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Community-Based Financing:
Entrepreneurial Resource Acquisition in the Age of Disintermediation

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ABSTRACT

Community-Based Financing: Entrepreneurial Resource Acquisition in the Age of Disintermediation

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Theories of resource acquisition generated by observing how early-stage ventures attain financial capital from professional investors may not apply to increasingly prevalent online financing settings such as crowdfunding, presale platforms, and initial coin offerings. This dissertation explores how entrepreneurs attain financial capital from distributed backers with diverse motivations and incentives in exchange for future offerings in the crowdfunding setting. Through a longitudinal analysis of eight crowdfunding campaigns, I induct a process framework of community-based resource acquisition to contribute to existing theories of nascent venture legitimacy. I then empirically analyze why entrepreneurs choose not to reveal signals of accomplishment relating to education, professional background, and entrepreneurial experience in their efforts to persuade crowds to contribute financial capital to uncertain entrepreneurial endeavors. This analysis contributes to the existing literature on signaling in entrepreneurship.

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DEDICATION

This dissertation is dedicated to Garrett.

You taught me to appreciate the details in this world.

1. INTRODUCTION

Some of the hottest product companies today (e.g., FitBit) started as internet-only brands. The solutions available to you today like Kickstarter or Self Starter can make it incredibly easy for your customers to learn about your product, learn about you, and make a conscious decision if they want to be involved.

- Marc Barros, founder of Moment

1.1. Overview

From Blackberries to iPhones, the rapid adoption of technological advancements in the twenty-first century connects people irrespective of location and time. This sociality afforded to distributed individuals increasingly disaggregates and decentralizes the role of established organizations and institutions (Davis, 2016; Faraj, von Krogh, Monteiro, & Lakhani, 2016; Powell, 2016). Research on organizations and entrepreneurship has begun to address this shifting landscape. Theories of hierarchical knowledge-based organizations (Kogut & Zander, 1996; Nahapiet & Ghoshal, 1998; Nonaka & Takeuchi, 1995) give way to models of knowledge creation in loosely coordinated user communities outside the boundaries of the firm (Faraj, Jarvenpaa, & Majchrzak, 2011; Lee & Cole, 2003; von Hippel & von Krogh, 2003). Theories of centralized producer-based innovation (Machlup & Penrose, 1950; Penrose, 1955) shift to address the efficiencies of collaborative user innovation (Baldwin & von Hippel, 2011; Hiennerth, von Hippel, & Jensen, 2014). Theories of entrepreneurial opportunity recognition as an event-based reduction in uncertainty (Eckhardt & Shane, 2003; Kirzner, 1973, 1997; Shane 2000; Shane & Venkataraman, 2000) now consider the recognition and pursuit of opportunities as a process of continuous engagement with user communities (Autio, Dahlander, & Frederiksen, 2013). Yet as technology continues to alter complex social and institutional structures, norms,

and practices (Lerner & Tirole, 2002; Zammuto, Griffith, Majchrzak, Dougherty, & Faraj, 2007), little theoretical attention has been given to the shifting landscape of entrepreneurial resource acquisition.

A variety of theoretical lenses and perspectives have been brought to bear on the important question of how entrepreneurs persuade professional investors—angels, venture capitalists (VCs), and institutional investors who possess financial expertise, business acumen, and technological insight—to provide financial resources to inherently uncertain entrepreneurial ventures (e.g., Elsbach & Kramer, 2003; Fisher, Kotha, & Lahiri, 2016). Consisting mostly of ideas and early-stage prototypes that require financial resources for further exploitation, nascent entrepreneurial ventures lack operating histories, customers to validate their product offerings, and established organizational routines and practices (Burton & Beckman, 2007; Rindova & Kotha, 2001; Santos & Eisenhardt, 2005, 2009). Such ventures therefore present high-risk investments for resource providers seeking financial returns on their investments (Shane & Venkataraman, 2000; Stinchcombe, 1965).

To explain how entrepreneurs acquire resources amidst significant uncertainty, prior work emphasizes three primary theoretical mechanisms. First, prior literature has addressed the projections¹ used by early-stage ventures to alleviate uncertainty by aligning with investors' expectations to generate legitimacy (Lounsbury & Glynn, 2001; Navis & Glynn, 2011; Zimmerman & Zeitz, 2002; Zott & Huy, 2007). Second, scholars have addressed efforts to efficiently establish ties with professional exchange partners (Hallen, 2008; Hallen & Eisenhardt, 2012; Stuart, Hoang, & Hybels, 1999). Third, prior studies have emphasized the role of founder-

¹ Projections include narratives, identity claims, and symbolic actions that capture disparate elements of a venture into comprehensive wholes for external observers to interpret. These are traditionally communicated via one-to-one exchanges at discrete moments in time via mediums such as venture pitches (e.g., Chen, Yao, & Kotha, 2009; Elsbach & Kramer, 2003) and/or initial public offering prospectuses (e.g., Martens, Jennings, & Jennings, 2007).

level and venture-level signals in investors' efforts to discern a venture's long-term quality and plausibility (Certo, 2003; Eisenhardt & Schoonhoven, 1990; Higgins & Gulati, 2006).

The first perspective, grounded in institutional theory (Meyer & Rowan, 1977), broadly discusses how new ventures establish legitimacy in the eyes of resource providers by aligning with extant institutional forms (Aldrich & Fiol, 1994; Deephouse, 1996; DiMaggio & Powell, 1983) and conforming to external expectations (Hsu, 2006). By drawing on generally accepted norms and values within their social contexts, entrepreneurs shape investor interpretations of their ventures through narratives, identity claims, and symbolic actions to gain legitimacy judgments and thereby acquire necessary resources (Fisher et al., 2016; Lounsbury & Glynn, 2001; Martens et al., 2007; Navis & Glynn, 2011; Wry, Lounsbury, & Glynn, 2011; Zott & Huy, 2007). Yet legitimacy judgments historically depend on what professional investors determine to be desirable and appropriate within a "socially constructed system of norms, values, beliefs, and definitions" (Suchman, 1995: 574). In this way, an investor's past investment experience influences the biases and heuristics upon which they base future investment decisions (Hall & Hofer, 1993; Huang & Pearce, 2015; Kirsch, Goldfarb, & Gera, 2009; Zacharakis & Shepherd, 2011). As such, entrepreneurs must determine the appropriate cues to draw upon and communicate to successfully attain resources during their formative stages, often in the absence of concrete indicators of venture quality.

The second perspective, broadly encapsulated by network theory (Granovetter, 1985), assesses the formation and exploitation of exchange relationships between entrepreneurs and potential resource providers (Hallen, 2008; Podolny, 2001; Stuart et al., 1999; Vissa, 2012; Vissa & Chacar, 2009). As low-power actors, entrepreneurs can both enhance their reputations and acquire essential capital by establishing connections with high-quality resource providers such as

VCs (Hallen, 2008; Khaire, 2010; Vissa, 2011). Forming ties with these professional investors generates direct financial investments and also indicates an early-stage venture's quality to other professional investors (Davis & Eisenhardt, 2011; Hallen & Pahnke, 2016). In this way, professional resource providers not only provide necessary financial capital, but also status through association that is then interpreted by other investors when making their funding decisions. Yet since professional exchange partners typically invest large sums of financial capital in a venture, entrepreneurs traditionally depend on a small number of these investors to reach their funding objectives. Therefore, early-stage ventures must focus on efficiently forming dyadic ties with professional investors to acquire necessary resources from their emerging network positions (Graebner & Eisenhardt, 2004; Hallen & Eisenhardt, 2012).

The third perspective, grounded in signaling theory (Spence, 1973), describes how investors rely on observable signals emitted by entrepreneurs to judge a venture's quality, viability, and plausibility amidst inherently uncertain conditions. Signal receivers are more attuned to signals when information asymmetry and uncertainty are high (Gulati & Higgins, 2003; Higgins & Gulati, 2006), and view costly and difficult to attain signals as more credible and valid (Cohen & Dean, 2005; Podolny, 1994). Studies on signaling in entrepreneurial resource acquisition suggest several indicators serve as signals, including the reputations and backgrounds of board members and top managers (Certo, 2003; Eisenhardt & Schoonhoven, 1990; Higgins & Gulati, 2006; Sanders & Boivie, 2004), certifications (King, Lenox, & Terlaak, 2005; Sine, David, & Mitsuhashi, 2007), and third-party endorsements (Podolny, 1993; Rao, 1994).

Each of these theoretical perspectives assesses how entrepreneurs attain financial resources from professional investors. Yet these perspectives may not translate directly to the

context of crowdfunding where entrepreneurs seek to identify and persuade large numbers of *non-professional* resource providers to provide relatively small financial contributions to assist early-stage ventures in meeting their self-selected funding goals (Mollick, 2014).² In this setting, entrepreneurs can attain both financial capital and product feedback from geographically distributed resource providers through public exchanges that prospective resource providers can subsequently observe in real-time and in retrospect. Crowdfunding therefore reduces an entrepreneur's dependence on professional resource providers; instead enabling entrepreneurs to garner resources for early-stage ventures from geographically distributed non-professional resource providers who seek to access an entrepreneur's product offering or support its broader purpose rather than maximize their financial returns (Mollick, & Nanda, 2016).

Since crowds do not have homogenous beliefs and objectives (i.e., realizing a financial windfall), entrepreneurs seeking resources via crowdfunding tap into broader “community benefits” by actively developing social capital—mutually-held trust, goodwill, and reciprocity from social relationships—amongst collective bodies of supporters who partake in evolving entrepreneurial ventures (Belleflamme, Lambert, & Schwienbacher, 2014; Fisher, Kuratko, Bloodgood, & Hornsby, 2017). Given the importance of interconnected communities of supporters in resource acquisition from distributed crowds, I seek to understand whether and how entrepreneurs employ actions to develop communities of supporters and the role of such communities in early-stage venture resource acquisition efforts.

In this dissertation, I use crowdfunding as a context to conceptually and empirically assess the public interactions between founders and distributed resource providers to unpack the

² *Forbes* (2015) reports that entrepreneurs raised approximately \$16 billion via crowdfunding in 2014, with estimates that \$34 billion would be raised via crowdfunding in 2016; exceeding the roughly \$30 billion invested by U.S. VCs annually.

processes that lead to successful resource acquisition in this setting. Below, I discuss recent research on crowdfunding and outline the contents of this dissertation in greater depth.

1.2. Crowdfunding Context

Recent crowdfunding research identifies two broad sets of mechanisms that influence the funding decisions of prospective resource providers: project-centric mechanisms and backer-centric mechanisms.

Consistent with traditional resource acquisition settings, *project-centric mechanisms* capture the processes by which resource providers interpret a crowdfunding project's underlying attractiveness as conveyed in quality signals and entrepreneurial sensegiving strategies (Calic & Mosakowski, 2016; Mollick, 2014; Parhankangas & Renko, 2017). Signals describe objective and observable characteristics that resource providers use to make inferences on founder capabilities and project plausibility. Sensegiving strategies describe actions entrepreneurs take to articulate “who we are” and “what we do” to prospective resource providers (Navis & Glynn, 2011). Sensemaking describes the subjective interpretations and assessments made by prospective resource providers based on available signals and sensegiving strategies to discern whether a venture aligns with their expectations across a variety of criteria (Greenberg & Mollick, 2017; Li, Chen, Kotha, & Fisher, 2017).

In contrast to traditional resource acquisition settings, *backer-centric mechanisms* describe the processes by which backers directly and indirectly interact, observe, and learn from one another to influence their decisions to fund a venture (e.g., Burtch, Ghose, & Wattal, 2016; Colombo, Franzoni, & Rossi-Lamastra, 2015; Kuppuswamy & Bayus, 2017). Crowdfunding is a highly public funding medium where potential backers observe, learn, and base their funding decisions on the actions of other backers (Zhang & Liu, 2012). Since potential backers often

view crowdfunding campaigns as informal communities, contextual social norms may emerge from observing the behaviors of early backers (Burtch, Ghose, & Wattal, 2015). Findings suggest project founders rely less on developing and leveraging relationships with high-status professional investors, but depend more on developing social capital with a broader community of potential resource providers. In this way, founders and backers develop a shared objective of bringing a nascent project to fruition, and collectively play an important role in how nascent ventures acquire necessary resources.

Crowdfunding platforms facilitate the formation of supporter communities comprised of individuals who not only provide financial resources as in traditional venture funding settings (i.e., venture capital, angel investing), but also contribute feedback, suggestions, and personal stories related to a product offering. Such platforms allow prospective backers to openly interact with venture founders for others to observe in real-time and in retrospect. Given the asynchronous nature of such communications, individuals not only post content, but also socialize and engage with founders and other backers. Thus, distributed individuals can come together over a common interest in the project's product offering and contribute to its development and funding success. For example, Palmer Luckey, who founded Oculus Rift and raised \$2.4 million for the venture on Kickstarter described the importance of communities before and during his crowdfunding campaign:

I'm a huge fan of online communities. I think that asynchronous internet-based communication forums such as Reddit and other discussion forums are one of the best things that could possibly have happened to collaborative invention. The Rift certainly would not exist without forums. It's kind of fascinating how you can bring people together from all around the world with some tiny niche interest and all collaborate on something. But I feel like we're all doing this together (Tweedie, 2013).³

³ Luckey also had prior experience facilitating online communities as the co-founder of ModRetro, which he described as “an electronics enthusiast community that focuses on modifying vintage game consoles, and it’s

This quote suggests Luckey benefited from creating a community of supporters around Oculus Rift rather than establishing one-off dyadic ties with investors.

These online communities are comprised of members whose interests not only overlap, but who interact with the entrepreneur and other backers to discuss and deepen their common interest around a project and its product offering (O'Mahony & Lakhani 2011). In this way, resource providers receive expansive benefits over and above consumer benefits as active participants in a venture's success. The efficacy of such communities depends on entrepreneurs to enact opportunities for supporters to discover commonalities with one another and interact with the entrepreneur through continuous updates and dialogue. In describing the critical role founders play in the formation of communities, Gerry Maravilla, Director of Crowdfunding at Seed&Spark, said the following:

I entered existing communities and groups. It took time to do so. I started my outreach in March and launched [my campaign] in July. If I did anything differently, I wish I had more time to develop stronger relationships and reach out to more organizations. You can't just show up as a stranger and cold ask for something and expect to get unanimous support.⁴

The communal and democratized nature of crowdfunding provides a public forum through which prospective backers can observe, learn, and base their funding decisions on backer-to-backer and backer-to-founder observations and interactions (e.g., Burtch et al., 2016; Colombo et al., 2015). Yet the impetus is on founders to develop vibrant communities of supporters rather than expect pre-existing collectives to be available to directly petition for financial resources. This line of thinking would suggest founders form numerous dyadic ties to incrementally acquire necessary resources rather than leverage the social capital of

actually one of the larger game console modification forums on the internet. I started that site when I was 15" (Tweedie, 2013).

⁴ Interview conducted on January 23, 2017.

interconnected individuals with a common interest. This is further emphasized by Maravilla of Seed&Spark:

A lot of people think there are a pool of wealthy individuals that are ready to jump in, that campaigns are waiting to be picked...They refer back to the top campaigns thinking that they raised funds because they used Kickstarter not because they have built-in audiences...People target and develop relationships with their audiences... finding a connection through a shared ideological principle; it becomes very interconnecting

Further understanding the formation of such communities, their interpretations of various project-level and founder-level signals, and their ultimate role in early-stage venture resource acquisition is the focus of this dissertation.

1.3. Contents

In the ensuing chapter (Chapter 2), I survey the literature on how entrepreneurs acquire resources from distributed, non-professional resource providers in the crowdfunding setting. I organize extant crowdfunding literature across the contexts of rewards-based crowdfunding, equity-based crowdfunding, and peer-to-peer lending, to develop a typology of three primary sets of mechanisms: *project-centric mechanisms*, *backer-centric mechanisms*, and *environment-centric mechanisms*.⁵ I then supplement this review with a survey of the organizational literature on communities in innovation and entrepreneurship to suggest that dynamic backer-to-backer and founder-to-backer interactions can play a critical role in early-stage venture resource acquisition from distributed non-professional resource providers. I then outline a conceptual framework of resource acquisition via crowdfunding and suggest future areas of study to set up the qualitative and quantitative analyses that I conduct in Chapters 3 and 4.

⁵ Research on environment-centric mechanisms attends to the formation and emergence of generally accepted practices in crowdfunding and their evolution into resilient structures present in the development of future crowdfunding platforms. While articles have begun to address the “institutionalization” of crowdfunding, this is not a primary focus of this dissertation. Yet due to the nontrivial number of articles in this area, these articles are included in the literature review of this dissertation.

In Chapter 3, I explore the processes early-stage ventures employ to acquire resources under dynamic conditions and ask the question: *How do early-stage ventures acquire financial resources from distributed resource providers?* Using a qualitative, case-based research design, I induct a process model of *community-based resource acquisition*. The framework consists of three distinct mechanisms: *community building*, *community engaging*, and *community spanning*. Community building entails sharing real-time ideas and events to identify a common domain of interest and share in the attainment of a new venture's vision. Community engaging is the co-construction of content and concepts between a venture's founder(s) and supporters that are then integrated into subsequent product development and community building efforts. Community spanning entails leveraging emergent backer communities to span into broader existing audiences and communities to generate greater visibility for the venture. By temporally analyzing resource acquisition in the crowdfunding setting, I empirically illustrate and theoretically conceptualize the dynamic nature of ongoing sensegiving and sensemaking between founders and backers as early-stage ventures create vibrant and interactive forums where they can attain valuable feedback, financial capital, and establish supporter communities.

In Chapter 4, I assess the signals used by founders in their efforts to attain financial capital via crowdfunding to ask the question: *Why do entrepreneurs select not to use available signals of past experience and accomplishment when seeking resources via crowdfunding?* While Chapter 3 emphasizes the pronounced role of ongoing interactions between founders and backers in the outcome of resource acquisition via crowdfunding, entrepreneurs must still initially signal their intent and ability to follow-through on uncertain early-stage ventures. My findings from an original dataset of early-stage technology and design ventures seeking resources via Kickstarter between August and November 2014 reveal many founders select not to employ

available signals of educational background, professional experience, and entrepreneurial experience in their initial crowdfunding pitches. While prior studies of equity crowdfunding find investors respond favorably to signals of founders' education, occupation, and qualifications (Ahlers, Cumming, Günther, & Schweizer, 2015), the equity crowdfunding setting closely parallels traditional entrepreneurial contexts where ventures seek financial capital from professional investors in exchange for equity. Yet in the rewards-based crowdfunding setting, where backers contribute financial capital in exchange for a future good or service rather than equity, the effectiveness and usage of such signals is less understood. In this chapter, I empirically explore three possible explanations as to why founders may withhold signals to more clearly understand whether and how founder-level and project-level signals impact the outcome of resource acquisition via crowdfunding campaigns and long-term venture success post-campaign.

In Chapter 5, I synthesize the previous chapters to offer a broader program of research for scholars assessing crowdfunding as an entrepreneurial financing mechanism. While a number of studies examine the factors that influence resource acquisition from distributed crowds, I encourage future studies to examine the individual-level antecedents that influence the macro-level structures of crowdfunding campaigns (particularly community formation), and also suggest research on longer-term wealth creation in the form of campaign follow-through and venture formation. Finally, I encourage future studies to assess the emergence of generally accepted norms and practices as crowdfunding becomes increasingly institutionalized as a form of venture finance.

Taken together, my dissertation explicates the dynamic interactions between entrepreneurs and distributed non-professional resource providers during a venture's earliest

stages of conception. By assessing these interactions in the context of crowdfunding, I contribute to the literatures on resource acquisition, legitimacy, signaling, communities in organizations, and crowdfunding.

1.4. Contributions

For research on communities in organizations, I extend prior work on community-based innovation where communities form horizontal structures to develop innovations (Bagozzi & Dholakia, 2006; Faraj & Johnson, 2011; Fleming & Waguespack, 2007) and established organizations tap into such communities for novel ideas (Dahlander & Wallin, 2006; Jeppesen & Frederiksen, 2006), to better understand how entrepreneurs raise resources from non-professional and distributed communities.

Prior work at the intersection of entrepreneurship and communities addresses the role of communities in opportunity recognition (Autio et al., 2013) and the propensity of community members to commercialize innovative ideas (Mollick, 2016), but it has yet to discuss how communities dynamically form to serve as a source of financial capital for nascent ventures. I further suggest that entrepreneurs, fueled by the interconnectivity of online crowdfunding platforms, play an active role in building, engaging, and spanning geographically-unbounded communities around a common purpose to generate expansive social capital, legitimacy, and attain resources for their early-stage ventures.

For research on entrepreneurial resource acquisition, I address the shifting landscape of entrepreneurial finance and the factors that influence non-professional resource providers in online settings (Drover, Busenitz, Matusik, Townsend, Anglin, & Dushnitsky, 2017). Prior research offers valuable frameworks and empirical findings to better understand how institutional norms (e.g., Martens et al., 2007; Navis & Glynn, 2011; Zimmerman & Zeitz, 2002)

and network ties (e.g., Hallen & Eisenhardt, 2012; Stuart et al., 1999) influence nascent venture resource acquisition outcomes. Yet our understanding of venture finance is mostly limited to professional investors who make decisions based on established heuristics and biases (Huang & Knight, 2017). Instead, I posit supporter communities play a critical role in resource acquisition from non-professionals. I therefore examine the actions taken by entrepreneurs to facilitate the formation of communities to generate social capital and attain financial capital. In so doing, entrepreneurs and emergent communities mutually construct venture narratives and products through continuous feedback and interactions.

I also contribute to the signaling literature by focusing on whether founder- and project-level signals impact both resource acquisition and long-term success in a crowdfunding setting. Using quantitative data, I examine three possible explanations as to why entrepreneurs withhold signals of experience and accomplishment. A number of interesting insights emerged from this study. First, founders' pre-entry entrepreneurial experience and accomplishments, previously theorized to serve as valid signals of a venture's quality and plausibility given uncertain conditions (Certo, 2003; Eisenhardt & Schoonhoven, 1990; Higgins & Gulati, 2006; Sanders & Boivie, 2004), appear to have little bearing on the long-term outcomes of campaign execution and product quality once delivered. Second, while entrepreneurial experience is indicative of backers' satisfaction with a delivered product, revealing this experience paradoxically inhibits financial resource acquisition in the first place, which runs counter to classic signaling literature (Spence, 1973). Third, project-level signals, including company formation, prototype development, detailed timelines, and campaign videos, appear to impact the campaign outcomes of funding success, amount raised, and number of backers. This is interesting since these project-level signals are not predictive of a campaign's long-term success, suggesting backers may

naively interpret these signals as valid indicators of a venture's long-term quality and plausibility. These findings call into question the validity of signals in the crowdfunding setting that have been shown to impact resource acquisition in traditional venture financing settings.

Broadly, it appears that the emergence of crowdfunding parallels a larger societal shift from centralized broadcasting of the twentieth century to the democratized information flows of the twenty-first century (Davis, 2016). This shift heightens the role of non-professional resource providers in entrepreneurial finance and necessitates theory on how entrepreneurs influence distributed resource providers to contribute to their early-stage ventures. By examining how entrepreneurs mobilize communities of resource providers in this dissertation, I conceptualize the processes by which democratized financing will impact the modern-day flow of resource capital to entrepreneurial projects.

2. **FROM CROWDS TO CROWDFUNDING: THE ROLE OF THE MASSES IN ENTREPRENEURIAL RESOURCE ACQUISITION**

Community connectedness is not just about warm fuzzy tales of civic triumph. In measurable and well-documented ways, social capital makes an enormous difference in our lives...Social capital makes us smarter, healthier, safer, richer, and better able to govern a just and stable democracy.

- Robert Putnam, *Bowling Alone* (2001: 290)

2.1. **Overview**

Crowdfunding—as a means for a relatively large number of individuals to provide relatively small contributions to assist projects or ideas meet their self-selected funding goals—presents a burgeoning venture financing mechanism for entrepreneurs. As annual financial contributions to crowdfunded projects grow to surpass venture capital and angel investments, crowdfunding increasingly alters the role of professional resource providers as centralized gatekeepers in entrepreneurial resource acquisition. In this review, I organize extant crowdfunding literature across the contexts of rewards-based crowdfunding, equity-based crowdfunding, and peer-to-peer lending, to develop a typology of three primary sets of theoretical mechanisms: *project-centric quality mechanisms* that capture the signals and actions originating with the project and how prospective backers make sense of them, *backer-centric behavioral mechanisms* that describe how backers interpret and make inferences based on behaviors and decisions of prior backers, and *environment-centric institutional mechanisms* that attend to the socially constructed norms of crowdfunding platforms. Each of these mechanisms is described in greater detail below.

2.2. Resource Acquisition and Crowdfunding

Entrepreneurs must adjudicate the inherent uncertainty of nascent entrepreneurial opportunities (Shane & Venkataraman, 2000; Stinchcombe, 1965) to influence professional investors' judgments of an opportunity's quality and attractiveness (e.g., Chen et al., 2009; Elsbach & Kramer, 2003; Fisher et al., 2016; Garud, Schildt, & Lant, 2014; Huang & Knight, 2017; Martens et al., 2007; Wry et al., 2011; Zott & Huy, 2007). Prior work emphasizes how early-stage ventures lacking operating histories, customers to validate their product offering, and established organizational routines and practices (Burton & Beckman, 2007; Rindova & Kotha, 2001; Santos & Eisenhardt, 2009) alleviate uncertainty by aligning with investors' expectations (Lounsbury & Glynn, 2001; Navis & Glynn, 2011; Zimmerman & Zeitz, 2002) and establishing ties with high-quality exchange partners (Hallen, 2008; Hallen & Eisenhardt, 2012; Stuart et al., 1999). Yet the emphasis of prior research on the interplay between entrepreneurs and professional investors may not generalize to crowdfunding—an increasingly pervasive form of funding where distributed crowds of non-professionals provide resources to access a venture's product offering (once developed) or support its broader purpose (Mollick, 2014). The following review attends to research on crowdfunding to develop an initial theoretical framework and encourage future inquiry in this setting.

