing a postgraduate institute of ophthalmology to train ophthalmologists and assistants in-house, and—in line with AECS's mission to eradicate curable blindness—building an institute to provide mixed-duration courses on eye care hospital management, community outreach, instrument maintenance, and social marketing in emerging markets.

Having found ways to train and retain key staff, AECS used paramedics to perform pre- and post-operative work with patients such as washing eyes, providing injections, and suturing, according to AECS's executive director. Paramedics were selected from a large pool of young women (400–500 high school-aged girls) from rural areas, which provided cost advantages; the paramedics were trained 2 years on job-related tasks, after which they could receive more advanced training on the job. The objective was to offload 60–70% of doctors' tasks and free them to focus on the higher-level activities that only they could perform. By standardizing procedures for doctors, AECS maximized its human resource efficiency and met operational objectives through a high-volume model, which in turn justified retaining more ophthalmologists at the market rate.

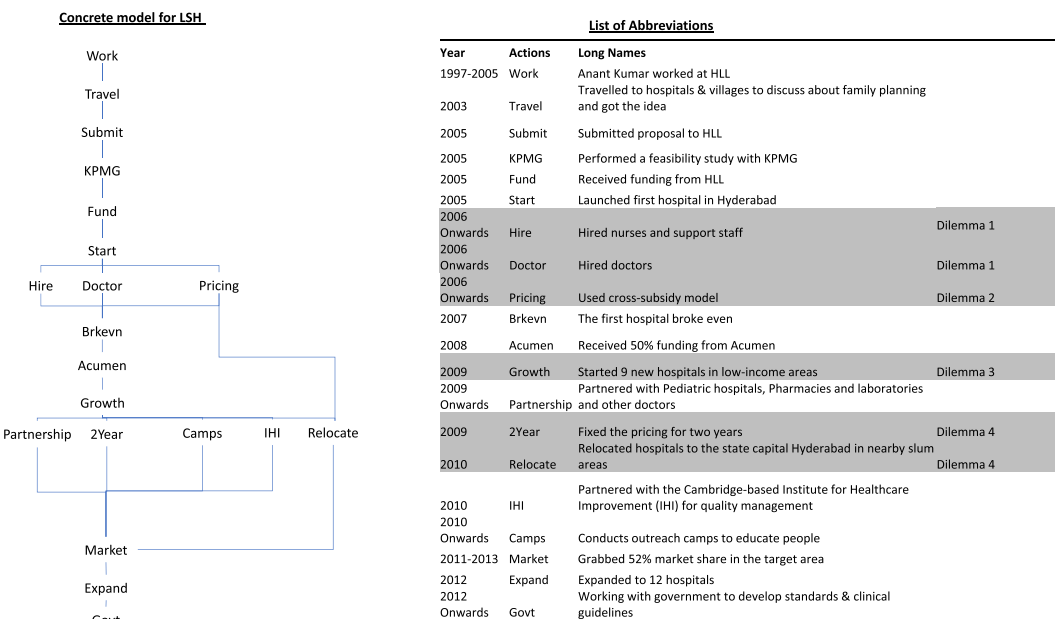
Efficient use of human resources led to high patient throughput and cost savings. For example, as the AECS executive director explained, "*Each operating room allocated at least two operating tables per surgeon, which allowed for fast transitions between surgeries and enabled surgeons to perform 2,000 or more cataract surgeries annually.*" While one patient was undergoing surgery, mid-level ophthalmic personnel prepared another patient on an adjacent operating table.

### 4.4 | Dilemma 3 (AECS D3): Bringing in quality at affordable prices

AECS used the top-tier technique intraocular lenses (see Figure 1, "IOL") as the standard for all cataract surgeries, which led to the third dilemma: how to manage the cost incurred performing IOL surgeries since AECS had to import expensive lenses while maintaining affordability for the vast majority of the population. AECS lowered the unit costs of lenses by building an in-house manufacturing facility, Aurolab, as a separate nonprofit trust with the mission of achieving high-quality, low-cost production. Financial inflows gained from Aurolab's capacity to serve global customers ensured the sustainability of AECS's low-cost model, and the training provided to Aurolab employees was



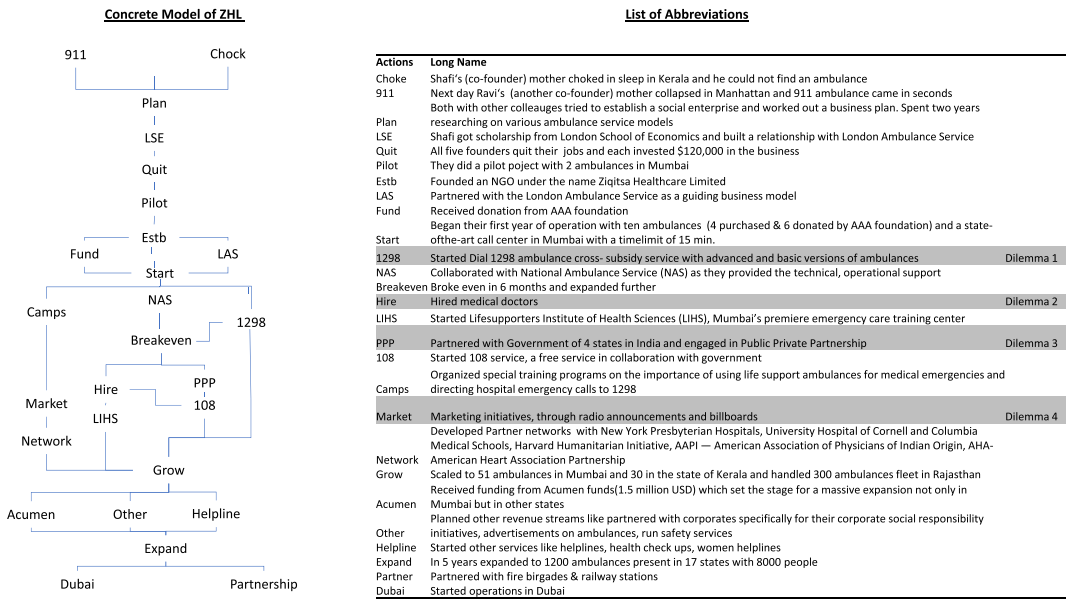
**FIGURE 1** AECS concrete model [Color figure can be viewed at wileyonlinelibrary.com]



**FIGURE 2** LSH concrete model [Color figure can be viewed at wileyonlinelibrary.com]

considered excellent and recognized by third parties in the United States, which further enhanced AECS's perceived value and quality among customers.

In addition, AECS hired women aged 17 to 19 from rural areas to work at Aurolab and its hospitals. The AECS executive director reported, "We have about 900 girls between our four hospitals and Aurolab. Aurolab employed 220 people, out of whom 10 percent were diploma or graduate engineers, pharmacists, and marketing personnel, and



**FIGURE 3** ZHL concrete model [Color figure can be viewed at wileyonlinelibrary.com]

**TABLE 3** Key practices for managing social entrepreneurship dilemmas

| Practice                     | Description                                                                                                                                                                                         |
|------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Asset multiplication         | A practice in which social entrepreneurs build new tangible and intangible assets and use these assets for one or more purposes to drive down costs.                                                |
| Leveraging human capital     | A practice in which social entrepreneurs hire inexperienced local workforces and train them on multiple functions to minimize costs and produce new employment opportunities.                       |
| Building social embeddedness | A practice in which social entrepreneurs work with local communities on a range of activities to ensure a continuous flow of customers and also to build relationships and create new social norms. |
| Affordable quality           | A practice in which social entrepreneurs create or maintain high quality standards and make them financially accessible to different customer segments.                                             |

90 percent were specifically trained women." An extended two-year training program for women from rural settings with 12 years of formal education made human resources valuable in AECS's operational settings.

### 4.5 | LifeSpring hospitals (LSH)

The LSH concrete model includes 20 events (see Figure 2, event abbreviations). LSH began in 2005, and four organizational dilemmas can be observed.