Crowdfunding enables entrepreneurs to bring a product or service to life by soliciting relatively small pledges from “crowds” of supporters uninhibited by geographic location or (lack of) investment experience (Lin & Viswanathan, 2015; Sorenson, Assenova, Li, Boada, & Fleming, 2016). While crowdfunding has become increasingly ubiquitous due to the social capabilities of the Internet, the act of seeking funding from a “crowd” of supporters dates back to at least 1713 when the English poet, Alexander Pope, enlisted the support of 750 backers to fund

his translation of *The Illiad* from Greek to English. In exchange for two gold guineas apiece, Pope acknowledged each backer in the pages of the final translated text (Kazmark, 2013). Pope realized the potential of inviting a distributed audience to bring his endeavor to life at a time when monarchs and aristocrats acted as “expert investors” for commissioning such works as Michelangelo’s Sistene Chapel (funded by Pope Julius II) and financing explorations including Magellan’s circumnavigation of the globe (funded by King Charles V of Spain). Yet others recognized the power of crowds as well. Mozart sought capital from the public to fund his early concertos in exchange for recognition in completed manuscripts. A century later, Joseph Pulitzer leveraged his *New York World* readership to obtain contributions from over 120,000 individuals to fund the construction of a pedestal for the Statue of Liberty (National Park Service). Though resource acquisition from distributed non-experts has existed for centuries, extant literature’s prevailing focus on professional investors provides little understanding of this increasingly prevalent practice.

Broadly, this chapter reviews research conducted through June 2017 on crowdfunding to advance the discussion of crowdfunding as an entrepreneurial financing mechanism. In this chapter, I systematically analyze existing research on crowdfunding across the three contexts of crowdfunding: rewards-based crowdfunding, equity-based crowdfunding, and peer-to-peer lending. Rewards-based crowdfunding describes settings where project creators solicit resources over a constrained period of time (e.g., 30 to 60 days) in exchange for pre-determined rewards, often presales of the ultimate product or service (e.g., Greenberg & Mollick, 2017; Kuppuswamy & Bayus, 2017). Equity-based crowdfunding describes settings where early-stage entrepreneurial ventures seek equity investments from accredited investors in an online marketplace⁶ (Cholakova

⁶ Equity crowdfunding investments are often \$5,000 or more, making them similar in amount to angel investments.

& Clarysse, 2016; Vismara, 2016). Peer-to-peer lending describes a setting where individuals provide financial loans to borrowers with minimal mediation from traditional financial institutions (e.g., Burtch et al., 2015; 2016; Sonenshein, Herzenstein, & Dholakia, 2011). While each context embodies a unique environment defined by distinct founder objectives, backer motivations, and outcomes of interest, all three provide a means for distributed groups of individuals to contribute capital to individuals or projects seeking to meet their self-selected funding goals from non-professional crowds rather than professional investors.

Since crowdfunding research attends to a variety of different outcomes, I next organized the articles by outcome variables across three categorical distinctions: (1) campaign-level, backer-level, and platform-level outcomes; (2) relative versus absolute outcomes; and (3) context-driven outcomes. This sorting and subsequent analysis revealed scholars' predominant focus on resource acquisition as an outcome of interest in crowdfunding studies as typically measured by campaign-level success and backer-level funding decisions. The various crowdfunding contexts—rewards-based, equity-based, and peer-to-peer lending—each offer unique outcomes (i.e., loan performance for peer-to-peer lending) in addition to common outcomes such as goal attainment and funding decisions.

Building on the initial groupings by context and outcomes, I develop a typology of three distinct lines of inquiry addressed in crowdfunding research: (1) *project-centric quality mechanisms* (Greenberg & Mollick, 2017; Leung & Sharkey, 2014; Li et al., 2017; Mollick, 2014; Sonenshein et al., 2011), (2) *backer-centric behavioral mechanisms* (Burtch, Ghose, & Wattal, 2013, 2015, 2016; Kuppuswamy & Bayus, 2017; Lin & Viswanathan, 2016), and (3) *environment-centric institutional mechanisms* (Powell, 2016; Sorenson et al., 2016).

Project-centric quality mechanisms describe actions (both symbolic and substantive) taken by project founders and judgments of quality by potential resource providers that mutually serve to reduce uncertainty and positively influence funding decisions (Cornelissen & Clarke, 2010; Zimmerman & Zeitz, 2002; Zott & Huy, 2007). Research on project-centric mechanisms is consistent with the literature on nascent venture resource acquisition in traditional contexts where entrepreneurs seek to reduce informational asymmetries with prospective investors who lack complete knowledge about a venture and its inner workings (Amit, Brander, & Zott, 1998).

Backer-centric behavioral mechanisms describe the decision-making processes of potential backers as a function of observations and learning from the collective decisions of others to overcome uncertainty pertaining to a project's quality and viability (Banerjee, 1992; Bikhchandani, Hirshleifer, & Welch, 1998). This process of collective decision-making, historically observed in domains defined by real-time availability of public information such as auctions (Simonsohn & Ariely, 2008) and stock exchanges (Bondt & Thaler, 1985), deviates from prior research on nascent venture resource acquisition where interpersonal dynamics typically encompass dyadic ties between entrepreneurs and experienced investors (e.g., Hallen, 2008; Hallen & Eisenhardt, 2012; Huang & Pearce, 2015; Katila, Rosenberger, & Eisenhardt, 2008). Instead, research on backer-centric behaviors identifies direct and indirect backer-to-backer interactions as an important factor in resource acquisition via crowdfunding.

Environment-centric institutional mechanisms describe the broad forces that enable and attenuate the emergence of crowdfunding platforms to attain financial resources for early-stage entrepreneurial ventures. Such studies examine the factors that facilitate the formation of crowdfunding platforms, determine the appropriateness of various platform types, and address

crowdfunding's broader societal impacts. In so doing, these studies begin to discuss crowdfunding as an emergent institutional form with associated norms and values.

2.3. Crowdfunding Literature Review

Reviewing extant literature constitutes an important step in understanding the role of crowdfunding as an emergent entrepreneurial financing medium. To comprehensively identify prior studies on crowdfunding, I assessed the foremost management and entrepreneurship journals as identified by Short, Ketchen, McKenny, Allison, and Ireland (2017) in a recent introductory article to a special edition of *Entrepreneurship Theory and Practice* on crowdfunding. This list includes the following: *Academy of Management Journal*, *Academy of Management Review*, *Administrative Science Quarterly*, *Journal of Applied Psychology*, *Journal of Management*, *Journal of Management Studies*, *Journal of Organizational Behavior*, *Management Science*, *Organization Science*, *Organization Studies*, *Organizational Behavior and Human Decision Processes*, *Personnel Psychology*, *Strategic Management Journal*, *Entrepreneurship Theory and Practice*, *Journal of Business Venturing*, and *Strategic Entrepreneurship Journal*. In addition to the journals listed above, I also analyzed articles published in *California Management Review*, *Strategic Organization*, and *Venture Capital* to assess exploratory and descriptive findings pertaining to the crowdfunding phenomenon.

Emergent insights on crowdfunding have also originated in related academic disciplines including Information Systems (IS) and Marketing. Findings in these domains parallel Management and Entrepreneurship research to lay a foundation for further empirical and theoretical inquiry. As such, I reviewed articles in major IS and Marketing journals, including *Information Systems Research*, *MIS Quarterly*, *Journal of Consumer Research*, *Journal of Marketing*, *Journal of Marketing Research*, and *Marketing Science*. Finally, to assess the broader

implications of crowdfunding across the social and natural sciences, I searched the top interdisciplinary journals of *Nature* and *Science*.

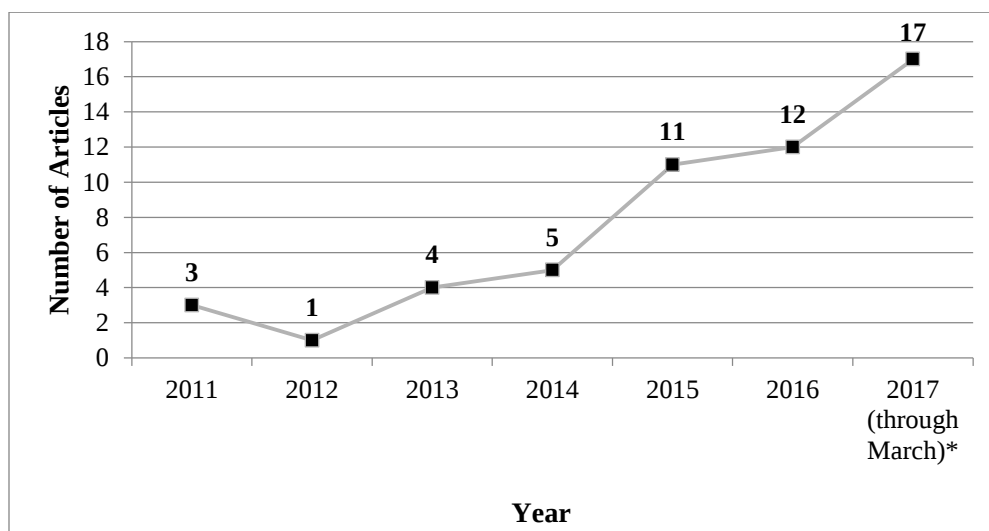
Consistent with the review conducted by Short and colleagues (2017), I searched for all articles containing at least one of the following terms in the title, abstract, or keywords: “crowdfunding,” “microlending,” “microfinance,” and “peer-to-peer lending.” I also searched for the following terms due to their relevance in the crowdfunding literature: “crowd-based funding,” “microloans,” “non-expert investors,” and “person-to-person lending.” These search terms produced several articles dating back to 2011, a year that correlates with the period when early crowdfunding platforms became ubiquitous. Once I procured a list of articles based on these keywords, I assessed each article to ensure it related to the focal topic of crowdfunding. Based on this criterion, 14 microfinance and micro-lending studies were dropped from this review because they addressed contexts where banks and/or established organizations provided small loans to entrepreneurial ventures rather than groups of individuals serving the financing function in aggregate.

From this process, I identified 53 distinct articles relevant to crowdfunding. Table 2.1 contains a synopsis of these articles by journal. As evidenced by the trend line depicted in Figure 2.1, a significant portion of crowdfunding articles have been published since 2015.

Table 2.1: Summary of Published Crowdfunding Articles by Journal

Journal	Number of Articles
Management journals:	
<i>Administrative Science Quarterly</i>	1
<i>California Management Review</i>	6
<i>Journal of Applied Psychology</i>	1
<i>Journal of Management Studies</i>	1
<i>Management Science</i>	9
<i>Organizational Behavior and Human Decision Processes</i>	1
<i>Organization Science</i>	1
<i>Strategic Organization</i>	2
Subtotal	23
Entrepreneurship journals:	
<i>Entrepreneurship Theory and Practice</i>	14
<i>Journal of Business Venturing</i>	6
<i>Venture Capital</i>	2
Subtotal	22
Information Systems journals:	
<i>Information Systems Research</i>	2
<i>MIS Quarterly</i>	2
Subtotal	4
Marketing journals:	
<i>Journal of Consumer Research</i>	1
<i>Journal of Marketing Research</i>	2
<i>Marketing Science</i>	1
Subtotal	3
Interdisciplinary journals:	
<i>Science</i>	1
Subtotal	1
Total	53

Figure 2.1: Summary of Published Crowdfunding Articles by Year



*2017 includes in-press and forthcoming articles

2.3.1. Contexts

Crowdfunding research to date broadly encapsulates a variety of contexts, most notably rewards-based crowdfunding, equity-based crowdfunding, and peer-to-peer lending. While each context constitutes a unique setting defined by distinct founder objectives, backer motivations, and outcomes of interest, all three contexts offer a means for a relatively large number of individuals to provide relatively small contributions to assist projects or ideas meet their self-selected funding goals (Belleflamme et al., 2014; Mollick, 2014). This commonality across crowdfunding contexts enables a variety of entrepreneurial, creative, and personal endeavors to attain necessary resources from geographically distributed backers located outside traditional innovation and entrepreneurial hubs (Sorenson et al., 2016), thereby diminishing the role of centralized intermediaries such as angel investors and VCs in the process of resource acquisition (Mollick & Nanda, 2016). Additionally, scholars also address campaigns run by individuals independent from crowdfunding platforms (e.g., Belleflamme, Lambert, & Schwienbacher, 2013), assess factors that influence the emergence of crowdfunding platforms and associated norms (e.g., Dushnitsky, Guerini, Piva, & Rossi-Lamastra, 2016; Younkin & Kaskooli, 2016), and conceptualize the role of crowdfunding on innovation (e.g., Powell, 2016; Sorenson et al., 2016). Table 2.2 further details the contexts addressed by crowdfunding research to date.

Table 2.2: Summary of Published Crowdfunding Articles by Context

Crowdfunding Context	Journals	Number of Articles
Rewards-based:		
<i>GoFundMe</i>	<i>ETP (1)</i>	1
<i>Kickstarter</i>	<i>ASQ (1), CMR (2), ETP (6), JAP (1), JBV (3), JCR (1), JMS (1), Mktg Sci (1), Mgmt Sci (1), Science (1), Strat Org (1), VC (1)</i>	20
<i>Experimental/Laboratory</i>	<i>ASQ (1), JAP (1), JBV (1)</i>	3
<i>Undisclosed</i>	<i>ISR (2), Mgmt Sci (1)</i>	3
Subtotal		27
Equity-based:		
<i>AngelList</i>	<i>CMR (1)</i>	1
<i>ASSOB</i>	<i>ETP (1)</i>	1
<i>Crowdcube</i>	<i>ETP (1)</i>	1
<i>Symbid</i>	<i>ETP (1)</i>	1
Subtotal		4
Peer-to-peer lending:		
<i>Kiva</i>	<i>ETP (2), JBV (1), JMR (1), MISQ (1)</i>	5
<i>Lending Club</i>	<i>Mgmt Sci (1)</i>	1
<i>PPDai</i>	<i>MISQ (1)</i>	1
<i>Prosper</i>	<i>JMR (1), Mgmt Sci (6), OBHDP (1), Org Sci (1)</i>	9
Subtotal		15
Other:		
<i>Platforms</i>	<i>CMR (2)</i>	2
<i>Self-run campaigns</i>	<i>VC (1)</i>	1
<i>VC decisions</i>	<i>ETP (1)</i>	1
Subtotal		4
Conceptual / Review	<i>CMR (1), ETP (2), JBV (1), Strat Org (1)</i>	5
Total		56*

*Two articles contained both archival analyses of Kickstarter and laboratory experiments, while a third study contained data collected from both Kickstarter and GoFundMe.

2.3.1.1. Rewards-Based Crowdfunding

A substantial amount of extant entrepreneurship and management research analyzes the context of *rewards-based crowdfunding*, where *project creators solicit resources over a constrained period of time in exchange for pre-determined rewards, often presales of the ultimate product or service* (e.g., Greenberg & Mollick, 2017; Kuppuswamy & Bayus, 2017; Li et al., 2017; Mollick, 2014). While most rewards-based platforms facilitate the acquisition of financial capital, platforms such as Seed&Spark, a rewards-based platform for film projects, also enable backers to contribute both financial and nonfinancial resources (e.g., production equipment, cameras, editing experience, etc.). A majority of research on rewards-based crowdfunding exploits Kickstarter—the world’s largest rewards-based platform, having facilitated approximately \$3.42 billion in contributions for 135,413 successful projects as of November 2017. Given the public nature of Kickstarter, researchers have used data from the platform to explore the general phenomenon of crowdfunding (e.g., Mollick, 2014), descriptively identify crowdfunding relationships (e.g., Chan & Parhankangas, 2017; Colombo et al., 2015; Parhankangas & Renko, 2017), and broadly contribute to management and organizational theory (e.g., Burtch et al., 2015, 2016; Greenberg & Mollick, 2017). With such diverse aims and objectives, researchers have employed a diverse set of sampling strategies and methods as discussed below.

Sampling strategies. Based on the nature of the research question, scholars have employed four primary sampling strategies when assessing campaigns listed on rewards-based platforms: temporally-bounded samples (e.g., Courtney, Dutta, & Li, 2017; Mollick, 2014), category-based samples (e.g., Chan & Parhankangas, 2017; Colombo et al., 2015), industry-based samples (e.g., Josefy, Dean, Albert, & Fitza, 2017), and random samples (e.g., Manning & Bejarano, 2017).

First, temporally-bounded sampling describes samples that include all campaigns from a given time period. Dependent on upper and lower temporal bounds, such samples produce a wide variety of sample sizes. However, given the accessibility of Kickstarter data, many temporally-based sampling strategies produce large samples, as exemplified by a recent study that analyzed 267,295 campaigns (Courtney et al., 2017).

Second, category-based sampling encompasses samples that exclusively include campaigns from a platform-designated category (i.e., technology, fashion, design, etc.). This sampling strategy is often used to create samples of campaigns most likely to become commercial ventures—typically technology and design projects—to enhance generalizability to other entrepreneurship contexts (Calic & Mosakowski, 2016). While most category-based samples are temporally bounded by nature, unlike pure temporally-bounded samples, category-based studies do not seek to address questions pertaining to the entire population of crowdfunding campaigns, but rather a similar subsection.

Third, industry-based sampling captures samples comprised of projects in an industry as determined by the researchers, rather than a broad category designated by the crowdfunding platform. Such samples often seek to control project-oriented heterogeneity to examine a particular mechanism. For example, a sample of “save the local theater” campaigns across Kickstarter and GoFundMe allowed researchers to examine the impact of a campaign’s cultural fit within a geographic community on funding outcomes (Josefy et al., 2017). By exclusively collecting data on small theater projects, the authors eliminated significant heterogeneity arising from other variables.

Finally, random sampling describes samples selected purely at random. This approach has been used in small-sample qualitative studies where researchers attempt to induct constructs and mechanisms that lead to crowdfunding success (e.g., Manning & Bejarano, 2017).

Research methods. Researchers have also employed a variety of research methods in their analyses of rewards-based crowdfunding campaigns. Phenomenon-driven studies often utilize exploratory methods to better understand the variables associated with funding success (e.g., Colombo et al., 2015; Mollick, 2014)⁷. Qualitative approaches enable researchers to induct the various types of strategies employed by crowdfunding campaign founders (Manning & Bejarano, 2017). To further understand causality, researchers also collect longitudinal datasets to analyze the effect of goal progress on subsequent resources acquired during a campaign (Burtch et al., 2013; Kuppuswamy & Bayus, 2017) and utilize experimental methods to isolate the impact of entrepreneur and project characteristics on prospective backer funding decisions (Davis, Hmieleski, Webb, & Coombs, 2017; Greenberg & Mollick, 2017; Li et al., 2017). Taken together, the use of varying methods and research designs sheds light on the crowdfunding phenomenon and its generalizability to extant entrepreneurship and management theory.

2.3.1.2. Equity-Based Crowdfunding

Several studies examine the context of *equity-based crowdfunding*, where *early-stage entrepreneurial ventures seek equity investments from accredited investors* (e.g., Ahlers et al., 2015; Vismara, 2016). In many respects, equity-based crowdfunding closely resembles the more traditional context of equity-based investing, but considers the online funding mechanism as the key differentiator. Similar to existing markets for new venture capital, equity crowdfunding

⁷ Phenomenon-based research focuses on capturing and reporting on a novel phenomenon of interest. This research represents a “pre-theoretical research strategy” since such studies explore and inform subsequent research designs to allow the advancement of theoretical inquiry (von Krogh, Rossi-Lamastra, & Haefliger, 2012).

provides investors with nascent venture investment opportunities in exchange for firm ownership stakes. Given the nature of capital-for-ownership exchanges, “campaigns” in the context of equity crowdfunding typically constitute new ventures with articulated identities and objectives, as opposed to the more conceptual projects and ideas that are synonymous with rewards-based crowdfunding. Unlike research on rewards-based crowdfunding, studies on equity-based crowdfunding have yet to coalesce around a dominant platform. Studies have utilized data collected from United States-based AngelList (Agrawal, Catalini, & Goldfarb, 2016), Australia-based ASSOBS (Ahlers et al., 2015), United Kingdom-based Crowdcube (Vismara, 2016), and Netherlands-based Symbid (Cholakova & Clarysse, 2016).

Extant research questions largely parallel those of prior studies on entrepreneurial resource acquisition (e.g., Chen et al., 2009; Elsbach & Kramer, 2003; Fisher et al., 2016; Garud et al., 2014b; Hallen, 2008; Hallen & Eisenhardt, 2012; Huang & Knight, 2017; Martens et al., 2007; Zott & Huy, 2007). For example, recent findings discuss the role of syndicates in equity crowdfunding where well-informed lead investors serve as a positive signal for the less-informed crowd (Agrawal et al., 2016). Entrepreneurial retention of equity and open discussion of relevant risks also serve as positive signals for equity crowdfunding investors because it indicates entrepreneurs are willing to “put some skin in the game” (Ahlers et al., 2015).

Equity-based crowdfunding investors also make decisions based on desire to realize extrinsic financial returns rather than nonfinancial motives (Cholakova & Clarysse, 2015). Finally, findings that parallel research in rewards-based crowdfunding show observational learning, where the investments of early backers increase the likelihood of subsequent investments from prospective resource providers, occur in the equity-based crowdfunding setting (Vismara, 2016). Taken together, emergent findings on equity-based crowdfunding reveal

similarities to both traditional nascent venture resource acquisition and rewards-based crowdfunding.

2.3.1.3. Peer-to-Peer Lending

A significant number of research studies in crowdfunding attend to the context of *peer-to-peer lending*, where *individuals provide financial loans to borrowers with minimal mediation from traditional financial institutions* (e.g., Leung & Sharkey, 2014; Lin & Viswanathan, 2015; Sonenshein et al., 2011). Peer-to-peer lending sites often take one of two forms: loan auction sites or social lending platforms.

Loan auction sites, such as Prosper.com, provide a platform for individual lenders to bid on unsecured personal loans based on a borrower's self-described intentions. Funds from various lenders are then pooled in a way that determines the lowest possible interest rate for a borrower. Social lending platforms, such as Kiva.org, provide a means for lenders to provide portions of zero-interest loans based on in-depth descriptions of how the funds will be utilized. Borrowers often originate in developing contexts (i.e., emerging markets) and seek loans for a variety of purposes, including investing in an entrepreneurial endeavor, paying school expenses, or accessing sources of renewable energy. Studies to date predominantly analyze the lending platforms of Prosper.com and Kiva.org, with minimal research on the portfolio-based lending platform of Lending Club (e.g., Paravisini, Rappoport, & Ravina, 2017), and the China-based PPDai (e.g., Liu, Brass, Lu, & Chen, 2015).

2.3.1.4. Broader Implications

In addition to studies grounded in the contexts of rewards-based crowdfunding, equity-based crowdfunding, and peer-to-peer lending, studies also address the broader implications of

crowdfunding. When considering the emergence and purpose of crowdfunding platforms, findings show nation-level cultural variables influence the creation and trajectory of crowdfunding platforms (Dushnitsky et al., 2016), and crowdfunding platforms most effectively address problems pertaining to gatekeeping and coordination (Younkin & Kashkooli, 2016). Research on self-run campaigns seeking funding outside streamlined crowdfunding platforms reveals non-profit organizations are more likely to reach funding goals in comparison to other campaigns (Belleflamme et al., 2013). Recent experimental research situates crowdfunding within the broader entrepreneurial funding landscape by examining how crowdfunding success impacts VC funding decisions; findings reveal VCs favor crowdfunded ventures that realize success on proven platforms, but the number of supporters does not impact subsequent VC decisions (Drover, Wood, & Zacharakis, 2015)⁸.

Recent conceptual work also aims to position crowdfunding within the broader discussion of entrepreneurial financing (e.g., Fleming & Sorenson, 2016; Powell, 2016; Short et al., 2017). Expanding beyond the determinants of crowdfunding success, broader conceptual discussions center on the emergence of crowdfunding as a technologically-driven response to imbalances between capital supply and demand for nascent ventures (Bruton, Khavul, Siegel, & Wright, 2015), and whether larger structural forces (i.e., institutions) will support individual efforts to create novel forms such as those enabled by crowdfunding platforms where individuals innovate without the intermediation of established investors (Powell, 2016). Conceptual work also sheds light on possible future states of crowdfunding: one possibility highlights a scenario where regulation and risk-aversion relegate crowdfunding to a minor financing mechanism, another emphasizes industry convergence that creates a small number of major crowdfunding

⁸ While findings on VC decision-making emerged in a laboratory setting, it is unclear how many crowdfunding campaigns later pursue and/or receive funding from established investors (i.e., angels, VCs).

platforms (Fleming & Sorenson, 2016)⁹. Beyond a funding mechanism, crowdfunding may increasingly become an exchange for multiple stocks of resources, and even a means to reduce economic inequality across geographic regions and socio-economic classes (Fleming & Sorenson, 2016). However, many of these articles are thought pieces and practitioner-oriented articles that require rigorous examination by academic researchers.

2.3.2. Outcomes

Research on crowdfunding attempts to explain a variety of different outcomes that I group across three categorical distinctions: (1) campaign-level, backer-level, and platform-level outcomes; (2) relative versus absolute outcomes; and (3) context-driven outcomes. Irrespective of context, campaign-level outcomes encompass determinants of campaign success, founders' campaign-related decisions, and post-campaign performance. Relative outcomes describe dependent variables measured as values relative to the campaign's self-selected goal (i.e., goal attainment, funding ratio) while absolute outcomes describe continuous variables measured irrespective of campaign goals (i.e., amount raised, number of contributors). Finally, the various crowdfunding contexts—rewards-based, equity-based, and peer-to-peer lending—each offer unique outcomes (i.e., loan performance for peer-to-peer lending) in addition to common outcomes such as goal attainment and funding decisions. Table 2.3 further summarizes outcomes considered by crowdfunding articles to date.

⁹ *Huffington Post* (2015) indicated over 2,000 crowdfunding platforms would exist worldwide by 2016.

Table 2.3: Summary of Published Crowdfunding Articles by Outcome

Focal outcome	Rewards-based crowdfunding articles	Equity-based crowdfunding articles	Peer-to-peer lending articles	Other	Total number of articles
Campaign-level outcomes:					
Campaign success					
Amount raised	ETP (2), JAP (1), JCR (1), JMS (1), VC (1)	ETP (1)		VC (1)	8
Amount raised per backer	JCR (1)				1
Early amount raised	ETP (1)				1
Goal attainment	ASQ (1), CMR (2), ETP (5), JBV (2), JMS (1), VC (1)	ETP (2)	ETP (1), JBV (1), Mgmt Sci (3)		19
Funding ratio	VC (1)		JMR (1), OBHDP (1), Org Sci (1)	VC (1)	5
Loan interest rate (P2P)			JMR (1), Mgmt Sci (2)		3
Number of contributors	ETP (1), JBV (1)	ETP (1)			3
Number of early contributors	ETP (1)	ETP (1)			2
Social capital	ETP (1)				1
Social media exposure	JAP (1), JCR (1)				2
Time to goal		ETP (1)	ETP (2), JBV (1), JMR (1), Mgmt Sci (1)		6
Founder decisions					
Narrative style	Strat Org (1)		OBHDP (1)		2
Pricing decisions	Mktg Sci (1)				1
Product line decisions	Mktg Sci (1)				1
Post-campaign performance					
Future investments	CMR (1)				1
Loan performance (P2P)			ETP (1), JMR (1), Mgmt Sci (4), OBHDP (1)		7
Long-term venture success	Mgmt Sci (1)				1
VC funding decisions	Science (1)			ETP (1)	2
Subtotal					66
Backer-level outcomes:					
Concealing personal information	ISR (1)				1
Contribution amount	ISR (1), JCR (1), Mgmt Sci (1)		JMR (1)		4
Enthusiasm	JAP (1)				1

<i>Funding decisions</i>	<i>ASQ (1), ISR (2), JBV (1), Mgmt Sci (2)</i>	<i>ETP (1)</i>	<i>MISQ (2), Mgmt Sci (2)</i>	11
<i>Home bias</i>		<i>CMR (1)</i>	<i>Mgmt Sci (1)</i>	2
<i>Perceived trustworthiness</i>			<i>OBHDP (1)</i>	1
<i>Predicted success</i>	<i>JBV (1)</i>			1
<i>Positive affect</i>	<i>JBV (1)</i>			1
<i>Post-campaign product use</i>	<i>ISR (1)</i>			1
<i>Risk aversion</i>			<i>Mgmt Sci (1)</i>	1
Subtotal				24
Platform-level outcomes:				
<i>Amount of VC capital</i>			<i>CMR (1)</i>	1
<i>Number of platforms</i>			<i>CMR (1)</i>	1
<i>Platform creation</i>			<i>CMR (1)</i>	1
<i>Total contributions</i>			<i>CMR (1)</i>	1
<i>Type of crowdfunding platform</i>			<i>JBV (1)</i>	1
Subtotal				5
Total				95*

*Outcome variables are not mutually exclusive, as many articles considered more than one outcome. Each outcome considered is reflected in the final total of this table.

2.3.2.1. Unit of Analysis

The unit of analysis—campaigns, backers, and/or crowdfunding platforms—plays a predominant role in determining the outcome variables considered in a crowdfunding study. While “crowdfunding success” serves as the outcome of interest in a majority of crowdfunding research, its operationalization depends on the unit of analysis considered by the researchers. Campaign-level outcomes often serve as indicators of success, while backer-level outcomes serve as the means by which campaigns realize success. For example, campaign-level studies typically consider what variables influence a crowdfunding campaign’s success. These studies use outcomes such as amount raised (e.g., Calic & Mosakowski, 2016; Li et al., 2017), goal attainment (e.g., Greenberg & Mollick, 2017; Mollick, 2014), funding ratio (e.g., Leung & Sharkey, 2014), and/or number of backers (e.g., Ahlers et al., 2015) to measure crowdfunding

success. Campaign-level studies also address post-campaign success through outcomes such as loan performance or default rate in the context of peer-to-peer lending (e.g., Iyer, Khwaja, Luttmer, & Shue, 2015). Pertaining to the campaign, studies also assess founder decisions such as narrative content and style (Manning & Bejarano, 2017; Sonenshein et al., 2011) and product pricing (Hu, Li, & Shi, 2015). Interestingly, while exploratory research associates campaign success with likelihood to experience delayed follow-through (Mollick, 2014), studies of rewards-based crowdfunding have yet to directly and empirically assess campaign follow-through, the parallel of loan performance in the context of peer-to-peer lending.

In contrast to campaign-level studies, backer-level studies consider why crowdfunding campaigns realize success by assessing the decisions and motivations of crowdfunding backers. These studies often analyze observable outcomes such as funding decisions (Burtch et al., 2014, 2015; Greenberg & Mollick, 2017) and contribution amounts provided by backers (e.g., Burtch et al., 2013; 2016; Galak, Small, & Stephen, 2011). Studies on backers also assess cognitive and motivational outcomes including enthusiasm (Li et al., 2017), perceived trustworthiness (Sonenshein et al., 2011), and risk aversion (Paravisini et al, 2017). Interestingly, studies also consider the aftermath of a crowdfunding campaign from the backer's perspective, by assessing the likelihood of a product's use as a function of a campaign's length and exposure (Burtch et al., 2013).

Finally, platform-level studies consider broad questions pertaining to platform creation (Dushnitsky et al., 2016), usage (Belleflamme et al., 2014), and purpose (Younkin & Kaskooli, 2016). Research on the creation of platforms finds nation-level variables influence how platforms develop and facilitate crowdfunding activity (Dushnitsky et al., 2016). Research addressing the use of platforms proposes entrepreneurs prefer platforms that support pre-ordering

when capital requirements are small, but prefer equity-based platforms when initial capital requirements are large (Belleflamme et al., 2014).

2.3.2.2. Relative Versus Absolute Outcomes

When assessing the success of crowdfunding campaigns, researchers often employ a combination of relative and/or absolute measures of success. Relative measures capture success metrics as functions of founder-determined goals. Studies that emphasize goal attainment dichotomously measure success as a function of whether a campaign reaches its funding goal (e.g., Greenberg & Mollick, 2017; Lin, Prabhala, & Viswanathan, 2013). For example, two distinct campaigns could each raise \$50,000, however Campaign A, with a goal of \$10,000, would be deemed a success; while a Campaign B, with a goal of \$100,000, would be deemed a failure according to this measure. To garner additional nuance in measures of relative success, studies calculate a campaign's funding ratio to measure magnitude of success (e.g., Sonenshien et al., 2011; Leung & Sharkey, 2014). For example, two campaigns could attain their target goals of \$100,000 and be deemed successful per the dichotomous measure of goal attainment. However, Campaign C could raise \$110,000 (a funding ratio of 1.1), while Campaign D could raise \$490,000 (a funding ratio of 4.9). By employing a funding ratio as the outcome of interest, researchers can assess the degree to which a campaign realizes success as both an outcome variable and a determinant of long-term campaign success (Mollick & Nanda, 2016).

Contrastingly, researchers also use absolute measures of campaign success which attend to success metrics irrespective of campaign goals. For example, some studies measure the amount raised as a continuous variable without considering whether the amount surpassed the campaign's goal (goal attainment), or by how much the amount under- or over-performed relative to the goal (funding ratio). While some studies consider absolute measures alongside

relative measures (e.g., Calic & Mosakowski, 2016), others emphasize absolute amounts raised without considering relative measures, particularly in laboratory settings assessing the decisions of potential resource providers (e.g., Li et al., 2017). Other absolute measures include total number of contributors (Ahlers et al., 2015; Josefy et al., 2017) and the attainment of social capital (Butticé, Colombo, & Wright, 2017). Yet such measures often have a theoretical reason for serving as a success proxy, such as the number of contributors in a geographic region serving as an indicator of a campaign's cultural alignment (Josefy et al., 2017).

2.3.2.3. Context

The third categorical determinant of outcome variables is the context in which the research takes place. Context alone does not determine exclusive variables (i.e., number of contributors versus contribution amount, or funding ratio versus amount raised). Instead, context influences subtle nuances in outcomes based on the norms and objectives of a given context. In this vein, differences emerge across the three predominant contexts previously identified: rewards-based crowdfunding, equity-based crowdfunding, and peer-to-peer lending. For example, studies on rewards-based crowdfunding often emphasize the amount of capital raised as a continuous variable since crowdfunding campaigns can exceed the target amount (e.g., Li et al., 2017). In contrast, peer-to-peer lending campaigns typically have an upper bound at the loan amount requested that lenders cannot exceed, making a continuous success metric impractical. As such, studies on peer-to-peer lending often emphasize the dichotomous success metric of goal attainment (Moss, Neubaum, & Meyskens, 2015), or loan interest rate (Lin et al., 2013). Since bids put forth by potential lenders determine a loan's interest rate, this outcome metric is exclusive to the peer-to-peer lending context.

While fewer studies examine the long-term success of crowdfunding campaigns (i.e., outcomes transpiring post-resource solicitation period), differences emerge in the post-campaign outcomes assessed across contexts as well. For example, studies in rewards-based crowdfunding assess the determinants of long-term venture success as indicated by a successful campaign's ability to follow-through on its commitments (Mollick & Nanda, 2016). In contrast, several studies on peer-to-peer lending examine loan performance, as indicated by whether a borrower defaults on a loan, as a long-term success metric (e.g., Iyer et al., 2015; Lin et al., 2013; Sonenshein et al., 2011).

Categorizing crowdfunding studies both by context and outcome provides a foundation for the development of a generalizable theoretical framework to explain the process of crowdfunding, by which a relatively large number of individuals provide relatively small contributions to assist projects or ideas in attaining their self-selected goals. However, in an environment defined by the following conditions: (1) non-professional resource providers with varying motives and incentives, (2) projects and contributors distributed outside traditional innovation ecosystems and hubs, and (3) lack of structured financial intermediaries, access to capital has become increasingly democratized for individuals seeking resources for a variety of projects. Given this set of commonalities, generalized theoretical mechanisms can be assessed based on prior research to construct a theoretical framework to explain crowdfunding as a viable entrepreneurial financing method. In the next section, I extend this discussion to address the theoretical mechanisms underlying crowdfunding resource acquisition and the broader implications based on research conducted to date.

2.4. Theoretical Mechanisms

Crowdfunding research emphasizes three distinct lines of inquiry: (1) project-centric quality mechanisms, (2) backer-centric behavioral mechanisms, and (3) environment-centric institutional mechanisms.

Project-centric quality mechanisms describe actions (both symbolic and substantive) taken by project founders to enhance quality judgments among potential resource providers. Such actions reduce inherent uncertainty to positively influence funding decisions (e.g., Aldrich & Fiol, 1994; Chen et al., 2009; Cornelissen & Clarke, 2010; Garud et al., 2014b; Martens et al., 2007; Navis & Glynn, 2011; Zimmerman & Zeitz, 2002; Zott & Huy, 2007). This research extends the literature on nascent venture resource acquisition in traditional contexts where entrepreneurs seek to reduce informational asymmetries arising from liability of newness concerns (Amit et al., 1998; Stinchcombe, 1965).

Backer-centric behavioral mechanisms describe the decision-making processes of potential backers as a function of observing and learning from the collective decisions of others to overcome uncertainty (Banerjee, 1992; Bikhchandani et al., 1998). This process of collective decision-making, historically observed in domains defined by real-time availability of public information, including auctions (Simonsohn & Ariely, 2008) and stock exchanges (Bondt & Thaler, 1985), deviates from prior research on nascent venture resource acquisition where interpersonal dynamics typically encompass dyadic ties between entrepreneurs and experienced investors (e.g., Hallen, 2008; Hallen & Eisenhardt, 2012; Huang & Knight, 2017; Huang & Pearce, 2015; Katila et al., 2008; Stuart et al., 1999; Vissa, 2012).

Environment-centric institutional mechanisms describe the broad forces that enable and attenuate the emergence of crowdfunding platforms as a medium to attain entrepreneurial

financing. Such studies examine the factors that facilitate the formation of crowdfunding platforms, determine the appropriateness of various platform types, and address crowdfunding's broader societal impacts. Each set of mechanisms are further discussed below.

2.4.1. Project-Centric Quality Mechanisms

Extant research on entrepreneurial resource acquisition describes a process through which entrepreneurs must adjudicate the inherent uncertainty of nascent entrepreneurial opportunities (Shane & Venkataraman, 2000; Stinchcombe, 1965) to overcome information asymmetries (Spence, 1973, 2002) and influence expert judgments of an opportunity's quality and attractiveness (e.g., Chen et al., 2009; Elsbach & Kramer, 2003; Fisher et al., 2016; Martens et al.; Wry et al., 2011; Zott & Huy, 2007). Early-stage ventures lack operating histories, customers to validate their product offering, and established organizational routines and practices (Burton & Beckman, 2007; Rindova & Kotha, 2001; Santos & Eisenhardt, 2009); but instead consist of ideas and early-stage prototypes that require financial resources for further exploitation. Extant research evaluates objective quality signals (Baum & Silverman, 2004; Shepherd, 1999), projective entrepreneurial actions (Lounsbury & Glynn, 2001; Martens et al., 2007), and subjective judgments of resource providers (Navis & Glynn, 2011) as distinct processes through which entrepreneurs arbitrate uncertainty and gain necessary resources.

Crowdfunding provides a context where project founders and non-professional resource providers can interact in real-time and in retrospect across geographic boundaries. As such, the differences in tastes and preferences across various audiences (Lamin & Zaheer, 2012) may be particularly acute in this setting, as evidenced by the legitimacy judgments of potential project contributors (Fisher et al., 2017). Given the disparate norms, values, beliefs, cultural contexts, motivations, and incentives embodied by various backers, a body of research has emerged

around the ways in which a project's attractiveness and underlying quality are communicated and interpreted by resource providers, as summarized in Tables 2.4a through 2.4c.

In this vein, researchers have examined three distinct mechanisms and their impact on the funding decisions of non-expert resource providers and crowdfunding success: (1) *signaling* through objective and observable quality metrics that indicate a project's progress to date (Ahlers et al., 2015; Mollick, 2014), (2) *sensegiving* as a process through which founders actively employ strategies to project a project's quality, motivations, and future intentions (Allison, Davis, Short, & Webb, 2015; Allison, McKenny, & Short, 2013; Herzenstein, Sonenshein, & Dholakia, 2011; Sonenshein et al., 2011), and (3) *sensemaking* as a process through which potential backers interpret and perceive a project's legitimacy (Davis et al., 2017; Greenberg & Mollick, 2017; Leung & Sharkey, 2014; Li et al., 2017). These mechanisms are highlighted in Figure 2.2 and further outlined in Table 2.5.

Table 2.4a: Project-Centric Crowdfunding Articles – Signaling

Article	Journal	Research Question(s)	Independent Variable(s)	Dependent Variable(s)	Key Findings	Context
Ahlers, Cumming, Günther & Schweizer 2015	ETP	(1) Do venture quality and level of uncertainty influence funding success on equity crowdfunding platforms?	(1) Venture quality: (a) Human capital (b) Social capital (c) Intellectual capital (2) Uncertainty: (a) Equity share of founders (b) Financial projections	(1) Goal attainment (2) Number of investors (3) Funding amount (4) Investment speed	(1) Retaining equity and providing extensive information on risks can be interpreted as effective signals that influence the probability of funding success on an equity platform (2) Social capital and intellectual capital have little impact on funding success	Equity-based
Galak, Small & Stephen 2011	JMR	(1) What borrower characteristics influence lending decisions on a person-to-person microfinancing platform?	(1) Borrower group size (2) Social distance: (a) Gender (b) Occupation (c) First name initial	(1) Loan amount (2) Time until loan fully funded	(1) Lenders favor individual borrowers over groups of borrowers (2) Lenders prefer borrowers that are socially proximate to themselves based on three dimensions of social distance: gender, occupation, and first name initial	Peer-to-peer lending
Courtney, Dutta & Li 2017	ETP	(1) How do signals that originate with the start-up versus those that originate with third parties interact to reduce information asymmetry?	(1) Start-up signals: (a) Media use (b) Past success (2) Third-party signals: (a) Backer sentiment	(1) Goal achievement	(1) Quality signals that originate with a campaign offset one another, while third-party endorsements complement and validate campaign-originating signals	Rewards-based
Hu, Li & Shi 2015	Mktg Sci	(1) How does a project creator's consideration of project success affect the optimal product line and pricing decisions?	(1) Buyer product valuations	(1) Product line decisions (2) Pricing decisions	(1) When buyers are heterogeneous in their product valuations, the creator should offer a line of products with different levels of product quality	Rewards-based
Mollick & Robb 2016	CMR	(1) In what ways does crowdfunding democratize the commercialization of innovation and financing?	(1) Quality signals: (a) Team pedigree (b) Outside endorsements (c) Extensive preparation (2) Geographic location	(1) Goal attainment (2) Future investment	(1) The crowd uses similar quality signals to VCs: team pedigree, outside endorsements, and extensive preparation (2) Crowdfunding is more geographically distributed than VC funding; clustering still occurs for high-technology projects (3) Successfully funded projects are more likely to receive later outside investment	Rewards-based

Mollick 2014	JBV	(1) Does crowdfunding reinforce or contradict extant research on entrepreneurial resource acquisition and success?	(1) Project quality (2) Social network	(1) Goal achievement	(1) Funding success is linked to signals of project quality and social network size (2) Campaigns often succeed by narrow margins or fail by large amounts	Rewards-based
Frydrych, Bock, Kinder & Koech 2014	VC	(1) How do rewards-based crowdfunding projects establish and demonstrate legitimacy in a virtual, impersonal context?	(1) Funding goal (2) Campaign video (3) Rewards	(1) Goal attainment (2) Funding amount (3) Funding ratio	(1) Lower funding targets and shorter campaign lengths signal legitimacy because they set achievable goals (2) Herding behavior among supporter communities may serve as a source of legitimacy (3) Calls for research on the co-creation of projects, and its impact on legitimacy and resource acquisition	Rewards-based

Table 2.4b: Project-Centric Crowdfunding Articles – Sensegiving

Article	Journal	Research Question(s)	Independent Variables	Dependent Variables	Key Findings	Context
Cholakova & Clarysse 2015	ETP	(1) What drives individuals to pledge and invest on online crowdfunding platforms? (2) To what extent do financial versus nonfinancial motivations influence decisions to invest or pledge?	(1) Intrinsic nonfinancial motives (2) Extrinsic financial motives	(1) Funding decisions	(1) Equity crowdfunding decisions were influenced by a backer's desire to receive extrinsic financial returns on their investments (2) Nonfinancial motives such as helping others, supporting ideas, or joining a community did not play a significant role in funding decisions; however desire to receive a reward influenced rewards-based funding decisions	Equity-based & Rewards-based
Allison, Davis, Short & Webb 2015	ETP	(1) Does the content of venture narratives influence the attractiveness of microloans to investors?	(1) Intrinsic language: (a) Human interest language (b) Diversity language (2) Extrinsic language: (a) Profit language (b) Risk taking language	(1) Time to funding	(1) Lenders respond favorably to campaign narratives that highlight opportunities to help others, and less favorably to narratives that describe business opportunities (2) Investors in prosocial microfinance contexts are intrinsically motivated	Peer-to-peer lending
Allison, McKenny & Short 2013	JBV	(1) Do rhetorical strategies of entrepreneurial narratives influence how quickly projects receive funding on a crowd-based microlending platform?	(1) Rhetoric of entrepreneurial narratives: (a) Accomplishment (b) Blame (c) Present concern (d) Leveling (e) Concrete (f) Tenacity (g) Rhetorical variety	(1) Goal achievement (2) Time to goal attained	(1) Narratives that emphasize blame and present concern lead to more rapid funding (2) Narratives high in accomplishment, tenacity, and variety lead to slower funding	Peer-to-peer lending
Herzenstein, Sonenshein & Dholakia 2011	JMR	(1) Do the number of identity claims and their content influence lending decisions? (2) Can identity claims predict longer-term performance of funded loans?	(1) Narrative identity claims: (a) Trustworthiness (b) Economic hardship (c) Hardworking (d) Successful (e) Moral (f) Religious	(1) Funding ratio (2) Loan interest rate (3) Loan performance	(1) Unverifiable information affects lending decisions over and above the influence of objective information (2) As identity claims contained in a narrative increase, loan funding increases but probability of loan payback decreases (3) Identities that emphasize trustworthiness and success are associated with increased funding, but are less predictive of loan performance than other identities such as moral and economic hardship	Peer-to-peer lending
Iyer, Khwaja, Luttmer & Shue 2015	MS	(1) How does screening in peer-to-peer lending markets compare with screening based on exact credit scores and the information-rich contexts of banks?	(1) Standard financial variables: (a) Borrower credit scores (2) Nonstandard financial variables: (a) Interest rate set by lenders	(1) Loan decisions (2) Default	(1) Peer lenders predict an individual's likelihood of loan default with greater accuracy than a borrower's credit score (lenders see only a credit category) (2) Lending efficiency is enhanced by aggregating the views of a peer group and leveraging "soft" information on borrowers	Peer-to-peer lending

Moss, Neubaum & Meyskens 2015	ETP	(1) Does the rhetoric used in entrepreneurial narratives influence funding and repayment on crowd-based microlending platforms?	(1) Virtuous orientation (2) Entrepreneurial orientation	(1) Goal attainment (2) Time to goal attained (3) Loan repayment (4) Time to loan repayment	(1) Microenterprises that signal an entrepreneurial orientation — autonomy, competitive aggressiveness, and risk-taking — are more likely to receive funding, and to receive it more quickly (2) Microenterprises that signal a virtuous orientation — conscientiousness, courage, empathy, and warmth — are less likely to receive funding	Peer-to-peer lending
Sonenshein, Herzenstein & Dholakia 2011	OBHDP	(1) What role do borrowers' social accounts play in lending decisions between unacquainted actors in uncertain peer-to-peer settings? (2) Does perceived trustworthiness impact this process? (3) How are social accounts related to loan performance?	(1) Social accounts: (a) Acknowledgments (b) Denials (c) Explanations (d) Unusual explanations (2) Borrower credit score	(1) Funding ratio (2) Number of unique social accounts (3) Perceived trustworthiness (4) Loan performance	(1) Lenders tend to fund loans where borrowers utilized social accounts in their loan descriptions (2) Borrowers with lower credit scores employ a broader array of accounts (3) The account combinations of explanation-acknowledgment, explanation-denial increase perceived trustworthiness and increase the likelihood of funding success. They also increase late loan payments; thus decisions based on account combinations are sub-optimal	Peer-to-peer lending
Calic & Mosakowski 2016	JMS	(1) Does a sustainability orientation affect an entrepreneur's ability to acquire resources via crowdfunding?	(1) Sustainability orientation: (a) Environmental orientation (b) Social orientation (2) Project creativity (3) Project legitimacy	1) Goal attainment 2) Amount raised	(1) A sustainability orientation positively affects crowdfunding goal attainment (2) Project creativity and third-party endorsements (legitimacy) mediate the relationship between sustainability orientation and success	Rewards-based
Manning & Bejarano 2017	Strat Org	(1) How are entrepreneurial narratives constructed to appeal to various audiences on a crowdfunding platform? (2) How do they reflect project goals?	(1) Outcome tangibility: (a) Tangible (b) Intangible (2) Technology sophistication: (a) Advanced (b) Less advanced (3) Project orientation: (a) Social (b) Commercial	(1) Narrative style: (a) Ongoing journey (b) Results-in-progress	(1) Ongoing journey narratives are used by longer-term endeavors with initial creative ideas and future vision to invite audiences to join the journey; predominantly intangible, less advanced, and social projects (2) Results-in-progress narratives depict projects as a progression of accomplishments to emphasize utility and project completion; predominantly used by tangible, advanced, and commercial projects	Rewards-based
Parhankangas & Renko 2017	JBV	(1) How does the style of an entrepreneur's verbal communication influence crowdfunding success?	(1) Linguistic style: (a) Concrete language (b) Precise language (c) Interactive style (d) Psychological distancing	(1) Goal achievement	(1) Social crowdfunding campaigns need to adopt linguistic styles that help backers understand and feel connected to the campaign, whereas such styles matter less for commercial entrepreneurs	Rewards-based

Thürridl & Kamleitner 2016	CMR	(1) Are different reward strategies more effective than others for crowdfunding success?	(1) Reward strategic tools: (a) Purchase me (b) Top it up (c) Collectible tokens (d) Something special (e) Pursuit of pleasure (f) Highly appreciated (g) Let's collaborate	(1) Goal attainment	(1) Selection of crowdfunding rewards largely depends on intuition and availability rather than strategy (2) Induct seven strategic uses of rewards based on eight reward dimensions: type, tangibility, scarcity, geographic limitations, monetary value, recognition, level of collaboration, and core feature (3) Purchase me, something special, and pursuit of pleasure strategies are associated with project success; collectible tokens and top it up are associated with project failure (4) Involving customers boosts success	Rewards-based
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Table 2.4c: Project-Centric Crowdfunding Articles – Sensemaking

Article	Journal	Research Question	Independent Variables	Dependent Variables	Key Findings	Context
Leung & Sharkey 2014	OS	(1) Do audiences perceive category-spanning ventures to be less appealing given no objective quality differences?	(1) Multiple-category membership	(1) Funding ratio	(1) Category spanning is perceived negatively by crowdfunders and can result in lower valuations, even when quality differences are not apparent	Peer-to-peer lending
Chan & Parhankangas 2017	ETP	(1) Does the innovativeness of crowdfunding campaigns impact funding outcomes?	(1) Incremental innovativeness (2) Radical innovativeness	(1) Amount raised	(1) Incremental innovativeness is associated with greater funding outcomes while radical innovativeness is associated with less successful funding outcomes (2) Combining incremental innovation with radical innovation can mitigate the negative impact of radical innovativeness (3) Depicts the crowd as consumers rather than purely investors	Rewards-based
Davis, Hmieleski, Webb & Coombs 2017	JBV	(1) How do backers' perceptions of a product's creativity influence resource allocation decisions? (2) Does an entrepreneur's pitch delivery influence the affective reactions of backers?	(1) Perceived product creativity	(1) Investment decisions (2) Predicted success (3) Funders' positive affective reactions	(1) Perceived product creativity is positively related to crowdfunding performance (2) Experienced positive affect partially mediates the relationship between product creativity and crowdfunding performance	Rewards-based
Greenberg & Mollick 2017	ASQ	(1) Why are women more likely to succeed at crowdfunding than men? (2) Why are women more successful in industries where they are least represented?	(1) Interpersonal homophily (2) Activist choice homophily (3) Founder(s) gender: (a) Categorical (b) Proportional	(1) Decisions to contribute (2) Goal attainment	(1) Develop concept of activist choice homophily, where shared structural barriers that arise from a common social identity based on group membership influence attraction between underrepresented groups rather than mere observable similarities (2) Activist choice homophily explains why women are more likely to succeed at crowdfunding than men, particularly in industries where they are least represented	Rewards-based
Li, Chen, Kotha & Fisher 2017	JAP	(1) Do displays of entrepreneurial passion influence funding outcomes on a crowdfunding platform?	(1) Displayed entrepreneurial passion	(1) Amount raised (2) Social media exposure (3) Viewers' enthusiasm	(1) Displayed entrepreneurial passion arouses viewers' enthusiasm through passion contagion (2) Displayed entrepreneurial passion is positively related to funding raised and social media exposure. Project innovativeness enhances these effects	Rewards-based