#### 4.5.1 | Dilemma 1 (LSH D1): Acquiring human resources in a financially sustainable way

LSH had to balance the costs of hiring a skilled workforce with the need to arrange the financial capital to retain these resources (see Figure 2, "Hire" and "Doctor"). Auxiliary nurses were hired as full-time employees on fixed



salaries. These nurses were trained in person and online on several tasks across departments. Furthermore, the LSH operations manager stated, nurses “*did not specialize in a particular task nor were they assigned exclusively to a particular department. Instead, they were trained to work effectively at several tasks across departments (e.g., outpatient, inpatient, wards, operation theatre, [intensive care unit]) and moved around as needed.*”

LSH supported process control practices by raising quality standards for commercial healthcare facilities through standardized treatment and process guidelines. LSH also minimized fixed human resources costs. For instance, during occasional peaks in demand, LSH used “*additional nursing help, thereby converting fixed costs to variable costs and lowering overall costs,*” according to the LSH operations manager.

#### 4.5.2 | Dilemma 2 (LSH D2): Pricing to balance social mission and financial independence

The second dilemma involved LSH needing to charge patients enough to cover operating costs while also needing to offer its services at a price that was affordable and accessible to both low- and middle-income segments in line with their social mission (see Figure 2, “Pricing”). LSH used a cross-subsidization model, generating profits by serving middle-income customers and thus subsidizing lower-income customers. It minimized fixed operational costs by leasing premises, effectively using auxiliary nurses, and making strategic decisions not to invest in capital infrastructure for service provision. Furthermore, as LSH's operations manager noted, “*We reduced working capital by not owning pharmacies and diagnostics. We make the most of the cost variables with revenue—which has been possible with various partnership agreements.*”

#### 4.5.3 | Dilemma 3 (LSH D3): Sustaining growth while maintaining the social Mission

LSH took 9 months to break even and subsequently received external financial capital from the Acumen Group in 2008, which was required for the growth that led to the establishment of nine LSH hospitals in low-income areas (see Figure 2, “Growth”). At this juncture, LSH had to ensure a continuous flow of customers while keeping expenses low to sustain growth. Additionally, LSH conducted outreach camps to educate lower-income customers in communities, build awareness, and reach out to key decision-makers. Trained community health workers helped educate families on pre- and postnatal health needs through outreach programs. These activities helped motivate women to register with LSH for antenatal examinations. LSH also used proactive marketing, visiting the homes of prospective and current customers. Outreach activities became recognized by members of the community, helping LSH maintain a continuous flow of patients while ensuring financial sustainability.

#### 4.5.4 | Dilemma 4 (LSH D4): Pricing to balance social mission and financial independence

Additionally, LSH sharpened its focus on low-income populations when it decided to keep prices constant for 2 years and relocated its hospitals to slum areas (see Figure 2, “2 Year” and “Relocate”). The dilemma was if the focus on social objectives would hamper financial independence. Adopting transparent pricing allowed lower-income individuals to budget for expenses, and a two-year fixed-pricing model translated into a reduced burden for families. This is particularly relevant since the expenses related to the first pregnancy and delivery of the first child are typically borne by the woman's parents, who already face enormous financial burdens due to weddings.

Financial inflows were also supported through a strategic partnership with the Institute for Healthcare Improvement, as the institute's expertise in clinical quality improvement helped LSH reduce maternal and neonatal morbidity,

improve clinical protocol adherence, and strengthen a culture of safety in all hospitals. Minimizing the fixed cost base through long-term leasing allowed LSH to rent existing hospitals on multi-year leases rather than purchase new buildings. The team also outsourced pharmacy and laboratory services, reduced machinery to that necessary for a safe, normal delivery, and relocated three hospitals to the state capital, Hyderabad. This move enabled cost savings by mobilizing expensive resources, such as ambulances and back-end operations, to be shared more easily among facilities operating out of leased premises. LSH was also able to have flexible staffing at an optimal patient-to-staff ratio on the basis of the number of deliveries performed and manage short-term transfers to sister facilities.

## 4.6 | Ziqitza Health Care Limited (ZHL)

ZHL's concrete model is a chronological sequence of 28 events (see Figure 3, event abbreviations). It began in 2004, and four organizational dilemmas can be observed.

### 4.6.1 | Dilemma 1 (ZHL D1): Pricing to balance social mission and financial independence

The first organizational dilemma appears at the initiation of a cross-subsidy ambulance service Dial 1298 (see Figure 3, "1298"). In line with its social mission, ZHL wanted to offer a choice for customers to pay depending on their paying capability; however, they were unsure if those who could afford services would pay. The founders' personal investment of \$120,000 to start the ambulance service was crucial to codeveloping resources with like-minded partners. For example, the Ambulance Access for All Foundation (AAA) donated six ambulances to ZHL in a partnership. Another external partner helped ZHL formulate a sliding-scale pricing strategy wherein people who go to private hospitals pay the full charge and those who go to government hospitals receive a subsidy of up to 50%. ZHL saw early success indicators for sliding-scale pricing, as 15–20% of the services provided in response to calls were free or subsidized, indicating that services were touching all strata of society.

### 4.6.2 | Dilemma 2 (ZHL D2): Running expensive services in a financially sustainable way

After breaking even, ZHL encountered a second dilemma: running expensive ambulances with trained professionals at reasonable prices (see Figure 3, "Hire"). ZHL acquired external investment of \$1.5 million, which was used to expand ambulances fleets, coverage area, and use a training institute to provide EMS training to doctors practicing alternative medicine, which in turn helped offset the cost of paying for relatively higher-priced doctors. The ZHL business manager reported, "*Alternative medicine doctors would professionally benefit from [institute] training and higher pay compared to [the] typical alternative medicine income. At the same time, this helps 1298 maintain a steady pool of potential ambulance doctors.*"

### 4.6.3 | Dilemma 3 (ZHL D3): Sustaining growth while maintaining the social mission

ZHL encountered another dilemma: Government collaboration would provide a platform for ZHL to increase its reach but also hinder its independence (see Figure 3, "PPP"). ZHL's operational efficiency helped it earn its first public-private partnership with the Rajasthan government, which was the starting point to building ZHL's reputation, acquiring other public-private partnerships with state governments, and starting new services such as the

108 national ambulance service, which transports low-income individuals to government hospitals for free. ZHL was also able to operate more than 300 state ambulances to provide EMS services. The ZHL business manager said, "They had to maintain high-quality service standards while adjusting to the ambulance infrastructure provided by the government and scale up their operations to make these services widely accessible within the state."

#### 4.6.4 | Dilemma 4 (ZHL D4): Marketing to both low-income and middle-income customer segments

The fourth dilemma occurred when ZHL started a marketing initiative (see Figure 3, "Market") using a consistent message to attract different customer groups. In this emerging market, emergency ambulances services were new and required building awareness at the grassroots level. Targeted marketing and outreach efforts were helpful in building awareness of Dial 1298, with the ZHL team using external media to subsidize billboards and corporate-sponsored training programs in schools and colleges to attract more customers. ZHL also ran an extensive hoarding campaign to spread messages at high-visibility sites throughout the city. Additionally, ZHL printed three key messages on 1298 ambulances: doctor on board, free transfers for accident victims, and subsidized rates. These targeted messages helped ZHL to overcome challenges related to marketing its services to different customer segments.

## 5 | DISCUSSION AND CONCLUSION

### 5.1 | Key practices for overcoming dilemmas

The findings from the inductive multiple-case study show that social entrepreneurs manage dilemmas through four key practices: *asset multiplication*, *leveraging human capital*, *building social embeddedness*, and *affordable quality*. Table 2 demonstrates the inductive process of moving from raw data to theorized practices, and Table 3 summarizes these practices and their definitions.