Wang, Mao, Li & Liu 2017	JCR	(1) How does smile intensity influence judgments of warmth and competence? (2) How does smile intensity thereby influence funding success?	(1) Smile intensity: (a) Warmth perceptions (broad smile) (b) Competence perceptions (slight smile)	(1) Amount raised (2) Amount pledged per backer (3) Number of Facebook shares (4) Contribution size	(1) Smile intensity differentially affects social judgments of founder warmth and competence (2) Founders who display broad smiles versus slight smiles are more likely to be perceived as warmer but less competent	Rewards-based
Belleflamme, Lambert & Schwienbacher 2013	VC	(1) What drives success via self-driven crowdfunding?	(1) Project characteristics (2) Type of crowdfunding model	(1) Amount raised (2) Funding ratio	(1) Non-profit organizations are more likely to reach their funding goals in comparison to corporations and freelance projects	Self-managed

Figure 2.2: Project-Centric Mechanisms & Outcomes

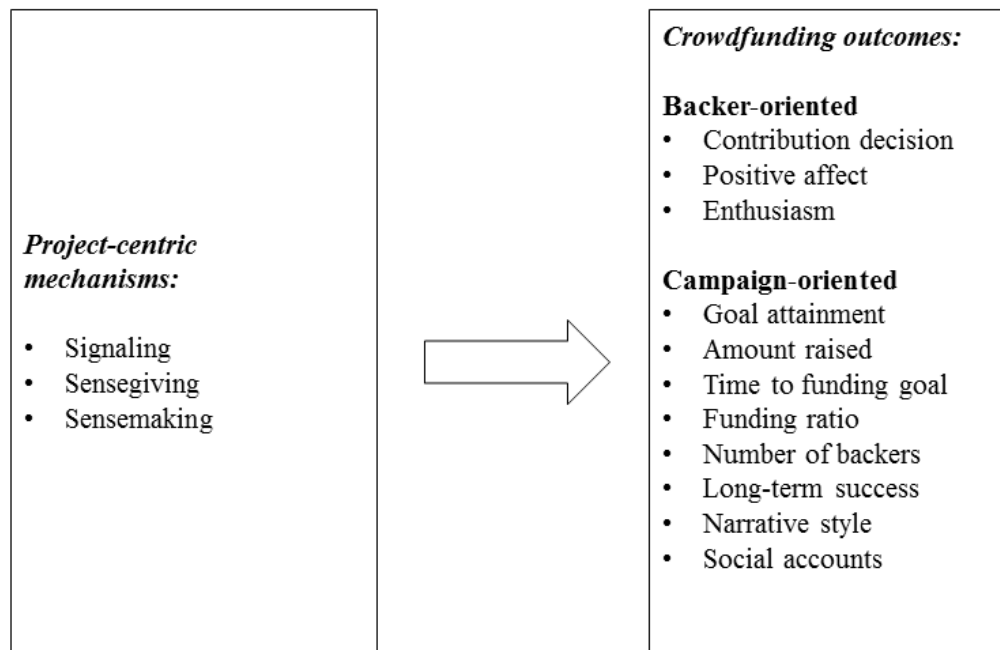


Table 2.5: Project-Centric Mechanisms Definitions & Examples

Mechanism	Nature	Definition	Examples
<i>Signaling</i>	Objective / Observable	Objective and observable project and founder characteristics that signal underlying capabilities and quality to alleviate inherent uncertainty	• Campaign quality • Role identities • Third-party endorsements
<i>Sensegiving</i>	Projective / Constructed	Actions and strategies actively employed by project founders to articulate “who we are” and “what we do,” and communicate motivations and future intentions	• Identity claims • Linguistic cues • Rewards
<i>Sensemaking</i>	Associative / Interpretive	Associations and interpretive processes through which resource providers develop subjective judgments of a project’s plausibility	• Category membership • Perceived creativity and innovativeness • Evaluations of founders

2.4.1.1. Signaling

In circumstances defined by imperfect information, signaling describes the objective and observable characteristics that indicate underlying quality (Connelly, Certo, Ireland, & Reutzel, 2011; Ross, 1977; Spence, 1973; Stiglitz, 2000). As such, extant research on signaling in entrepreneurship suggests that a variety of signals impact quality judgments of prospective resource providers including *reputations* of board members and top managers (Certo, 2003;

Cohen & Dean, 2005; Filatotchev & Bishop, 2002; Sanders & Boivie, 2004; Zhang & Wiersema, 2009), *relationships* with high-power exchange partners (Hallen, 2008; Hallen & Eisenhardt, 2012; Khaire, 2010; Stuart et al., 1999; Vissa, 2011), and *certifications* (Beatty & Ritter, 1986; King et al., 2005; Polidoro, 2013; Rindova, Williamson, Petkova, & Server, 2005; Sine et al., 2007). Given the importance of signals in extrapolating quality under conditions of uncertainty, the online context of crowdfunding provides an apt context for signaling theory to impact the decisions of prospective project backers (Gregg & Walczak, 2008).

Crowdfunding provides a context where individuals seek resources for projects in various stages of development from a distributed audience of non-expert backers. Given the conceptual nature of many products, prospective backers must determine whether to contribute resources, typically financial capital, under conditions of uncertainty. While many prominent crowdfunding platforms now attempt to mitigate uncertainty by requiring campaign founders to post a video depicting the stage of the product prototype, prospective backers must still decide whether they believe the project in question will deliver on its intended objectives once funded. Given the uncertainty pertaining to whether a campaign will deliver on its promised product or service upon reaching its funding goal, prospective contributors utilize a variety of signals in the crowdfunding setting when making their funding decisions. These signals, as identified in prior literature on crowdfunding, include: (1) *role identities* to signal founder-level competence, prestige, and reputation (Ahlers et al., 2015; Galak et al., 2011), (2) third-party *endorsements* to signal validation through reputable outside parties (Courtney et al., 2017), and (3) campaign *quality* to signal ultimate product quality (Mollick, 2014). . Each of these are discussed in greater depth below.

Individuals occupy positions in a variety of social relationships within their broader societal and cultural contexts (Stryker, 2000). The roles individuals occupy are accompanied by generally accepted behavior and norms; when enacted repeatedly these behaviors serve as the basis for an individual's *role identity* (Stryker & Burke, 2000). In a complex society, role identities assist in distinguishing one's place in a broader social structure by signaling an individual's prior socialization and learning processes (Beyer & Hannah, 2002; Huckman & Pisano, 2006) and continued embeddedness in a network of individuals and organizations associated with the defined role (Chua, Ingram, & Morris, 2008).

Scholars of management and entrepreneurship have further identified the salience and impact of such identities in a variety of settings, including the market for human capital (Bidwell, Won, Barblulescu, & Mollick, 2015), and entrepreneurial opportunity recognition and pursuit (Fauchart & Gruber, 2011; Wry & York, 2017). As such, founder role identities often serve as a quality signal in the uncertain context of entrepreneurial resource acquisition (Higgins & Gulati, 2006).

Crowdfunding, as an online financing platform, does not automatically facilitate in-person interactions between project founders and backers. Unless a founder takes strides to directly engage with prospective resource providers in person, opportunities to highlight one's role identity through conversations, written business plans, and pitch decks are reduced in the crowdfunding setting. Instead, project founders must rely on a campaign's written content and pitch video to communicate this information. As such, the impact of role identities as a quality signal in the crowdfunding context is a recent topic of research (Ahlers et al., 2015; Galak et al., 2011). Findings reveal backers respond favorably to human capital signals, as indicated by team competence, qualifications, and education, to a greater degree than signals of social and

intellectual capital (Ahlers et al., 2015). Additionally, prior research indicates backers not only respond to the type and pedigree of occupations held (Mollick & Robb, 2016), but also to the proximity of a founder's occupation to their own (Galak et al., 2011). Role identities therefore seem to maintain their impact as a quality signal in the crowdfunding context.

Research on early-stage entrepreneurial ventures indicates external partners can signal a venture's legitimacy by publicly and visibly aligning with a venture in question (e.g., Hallen & Pahnke, 2016; Pollock & Rindova, 2003; Stuart et al., 1999). In this vein, research suggests firms with *endorsements* from high-quality exchange partners perform better than those without similar endorsements in terms of speed to initial public offering (IPO) and IPO valuations (Stuart et al., 1999). Additionally, the media acts as a "propagator" of legitimacy for firms seeking IPOs (Pollock & Rindova, 2003). Though media attention often reflects a certain level of existing validation from the public (Elsbach, 1994), it also acts as a means to affect legitimacy perceptions by influencing the formation of external impressions (Hoffman & Ocasio, 2001; Rao, Greve, & Davis, 2001). As such, external media endorsements often serve as legitimacy signals in the uncertain context of entrepreneurial resource acquisition (Pollock, Chen, Jackson, & Hambrick, 2010; Pollock & Rindova, 2003).

As a public platform, crowdfunding facilitates reviews and endorsements from a broad range of stakeholders including established media outlets, syndicates (in the case of equity crowdfunding), and online users (Agrawal et al., 2016; Courtney et al., 2017). While a significant portion of entrepreneurship research discusses the role of established and reputable relational endorsements (e.g., Gulati & Higgins, 2003), a variety of endorsements can also serve as quality signals in the crowdfunding setting. Findings show crowdfunding audiences and professional investors similarly interpret external endorsements from high-profile actors as

positive signals of venture quality (Mollick & Robb, 2016). However, research also suggests positively-worded backer comments on a campaign's page also serve as a signal that leads to successful funding outcomes (Courtney et al., 2017). While more research can systematically assess the role of traditional and non-traditional media outlets on crowdfunding success, initial findings suggest third-party endorsements serve as an important quality signal in diminishing a venture's uncertainty for prospective contributors.

Directly observable *campaign attributes*, particularly those that demonstrate effort and preparation on behalf of a project's founder, seem to serve as signals of a product's ultimate quality (Mollick, 2014). For example, project founders who update backers in the initial days of a campaign, utilize videos (on a platform where video pitches are optional), and do not have spelling errors in their campaign content are more likely to receive funding (Mollick, 2014). Additionally, founders who display prototypes and an understanding of risks and potential pitfalls are more likely to be viewed as prepared, and thereby more likely to receive funding (Mollick & Robb, 2016). Finally, campaigns with shorter durations and lower funding targets are also seen to signal achievability (Frydrych, Bock, Kinder, & Koeck, 2014). These emergent findings suggest the time and effort put into a crowdfunding campaign serve as an indicator of preparedness which shows that the founders possess an awareness of the necessary steps to fulfil their campaign objectives and produce a quality product or service.

2.4.1.2. Sensegiving

Sensegiving describes a projective and constructed process through which project founders communicate mental models and visions to add meaning to early-stage projects and depict future intentions for prospective resource providers (Hill & Levenhagen, 1995; Gioia & Chittipeddi, 1991). In other words, sensegiving depicts the actions and strategies entrepreneurs actively

employ to articulate “who we are” and “what we do” and thereby aid potential resource providers in overcoming information asymmetries regarding a firm’s yet to be validated intentions (Navis & Glynn, 2011).

Extant research on sensegiving in entrepreneurship suggests that entrepreneurs *craft narratives* (Garud et al., 2014b; Lounsbury & Glynn, 2001; Martens et al., 2007), *make identity claims* (Navis & Glynn, 2011) and *manage symbols* (Zott & Huy, 2007) to create favorable impressions and gain legitimacy judgments from sophisticated resource providers, including angel investors, VCs, and institutional investors. However, legitimacy judgments depend on what investors determine to be desirable and appropriate within a “socially constructed system of norms, values, beliefs, and definitions” (Suchman, 1995: 574). Therefore, drawing on the appropriate norms and values in a given social context is vital for entrepreneurs seeking resources from expert investors with biases and heuristics developed through prior investment experience (Hall & Hofer, 1993; Huang & Pearce, 2015; Kirsch et al., 2009; Zacharakis & Shepherd, 2011).

Crowdfunding, as a funding mechanism for early-stage entrepreneurial projects, is not dominated by professional investors, who typically serve as the focus of studies on entrepreneurial resource acquisition (e.g., Fisher et al., 2016; Huang & Knight, 2017). Instead, crowdfunding provides a means for a broad array of individuals with different objectives, motivations, and values to fund early-stage projects, often amidst high uncertainty. Thus, potential resource providers in the crowdfunding setting likely draw upon a more expansive set of individual preferences and idiosyncratic experiences than expert resource providers when making legitimacy judgments and contribution decisions (Fisher et al., 2017).

To unpack how entrepreneurs appeal to the diverse individual preferences of prospective backers, an emerging stream of literature addresses sensegiving in crowdfunding, through which entrepreneurs actively employ various strategies to communicate their future visions and add meaning to their nascent ideas within a broader cultural context (Garud et al., 2014b; Garud, Gehman, & Giuliani, 2014). Specially, sensegiving strategies identified by prior crowdfunding research include: (1) *identity claims* (Herzenstein et al., 2011; Iyer et al., 2015), (2) *linguistic cues* (Allison et al., 2013, 2015; Manning & Bejarano, 2017; Sonenshien et al., 2011), and (3) *rewards* (Cholakova & Clarysse, 2015; Thürridl & Kamleitner, 2016). Each of these is discussed in greater depth below.

A firm's *identity claims*—whether emergent or established—serve as a central way to communicate its “theory of being” to external observers (Livengood & Reger, 2010). In uncertain and ambiguous entrepreneurial settings, where nascent ventures lack formal structures, systems, and routines, identity claims serve as a primary source of meaning for external audiences attempting to make sense of a firm in its conception stages (Glynn, 2000; Navis & Glynn, 2010). Since early-stage ventures predominantly consist of ideas and concepts spawned from a recognized market opportunity, nascent venture identity claims aim to articulate and make salient “who we are” and “what we do” in regards to the founder, the venture, and the recognized opportunity (Navis & Glynn, 2011). Given the level of agency possessed by venture founders in distinguishing their nascent identity claims, such claims serve as a sensegiving process for entrepreneurs operating amidst uncertainty and ambiguity.

Projects seeking funding via crowdfunding often project their narrative claims through a pitch video or written text on the campaign page. Studies on peer-to-peer lending show individuals who make more identity claims increase their likelihood of realizing funding success

due to their broader appeal to a greater number of prospective resource providers; however, this success is not predictive of subsequent performance post-campaign (Herzenstein et al., 2011). Findings also suggest that lenders who assess borrower-provided “soft” content, including personal profiles, pictures, and intended loan purposes, predict the likelihood of long-term loan performance with greater accuracy than objective credit scores (Iyer et al., 2015). More research is necessary to understand why the number of identity claims is negatively associated with post-campaign performance, while relating a personal narrative through “soft” information is positively associated with post-campaign performance.

Additionally, research also examines the orientations put forth by campaign founders as a form of identity claim. In rewards-based crowdfunding, findings show campaigns that communicate a sustainability orientation, as indicated by visibly embracing objectives focusing on “the preservation of nature, life support, and community in the pursuit of perceived opportunities to bring into existence future products, processes, and services for gain, where gain is broadly construed to include economic and non-economic gains to individuals, the economy, and society” (Calic & Mosakowski, 2016, citing Shepherd & Patzelt, 2011: 137), are more likely to realize funding success than campaigns with a purely commercial orientation (Calic & Mosakowski, 2016).

In the context of the social lending platform Kiva, campaigns that indicate an “entrepreneurial orientation” by communicating the characteristics of autonomy, competitive aggressiveness, and risk-taking are more likely to realize funding success than those who indicate a “virtuous orientation” by communicating the characteristics of conscientiousness, courage, empathy, and warmth (Moss et al., 2015). This apparent inconsistency is a fascinating area for further exploration because, taken together, these studies reveal a counterintuitive

finding in crowdfunding research to date: campaigns with a social objective are more likely to attain funding than those with a market objective on the market-oriented rewards-based crowdfunding platform of Kickstarter, while campaigns with an entrepreneurial objective are more likely to realize funding success than socially-driven campaigns on the socially-oriented lending platform of Kiva.

One explanation for this discrepancy could be the inherent institutional logics applied to lending versus contribution platforms. Those who contribute on a lending platform may maintain a motivation of a financial return (or minimally interest-free loan payback), while those on a crowdfunding platform may actually be more altruistic in their funding decisions. Alternatively, as the respective norms and expectations of rewards-based crowdfunding versus peer-to-peer social lending become entrenched, it may lead social campaigns seeking funds on rewards-based crowdfunding platforms and entrepreneurial campaigns seeking funds on peer-to-peer lending platforms to realize a form of optimal distinctiveness by differentiating themselves from other campaigns on their respective platforms (Brewer, 1991, 1993). More research is needed to further understand the effectiveness of different identity claims on various crowdfunding platforms with divergent purposes and functions.

Linguistic cues describe the rhetorical strategies used to communicate a campaign's narrative and identity claims (Clarke & Cornelissen, 2011). Grounded in theories of psycholinguistics and communications, studies on linguistic cues emphasize both linguistic style—*how* something is said—and linguistic content—*what* is said—as persuasive mechanisms. (Pennebaker, Mayne, & Francis, 1997; Pennebaker, 2011; Toma & D'Angelo, 2015). Research in this domain finds linguistic style has a greater influence on external perceptions than linguistic content because style cues more closely align with an individual's worldview and social identity,

thereby enabling connections with desired audiences (Berry, Pennebaker, Mueller, & Hiller, 1997). Given the impactful nature of communicative styles, linguistic cues play an important role in alleviating uncertainty for nascent ventures (Clarke & Cornelissen, 2011; Cornelissen, Durand, Fiss, Lammers, & Vaara, 2015).

Linguistic cues are particularly salient in the crowdfunding context where individuals describe their projects in the initial campaign text, highlight their ideas in pitch videos, and continuously update backers and potential contributors with written updates. Research on linguistic cues in crowdfunding reveal backers respond more favorably to intrinsic language (i.e., human interest and diversity linguistic cues) that communicates opportunities to help others versus extrinsic language (i.e., profit-seeking and risk-taking linguistic cues) that communicates market-oriented opportunities (Allison et al., 2015). When addressing potential areas of weakness in their campaigns, entrepreneurs who utilize language to explain a shortcoming alongside language to either deny or acknowledge the shortcoming are more likely to attain funding than those who use only a single strategy (Sonenshein et al., 2011). An analysis of linguistic cues in crowdfunding reveals social campaigns need to adopt styles that assist backers in understanding and relating to the campaign, whereas such styles matter less for commercially-oriented entrepreneurs in communicating their projects (Parhankangas & Renko, 2017).

Project founders can also set rewards for various contribution amounts from backers. While rewards are eponymously most salient in rewards-based crowdfunding, interest rates and ownership stakes, as communicated on peer-to-peer lending and equity crowdfunding platforms respectively, also take the form of “rewards.” Since founders ideally follow through on their promised rewards if successful, rewards serve as a means for founders to illustrate their future intentions and objectives after a campaign concludes. As such, campaigns promising product

presales are much more likely to realize success than those promising token gifts (Thürridl & Kamleitner, 2016). This further supports the finding that reward desirability, particularly for presales of a product, influences backer contributions (Cholakova & Clarysse, 2015).

2.4.1.3. Sensemaking

Sensemaking describes an associative and interpretive process through which potential resource providers develop subjective judgments about the plausibility of an early-stage idea (Weber & Glynn, 2006; Weick, 1995; Weick, Sutcliffe, & Obstfeld, 2005). In other words, sensemaking depicts how resource providers understand and evaluate nascent-stage ventures shrouded in uncertainty (Navis & Glynn, 2011). Extant research on sensemaking in entrepreneurship suggests that resource providers internalize a nascent venture's *category membership* (Kim & Jensen, 2011; Hsu, Hannan & Koçak, 2009; Navis & Glynn, 2010; Pontikes, 2012), its alignment with extant *institutional forms* (Aldrich & Fiol, 1994; Deephouse, 1996; DiMaggio & Powell, 1983), and whether it conforms with *expectations* (Hsu, 2006) to understand and evaluate nascent entrepreneurial ideas.

Since crowdfunding provides a diverse array of individuals with the ability to provide small contributions to early-stage ideas, findings on the sensemaking strategies of expert resource providers may not directly transfer to the crowdfunding setting. As such, studies on sensemaking in crowdfunding consider how audience members perceive nascent projects when compared against their expectations across a variety of criteria.

To unpack how resource providers make sense of early-stage projects, an emerging stream of literature addresses sensemaking in crowdfunding. Through this process, resource providers evaluate early-stage projects based on interpretations and associations embedded in a broader institutional environment. Specifically, sensemaking processes identified by

crowdfunding studies to date include: (1) *category membership* (Leung & Sharkey, 2014), (2) perceived *project creativity and innovativeness* (Chan & Parhankangas, 2017; Davis et al, 2017), and (3) *founder evaluations* (Greenberg & Mollick, 2017; Li et al., 2017). Each of these is discussed in greater depth below.

Categories and categorization processes play a pivotal role in determining audience perceptions of firms and products within market settings (Ruef & Patterson, 2009; Zuckerman, 1999, 2000). Beyond impacting perceptions, audience categorization influences economic outcomes as well, particularly for firms perceived as spanning multiple categories (Hsu, 2006; Hsu et al., 2009). Category-spanning firms are often discounted or devalued because external audience members encounter difficulty making sense of them (Hannan, 2010; Zuckerman, 1999). Researchers find support for the discounting effect in a variety of category-spanning firms and products, including wines (Negro & Leung, 2013), online auctions (Hsu et al., 2009), and movies (Hsu, 2006). Even established VCs, who seek to create markets rather than simply consume what markets produce, avoid investing in ambiguous firms spanning multiple categories (Pontikes, 2012). As such, categorization processes influence a variety of stakeholders ranging from consumers and users, to investors and lenders (Hannan, 2010; Pontikes, 2012).

Crowdfunding provides an intriguing context to examine the effect of category membership, particularly given the range of intentions and motivations operationalized by diverse project backers who typically lack the institutional constraints and established heuristics of traditional investors (Huang & Pearce, 2015; Pontikes, 2012). Consistent with prior research, findings from an examination of category membership on a crowdfunding platform reveal category spanning negatively affects resource acquisition (Leung & Sharkey, 2014). In addition, a matched set of firms revealed audience perceptions rather than quality differences influenced

the unsuccessful funding efforts (Leung & Sharkey, 2014). Future research can extend how different types of stakeholders categorize firms, and whether they hold different views of category membership.

Perceptions of a firm or product's *innovativeness and creativity* serve as a means for investors and consumers to make sense of a nascent venture (Rogers, 2003). Literature on innovation differentiates between incremental innovation—minor improvements to existing knowledge or technologies; and radical innovation—paradigm-shifting changes to existing knowledge or technologies (Dewar & Dutton, 1986; Ettlie, Bridges, & O'Keefe, 1984; Henderson & Clark, 1990; Tushman & Anderson, 1986). Extending this differentiation, research finds external stakeholders, including investors and consumers, view incrementally creative projects as familiar, beneficial, and less risky (Rogers, 2003); and radically creative projects as unfamiliar, costly to adopt, and risky (Dobrev & Gotsopoulos, 2010). Essentially, while stakeholders value novel ideas and projects, innovative and creative projects suffer when they deviate too far from generally accepted norms and expectations (Dobrev & Gotsopoulos, 2010).

Since crowdfunding supporters typically contribute small amounts of capital, their perceptions of innovativeness and creativity may deviate from traditional resource providers who invest large amounts of capital with the aim of financial returns. In a recent analysis of incremental and radical innovation amongst crowdfunding campaigns, researchers found incremental innovation is associated with successful funding outcomes, while radical innovation is associated with unsuccessful funding outcomes (Chan & Parhankangas, 2017). Interestingly, founders who combined incremental innovation on certain project elements with radical innovation on other elements could mitigate the negative impact of radical innovativeness (Chan & Parhankangas, 2017). Psychologically-driven studies of crowdfunding find backer perceptions

of project creativity to influence funding success, with positive affect mediating the relationship (Davis et al., 2017). Similarly, findings reveal perceived creativity enhances the effect of backer perceptions of founder passion (Li et al., 2017), and mediates the effect of sustainability orientation on campaign success (Calic & Mosakowski, 2016). Based on these findings, crowdfunding backers seem to respond favorably to creative projects, perhaps to a greater degree than traditional resource providers, but the effect diminishes once a project's innovativeness becomes too radical.

Evaluations of a firm's founder also assist prospective resource providers make sense of a nascent entrepreneurial venture (e.g., Chen et al., 2009; Elsbach & Kramer, 2003). In addition to internalizing role identity signals (Stryker & Burke, 2000) and considering projected identity claims (Navis & Glynn, 2011), investors also directly evaluate entrepreneurs to assess his or her ability to follow through on their ideas and visions (Baron, 2008; Cardon, Wincent, Singh, & Drnovsek, 2009). In this vein, investors appraise an entrepreneur's preparedness (Chen et al., 2009), positive affect (Baron, 2008), passion (Cardon et al., 2009), expressiveness (Baron & Tang, 2011), and tenacity (Murnieks, Cardon, Sudek, Singh, & Brooks, 2016) as nonverbal cues when making sense of an early-stage venture (Elsbach & Kramer, 2003).

In the crowdfunding setting, founders often appear in pitch videos and describe their personal motivations for pursuing their projects on the campaign pages. A recent study finds that displays of entrepreneurial passion enhance enthusiasm among viewers through a contagion effect, and ultimately impacts the likelihood of campaign success (Li et al., 2017). In a study on perceptions of gender in crowdfunding, findings reveal backers engage in a form of activist choice homophily where female backers recognize and resonate with the structural barriers experienced by female founders, particularly in the technology industry where women are most

underrepresented (Greenberg & Mollick, 2017). As such, females are more likely to contribute to female founders on crowdfunding platforms, not simply due to observable similarities, but due to shared social identities and the mutual understanding they create (Greenberg & Mollick, 2017). These studies exemplify the role of founder evaluations in the sensemaking process of prospective resource providers.

2.4.2. Backer-Centric Herding Mechanisms

The public and democratized nature of online crowdfunding, whether rewards-based, equity-based, or lending-based, provides a variety of individuals with a means to contribute to early-stage entrepreneurial ideas without the mitigation of expert gatekeepers (Mollick & Nanda, 2016). As such, increasing attention has been given to the decision-making processes of non-professional, geographically-distributed contributors with varying motivations and incentives. Instead of emphasizing the effectiveness of signals by assessing how backers respond to various actions that originate with the project (Elsbach & Kramer, 2003), such research recognizes crowdfunding as a public and communicative funding medium through which potential backers can observe, learn, and base their funding decisions off the actions of others as summarized in Tables 2.6a to 2.6f. In this vein, researchers have emphasized a number of mechanisms that account for the open and social nature of crowdfunding, including *observational learning* (Liu et al., 2015; Vismara, 2016; Zhang & Liu, 2012), *descriptive social norms* (Burtch et al., 2015, 2016), *internal social capital* (Butticé et al., 2017; Colombo et al., 2015; Lin et al., 2013), *home bias* (Josefy et al., 2017; Lin & Viswanathan, 2016), the *goal gradient effect* (Kuppuswamy & Bayus, 2017), and the *substitution effect* (Burtch et al., 2013). These mechanisms are highlighted in Figure 2.3 and discussed in greater depth below.

Table 2.6a: Backer-Centric Crowdfunding Articles – Observational Learning

Article	Journal	Research Question(s)	Theoretical Mechanism	Independent Variable(s)	Dependent Variable(s)	Key Findings	Context
Vismara 2016	ETP	(1) Do information cascades among individual equity crowdfunding investors play a role in crowdfunding success?	Observational learning	(1) Number of early investors (2) Proportion of investors with public profiles	(1) Goal attainment (2) Number of early investors	(1) Public profile investors attract other early investors through information cascades and observational learning (2) Contributions in the early days of an equity crowdfunding campaign are positively associated with later contributions, and ultimately campaign success	Equity-based
Hildebrand, Puri & Rocholl 2017	MS	(1) What are the incentives of lenders in peer-to-peer lending markets? (2) What are group leader incentives in this setting?	Observational learning	(1) Presence of rewards for group leaders	(1) Listing success (2) Interest rates (3) Default rates	(1) When group leaders can earn rewards, they bid actively and promote listings, thereby increasing the probability of successful funding (2) When group leaders cannot earn rewards, they bid less actively and promote fewer listings, thereby reducing the likelihood of funding (3) Loan default rates substantially decrease when group leaders are no longer able to attain rewards; suggesting group leaders promote questionable loans to gain rewards (4) Group leader bids result in lower interest rates, which serves as a signal of higher loan quality for subsequent lenders	Peer-to-peer lending
Liu, Brass, Lu & Chen 2015	MISQ	(1) How do friendship relationships act as pipes, prisms, and herding signals in online peer-to-peer lending?	Observational learning	(1) Pipes (2) Prisms (3) Relational herding	(1) Lending decisions	(1) Friends of the borrower, particularly close offline friends, act as financial pipes (2) The prism effect of friends' bids on loans negatively impact subsequent bids by third parties (3) When offline friends of potential lenders place a bid, a relational herding effect occurs since potential lenders are more likely to follow the lead of their personal offline friends	Peer-to-peer lending
Paravisini, Rappoport & Ravina 2017	MS	(1) What is the link between risk aversion and investor wealth in a person-to-person lending setting?	Observational learning	(1) Investor wealth	(1) Investor risk aversion	(1) Wealthier investors are more risk averse and investors become increasingly risk averse after a negative housing wealth shock	Peer-to-peer lending
Zhang & Liu 2012	MS	(1) Is herding in crowd-based microlending rational or irrational?	Observational learning	(1) Rational herding (2) Irrational herding	(1) Lending decisions	(1) Microlenders engage in rational herding by learning from active observation, rather than irrational herding as evidenced by mimicking peers passively	Peer-to-peer lending

Mollick & Nanda 2016	MS	(1) How do crowds and experts differ in their ability to judge projects? Are crowds rational or irrational in their funding decisions?	Observational learning	(1) Expert evaluations of a project's: (a) Novelty (b) Feasibility (c) Quality (d) Reach (e) Social relevance	(1) Funding decisions (2) Long-term success	(1) Significant agreement between funding decisions of experts and non-experts (2) Non-experts are more likely to fund projects that experts are not; thereby reducing the occurrence of false negatives (3) No difference in long-term outcomes of projects funded by crowds versus experts	Rewards-based
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Table 2.6b: Backer-Centric Crowdfunding Articles – Descriptive Social Norms

Article	Journal	Research Question(s)	Theoretical Mechanism	Independent Variable(s)	Dependent Variable(s)	Key Findings	Context
Burtch, Ghose & Wattal 2015	MS	(1) Is there a causal relationship between a crowdfunding platform's provision of information controls and potential contributors' willingness to transact?	Descriptive social norms	(1) Timing of information control question: (a) Before payment (b) After payment	(1) Funding decision (2) Funding amount	(1) Delaying the presentation of personal information controls led to a net increase in project fundraising due to: (a) increased probability of contributing, and (b) decreased average contribution amount due to privacy concerns that tempered large contributions (2) Prompting users with privacy-related questions prior to transaction conclusion can prime users with privacy concerns	Rewards-based
Burtch, Ghose & Wattal 2016	ISR	(1) Does a crowdfunder's decision to conceal personal information impact subsequent funding decisions from peers?	Descriptive social norms	(1) Prior decisions to conceal personal information	(1) Decisions to conceal personal information (2) Likelihood of contribution (3) Contribution amount	(1) Crowdfunders are more likely to conceal personal information when prior contributors have also done so (2) When campaign contributors elect to conceal personal identifying information, it has a negative impact on subsequent visitors' likelihood of contributing and their average contribution amount	Rewards-based

Table 2.6c: Backer-Centric Crowdfunding Articles – Home Bias

Article	Journal	Research Question(s)	Theoretical Mechanism	Independent Variable(s)	Dependent Variable(s)	Key Findings	Context
Agrawal, Catalini & Goldfarb 2016	CMR	(1) Can equity crowdfunding syndicates overcome the challenges brought about by information asymmetries?	Home bias	(1) Syndicated deals (2) Non-syndicated deals	(1) Home bias	(1) Syndicates in equity crowdfunding serve as a means for well-informed lead investors to leverage their knowledge to bring in funds from less well-informed crowds (2) Syndicated deals have more distant backers than non-syndicated deals because investors have less need to be co-located with the venture to address issues arising from information asymmetries	Equity-based
Burtch, Ghose & Wattal 2014	MISQ	(1) What role do physical and cultural distance play in online peer-to-peer transactions?	Home bias	(1) Geographic distance (2) Cultural differences	(1) Lending decisions	(1) Lenders prefer culturally similar and geographically proximate borrowers (2) Find empirical evidence to suggest IT-based trust mechanisms can overcome cultural differences (3) As physical distance increases, cultural differences will play a decreased role on lending volumes (and vice versa)	Peer-to-peer lending
Lin & Viswanathan 2016	MS	(1) Do investors in online crowdfunding platforms exhibit home bias? (2) If so, what is the mechanism that drives this bias?	Home bias	(1) Economic reasons (2) Behavioral reasons	(1) Home bias	(1) Home bias still exists in the virtual marketplace for financial products (2) Behavioral reasons largely drive home bias in on-line crowdfunding markets, rather than purely economic explanations	Peer-to-peer lending
Josefy, Dean, Albert & Fitza 2017	ETP	(1) Does community context impact crowdfunding success?	Home bias	(1) Cultural fit with focal community	(1) Amount pledged (2) Number of backers (3) Goal achievement	(1) The success of crowdfunding campaigns is associated with the degree to which they culturally align with the communities to which they belong (both geographic and virtual)	Rewards-based

Table 2.6d: Backer-Centric Crowdfunding Articles – Internal Social Capital

Article	Journal	Research Question(s)	Theoretical Mechanism	Independent Variable(s)	Dependent Variable(s)	Key Findings	Context
Lin, Prabhala & Viswanathan 2013	MS	(1) Do the number and type of online borrower friendships serve as a signal of borrower credit quality?	Internal social capital	(1) Online friendships	(1) Goal attainment (2) Loan interest rates (3) Loan default rates	(1) Online friendships of borrowers signal credit quality and increase the likelihood of successful funding outcomes, lower funder-driven interest rates, and lower default rates (2) The level of public detail available on online friendships enhances the impact of online friendships on success	Peer-to-peer lending
Butticé, Colombo & Wright 2017	ETP	(1) Are serial crowdfunders more successful than first-time crowdfunding entrepreneurs? (2) What mechanisms drive the success of serial crowdfunding entrepreneurs?	Internal social capital	1) Previous successful campaigns 2) Previous unsuccessful campaigns	(1) Social capital from successful campaigns (2) Goal attainment	(1) Likelihood of campaign success increases with the number of prior successful campaigns (2) Relationship between campaign success and prior success mediated by internal social capital (3) Internal social capital has a limited lifecycle	Rewards-based
Colombo, Franzoni & Rossi-Lamastra 2015	ETP	(1) What are the mechanisms that make early contributions crucial for crowdfunding success? (2) What leads to the attraction of early contributions?	Internal social capital	(1) Internal social capital	(1) Early number of backers (2) Early amount raised (3) Goal achievement	(1) Developing internal social capital by supporting other projects on the platform is associated with early backers and contributions (2) Early backers and contributions are associated with ultimate goal achievement	Rewards-based
Skirnevskiy, Bendig & Brettel 2017	ETP	(1) How does internal social capital developed in previous crowdfunding campaigns affect the outcome of subsequent campaigns?	Internal social capital	(1) Number of prior campaigns (2) Early campaign support: (a) Loyal backers (b) New backers (3) Social capital spillover	(1) Goal attainment	(1) Loyal backer communities may replace the initial support from "friends and family" in subsequent crowdfunding projects (2) Social capital developed through creator track record is associated with early backer support (3) Early support mediates the relationship between track record and campaign success	Rewards-based

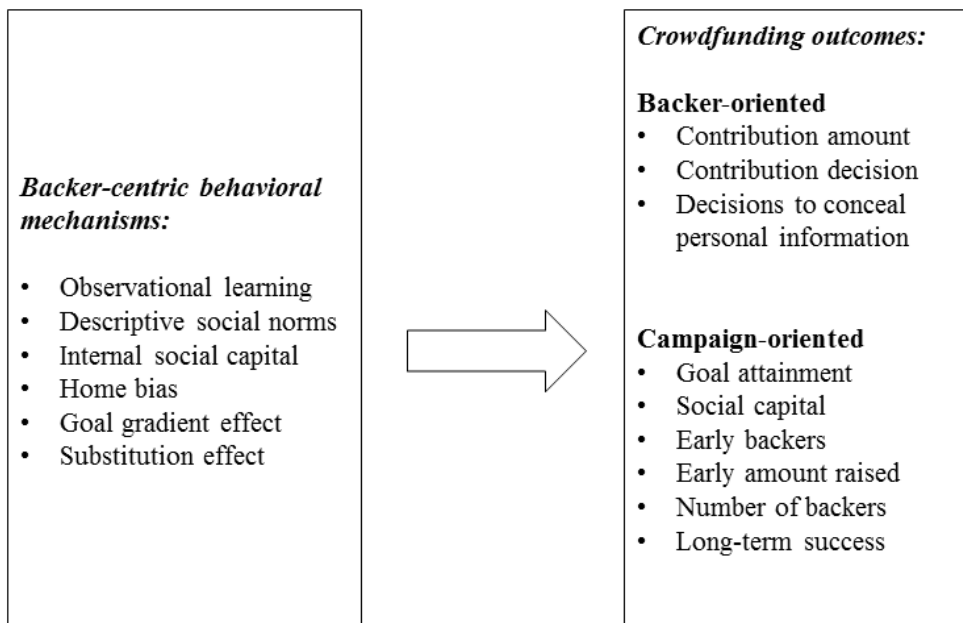
Table 2.6e: Backer-Centric Crowdfunding Articles – Goal Gradient Effect

Article	Journal	Research Question	Theoretical Mechanism	Independent Variable	Dependent Variable	Key Findings	Context
Kuppuswamy & Bayus 2017	JBV	(1) Does goal progress have an effect on contribution behavior after accounting for the number of past contributors?	Goal gradient effect	(1) Goal proximity	(1) Additional backers	(1) Crowdfunding projects receive more backer support as they approach their target goals, but support sharply drops after a goal is reached	Rewards-based

Table 2.6f: Backer-Centric Crowdfunding Articles – Substitution Effect

Article	Journal	Research Question(s)	Theoretical Mechanism	Independent Variables	Dependent Variables	Key Findings	Context
Burtch, Ghose & Wattal 2013	ISR	(1) What effects do observable indicators of others' prior contribution decisions in a crowd-funded market have on later participants' contribution decisions? (2) Is the contribution pattern associated with project performance?	Substitution effect	(1) Contribution frequency (2) Campaign length (3) Campaign exposure	(1) Contribution amount (2) Story readership	(1) Evidence of a substitution model where individual contribution amounts decrease as individuals observe others contributing more frequently (2) Contributions are subject to crowding out since the marginal utility gained from contributing to a project is diminished by other contributions (3) Campaign length and exposure are positively associated with readership of the article after a campaign ends	Rewards-based

Figure 2.3: Backer-Centric Behavioral Mechanisms & Outcomes



2.4.2.1. Observational Learning

Prior research on rational herding recognizes observational learning as foundational in the decision-making process of actors in a variety of uncertain environments (Banerjee, 1992; Bikhchandani et al., 1998; Devenow & Welch, 1996; Scharfstein & Stein, 1990) ranging from auctions (Simonsohn & Ariely, 2008) to stock exchanges (Bondt & Thaler, 1985). Studies on observational learning recognize that decision-makers rely on rational Bayesian inferences derived from observing the decisions of others to mitigate uncertainty, in addition to discernable quality signals. This differs from irrational herding where individuals mimic the decisions of others reflexively and interpret others' decisions as descriptive social norms to which they should conform (Cipriani & Guarino, 2005; Croson & Shang, 2008; Simonsohn & Ariely, 2008). However, crowdfunding provides a context where the actions of early contributors are magnified in their effect on later contributions since individuals can openly observe the funding decisions of others when determining whether to provide resources to a campaign (Vismara, 2016).

When compared to expert resource providers, crowdfunding contributors are shown to make rational decisions, and even outperform experts in decreasing the number of “false negatives” passed over by professionals in their funding decisions (Mollick & Nanda, 2016). Further supporting the argument for the “wisdom of crowds” (Budescu & Chen, 2014; Ray, 2006; Surowiecki, 2005) over the “madness of crowds” (Mackay, 1852), recent research shows crowdfunding contributors rely on active observation rather than passive mimicry of peers in making funding decisions (Zhang & Liu, 2012). Active observational learning and information cascades then result in subsequent campaign funding success (Vismara, 2016). Interestingly, when campaigns with obvious defects receive initial contributions, it amplifies the herding momentum among crowdfunding supporters because they make the inference that unobservable

merits account for contributions in the face of obvious defects (Liu et al., 2015; Zhang & Liu, 2012). In this vein, contributions from friends weaken the effect of herding since third parties attribute these contributions to underlying relationships rather than project quality.

2.4.2.2. Descriptive Social Norms

Interpretive and subjective by nature, descriptive social norms capture an individual's belief as to what constitutes appropriate and acceptable behavior in a given context (Cialdini, 1993; Cialdini & Goldstein, 2004; Cialdini, Reno, & Kallgren, 1991; Gerber & Rogers, 2009). Descriptive social norms do not exist as objective rules, but instead emerge from context-specific observations and perceptions of prevalent behaviors (Thibaut & Kelley, 1959). Research reveals the ease with which descriptive social norms can manifest, particularly in groups where individuals face similar decisions amidst comparable levels of uncertainty (Goldstein, Cialdini, & Griskevicious, 2008). In contexts ranging from energy conservation (Allcott, 2011) to pro-social behavior (Frey & Meier, 2004), individuals often adhere to descriptive social norms constructed by individuals with whom they have little to no personal interaction in-person and/or online (Postmes, Spears, & Lea, 2000; Postmes, Spears, Sakhal, & de Groot, 2001). Thus, crowdfunding presents an apt context for descriptive social norms to emerge.

Crowdfunding, as a collective process where individuals often conceptualize campaigns as impromptu communities, provides a context where descriptive social norms influence both individual funding decisions and a campaign's ultimate success (Burtch et al., 2016). Recent research reveals crowdfunding supporters are likely to act in congruence with prior contributors to a respective campaign (Burtch et al., 2016). For example, when given the option to conceal personal information including username and contribution amount, individuals are likely to behave in a manner consistent with prior contributors (Burtch et al., 2016). Interestingly, the

social norms of secrecy and privacy, as indicated by early backers' decisions to obscure personal information, negatively impacts the likelihood of contributions from subsequent visitors (Burtch et al., 2016). A field experiment conducted at a large crowdfunding platform also revealed crowdfunding platforms can mitigate the emergence and cementation of undesirable social norms such as secrecy and privacy by delaying the presentation of personal information controls until after a contribution's conclusion (Burtch et al., 2015).

At this juncture, it is also important to distinguish between descriptive social norms and rational herding as discrete theoretical mechanisms. As previously discussed, rational herding embodies active observational learning on behalf of potential resource providers seeking to mitigate uncertainty in their funding decisions. Prospective resource providers seek to understand why others contributed to a focal campaign at a previous point in time. In contrast, descriptive social norms emerge as a construction of what individuals deem as appropriate behavior within a respective campaign. This emphasis on within-campaign judgments of appropriate behavior distinguishes descriptive social norms from irrational herding, which would assume that individuals base opinions of a campaign's desirability on others' funding decisions and thereby mimic such funding decisions. Instead, descriptive social norms play a more nuanced role in determining campaign success since interpreted norms of privacy or secrecy can deter individuals from providing resources.

2.4.2.3. Internal Social Capital

Social capital describes the net benefits realized from immersion in a social network characterized by mutually-held trust and reciprocal relationships (Coleman, 1988, 1990; Putnam, 1995; Tsai & Ghoshal, 1998). Internal social capital encapsulates network ties within a collective, while external social capital exists outside a collective, with collectives manifesting in

a variety of forms, including organizations (Leana & Van Buren, 1999), online communities (Wasko & Faraj, 1995), and strategic alliances (Kale, Singh, & Perlmutter, 2000). In the context of crowdfunding, the platform constitutes a collective where individuals derive internal social capital through interactions between various campaign proponents and backers (Faraj & Johnson, 2011). This internal social capital can then influence early contributors, a necessity for the rational herding effect to emerge (Colombo et al., 2015).

Crowdfunding research depicts a variety of ways in which project founders can develop internal social capital, including backing other campaigns on the platform (Colombo et al., 2015) and realizing success in previous campaigns on the platform (Butticé et al., 2017). Contributing to other projects on the crowdfunding platform is associated with early contributions and ultimately with goal achievement (Colombo et al., 2015). Realizing success in prior campaigns on a focal crowdfunding platform provides founders with internal social capital based on relationships with prior contributors, a form of social capital unavailable to serial entrepreneurs whose prior successes occurred outside the platform (Butticé et al., 2017). Previous success on a crowdfunding platform leads to subsequent campaign success, with the effect fully mediated by internal social capital (Butticé et al., 2017). Further supporting this notion, findings show backer communities from prior campaigns may replace the support from “friends and family” in subsequent campaigns (Skirnevskiy, Bendig, & Brettel, 2017). Finally, individuals with a larger number of friends within a peer-to-peer lending platform are more likely to realize their funding objectives and have a lower probability of post-campaign failure due to social stigma (Lin et al., 2013).

2.4.2.4. Home Bias

Research in economics and finance identifies the prevalence of home bias, defined as a tendency for transactions to occur between parties in proximal rather than distal geographic areas (Disdier & Head, 2008; French & Poterba, 1991; Hillberry & Hummels, 2003). Essentially, individuals are more likely to transact with those with whom they are co-located geographically regardless of whether the transaction occurs in-person or online (Coval & Moskowitz, 1999; Hortaçsu, Martinez-Jerez, & Douglas, 2009). Home bias influences agents in a variety of contexts including angel investing (Sohl, 1999), venture capital (Sorenson & Stuart, 2001), and general equity investing (Graham, Harvey, & Huang, 2009). This prevalence of home bias in various investment settings ultimately extends beyond resource acquisition to influence rates of entrepreneurial entry and innovation trajectories (Stuart & Sorenson, 2003a, 2003b).

Despite the geographically-unbounded nature of crowdfunding platforms that enables individuals outside traditional innovation hubs to provide financial capital to entrepreneurial projects (Sorenson et al., 2016), home bias continues to persist in online crowdfunding markets (Lin & Viswanathan, 2016). Research on equity crowdfunding suggests syndicates can lessen the home bias effect by reducing inherent uncertainty through their credible endorsements (Agrawal et al., 2016). This suggests an underlying rationale for the persistence of home bias in crowdfunding. However, additional findings suggest behavioral biases and bounded rationality (Kahneman, 2003) rather than purely economic and rational reasoning motivate the persistence of home bias in online crowdfunding (Lin & Viswanathan, 2016). As such, findings show lenders in peer-to-peer lending markets prefer geographically proximate and culturally similar borrowers (Burtch et al., 2014). Further, in a study of “save the local theater” campaigns,

researchers find an association between a campaign's success and the degree to which it culturally aligns with the geographic community where it is located (Josefy et al., 2017).

2.4.2.5. Goal Gradient Effect

The goal gradient effect describes a phenomenon where motivation to accomplish a goal increases as the goal becomes more proximal (Hull 1932, 1934). Essentially, as the perception of a goal's attainability increases, largely as a function of prior effort, motivation to accomplish the goal increases as well (Forster, Higgins, & Idson, 1998; Forster, Liberman, & Higgins, 2005; Liberman & Forster, 2008). Researchers have observed the goal gradient effect in a variety of contexts, including charitable campaigns (Cryder, Loewenstein, & Seltman, 2013) and loyalty card programs (Kivetz, Urminsky, & Zheng, 2006). However, due to the dyadic nature of traditional nascent venture funding settings between entrepreneurs and investors, motivational escalation toward a funding goal was not an explanatory mechanism of nascent venture resource acquisition in such settings.

Recent findings show perceptions of a financial contribution's impact positively relate to a campaign's goal proximity in the domain of rewards-based crowdfunding (Kuppuswamy & Bayus, 2017). In this vein, contributions to a crowdfunding campaign steadily increase as a campaign approaches its funding goal and sharply drop once the goal is attained (Kuppuswamy & Bayus, 2017). Even after controlling for the number of contributors, goal progress independently impacts contribution behavior (Kuppuswamy & Bayus, 2017). This suggests the relative level of progress toward a goal influences the funding decisions of prospective resource providers over and above observations of other contributors. Perhaps more interesting, subsequent contributions drastically decrease once a campaign reaches its self-selected goal, suggesting that rewards may not play a significant role in contribution behavior since intent to

deliver on these rewards is cemented once a campaign reaches its goal. However, given that certain campaigns vastly exceed their funding goals, more research is necessary to understand the mechanisms that lead to positive deviations in resources acquired.

2.4.2.6. Substitution Effect

Research on behavioral herding in crowdfunding inherently emphasizes reinforcement models wherein initial contributions positively influence subsequent contributions (Shang & Croson, 2009; Sugden, 1984). In contrast, substitution models describe settings where initial contributions negatively influence later contributions due to a crowding out effect based on the diminished marginal benefit received by later contributors (Andreoni, 1990). This perception causes potential backers to allocate funds toward private consumption rather than public goods (Andreoni, 1990). Examples showcasing this substitution effect include peer-to-peer music sharing (Asvanund, Clay, Krishnan, & Smith, 2004) and charitable giving (Andreoni, 1998; Andreoni & Payne, 2003). In the crowdfunding context, evidence for a substitution model depends on the motivations and incentives of potential backers.

Recent findings provide support for the substitution effect in crowdfunding wherein individual contribution amounts decreased as individuals observed others contributing more frequently (Burtch et al., 2013). Since the sample contained campaigns seeking to meet their funding goals such findings directly contrast findings suggesting a goal gradient effect (Kuppuswamy & Bayus, 2017). However, it is important to note support for a substitution effect occurred in the setting of crowdfunded journalism where contributors provide capital to bring a journalistic endeavor to life (Burtch et al., 2013). Since pieces of journalism will reside in the public domain post-publication, such pieces constitute public goods and individual backers receive a personal and social benefit from their contributions. Backers of campaigns on rewards-

based or equity-based campaigns may have differing motivations. As such, more research is necessary to understand the conditions under which the substitution effect occurs. However, prior contributions are necessary for a substitution effect to take place.

2.4.2.7. A Model of Backer-Centric Herding

While herding describes the human tendency to base decisions on the observation of others' decisions, a variety of mechanisms influence this form of social behavior, particularly in online settings defined by real-time and retrospective interactions and observations. As outlined above, prior research discusses six primary mechanisms in the process of herding in online crowdfunding: (1) observational learning, (2) descriptive social norms, (3) internal social capital, (4) home bias, (5) the goal gradient effect, and (6) the substitution effect. The varying mechanisms and underlying motivations reveal the complexity in herding behavior among multiple individuals with divergent motives and incentives.

To further unpack these mechanisms in the context of online crowdfunding, it is important to consider the outcomes considered in various studies, most notably: (1) funding decisions, (2) funding amounts, (3) early contributors, (4) later contributors, and (5) goal achievement. Funding decisions and funding amounts constitute unique decisions made by prospective backers over the duration of a campaign's active solicitation period. Such decisions serve as the foundation for herding behavior since the phenomenon cannot exist without the occurrence of prior individual decisions. Early contributors, later contributors, and goal achievement represent focal outcomes for the campaign, as projects must garner initial support and subsequent support to reach their ultimate funding goals, regardless of when they occur within the bounds of the campaign timetable. As such, the various behavioral mechanisms

previously identified and discussed appear to impact various campaign-centric outcomes differently as illustrated in Table 2.7.