*Asset multiplication* is a practice in which social entrepreneurs build new tangible and intangible assets and use these assets for one or more purposes to drive down costs. Assets can be built through internal or external investments, partnerships, camps, and institutes, and they can then be multiplied through flexible sharing or repurposing to maximize resource utilization and reach customers. Assets are not just physical but also include knowledge, skills, and emotions (Hastings, 2010). Social enterprises score high on asset multiplication when they are able to bring down costs by reusing built assets for alternative business purposes, and they score low when they incur high costs from built assets and are unable to use assets for alternative business purposes.

AECS built tangible assets through its substantial efforts to construct internal training institutes and in-house manufacturing facilities (AuroLab). For LSH, asset-building occurred through forming partnerships with pharmacies, diagnostic centers and hospitals for delivering intensive care services. ZHL built assets through internal investment (self-funded) and external investment (Acumen Fund) to expand its fleet of ambulances, the core asset for service delivery; it also formed an institute for emergency care training and engaged in public-private partnership opportunities with the government.

The multiplying effect from asset multiplication comes after assets are built for efficient resource utilization and cost reduction. One mode of asset multiplication is flexible sharing, which AECS accomplished by using built assets as multiple delivery locations for core services: Camps, a main hospital, multi-tiered hospitals, and primary centers enabled AECS to share expensive machines and doctors flexibly across sites and helped customers to access services from remote locations. AECS was also able to use its manufacturing facility flexibly to diversify into in-house manufacturing of sutures, and these sutures were then used to further reduce the cost of surgeries. LSH flexibly shared assets through a cluster approach, relocating hospitals to slum areas in order to share ambulances and back-

end operations and using flexible staffing to maintain an optimal patient-to-staff ratio on the basis of the number of deliveries performed while managing short-term transfers between hospitals.

Repurposing assets—using assets for dual purposes—is another method of multiplying them. For example, ZHL also used a static asset (ambulances) in an outbound marketing effort at no additional cost to ZHL, multiplying this particular asset in an unusual way.

*Leveraging human capital* is a practice in which social entrepreneurs hire inexperienced local workforces and train them on multiple functions to minimize costs and produce new employment opportunities. Social enterprises score high on leveraging human capital when they are able to bring down human resources costs by using and upskilling local workforces and by opening new employment opportunities locally (Battilana & Dorado, 2010). They score low on leveraging human capital when they incur high costs in hiring standard human resources that are not local.

AECS's hiring practices and manufacturing facility (AuroLab) targeted high school graduates from underserved areas and offered them employment opportunities. Recruited individuals were upskilled through training at internal institutes to perform multiple tasks in hospitals, camps, and the manufacturing facility. Leveraging a local workforce in this way allowed AECS to reduce costs. LSH management hired auxiliary nurses with less experience instead of graduate nurses or midwives and trained them in routine maternity care. Specifically, these nurses were trained in person and online in order to work effectively at several tasks across departments and move across functions as needed. In a similar vein, ZHL hired practitioners of alternative medicine who were available at lower cost, training these doctors at an institute to ensure a stable workforce.

Each of these social enterprises was highly selective when hiring doctors of alternative medicine, paramedics, and nurses and prioritized hiring from poor or local backgrounds and based on an individual's ability to learn. Also of note, greater concern about leveraging local workforces to drive down costs stimulated employment in local markets.

*Building social embeddedness* is a practice in which social entrepreneurs engage in a range of activities in order to work with local communities to build relationships and create new social norms. Social enterprises score high on building social embeddedness when they are able to establish new social norms and build local community relationships (Coleman, 1990; Granovetter, 1985; Putnam, 2001) and score low when they are unable to reach and work with local communities.

AECS built social embeddedness by proactively going into local communities to generate awareness and identify people needing eye care. Conducting outreach camps through local community workers builds trust and enables new social norms around healthcare, and providing services such as transportation to the hospital enhances relationships with the target population. LSH is able to build trust by offering transparent prices and relocating hospitals closer to the target population, and fixed pricing for over 2 years allows poor communities to plan for maternity-related hospital expenses. Other LSH relationship-building methods include hiring women as outreach workers from the communities they serve, reaching key decision-makers, and setting up community-level camps, which increases trust. ZHL builds social embeddedness through marketing efforts to persuade community members to use ambulances, with advertising campaigns tailored to build awareness with both low- and middle-income customers.