Table 2.7: Effects of Backer-Centric Herding Mechanisms on Campaign Outcomes

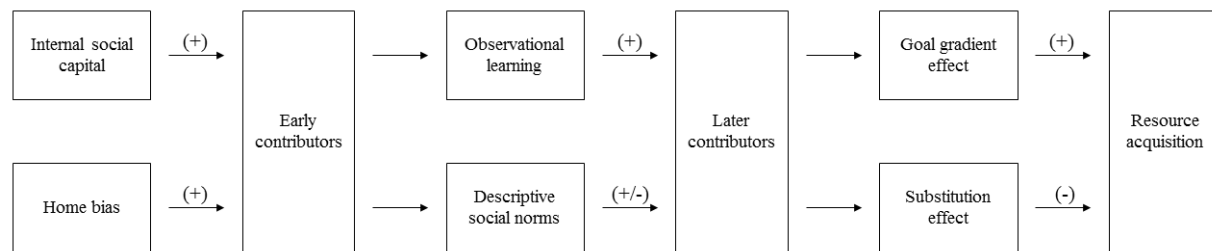
	Early contributors	Later contributors	Resource acquisition
Internal social capital	+	+	N/A
Home bias	+	+	N/A
Observational learning	N/A	+	+
Descriptive social norms	N/A	+/-	+
Goal gradient effect	N/A	N/A	+
Substitution effect	N/A	N/A	-

While research predominantly emphasizes the role of observational learning and descriptive social norms as the rational and mimetic mechanisms of herding respectively, these behaviors can only play out in the presence of early contributor decisions. Effectively, without early contributors, subsequent contributors lack points of reference on which to base their decisions. As previously discussed, contributors can base decisions on project-centric quality signals as influenced by founders, or they can base initial decisions on perceptions of internal social capital and home bias. These mechanisms serve as catalysts for subsequent funding decisions based on behavioral motivations derived from a backer's level of comfort derived from social ties, cultural alignment, and proximity.

After early contributors respond to internal social capital and home bias, they inadvertently catalyze subsequent decisions of prospective backers who base decisions on observational learning and descriptive social norms. As the goal becomes increasingly attainable, the goal gradient effect may kick-in, influencing individuals to be part of a small community nearing its desired outcome. Alternatively, as a campaign nears its self-selected goal, a substitution effect may also serve as a disincentive for backers who believe the campaign will

reach its goal with or without their assistance, causing them to perceive a greater utility from investing their resources in a different cause or campaign. Further experimental research can consider the individual-level antecedents that may cause later-stage crowdfunding backers to subscribe to the goal gradient effect or the substitution effect. The process model of backer-centric behavior in crowdfunding is further depicted in Figure 2.4.

Figure 2.4: Model of Backer-Centric Herding in Crowdfunding



It is important to note that this backer-side model of herding in crowdfunding is right-bounded at a campaign's goal attainment. Thereby, it does not account for campaigns that not only reach their goals, but vastly exceed them. For these campaigns, both the goal gradient effect and the substitution effect would seemingly have a negative force on their continued ability to attain resources, so it remains to be seen what such campaigns do differently than those that just manage to reach their goals. The model also does not consider post-campaign outcomes such as campaign follow-through or subsequent investments from angels or VCs. Further research could also examine the degree to which herding continues post-campaign, or if it only survives in the form of social capital for serial founders returning to the crowdfunding platform with subsequent projects.

2.4.3. Environment-Centric Institutional Mechanisms

As crowdfunding becomes increasingly prevalent and recognized as an entrepreneurial funding mechanism, environment-centric research is beginning to attend to the factors that lead to

platform emergence (e.g., Dushnitsky et al., 2016) and the broader implications of crowdfunding on entrepreneurship, organizations, and society (e.g., Powell, 2016; Sorenson et al., 2016; Wei & Lin, 2017). Research in this vein largely attends to the emergence of crowdfunding as an accepted form of entrepreneurial financing. To date, environment-focused research investigates the establishment of social norms in crowdfunding (Belleflamme et al., 2014; Wei & Lin, 2017; Younkin & Kashkooli, 2016), the impact of crowdfunding on traditional forms of top-down organizing (Powell, 2016), and the spillovers of crowdfunding to traditional funding contexts (Drover et al., 2015). Beyond the campaign-hosting functions of crowdfunding platforms, such research also emphasizes broader societal outcomes including the emergence of geographic ecosystems and the trajectory of innovation (Powell, 2016; Sorenson et al., 2016). This research is summarized in Table 2.8.

Table 2.8: Environment-Centric Crowdfunding Articles

Article	Journal	Research Question(s)	Independent Variable(s)	Dependent Variable(s)	Key Findings	Context
Belleflamme, Lambert & Schwienbacher 2014	JBV	(1) What economic factors influence entrepreneur decisions to pursue funding via crowdfunding platform that support presales versus equity investment?	(1) Capital requirements	(1) Type of crowdfunding platform	(1) When initial capital requirements are small, entrepreneurs prefer platforms that support pre-ordering. When initial capital requirements are large, entrepreneurs prefer platforms that support profit-sharing (2) Crowdfunding generates "community benefits" for participants. These benefits are tied to consumption experience and investing experience for contributors	Conceptual
Bruton, Khavul, Siegel & Wright 2015	ETP	(1) How are the expanding ways to finance nascent ventures altering the face of entrepreneurship?	—	—	(1) Develops framework to consider emerging entrepreneurial funding mechanisms (2) Crowdfunding emerged as a response to imbalances between capital supply and demand for new ventures, and a result of technological advancement	Conceptual
Fleming & Sorenson 2016	CMR	(1) What are the possibilities for the future of crowdfunding?	—	—	(1) Discuss two possible crowdfunding trajectories: (a) Regulators emphasize consumer protection and funders become overly cautious, making crowdfunding a minor financing mechanism; or (b) convergence will result in a small number of large crowdfunding platforms (2) Crowdfunding platforms may become a platform to exchange ideas, human resources, and social capital (3) By spreading opportunities across a broader swath of society, crowdfunding may reduce economic inequality	Conceptual
Powell 2016	Strat Org	(1) How have crowd phenomena altered traditional ways of organizing?	—	—	(1) Discusses when larger structural forces are supportive of individual-level efforts to create novel forms	Conceptual
Short, Ketchen, McKenny, Allison & Ireland 2017	ETP	(1) What has scholarly research to date revealed about crowdfunding?	—	—	(1) Crowdfunding research to date focuses on the determinants of crowdfunding success as typically indicated by resource acquisition	Conceptual

Wei & Lin 2017	MS	(1) How do auctions versus posted prices compare in their influence on market participant behaviors, transaction outcomes, and social welfare?	(1) Auction market mechanism (2) Posted price market mechanism	(1) Goal attainment (2) Speed of funding (3) Default rates	(1) When the platform sets the price, loans are more likely to be funded, but the interest rates are higher than those set in an auction. Such loans have an increased likelihood of default. (2) When the platform sets the price, lenders are more likely to submit larger bids, submit their bids sooner, and rely less on the decisions of others (i.e., reduced herding)	Peer-to-peer lending
Dushnitsky, Guerini, Piva & Rossi-Lamastra 2016	CMR	(1) What influences crowdfunding platform creation?	(1) National population size (2) National entrepreneurial rates (3) Platforms operated by financial organizations	(1) Crowdfunding platform creation	(1) Crowdfunding platforms development differs across countries and national patterns emerge for crowdfunding activity (2) Size of national population, national entrepreneurial rates, and platforms operated by financial organizations drive the creation of crowdfunding platforms (3) Lending platforms follow a distinct logic based on cultural and legal traits within a country	Platforms
Younkin & Kashkooli 2016	CMR	(1) For what types of problems does crowdfunding provide a unique and viable solution?	(1) Problems addressed by platform: (a) Coordination (b) Gatekeeping (c) Inexperience (d) Patronage	(1) Number of crowdfunding platforms (2) Amount of venture capital raised (3) Total contributions	(1) Induct four core problems addressed by crowdfunding platforms: coordination, gatekeeping, inexperience, and patronage (2) Crowdfunding effectively addresses gatekeeping and coordination, but ineffectively addresses inexperience and patronage as a primary rather than complementary focus	Platforms
Drover, Wood & Zackarakis 2015	ETP	(1) How do attributes of crowd-funded investments signal venture quality for VCs?	(1) Successful angel funding: (a) Angel experience (b) Angel reputational spillover (2) Successful crowdfunding: (a) Platform reputation (b) Number of crowdfunders	(1) VC screening decisions	(1) Establishes link between crowdfunding and VC screening decisions (2) VCs favor crowd-funded ventures that realized success on platforms with a proven track-record (3) The number of crowdfunders did not impact VC decisions to subsequently screen a venture	Rewards-based
Sorenson, Assenova, Li, Boada & Fleming 2016	Science	(1) Does crowdfunding expand access to entrepreneurial finance in new geographic regions?	(1) Annual number of Kickstarter campaigns (t-1)	(1) Annual number of VC investments (t)	(1) Crowdfunding has provided funding to innovators in a large number of places typically excluded from venture capital, and thus has expanded the geographic reach of venture capital (2) Success crowdfunding in the technology category drives most of the subsequent VC investment in that region	Rewards-based

While the existence of crowdfunding dates back centuries in localized contexts, advances in technology have enabled crowdfunding to emerge in its current, geographically-unconstrained incarnation. Spawned from imbalances between centralized capital supply and distributed demand for new ventures, crowdfunding now facilitates billions of dollars in transactions annually (Bruton et al., 2015). Given that crowdfunding addresses disparities in capital accessibility, several country-level variables influence the emergence of crowdfunding platforms, including population, entrepreneurship rates, and the presence of extant platforms operated by established financial organizations which serve to legitimate crowdfunding as a financing mechanism (Dushnitsky et al., 2016).

Platforms also generate “community benefits” by balancing the experiences of consumption and investing for participants (Belleflamme et al., 2014). For example, rewards-based crowdfunding platforms prioritize the consumption experience by allowing backers to contribute in exchange for a product presale rather than equity whereas equity-based crowdfunding platforms emphasize the investment experience as backers are able to receive equity in exchange for their capital contributions. This distinction between types of platforms leads founders with low initial capital requirements to gravitate to rewards-based crowdfunding platforms, and founders with high initial capital requirements to prefer equity-based crowdfunding platforms (Belleflamme et al., 2014). As the purposes of distinct crowdfunding platforms become more apparent with time and visibility, the problems addressed by crowdfunding have also become increasingly salient. Crowdfunding allows founders to overcome problems related to resource acquisition due to gatekeeping and coordinate disparate social contacts on a single platform, but crowdfunding does not remedy inexperience nor does it act as a mechanism for patronage (Younkin & Kashkooli, 2016).

Beyond democratizing entrepreneurial finance, crowdfunding also impacts entrepreneurial resource acquisition from traditional sources such as angel investors and VCs. Since crowds express a willingness to invest in riskier projects than expert resource providers (Mollick & Nanda, 2016), more projects are now able to pursue recognized opportunities and develop prototypes using resources from the crowd, which subsequently increases their appeal to established resource providers. Given the broader infusion of capital, projects that realize successful funding outcomes on proven crowdfunding platforms are more likely to receive VC funding (Drover et al., 2015). Essentially, crowdfunding success serves as a source of legitimacy for subsequent resource providers seeking returns on their financial investments. Yet the number of campaign backers does not seem to impact VC investment decisions, indicating VCs may attend to goal attainment over the size of a start-up's customer base (Drover et al., 2015). Further findings on the relationship between crowdfunding and venture capital reveal successfully crowdfunded technology projects precede VC investments in the campaign's geographic location, suggesting crowdfunding's role in the diffusion of VC investments (Sorenson et al., 2016).

Taken together, our understanding of crowdfunding as an entrepreneurial resourcing mechanism continues to materialize. As discussed above, an emergent body of research on crowdfunding addresses project-centric quality and backer-centric behaviors as influential in acquiring resources from distributed crowds of non-professional resource providers. Such research attends to the observable and measurable relationships between campaign-level variables and campaign outcomes. Alongside this body of research, a third stream of research examines the environmental factors that influence the emergence of platforms, the behaviors of both founders and backers on such platforms, and crowdfunding's broader implications on

entrepreneurship and society. Findings from these streams of research provide both the foundation for our understanding of crowdfunding and a launching pad for future inquiry.

Extant crowdfunding research alludes to the “community benefits” of crowdfunding (Belleflamme et al., 2014), and identifies social capital as a resource derived from contributions to other campaigns and prior crowdfunding success (Butticé et al., 2017; Colombo et al., 2015). Yet such research emphasizes the distinct roles of founders as project producers and backers as resource providers. Yet the crowdfunding setting heightens the importance of enacting opportunities for supporters to discover commonalities with one another and interact with the founder to develop social capital (Adler & Kwon, 2002; Etzioni, 2001; Putnam, 1995). In this way, supporters not only provide financial capital, but also contribute time and energy to build, refine, and validate ideas for little or no financial reward (Adams, Fontana, & Malerba, 2015; Lerner & Tirole, 2002; von Krogh & von Hippel, 2006). As such, the benefits of dynamic founder-backer interactions comprised of multiple feedback loops may have a distinct impact on resource acquisition from distributed crowds.

In the next section, I review the literature on communities—“voluntary collections of actors whose interests overlap and whose actions are partially influenced by this perception” (O’Mahoney & Lakhani, 2011: 4)—in open innovation and organizational settings to develop a theoretical framework suggesting *community-centric social capital* serves as a distinct mechanism for resource acquisition from distributed crowds of non-expert supporters.

2.5. Communities, Crowdfunding, and Resource Acquisition

Fueled by the interconnectivity of the Internet, geographically-unbounded communities increasingly emerge around common purposes, ideas, and/or projects (O’Mahony & Lakhani, 2011). Research on innovation and entrepreneurship addresses how online communities facilitate

open collaboration between diverse individuals, including users, investors, and inventors (Faraj et al., 2016). To further understand audience involvement during a venture's conception stages, recent work discusses the important role of community-based innovation across a variety of fields, including open source software (Frederiksen & Rullani 2016; Mollick 2017), scientific discoveries (Franzoni & Sauermann, 2014), crowdsourcing (Afuah & Tucci, 2012), and musical instruments (Jeppesen & Frederiksen, 2006). While extant studies discuss how entrepreneurs harness online communities to validate demand for venture ideas and refine product prototypes based on feedback (Adams et al., 2015; Autio et al., 2013), such work does not address whether and how entrepreneurs build and engage communities of supporters from whom they attain financial resources for their emergent ventures. Analyzing the dynamically unfolding relationships between entrepreneurs and early stakeholders will shed light on the role of emergent communities in entrepreneurial resource acquisition.

Organizational research on community-based innovation largely focuses on the ways in which online communities facilitate knowledge creation outside of organizational boundaries (Lee & Cole, 2003; Ma & Agarwal, 2007), the relational dynamics within communities (Bagozzi & Dholakia, 2006; Dahlander & O'Mahony, 2011; Faraj & Johnson, 2011; Fleming & Waguespack, 2007), and the competitive dynamics amongst firms who create or engage in online communities (Jeppesen & Frederiksen, 2006; Miller, Fabian, & Lin, 2009). Further research on entrepreneurship and communities emphasizes the role of communities in entrepreneurial opportunity recognition (Adams et al., 2015; Autio et al., 2013) and commercialization efforts (Mollick, 2016).

Paralleling these online communities, crowdfunding provides a setting where individuals come together to offer financial capital to bring a third-party endeavor into existence, rather than

to contribute time and effort to the development of a novel solution. Crowdfunding also provides a context where individual backers can derive further social benefits from interactions with project founders and other backers, suggesting that underlying social mechanisms play a role in the success of crowdfunding campaigns, over and above the direct relationships observed between various constructs and funding success. I therefore review the extant literature on these social mechanisms to suggest their role in resource acquisition.

2.5.1. Communities and Organizations

Sociologists have long postulated on the role of *community* in broader societal processes (e.g., Durkheim, 1897/1951; Etzioni, 1991; Putnam, 1995; Tönnies, 1887). For most of recorded history, communities—defined as “an aggregate of people who share common activities and/or beliefs and who are bound together by relations of affect, loyalty, common values, and/or personal concern” (Brint, 2001: 8)—emerged around geographic proximity and common activities (Vaisey, 2007). These structural mechanisms produced “we-feelings” or “we intentions” based on group identification and solidarity derived from repeated spatial interactions (Bagozzi & Dholakia, 2006; Kanter, 1968). However, increased mobility and online communication have facilitated the emergence of choice-based communities where individuals coalesce around shared cultural beliefs and form collective identities (Brint, 2001; Etzioni, 2001). Beyond their derivation in sociological studies, choice-based communities have also been shown to impact a variety of entrepreneurial and organizational outcomes (e.g., Kwon, Heflin, & Reuf, 2013; Marquis, Davis, & Glynn, 2007; Miller et al., 2009). In Table 2.9, I summarize some prior conceptualizations of community in sociology and organizations (later in the chapter I summarize literature on communities in innovation and entrepreneurship).

Table 2.9: Community Conceptualizations

Article	Journal	Research Question	Interesting Ideas
Brint 2001	Soc Theory	(1) What types of community exist in the twenty-first century? (2) How and why do major subtypes of community relate to important variations in the behavioral and organizational outcomes of community?	(1) Defines community as an aggregate of people who share common activities and/or beliefs and who are bound together principally by relations of affect, loyalty, common values, and/or personal concern (i.e., interest in the personalities and life events of one another) (p. 8) (2) Differentiates between geographic and choice-based communities (3) Differentiates between primary reasons for interaction: activity-based and belief-based
Kanter 1968	ASR	(1) What aspects of individual personality systems lead to a "good fit" within a social system?	(1) Proposes three types of commitment that bind individuals to social systems: continuance, cohesion, and control (2) Sacrifice and investment support continuance (3) Renunciation and communion support cohesion (4) Mortification and surrender support control (5) Commitment refers to the willingness of social actors to give energy and loyalty to social systems
Marquis, Glynn & Davis 2007	AMR	(1) How do institutional pressures at the community level shape corporate social action?	(1) Suggests community isomorphism influences the nature and level of corporate social action within communities (2) Proposes the community serves as the focal unit of analysis to better understand corporate social action (3) Local understandings, norms, and rules can serve to legitimate corporate social action
Marquis, Davis & Glynn 2013	OS	(1) How does the community-level institutional infrastructure exert pressures on organizations that affect the vitality of local nonprofit sectors? (2) How do elite interests and the social organization of the local elite influence the link between corporate and nonprofit sectors?	(1) Corporate density enhances the growth of two types of nonprofits: elite-oriented cultural and educational institutions, and social welfare-oriented institutions (2) Location in the northeast United States and a long-established business community influence nonprofit growth as well (3) Corporate density particularly impacts the growth of elite-oriented nonprofits but not social welfare nonprofits (4) Suggests local geographic communities continue to play an important role in multisector organizational processes among corporations and nonprofits
Vaisey 2007	ASR	(1) How do structural and cultural mechanisms influence the experience of community?	(1) Fuzzy set analyses illustrate how culture and structure combine to sustain or inhibit the experience of community, as defined as the experience of "we feeling" within groups (2) Structural mechanisms include: (a) spatiotemporal interaction, (b) homophily, (c) authority, and (d) investment

Online communities—defined as “collective spaces of knowledge flows characterized by a continuous morphing [that] are mutually constituted by digital technologies and participants” (Faraj et al., 2016: 669)—serve to sustain knowledge flows through observation, imitation, and interaction. Online communities play a pivotal role in the development of novel, user-based innovations. Extant research on community-based innovation focuses on the ways in which online communities facilitate knowledge creation outside of organizational boundaries (Lee & Cole, 2003; Ma & Agarwal, 2007), the relational dynamics within communities (Bagozzi & Dholakia, 2006; Dahlander & O’Mahony, 2011; Faraj & Johnson, 2011; Fleming & Waguespack, 2007), and the competitive dynamics amongst firms who create or engage in online communities (Jeppesen & Frederiksen, 2006; Miller et al., 2009). At the intersection of entrepreneurship and communities, prior work addresses the role of communities in entrepreneurial opportunity recognition (Adams et al., 2015; Autio et al., 2013) and commercialization efforts (Mollick, 2016). Each of these foci is described in greater depth below.

2.5.2. Community-Based Innovation

Foundational research on organizations typically assumes knowledge creation takes place at the firm level under hierarchical conditions of authority (Penrose, 1955; Nelson & Winter, 1982; Teece, 1986). In contrast, online communities, where geographically-dispersed individuals collaborate over the Internet to create innovative products outside firm boundaries, provide an alternative to capital-intensive, firm-based models of knowledge creation. Research on the Linux open-source software community suggests product development takes the form of an evolutionary process comprised of criticism and error correction among community members (Lee & Cole, 2003). In this way, innovation occurs openly rather than in isolation or in secret, as

suggested by findings from communities of sports' enthusiasts (Franke & Shah, 2003). Further, in assessing the trajectories of innovation within online communities more granularly, paradox-framed trajectories, where individuals sequentially contribute a paradox, share assumptions to validate the paradox, and then share ideas to resolve the paradox, result in superior solutions than other knowledge-sharing trajectories (Majchrzak & Malhotra, 2016). Despite these findings, the ability to verify community members' identities facilitates knowledge sharing among members, suggesting trust and transparency play a role in online knowledge creation (Ma & Agarwal, 2007).

Research on relational dynamics within online communities attends to the development of shared intentions, the motivations and exchange patterns of participants, and the emergence of leaders within horizontally-structured groups. Communities depend on the development of collective "we intentions" for members to coalesce around a shared goal or objective (Bagozzi & Dholakia, 2006). Positive attitudes towards group participation (cognitive factors), desire to avoid negative emotions arising from nonparticipation (affective factors), and identification with a shared social identity (social factors) each contribute to a participant's desire to contribute to an online community (Bagozzi & Dholakia, 2006). Rather than seeking to engage with high-status members of a group, community member exchange patterns are characterized by reciprocal relations within a lateral organizational structure (Faraj & Johnson, 2011). Interestingly, leadership within horizontally-structured communities is attained through progression to the community's center by touching more areas of the project, rather than vertically attaining more managerial responsibilities (Dahlander & O'Mahony, 2011). Leaders are initially selected based on technical contributions (Fleming & Waguespack, 2007), but socially-driven coordination work and communication are associated with long-term leadership roles (Dahlander &

O'Mahony, 2011; O'Mahony & Ferraro, 2007). Taken together, these studies suggest several socio-psychological mechanisms influence the dynamics between community members.

While communities originate outside a firm's established boundaries, firms employ a variety of strategies to harness community benefits. First, external online user communities can serve as a complementary asset for established firms. An analysis of the GNOME open-source software community revealed firms assign individuals to work in external communities to access community-based developments and influence subsequent trajectories of innovation (Dahlander & Wallin, 2006). Second, firms can host user communities. Findings from the Propellerhead-hosted software community reveal recognition from the firm serves as the motivating factor for innovative users (Jeppesen & Frederiksen, 2006). In this way, firms can harness the innovative capacity of "hobbyist" users through public acknowledgement of their contributions. Tables 2.10a through 2.10c summarize some key papers on community-based innovation.