*Affordable quality* is a practice in which social entrepreneurs create or maintain high quality standards and make them financially accessible to different customer segments. Social enterprises score high on affordable quality when they create or maintain high quality standards at affordable prices and serve low-income customers. By contrast, they score low when they are unable to maintain consistent quality standards for different customer segments.

AECS accomplishes affordable quality by using the top-tier IOL technique in medical procedures for both low- and middle-income customers and making this financially affordable through in-house manufacturing and partnerships. AECS fixes prices to ensure transparency for customers and ensures high quality irrespective of the customer group, as well as maintains quality standards at fixed prices through process efficiencies and by standardizing surgical processes to increase patient throughput. LSH maintains quality standards in maternity healthcare, standardizing processes that are carried out by auxiliary nurses for a range of specialized maternal and child services; in complex cases, patients are referred out to partners. Thus, quality standards are maintained at prices affordable to all customer

groups. ZHL maintains quality standards for all customer segments in emergency medical services by partnering with governments and following the London Ambulance Service's business model. Targeted marketing is used to spread awareness of affordable medical services for both low- and middle-income customers.

## 5.2 | Contributions

Our findings build understanding on how social entrepreneurs manage dilemmas around the hybrid tensions and institutional voids posed by resource-constrained emerging markets (Battilana, 2018; Desa, 2012; Desa & Basu, 2013; Di Domenico et al., 2010). Within the social entrepreneurship literature, studies have argued for bricolage as an important mechanism for resource mobilization in such settings (Desa & Basu, 2013) and argued for legitimizing societal change to gain institutional support (Desa, 2012). Nevertheless, some studies have raised concerns about the applicability of bricolage in its current form due to missing aspects core to the social entrepreneurship process: social value creation, persuasion, and stakeholder participation (Di Domenico et al., 2010). Bridging these gaps, our study uses an empirical analysis to propose using *jugaad* as a theoretical lens to study resource mobilization processes in the context of social entrepreneurship. We propose that beyond being creative, flexible, and resourceful (constructs of bricolage), the *jugaad* approach also includes the elements of frugality and inclusiveness (Prabhu & Jain, 2015). Closely linked to the social processes of social embeddedness and social value creation (Di Domenico et al., 2010; McKague et al., 2015; Prabhu & Jain, 2015), *jugaad* focuses on both consciously reducing costs and producing inclusive solutions in response to the community's needs. Thus, it is conceptually distinct from bricolage and more relevant to studying social enterprises' resource mobilization processes.

More specifically, our study shows manifestations of this *jugaad* approach through four induced practices: *asset multiplication*, *leveraging human capital*, *building social embeddedness*, and *affordable quality*. Social entrepreneurship studies have looked at the different approaches, structures, and processes that social entrepreneurs engage in: for example, apprenticeship and the integration approach for hybridization (Battilana & Dorado, 2010); social embedding and contextual bridging for building social structures (Coleman, 1990; Granovetter, 1985; McKague et al., 2015; Putnam, 2001); and social value creation, stakeholder participation, and persuasion for creating social enterprises. Our study extends this body of work by introducing novel *jugaad* practices for managing dilemmas around hiring, pricing, and serving distinct customer groups in the context of social entrepreneurship.

Set in the particular context of Indian healthcare, our findings show that these four induced practices embody the *jugaad* elements of frugality and inclusivity (Krishnan & Prashantham, 2018; Pahalad & Mashelkar, 2010; Radjou et al., 2012; Shepherd et al., 2020). For instance, *Asset multiplication* focuses on cost reduction (frugality) through using built assets for one or more purposes, which can make services accessible to hard-to-reach customer segments (inclusivity). *Leveraging human capital* centers on local hiring and on training inexperienced workforces to generate employment (inclusivity) and minimize costs (frugality). *Building social embeddedness* involves working with local communities on a range of activities to ensure a continuous flow of customers (frugality) and also to build relationships and create new social norms (inclusivity).

*Affordable quality* is about standardizing processes and making quality services financially accessible (frugality) to low- and middle-income segments (inclusivity).

Furthermore, our study's longitudinal organizational view on *jugaad* practices—compared to the dominant individual lens (Prabhu & Jain, 2015)—demonstrates that *jugaad* practices used by social entrepreneurs are complementary and build on each other. For example, building institutes for training local workforces (*asset multiplication*) can deliver medical tasks (*leveraging human capital*) and build community relationships (*building social embeddedness*). A systematization or repeated use of *jugaad* practices can lead to cumulative effects, which provides a contrast to the quick-fix and improvised view of *jugaad* (Prabhu & Jain, 2015; Shepherd et al., 2020) in social entrepreneurship.

Finally, this study makes a methodological contribution in introducing the ESA approach to provide a longitudinal perspective on social entrepreneurship. Specifically, ESA helps capture the temporal relationship between events

and uncovers the nuances of consequential actions taken by social entrepreneurs. The application of ESA as a processual approach, in conjunction with inductive multiple-case study, opens new avenues for investigating resource mobilization processes from a dynamic, long-term perspective (Clough et al., 2019).

In terms of practical application, our study offers insights into the *jugaad* practices used by social entrepreneurs to manage dilemmas (see Table 3). These practices can allow social entrepreneurs to build resources in a bottom-up way in order to gain recursive insights over time, as well as allow them to experiment with trading off the *jugaad* elements of frugality and inclusivity. Our results indicate that social entrepreneurs should pay particular attention to understanding how to proceduralize human assets, as this will allow for building training systems that are highly task-focused and are easily absorbed and replicated. In doing so, workforces can comprise “interchangeable parts” with individuals valued more for their utility rather than their independent skills or knowledge; this would also allow lower-wage/-skilled workers to thrive in task-oriented environments. This study also provides evidence encouraging social entrepreneurs to not only enter rural markets but also seek wider resource pools to help build social embeddedness in communities. This can help social entrepreneurs achieve their social mission while also tapping into the know-how and skills that they can develop in such communities.

## 6 | LIMITATIONS AND DIRECTIONS FOR FUTURE RESEARCH

This study's generalizability must be interpreted with caution, as our empirical results relate specifically to social ventures in Indian healthcare. More work is needed to refine and extend the *jugaad* approach from a theoretical and empirical standpoint, and future studies should explore *jugaad* practices' applicability in other sectors, organization types, and national contexts. Research in other settings—where social enterprises have different dilemmas, operational constraints, funding sources, and institutional set-ups—would help develop and refine our understanding of the *jugaad* approach. For instance, asset building and multiplying effects could happen in different ways, and it would be interesting to understand other possibilities in terms of how asset multiplication could happen in the education sector.

Future research should also investigate whether social entrepreneurs use other *jugaad* practices to manage different dilemmas, such as crisis management around pandemics. Additionally, further research would be beneficial on *jugaad* in the context of other types of organizations, such as for-profits, not-for-profits, charities, and voluntary organizations in both resource-poor and resource-rich settings. Specifically, it would be interesting to examine how *jugaad* practices may help with realizing objectives around sustainability when organizations are pursuing triple-bottom-line targets. Additionally, this study does not consider the performance implications of using *jugaad* practices, and it would be beneficial to examine if these practices are necessary for performance linkages: for example, comparing if high- and low-performing firms are embodying *jugaad* practices. Future research could also focus on measuring and creating scales for *jugaad* practices.

On the methodological front, it is also important to note ESA's limitations and subjectivity. The ESA approach is highly dependent on the knowledge level of researcher(s) since the researcher(s) need to judge how one event is a prerequisite of subsequent events. The models that are produced are undeniably influenced by subjective interpretation, and judgment about events and their connections can be biased; for example, different actors may have differing perceptions about events and their connections.

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## ORCID

Nivedita Agarwal  <https://orcid.org/0000-0002-6806-4399>

## ENDNOTE

<sup>1</sup> The significant event for each dilemma is provided briefly here and highlighted in the respective concrete models.

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