Table 2.10a: Prior Research on Community-Based Innovation – Knowledge Creation

Article	Journal	Research Question(s)	Context	Independent Variable(s)	Dependent Variable(s)	Key Findings
Baldwin & von Hippel 2011	OS	(1) How does the economic viability of innovations by users and open collaborative groups compare to traditional producers? (2) Under what conditions is each model likely to emerge?	Conceptual	(1) Design costs (2) Design architectures (3) Communication costs	(1) Single-user firm (2) Producer firm (3) Open collaborative innovation project	(1) Both innovation by individual users and open collaborative groups increasingly compete and may largely displace producer innovation as design and communication costs decrease (2) User and collaborative innovation represents a paradigm shift for innovation research, policy making, and practice
Brown & Duiguid 1991	OS	(1) Can assessments of work, learning, and innovation in the context of actual communities and practices influence how we conceive organizations?	Conceptual	(1) Conventional job descriptions; divergent view of working, learning, and innovating (2) Unified, community based view of working, learning, and innovating	(1) Ways people work (2) Learning (3) Innovation	(1) Learning represents the bridge between working and innovating (2) To understand innovation, it is necessary to focus on the formation and change of communities where work takes place; not merely abstractions (3) Conventional job descriptions mask the ways people work, and learning and innovation that occurs in informal communities of practice
Faraj, Jarvenpaa & Majchrzak 2011	OS	(1) How do online communities engage in knowledge collaboration?	Conceptual	(1) Tensions: (a) Passion (b) Time (c) Socially ambiguous identities (d) Social disembodiment of ideas (e) Temporary convergence	(1) Online community knowledge collaboration	(1) Fluidity plays an important role in online community collaborations; allowing a dynamic flow of resources including passion, time, identity, social disembodiment of ideas, socially ambiguous ideas, and temporary convergence, in and out of the community (2) Additions of new resources in online communities create tensions that provide opportunities for collaboration when communities respond in ways that permit interactions to be generative rather than constrained; depends on community response rather than structural mechanisms

Faraj, von Krogh, Monteiro & Lakhani 2016	ISR	(1) What are the conditions for tacit versus explicit knowledge flows between community participants?	Conceptual	(1) Sociality	(1) Tacit knowledge flows	(1) Novel, digital technology does not constitute the crucial condition for knowledge flows to occur, but instead the technology's domestication by humanity and the sociality it affords (2) Define online communities as "collective spaces of knowledge flows characterized by a continuous morphing and are mutually constituted by digital technologies and participants" (p. 669) (3) Online communities are spaces for tacit knowledge flows among participants via observation and imitation, rather than writing or speech
Foss, Frederiksen & Rullani 2016	SMJ	(1) Is communication about new opportunities, projects, and business ideas in online communities free and unconstrained or does it revolve around existing artifacts making it more constrained?	SourceForge.net - 544,669 developers over 840 days from 2000 to 2002	(1) Open-ended communication (2) Artifact-based communication	(1) Projects launched (2) Projects joined	(1) Free and unconstrained communication is more likely to be associated with creating and initiating new strategic initiatives (2) Constrained communication around existing artifacts is more likely to be associated with more incremental initiatives
Jeppesen & Lakhani 2010	OS	(1) Which external solvers are able to develop successful solutions when problem information is disclosed widely and contest entry is unconstrained?	166 science challenges; 12,000+ scientists	(1) Increasing distance between solvers' field of expertise and the focal field of the problem (technical marginality) (2) Being a female (social marginality)	(1) Successful solution generation in a broadcast search	(1) Technical and social marginality, being a source of different perspectives and heuristics, plays an important role in explaining individual success in problem solving (2) Winning solutions were positively related to distance between the solver's field of technical expertise and the focal field of the problem (3) Females performed better than men in developing solutions

Lee & Cole 2003	OS	(1) How do distributed communities, dispersed across organizational and geographic boundaries, collaborate to produce innovative products of high quality?	Linux kernel development project	(1) Intellectual property licensing (2) Incentives to contribute (3) Coordination under conditions of uncertainty (4) Quality in processes of innovation	(1) Knowledge creation	(1) Propose a model of community-based, evolutionary knowledge creation in purposeful, loosely coordinated, distributed systems, as an alternative to firm-based commercial models (2) Suggest individuals dispersed across organizational and geographic boundaries collaborate over the internet to create innovative products, expanding knowledge creation beyond the boundary of the firm (3) Suggests the product development process can be effectively organized as an evolutionary process of learning driven by criticism and error correction
Ma & Agarwal 2007	ISR	(1) How can voluntary knowledge contribution be promoted between strangers interacting through technology-mediated communication?	QuitNet - online emotional support community for those who want to stop smoking; IS300 - online community for Lexus IS300 owners	(1) Information technology artifacts: (a) Virtual co-presence (b) Persistent labeling (c) Self-presentation (d) Deep profiling	(1) Perceived identity verification (2) Member knowledge contribution	(1) The use of four information technology artifacts — those supporting virtual co-presence, persistent labeling, self-presentation, and deep profiling — enhance perceived identity verification in online communities (2) Perceived identity verification contributes to member satisfaction and knowledge contribution (3) Theorize identity verification serves as a key driver of knowledge contribution in online communities
Majchrzak & Malhotra 2016	ISR	(1) Do knowledge-sharing trajectories affect the innovative outcomes achieved by a crowd? If so, are there some trajectories that lead to more innovative outcomes than others?	Five collaborative innovation challenges	(1) Knowledge-sharing pattern/trajectory: (a) Paradox-framed trajectory (paradox, assumptions, idea) (b) Invalidated paradox-framed (paradox then idea) (c) Alternative ideas-only trajectory (brainstorming) (d) Alternative ideas-framed trajectory (brainstorming with assumptions)	(1) Innovative outcomes	(1) A paradox-framed knowledge trajectory occurs when a novel solution emerges when different participants post in the following sequence: (a) contributing a paradox associated with the problem objective, (b) sharing assumptions to validate the paradox, and (c) sharing initial ideas for resolving the paradox in a manner than meets the problem statement (2) Paradox-framed trajectories are more likely to precede innovative outcomes compared to three other knowledge-sharing trajectories
von Hippel & von Krogh 2003	OS	(1) How does private-collective innovation combine elements of private investment and collective action to bring about innovative products?	Conceptual	—	—	(1) Proposes the private-collective model of innovation, compounding the "private investment" model and the "collective action" model

Table 2.10b: Prior Research on Community-Based Innovation – Relational Dynamics

Article	Journal	Research Question(s)	Context	Independent Variable(s)	Dependent Variable(s)	Key Findings
Bagozzi & Dholakia 2006	MS	(1) In what ways does community influence OSS users? Why do they participate and remain engaged in OSS user groups?	191 Linux user groups; Survey	(1) Attitudes toward Linux user group participation (2) Perceived behavioral control (3) Positive anticipated emotions from participating / Negative from not participating (4) Social identity with Linux user group (5) "We-intentions"	(1) "We-intentions" (2) Money spent on Linux (3) Time spent working with Linux (4) Reading Linux materials (5) Time spent viewing Linux websites	(1) Cognitive, affective, and social factors influence the formation of "we-intentions" and participation in open source user groups (2) Negative anticipated emotions from not participating, rather than positive emotions from participating influence user group participation (3) Linux user's experience level moderates the extent of the Linux user group's social influence and its impact on user participation
Dahlander & O'Mahony 2011	OS	(1) Who gains horizontal authority, and how do they use it? (2) How does progression in organizations that rely on horizontal authority differ from those that rely on vertical authority?	GNOME open source software project interaction; six-year, longitudinal	(1) Technical contributions (2) Technical communication (3) Coordination work	(1) Progression stage 1 - Project member (2) Progression stage 2 - Board member	(1) In determining how individuals progress to lateral authority roles (rather than vertical, hierarchical roles), technical contributions are initially important, but coordination work is more critical at later stages; two-stage model (2) In horizontal work settings, individuals progress to the center (by touching more areas of the project) rather than up a hierarchy (by managing more individuals) (3) Project members contribute significantly more after progressing to lateral authority roles, particularly when it comes to coordination work
Faraj & Johnson 2011	OS	(1) How are interactions within online communities structured? (2) How do individual behaviors manifest in exchange patterns in online community communication networks?	Five online communities; 38,483 interactions	(1) Structural network tendencies: (a) Direct reciprocity (b) Indirect reciprocity (c) Preferential attachment	(1) Online community exchange patterns	(1) Network exchange patterns in online community communications are characterized by direct reciprocity and indirect reciprocity patterns (2) Exchange patterns shift away from preferential attachment to suggest individuals are not motivated entirely by desire to connect with "popular" others (3) Community-specific social processes or norms regulate participation dynamics

Fleming & Waguespack 2007	OS	(1) What types of human and social capital identify the emergence of leaders of open innovation communities?	Internet Engineering Task Force community (1986-2002); Longitudinal analysis	(1) Technical contributions (2) Greater physical presence and social brokerage (3) Internal community boundary spanning	(1) Appointment to leadership positions in open-source community	(1) Future leaders in open source innovation communities must make strong technical contributions (2) To prevent splintering, forking, and balkanization, leaders must integrate their communities through social brokerage and boundary spanning between technological areas
Lakhani & von Hippel 2003	RP	(1) How are mundane but necessary tasks organized in open source communities? (2) Why are some project participants motivated to contribute to mundane tasks for free?	Apache software community	(1) Individual motivations: (a) Altruism (b) Incentives to support one's community (c) Reputation-enhancement benefits received by information providers (d) Expectations of benefits from reciprocal helping behaviors	(1) Volunteering on mundane tasks (i.e., field support) within user communities	(1) Community members engage in the mundane task of field support because they directly benefit from the activity since they spend most time reading questions to learn about issues others are facing for their own benefit; a very small amount of time is spent answering questions to which they already know an answer which lowers the cost considerably
Majchrzak, Jarvenpaa & Hollingshead 2007	OS	(1) How do emergent response groups coordinate expertise?	Hurricane Katrina response - KatrinaHelp wiki	(1) Tailoring the role of expertise (2) Replacing credibility with trust (3) Coordinating knowledge processes without a shared metastructure	(1) Expertise coordination	(1) Task-relevant expertise often is not present in emergent response groups (2) Suggests trust replaces credibility in action scenarios and task assignment (3) Knowledge coordination occurs through observations of action scenarios, identifying ways to contribute to scenarios, and devising coordination mechanisms (4) Community-developed narratives may assist in coordination
O'Mahony & Ferraro 2007	AMJ	(1) How do communities that produce collective goods govern themselves?	Open source software community	(1) Technical contributions: (a) Amount (b) Impact (2) Organization-building activities: (a) Online communications (b) In-person interactions	(1) Leadership positions	(1) Members developed shared basis of formal authority but limited it with democratic mechanisms to enable experimentation with shifting conceptions of authority over time (2) Though technical proficiency matters for leadership in open source communities, it is not sufficient (3) Members engaged in organization building are more apt to assume leadership roles than those concerned primarily with technical issues

Table 2.10c: Prior Research on Community-Based Innovation – Firm Dynamics

Article	Journal	Research Question(s)	Context	Independent Variable(s)	Dependent Variable(s)	Key Findings
Dahlander & Wallin 2006	RP	(1) How do firms unlock communities, which exist outside firm boundaries, as complementary assets? (2) How do firms manage innovation across firm borders without ownership of key resources?	Open source software community developing GNOME	(1) Individual's affiliation with firms that engage in the GNOME community	(1) Out-degree (2) In-degree (3) Prestige (4) Eigenvector	(1) Firms must assign individuals to work in external communities to gain access to developments and influence the direction of the community (2) Individuals placed by firms in communities interact with more individuals than interact with them, and also seek to interact with central individuals in the community (3) Propose the role of an external user community as a complementary asset
Fjelstad, Snow, Miles & Lettl 2012	SMJ	(1) What types of new organizational designs are emerging in the complex, dynamic, and interconnected sectors of the global economy?	Accenture, Linux, Blade.org, Network Centric Operation; Conceptual	(1) Actor-oriented architectural scheme elements: (a) Actors who have the capabilities and values to self-organize (b) Commons where the actors accumulate and share resources (c) Protocols, processes, and infrastructures that enable multi-actor collaboration	(1) New organizational designs	(1) Introduce the concept of actor-oriented architectural scheme and discuss its role in explaining emergent organizational designs (2) Three elements of actor-oriented scheme include: actors who have the capabilities and values to self-organize, commons where the actors accumulate and share resources, and protocols, processes, and infrastructures that enable multi-actor collaboration (3) Such organizational designs enable large-scale, multiparty collaboration
Jeppesen & Frederiksen 2006	OS	(1) Why do users contribute to firm-hosted user communities?	Propellerhead Software; Interviews, weblog, questionnaires	(1) Personal attributes of users: (a) Hobbyists (b) Motivated by recognition from peers (c) Motivated by recognition from the firm (d) Exhibit lead user attributes	(1) Likelihood of becoming an innovative user	(1) Innovative users are likely to be hobbyists, which positively affects innovators' willingness to share innovations (2) Innovative users are responsive to "firm recognition" as a motivating factor for undertaking innovation, explaining why they decide to join the firm's domain
Lerner & Tirole 2002	JIE	(1) What are the economics of open source software?	Apache, Linux, Perl, Sendmail; Conceptual	—	—	(1) Software firms employ a number of strategies to capitalize on open source communities: symbiotic open source projects, code release, intermediaries
Miller, Fabian & Lin 2009	SMJ	(1) How do social learning processes and firms' product promotion strategies affect the evolution of demand within online communities?	Simulation	(1) Interpersonal communication (2) Firm strategy	(1) Demand for a product	(1) Posit a socializing, rather than informational, role for online interpersonal exchanges (2) Consumption that conforms to collective norms can take on value independent of products' tangible characteristics (3) Develops a simulation model to illustrate how demand evolves as a function of interpersonal communication and a firm's chosen strategy

2.5.3. Communities and Entrepreneurship

Theories of entrepreneurial opportunity recognition emphasize two critical means by which individuals identify opportunities—individual cognitive processes (Baron & Ensley, 2006; Grégoire, Barr, & Shepherd, 2010; Grégoire & Shepherd, 2012) and exposure to information in the environment (Shane, 2000). A variety of social sources, including mentors and professional forums, provide opportunity-related information (Ozgen & Baron, 2007). At the intersection of the individual and the environment, recent studies also suggest communities play a pivotal role in entrepreneurial opportunity recognition (Autio et al., 2013). Within the Propellerhead online community, technical information influenced opportunity recognition and evaluation, while social information pertaining to user needs drove the pursuit of opportunities (Autio et al., 2013). Perceptions of user needs serve as an indicator of an opportunity's market viability based on extrapolations of demand expressed within the user community (Adams et al., 2015). As such, communities serve as an important source of information to reduce both technological and market uncertainty.

While online communities reduce uncertainty in the pursuit of entrepreneurial opportunities, their lack of concern for social conventions, hierarchy, and structural mechanisms often creates a distinct set of norms and values that discourages subsequent product commercialization (Faraj et al., 2011). Since the process of innovation and creation often serves as a desired end in such settings, subsequent commercialization may fall outside the generally accepted practices within a user-based community. A recent survey of open-source software community members supported such conceptualizations by finding community members associated with an innovation possess a lower propensity toward commercialization due to perceived differences between community-based innovators and entrepreneurs, rather than anti-

commercialization sentiment (Mollick, 2016). Despite this disinclination toward commercialization, a longitudinal comparison of innovations within the whitewater kayaking industry revealed users were three times more efficient at developing important product innovations than producers due to “efficiencies of scope” derived from small investments from many users (Hienerth et al., 2014). Tables 2.11a and 2.11b summarize some key papers on community and entrepreneurs.

Table 2.11a: Research on Community and Entrepreneurship – Opportunity Recognition

Article	Journal	Research Question(s)	Context	Independent Variable(s)	Dependent Variable(s)	Key Findings
Autio, Dahlander & Frederiksen 2013	AMJ	(1) How do individuals recognize and evaluate third-person entrepreneurial opportunities? (2) What factors influence whether the recognized opportunities are feasible courses of action?	Propellerhead online user community; 8 years web log	(1) Exposure to external information in online community (2) Technological domain: (a) Lead user attributes (b) Technological probing (3) Social domain: (a) Community attention (b) Community spanning	(1) Recognition and evaluation of opportunities (2) Pursuit of opportunities	(1) Technical information shaped opportunity evaluations (2) Social information about user needs drove individuals to pursue entrepreneurial opportunities (3) Reducing demand uncertainty regulates entrepreneurial action
Kwon, Heflin & Ruef 2013	ASR	(1) How does community-based social capital influence entrepreneurship?	Social Capital Community Benchmark Survey; General Social Survey	(1) Community-based social capital	(1) Self-employment	(1) Benefits of social trust and organization memberships accrue not just to individuals, but to communities at large (2) Individuals in communities with high levels of social trust are more likely to be self-employed compared to individuals in communities with low levels of social trust (3) Entrepreneurship-enhancing effects of community-based social capital are stronger for whites, native-born residents, and long-term community members than for minorities, immigrants, and recent entrants to the community
Shah & Tripsas 2007	SEJ	(1) How do users create, evaluate, share, and commercialize their ideas?	Conceptual	—	—	(1) Users are "accidental entrepreneurs" who happen upon an idea and share it within a community (2) Ideas are often further developed and refined within user communities (3) Development of an idea, experimentation, adaption, and preliminary adoption occur prior to commercialization

Table 2.11b: Research on Community and Entrepreneurship – Commercialization

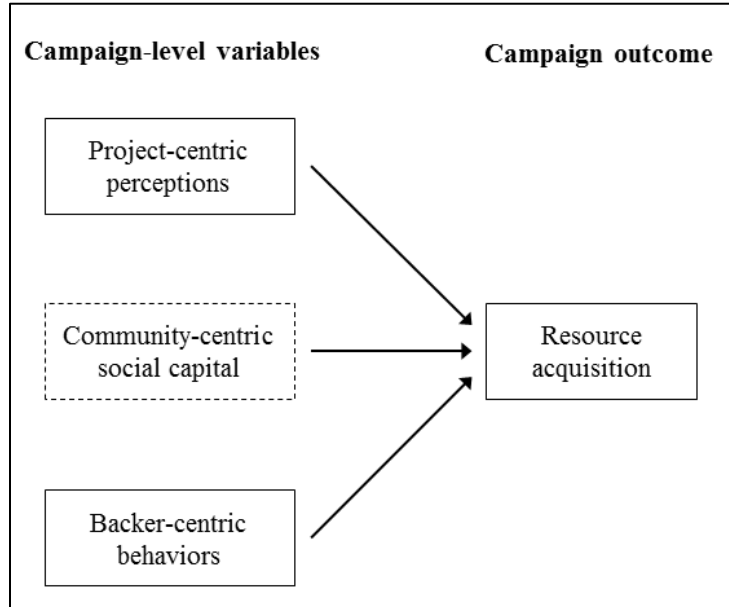
Article	Journal	Research Question(s)	Context	Independent Variable(s)	Dependent Variable(s)	Key Findings
Franke & Shah 2003	RP	(1) How do user-innovators gather the information and assistance they need to develop their ideas? (2) How do user-innovators share and diffuse resulting innovations?	Sports enthusiast communities	(1) Voluntary special-interest community context	(1) Development of innovations	(1) Individuals within voluntary special-interest communities often prototype novel products and they receive assistance in their development from fellow community members; they do not innovate in isolation or secrecy (2) Innovation-related information and assistance, as well as the innovations, are freely shared within the communities
Franke & Hippel 2003	RP	(1) How effective is the strategy of enabling users to modify products using their own "innovation toolkits"?	Apache security software webmaster posts	(1) Heterogeneity of user need (2) Product modifications	(1) Product modifications (2) Satisfaction levels with the product	(1) Given the high level of heterogeneity in the field, users who modify their own software were significantly more satisfied than non-innovating users (2) Suggest "user toolkit" solutions will be useful in many markets characterized by heterogeneous demand
Haefliger, Jäger & von Krogh 2010	RP	(1) Under what conditions do users, who apply assets from one industry, commercialize in markets of another industry?	Nascent firms founded by video game users who produced Machinima	(1) preference towards selective sharing (2) User communities knowledge pool (3) Film maker talent pool	(1) Access to complementary assets (2) Application of complementary assets (3) Domain knowledge (4) User entrepreneur entry into animation industry	(1) Identify a two-phase approach to user entrepreneurship across industries. In stage one, they begin "under the radar" of incumbent firms, gain experience, and attract an initial customer base. In stage two, they engage in commercialization, transferring assets in one industry to act as complementary assets in another industry (2) During this two-stage process, a community of fellow users serves as a knowledge pool for skills development and experimentation with different commercialization paths
Hiennerth, von Hippel & Jensen 2014	RP	(1) Are users or product producers more efficient in developing innovations?	Whitewater kayaking field; 50 years of innovation	(1) User product developments (2) Producer product developments	(1) Efficiency (expenditure) of innovation	(1) In aggregate, users in the whitewater kayaking industry were three times more efficient at developing important kayaking product innovations when compared to producers (2) Suggest "efficiencies of scope" drives this efficiency since such efficiencies favor an aggregation of user innovators who each invest little, over fewer product innovators benefitting from higher economies of scale
Mollick 2017	OS	(1) How does online community affiliation alter the incentives to commercialize new innovations?	Open source software survey; Experiment	(1) Dis-utility of profit seeking among community members (2) Self-identity of community members	(1) Commercialization activity	(1) Individuals associated with online community innovation have a lower propensity towards commercialization (2) Surveys do not reveal that anti-commercial attitudes play a role in commercialization decisions within open source communities (3) Self-identity differences between community-based innovators and entrepreneurs impact the propensity to commercialize innovations

Extant organizational research addresses the processes by which distributed individuals form communities around shared identities and common objectives to develop novel and innovative solutions, interact in non-hierarchical settings, and influence the trajectories of established firms (e.g., Faraj et al., 2011; Fleming & Waguespeck, 2007; von Hippel & von Krogh, 2003). Research also addresses the role of communities in entrepreneurship as a means for individuals to identify and commercialize potential entrepreneurial opportunities (e.g., Autio et al., 2013; Mollick, 2016). Such insights may also explain how entrepreneurs develop social capital among supporter communities through ongoing founder-to-backer and backer-to-backer interactions to successfully reach their resource acquisition goals. In this way, a variety of individuals may coalesce around a crowdfunding campaign to provide feedback and financial resources to entrepreneurs seeking to launch early-stage projects.

2.6. Towards a Theoretical Framework

As previously discussed, research on crowdfunding addresses the project-centric qualities and backer-centric behaviors that influence resource acquisition from distributed audiences of non-expert resource providers. Yet neither perspective fully captures ongoing founder-to-backer interactions that are enabled by the crowdfunding medium. Therefore, I synthesize and extend recent studies on crowdfunding to propose a broader theoretical framework of crowdfunding that considers community-centric social capital at the confluence of founder and backer interactions as an influential mechanism in resource acquisition. This framework is depicted in Figure 2.5 and further discussed below. In the subsequent chapter, I elaborate on this framework by considering the temporal dimensions of the mechanisms shown to influence resource acquisition via crowdfunding (see Figure 3.2). I then induct a more detailed process model of community-based resource acquisition (see Figure 3.6).

Figure 2.5: Initial Crowdfunding Theoretical Framework



2.6.1. Campaign-Level Variables

Project-centric perceptions. Consistent with traditional resource acquisition settings, project-centric perceptions capture how resource providers interpret a project’s underlying attractiveness through quality signals and entrepreneurial sensegiving strategies. Signals describe objective and observable characteristics that resource providers internalize to make inferences on unobservable founder capabilities and project plausibility. Project-based perceptions also depend on resource providers engaging in acts of sensemaking. Prior research in this vein often considers how audience members perceive campaigns as proximal or distal relative to their expectations across a variety of criteria. The confluence of signals and sensegiving strategies with an entrepreneur’s interpretations and perceptions suggest perceptions of a campaign’s desirability and viability continue to influence funding decisions among non-professional resource providers.

Backer-centric behaviors. Diverging from traditional resource acquisition settings where entrepreneurs seek to establish and leverage dyadic ties with expert investors, backer-

centric behaviors describe how backers directly and indirectly engage with other supporters when making funding decisions. Research in this vein recognizes crowdfunding as a public and communicative funding medium through which potential backers observe, learn, and base their funding decisions on the actions of other backers (Vismara, 2016; Zhang & Liu, 2012). Since backers often conceptualize crowdfunding campaigns as informal and impermanent communities, contextual social norms emerge from perceptions of prevalent behaviors of early backers to influence overall outcomes for crowdfunding campaigns (Burtch et al., 2015, 2016).

Community-centric social capital. Extant crowdfunding research discusses the “community benefits” of crowdfunding (Belleflamme et al., 2014), and thereby identifies social capital as a resource derived from contributions to other campaigns and prior crowdfunding success (Butticé et al., 2017; Colombo et al., 2015). Yet such research emphasizes the distinct roles of founders as project producers and backers as resource providers. Instead, the community benefits of founder-backer interactions may extend beyond the resourcing functionality of the crowdfunding campaign. Through multiple feedback loops (McMullen & Dimov, 2013), founders and backers may dynamically construct the environments necessary for nascent venture success without the intermediation of established resource providers.

The proposed theoretical framework draws on insights from the literature on open innovation and entrepreneurial communities—“voluntary collections of actors whose interests overlap and whose actions are partially influenced by this perception” (O’Mahoney & Lakhani, 2011: 4)—to suggest community-centric social capital as an important factor in resource acquisition via crowdfunding. This emergent framework suggests that entrepreneurs, fueled by the interconnectivity of online crowdfunding platforms, play an active role in building and engaging geographically-unbounded communities around a common purpose to generate

expansive social capital, mutually develop identities and narratives, incorporate feedback, and ultimately acquire necessary resources. I examine the role of community in greater detail in the subsequent chapters.

2.6.2. Outcome Variables

Resource acquisition. The democratized and disintermediated landscape of entrepreneurial finance enabled by online crowdfunding platforms allows geographically-unbridled, non-expert resource providers to provide capital to nascent entrepreneurial ideas. As such, a review of the outcome variables examined in crowdfunding studies to date reveals the resourcing function of crowdfunding has received a majority of researchers' attention. Whether assessing campaign success in the form of goal attainment, funding ratio, or number of contributors; or backer behaviors as evidenced by funding decisions or contribution amounts; most research examines the factors that lead to successful resource attainment. Since crowdfunding inherently serves the purpose of an entrepreneurial financing mechanism, emphasizing resource acquisition as the focal outcome is logical. However, I suggest future studies on crowdfunding include magnitude of success as a measure of relative campaign performance since it may serve as a valuable indicator as to whether a campaign will fulfil its objectives and ultimately create a venture post-campaign. This outcome is further emphasized in the next chapter of this dissertation.

2.7. Conclusion

This chapter reviews research conducted to date on crowdfunding to advance the discussion of crowdfunding as an entrepreneurial financing mechanism. In this review, I systematically analyzed existing research on crowdfunding across three distinct contexts: rewards-based crowdfunding, equity-based crowdfunding, and peer-to-peer lending. Each of these contexts provides a means for distributed groups of individuals to provide capital to individuals or

projects seeking resources from non-expert crowds rather than expert investors. To gain a more comprehensive understanding of questions addressed by prior crowdfunding research, I next organized the articles by outcome variables of interest across the project, backer, and platform levels of analysis; relative versus absolute measures; and context. This sorting and subsequent analysis revealed scholars' significant focus on resource acquisition as an outcome of interest, measured by both project-level success and backer-level funding decisions.

Extending these initial categorizations, I developed a typology of crowdfunding research conducted to date based on the theoretical mechanisms brought to bear on the crowdfunding setting by the researchers. This resulted in a typology of three primary sets of mechanisms: *project-centric quality mechanisms* that capture the signals and actions originating with the project and how prospective backers make sense of them, *backer-centric behavioral mechanisms* that describe the mechanisms by which crowdfunding backers interpret and make inferences based on the behaviors and decisions of prior backers, and *environment-centric institutional mechanisms* that attend to the emergence and impact of crowdfunding in entrepreneurship, organizations, and society.

I then review the literature on communities in organizations and entrepreneurship to suggest ongoing and dynamic backer-to-backer and founder-to-backer interactions play a critical role in entrepreneurial resource acquisition from distributed crowds. In this way, community-centric social capital may play a distinct role in determining the resource acquisition outcomes of resource acquisition efforts from crowds of distributed supporters.

In the subsequent chapters, I qualitatively and quantitatively explore the dynamic interactions between entrepreneurs and resource providers to suggest how entrepreneurs develop supporter communities that provide resource capital and intellectual capital for their early-stage

projects. In doing so, I highlight the co-evolution of narratives and communities that serve to influence the continuous acquisition of resources under such uncertain conditions. Broadly, I contribute to the literatures on crowdfunding, entrepreneurial resource acquisition, cultural entrepreneurship, signaling, and organizational theory.

3. LEVERAGING COMMUNITY: THE PROCESS OF ACQUIRING RESOURCES FROM CROWDS

Those who do not have the power over the story that dominates their lives, the power to retell it, rethink it, deconstruct it, joke about it, and change it as times change, truly are powerless, because they cannot think new thoughts.

- Salman Rushdie

3.1. Abstract

I examine how early-stage ventures acquire resources from geographically distributed crowds through an inductive, longitudinal analysis of successful and unsuccessful early-stage ventures seeking resources via crowdfunding. The central contribution of this study is a process model of *community-based resource acquisition* consisting of three distinct mechanisms: *community building*, *community engaging*, and *community spanning*. Community building entails sharing real-time ideas and events to identify a common domain of interest and share in the attainment of a new venture's vision. Community engaging is the co-construction of content and concepts between a venture's founder(s) and supporters that are then integrated into subsequent product development and community building efforts. Community spanning entails leveraging emergent backer communities to span into broader existing audiences to generate greater visibility for the venture. Through this ongoing process, early-stage ventures deepen, co-construct, and amplify their narratives. By temporally analyzing resource acquisition in the crowdfunding setting, I empirically illustrate and theoretically conceptualize the dynamic nature of ongoing sensegiving and sensemaking between founders and backers as early-stage ventures create vibrant and interactive forums where they can attain valuable feedback, financial capital, and establish supporter communities.

3.2. Introduction

In May 2012, Pebble raised \$10.2 million to bring its novel smartwatch to life. Yet rather than attaining the financial capital from a few angel investors or venture capitalists (VCs) in exchange for equity, Pebble raised an average of \$149 from 68,929 contributors on Kickstarter—the world’s largest rewards-based crowdfunding platform—in exchange for presales of its product. During its 37-day crowdfunding campaign, Pebble outlined how it would use the financial contributions to facilitate production tooling, complete a large component order, and gain global Bluetooth certification (Kickstarter, 2012). Pebble delivered on its promise and successfully crowdfunded its two subsequent products, raising \$20.3 million in March 2015 and \$12.7 million in June 2016 respectively. This approach to financial resource acquisition is increasingly prevalent amongst early-stage ventures.

Organizational theorists and entrepreneurship scholars have long sought to understand how early-stage ventures garner much-needed financial resources when faced with inherent uncertainty. Research suggests early-stage ventures attenuate this uncertainty by aligning with generally accepted norms and expectations to gain legitimacy in the eyes of professional investors (Aldrich & Fiol, 1994; Fisher et al., 2016; Lounsbury & Glynn, 2001; Zimmerman & Zeitz, 2002). Ventures gain legitimacy by projecting salient narratives (Garud et al., 2014b; Lounsbury & Glynn, 2001; Martens et al., 2007), crafting recognizable identities (Navis & Glynn, 2011; Wry et al., 2011), and managing symbolic repertoires (Zott & Huy, 2007). Using these mechanisms, entrepreneurs set expectations, invite outsiders to imagine their venture’s future possibilities, and convince resource providers of their venture’s viability and attractiveness (Bartel & Garud, 2009; Garud et al., 2014b). Yet research has largely focused on how these mechanisms are projected, or communicated via one-to-one exchanges at discrete moments in

time via mediums such as venture pitches (e.g., Chen et al., 2009; Garud et al., 2014b; Elsbach & Kramer, 2003) and/or initial public offering prospectuses (e.g., Martens et al., 2007).

While discrete projections are imperative in garnering financial resources, extant theory does not address how these projections emerge and evolve during a venture's earliest stages of conception when ventures are developing capabilities (Burton & Beckman, 2007; Rindova & Kotha, 2001), forming boundaries (Santos & Eisenhardt, 2005; 2009), and gaining power (Ozcan & Eisenhardt, 2009). At this stage, projective actions are less focused on mitigating risk for investors, as in the case of IPO-seeking ventures that communicate operating histories and funding track records (Martens et al., 2007), but instead capturing several disparate elements to make a venture salient and real for external observers. Scholars have thus begun to theorize about the temporal dynamics of these projections and how entrepreneurs use them to garner and maintain legitimacy over time (e.g., Fisher et al., 2016; Garud et al., 2014b). In this vein, scholars have conceptualized venture creation and legitimation as a co-constructed process where various stakeholders partake in an early-stage venture's formation and trajectory (Garud et al., 2014a; McMullen & Dimov, 2013). Scholars have thus called for empirical studies to address the dynamic processes between entrepreneurs and resource providers that may lead to resource acquisition during a venture's earliest stages of conception (Glynn & Navis, 2013, McMullen & Dimov, 2013).

Prior organizational research has also focused mainly on professional investors who seek to realize financial returns on their investments. This research describes the actions early-stage ventures take to develop ties with professional investors (Hallen, 2008; Hallen & Eisenhardt, 2012; Vissa, 2012) and suggests these ties, once formed, reduce uncertainty amongst subsequent professional investors and lead to resource acquisition (Hallen & Pahnke, 2016; Stuart et al.,

1999). Yet these explanations of resource acquisition may not fully generalize to increasingly prevalent online crowdfunding platforms where many distributed individuals with different motivations and interests contribute financial resources for a product and/or service that is partially conceived, but not yet completed. Scholars have therefore called for further empirical research to explore the motivations and incentives of non-professional resource providers in the crowdfunding setting (e.g., Drover et al., 2017; Fisher et al., 2017; Mollick & Nanda, 2016).

Recent empirical studies of crowdfunding have begun to account for several variables related to successful resource acquisition in this setting. These include the projective sensegiving actions of early-stage ventures such as narratives, identity claims, and linguistic styles (e.g., Calic & Mosakowski, 2016; Mollick, 2014; Parhankangas & Renko, 2017); the interpretative sensemaking actions of prospective backers pertaining to a venture's novelty and innovativeness, and a founder's passion, gender, and race (e.g., Davis et al., 2017; Greenberg & Mollick, 2017; Li et al., 2017; Younkin & Kuppuswamy, 2017); and the herding behavior amongst backers (Burtch et al. 2015, 2016). However, these studies also emphasize the static, projected attributes and characteristics of a venture and its founders rather than the dynamic interactions between founders and resource providers. In response, this study explores the dynamic process by which early-stage ventures acquire resources from broadly distributed non-professional investors via an online crowdfunding platform and asks the question: *How do early-stage ventures acquire financial resources from distributed resource providers?*

To address this question, I studied eight early-stage ventures that attempted to acquire financial resources on Kickstarter while simultaneously conducting research and developing functioning prototypes. The Kickstarter platform publicly facilitates efforts to acquire financial resources via contributions from many individuals who often serve as future users of the product

and/or service. This novel setting enabled us to observe the ongoing interactions between entrepreneurs and resource providers rather than static pitches where entrepreneurs *project* the merits of their ventures for professional resource providers to *interpret* at a single point in time (e.g., Chen et al., 2009; Elsbach & Kramer, 2003; Martens et al., 2007). Using a multiple-case study research design, I explicate how the *process* of resource acquisition occurs in this novel setting (Edmondson & McManus, 2007; Eisenhardt, 1989).

This study contributes at the nexus of the organizational theory and entrepreneurship literatures, and to the emerging body of literature on crowdfunding. While prior literature highlights the importance of projective actions in acquiring financial resources, this study empirically shows that these projections are *necessary* but *insufficient* for early-stage venture resource acquisition. Successful ventures instead benefit from building a community of supporters with whom they interact to co-construct a venture's narrative for subsequent supporters to make sense of as the venture evolves. In turn, these ventures then leverage the legitimacy garnered from growing supporter communities to amplify their ongoing narratives into broader existing communities via established third-party intermediaries. These findings expand on recent conceptual frameworks that suggest, but do not empirically demonstrate, that resource acquisition constitutes an ongoing and dynamic process (Fisher et al., 2016; Garud et al., 2014b).

In doing this, I propose a process model of crowdfunding. While prior studies account for the projective sensegiving actions as depicted in a venture's initial claims, the interpretive sensemaking actions of prospective resource providers as they assess a venture's static attributes, and herding effects that occur when backers observe other backers; I unpack the temporal dynamics of ongoing founder-to-backer interactions and their impact on resource acquisition. I

illustrate how the acts of sensegiving and sensemaking are ongoing and recursive as a venture deepens, co-constructs, and amplifies its narrative. Finally, this study sheds light on the motivations and incentives of non-professional crowdfunding backers who increasingly play a role in validating and financing early-stage ventures.

3.3. Early-Stage Venture Resource Acquisition

Traditional approaches to early-stage venture resource acquisition involve persuading professional investors—angels, VCs, and institutional investors—to provide financial resources amidst significant uncertainty (Shane & Venkataraman, 2000). Given the ubiquitous practice of seeking financial resources from a few professional investors, start-up financial capital has traditionally constituted a scarce resource attained by gaining legitimacy with these investors. In this context, legitimacy is defined as “a generalized perception or assumption that the actions of an entity are desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs, and definitions” (Suchman, 1995: 574). As such, resource acquisition theories address the projections used by early-stage ventures to garner legitimacy with professional investors via dyadic one-to-one exchanges (e.g., Garud et al., 2014a; Navis & Glynn, 2011).

Early-stage ventures establish legitimacy amongst prospective investors by effectively communicating how they intend to exploit opportunities and generate financial returns to investors. To do this, research suggests ventures should align with recognizable institutional forms (Aldrich & Fiol, 1994; Deephouse, 1996; DiMaggio & Powell, 1993) and conform to generally accepted expectations (Hsu, 2006). Early-stage ventures thereby attenuate uncertainty amongst professional investors through projective actions that are communicated via one-to-one exchanges at discrete moments in time to favorably shape external perceptions of a venture’s

quality and plausibility (Garud et al., 2014b; Lounsbury & Glynn, 2001; Martens et al., 2007; Navis & Glynn, 2011).

Empirical findings show that effective projective actions, including narratives, identity claims, and symbolic actions, provide meaning to early-stage ventures by demarcating emergent firm boundaries within a market (Santos & Eisenhardt, 2009), and by articulating how a firm intends to act upon recognized opportunities (Martens et al., 2007). As such, these mechanisms provide a means for early-stage ventures to coherently express their future intentions to resource providers (Garud et al., 2014b). Yet such research tends to link projections with successful resource acquisition—as depicted in Figure 3.1—rather than examine interactions between resource providers and early-stage ventures that dynamically evolve over time. Crowdfunding platforms not only create a context for resource acquisition to occur with many non-professional resource providers motivations and incentives that diverge from professional investors (Drover et al., 2017; Fisher et al., 2017), but also a context to observe the dynamics of founder-to-backer interactions in real-time as a venture seeks financial resources.

Figure 3.1: Process Model of Entrepreneurial Projective Actions

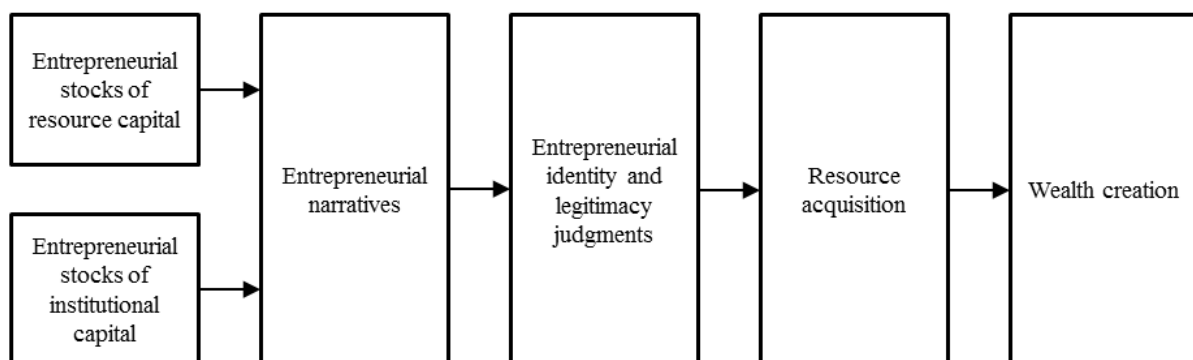


Figure adapted from Lounsbury & Glynn's (2001: 547) article on cultural entrepreneurship.

3.3.1. Dynamic Processes of Legitimacy Attainment and Resource Acquisition

Recent theoretical work begins to consider the temporal dynamics of venture legitimacy attainment and resource acquisition beyond initial projections by addressing legitimacy reconstruction, or reactionary actions to regain legitimacy following delegitimizing events, and legitimacy maintenance, or anticipatory actions to garner legitimacy judgments with different audience groups over time (Fisher et al., 2016; Garud et al., 2014a). While such work provides theoretical frameworks to understand how a venture's projections evolve over time, only recently have scholars begun to postulate on the dynamics of how such projective strategies come into being by way of ongoing interactions between entrepreneurs and initial stakeholders (Garud et al., 2014a).

Scholars have conceptualized that early-stage ventures' projections are often met with delegitimizing events that force them to reactively reconfigure and replot their narratives to reestablish perceptions of plausibility with external parties (Garud et al., 2014b). For example, Garud and colleagues (2014b) describe how dot-com ventures in the 1990s initially garnered legitimacy because of their "dot-com" label. Yet the subsequent "dot-com bust" delegitized these ventures when professional investors, as a collective, lost faith in dot-com firms. To regain legitimacy, these firms were forced to alter their projections to align with changing investor preferences. This process captures how ventures formulate initial projections, interpret revised investor preferences, and reformulate subsequent projections to realign with investors' evolving preferences. Yet such conceptualizations emphasize reactions to external events rather than ongoing and emergent exchanges between ventures and their respective stakeholders.

Recent theorizing on the temporal dynamics of legitimacy and resource acquisition has also begun to consider how early-stage ventures anticipate different preferences amongst various

groups of resource providers (Fisher et al., 2016). Extending empirical findings that indicate resource providers are heterogeneous in their judgments of a venture's legitimacy (Lamin & Zaheer, 2012), this line of theorizing conceives that different resource provider groups possess unique preferences that relate to the stage of a venture's lifecycle at which they provide financial capital. For example, recent resource provider typologies suggest crowdfunding backers provide capital to ventures that articulate their community commitment while VCs fund ventures that indicate their superiority over competitors (Drover et al., 2016; Fisher et al., 2017). Fittingly, scholars have theorized that early-stage ventures encounter a series of legitimacy thresholds to which they respond by shifting their projective strategies to align with the anticipated expectations of increasingly established groups of resource providers (Fisher et al., 2016). Despite orchestrated shifts in the content of projective strategies over time, such conceptual frameworks continue to emphasize the projective nature of resource acquisition as entrepreneurs adjust their projections to fit shifting preferences of increasingly professionalized audiences.

Only recently have scholars begun to theorize that venture legitimacy constitutes a mutually constructed process characterized by continuous interaction between ventures and external stakeholders through a series of ongoing and recursive processes (McMullen & Dimov, 2013). Further conceptual work clarifies this dynamic process by positing early-stage ventures' projective strategies are co-constructed via ongoing interactions between a venture's founder(s) and external groups to continuously "take the inside [of a venture] out" and "bring the outside in" (Garud et al., 2014a: 1183). This perspective emphasizes "attempts by entrepreneurs to contextualize [ventures] through relational, temporal, and performative efforts" rather than "a priori assumptions by researchers on what counts as contexts or how boundaries should be drawn" (Garud et al., 2014a: 1181).

Despite this recent conceptual work, existing studies have yet to empirically address the *mechanisms*, and their *temporal sequencing*, underlying early-stage venture legitimacy and resource acquisition; specifically from distributed and non-professional resource providers. This is particularly important in online settings where early-stage ventures can include resource providers in the ongoing process of a venture's formation (Manning & Bejarano, 2017), rather than traditional settings where ventures benefit from systematically reducing risk for professional investors by validating their product's superiority to alternatives and indicating their progress to date (Chen et al., 2009; Martens et al., 2007; Zott & Huy, 2007). Assessing the dynamic process of resource acquisition for early-stage ventures in the online crowdfunding setting can therefore help to advance our understanding of entrepreneurship generally, and early-stage venture financing specifically. To this end, I next review the crowdfunding literature to address what is known about resource acquisition from broadly distributed non-professional resource providers.

3.3.2. Resource Acquisition via Crowdfunding

Crowdfunding has emerged as a technologically-driven response to imbalances between capital supply and demand for early-stage ventures seeking resources from established investors (Bruton et al., 2015). Crowdfunding enables early-stage ventures to garner financial resources for innovative ideas without intermediation from established investors (Powell, 2016). Despite this important distinction, research on crowdfunding to date parallels the projective and interpretive perspectives employed by studies that assess resource acquisition in traditional settings (e.g., Elsbach & Kramer, 2003; Chen et al., 2009). In this way, crowdfunding studies suggest early-stage ventures engage in projective acts of *sensegiving*, in which venture founders communicate visions and depict future intentions to add meaning to early-stage ventures (e.g., Allison et al., 2015; Parhankangas & Renko, 2017); and prospective resource providers engage

in interpretive acts of *sensemaking* in which they develop subjective judgments about the plausibility of early-stage ventures based on venture and founder attributes and characteristics (e.g., Greenberg & Mollick, 2017; Mollick & Nanda, 2016; Younkin & Kuppuswamy, 2017). Diverging from the classic literature on resource acquisition, crowdfunding studies also recognize the role of *herding*, a process of observational learning employed by decision-makers in uncertain contexts to assess what constitutes appropriate behavior based on the prior actions of others (e.g., Burtch et al., 2015; 2016; Zhang & Liu, 2012).

Studies focused on sensegiving. Within the crowdfunding setting, sensegiving strategies broadly encapsulate the narratives and identity claims used to garner legitimacy judgments in uncertain settings. Empirical findings reveal early-stage ventures that embrace socially-oriented objectives such as environmental sustainability in their narratives are more apt to realize funding success than campaigns with purely commercial orientations (Calic & Mosakowski, 2016). Similarly, ventures that communicate opportunities to help others are found to realize a greater likelihood of funding success than those that communicate purely market-oriented opportunities and intentions (Allison et al., 2015). Research also suggests that ventures with socially-oriented narratives benefit from adopting linguistic styles that assist potential backers in understanding and relating to the campaign, whereas such styles matter less for commercially-oriented (and more readily understood) ventures (Parhankangas & Renko, 2017). While such findings begin to reveal the mechanisms that lead to successful resource acquisition on crowdfunding platforms, these studies analyze specific projections used by early-stage ventures at the inception of their campaigns rather than ongoing interactions that occur between founders and backers as campaigns unfold in real-time.

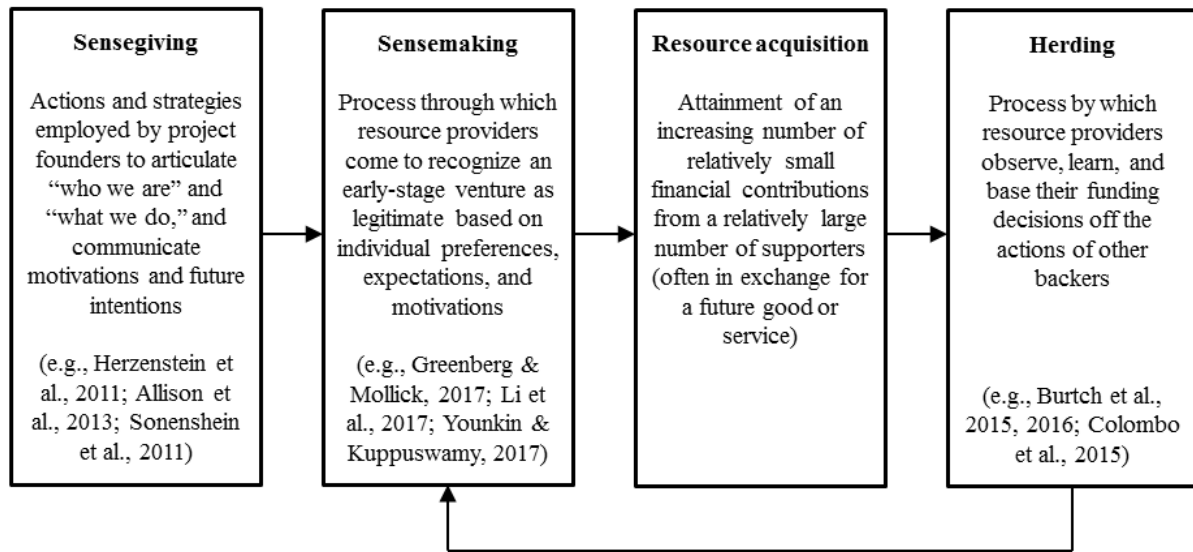
Studies focused on sensemaking. Similarly, sensemaking in the crowdfunding setting captures the processes by which prospective resource providers recognize an early-stage venture as legitimate based on individual preferences, expectations, and motivations. Empirical findings suggest resource providers consider a variety of project- and founder-related attributes in their funding decisions. For example, with respect to project attributes, resource providers are more apt to fund innovative ventures (Davis et al., 2017), perceiving incremental innovations more favorably than radical innovations (Chan & Parhankangas, 2017). Contrasting findings also show crowdfunding backers appear to possess a higher appetite for risky projects than experienced investors (Mollick & Nanda, 2016). Recent findings reveal crowdfunding backers respond favorably to founder displays of passion (Li et al., 2017) and signals of competence such as the proportion of board members with MBA degrees (Ahlers et al., 2015). Regarding founder attributes, findings indicate backers consider gender and race in their funding decisions; female backers are more likely to contribute to female-founded campaigns (Greenberg & Mollick, 2017) and backers overall perceive projects founded by black males as lower quality than those founded by white males (Younkin & Kuppuswamy, 2017). Yet such findings emphasize the interpretation of specific founder and venture attributes and characteristics rather than ongoing interactions and relational dynamics between founders and backers.

Studies focused on herding. Scholars recognize that geographically-distributed resource providers can observe, learn, and base their funding decisions on the actions of others in a process of rational herding (i.e., Burtch et al., 2015; 2016; Colombo et al., 2015), as typified by economic research on uncertain public settings such as auctions (Simonsohn & Ariely, 2008) and stock exchanges (Bondt & Thaler, 1985). The actions of early contributors therefore have a magnified effect on a campaign's success since individuals can openly observe the funding

decisions of previous backers when determining whether to provide their own financial resources (Vismara, 2016). While the collective actions of prior backers (or lack of backers) provides an additional signal for prospective resource providers to internalize and consider (Kuppuswamy & Bayus, 2017), this research examines the process of backer-to-backer observation, rather than founder-to-backer interactions that can bring a venture to life via involvement and input from a growing body of resource providers.

In summary, the crowdfunding literature identifies three critical mechanisms that lead to funding success: sensegiving, sensemaking, and herding. I synthesize these prior findings in an initial framework of resource acquisition via crowdfunding in Figure 3.2. However, these prior studies have yet to examine the temporal and dynamic interactions that occur between founders and backers and the impact such interactions might have on the sensegiving, sensemaking, and herding processes as ventures raise financial resources. Thus, I seek to further unpack the ongoing dynamics between founders and backers to better explicate how early-stage ventures attain small amounts of capital from a large group of distributed non-professional resource providers. Adopting a temporal perspective enabled me to uncover and elaborate on process elements and sequential factors (Langley, 1999) that impact whether and how early-stage ventures acquire much-needed financial resources in the novel setting of crowdfunding.

Figure 3.2: Framework of Resource Acquisition via Crowdfunding



3.4. Methods

Given limited theory on how early-stage ventures attain resources from distributed resource providers in an ongoing and dynamic setting, I used inductive theory building with multiple cases to address this research question (Eisenhardt 1989). I build theory and elaborate on existing theory (Fisher & Aguinis, 2017; Lee, Mitchell, & Sablinski, 1999) using process theorizing strategies including visual mapping and temporal bracketing (Langley, 1999). Multiple cases are particularly suited to address process questions, allowing me to employ replication logic where each case served as a unique experiment to: (1) deepen emergent insights, (2) elaborate theoretical links unaddressed in prior literature, and (3) provide a basis to refine and redirect theory (Eisenhardt & Graebner, 2007; Siggelkow, 2007; Yin, 1994).

3.4.1. Research Setting

The Kickstarter crowdfunding platform served as the setting for this study. Having facilitated the procurement of \$3.27 billion for 131,512 successful projects as of September 2017, Kickstarter provides a setting where numerous campaigns compete for financial resources concurrently and

therefore benefit from persuading individuals to contribute within a constrained funding solicitation period (average length of a campaign is 30 days). Kickstarter's public nature makes it an ideal online platform to observe and evaluate how entrepreneurs interact with prospective resource providers longitudinally. The funding outcomes displayed for each campaign allowed me to theoretically sample and match campaigns while mitigating the impact of other influential campaign aspects (e.g., product category, contribution options, timing, etc.). In sum, the crowdfunding context allowed me to study the nuanced relationship between funding outcomes and ongoing founder and backer dynamics to understand the process early-stage ventures employed to attain resources.

3.4.2. Sample

The sample consisted of eight early-stage ventures listed between 2012 and 2014 across four distinct product categories: (1) 3D printing, (2) educational board-games, (3) smartphone camera lenses, and (4) household gadgets (see Table 3.1 for venture descriptions and aliases). The diversity of product categories helps to enhance the generalizability of emergent theoretical insights (e.g., Seidel & O'Mahony, 2014). I selected the matched theoretical sample using campaign similarities pertaining to certain criteria (e.g., product type, product specifications, timing, etc.), yet with stark differences in funding success. Differences in funding success was based on a project's funding ratio, equal to total funds raised relative to its funding goal (i.e., if total contributions amount to \$120,000 and the goal amount is \$10,000, then the funding ratio is 12). As shown in Table 3.1, although successful and unsuccessful ventures each set funding goals between \$20,000 and \$100,000, successful ventures had an average funding ratio of 16.92, compared to 0.18 for unsuccessful ventures. Selecting financially successful and unsuccessful ventures from four unique product categories provided high across-firm variation and allowed

me to induct accurate, parsimonious, and generalizable theoretical insights by delving into rich detail when analyzing the temporal sequences of each case (Eisenhardt & Graebner, 2007; Harris & Sutton, 1986).

Table 3.1: Case Descriptions

Industry	Venture	Campaign Launched	Amount Raised	% of Goal Raised	# of Backers	# of Founders	Prior Kickstarter Experience	Prior Start-up Experience	Funding Status
Board Games	Game/S	2013	\$500K - \$1M	2525%	10,000+	1	No	Yes	Successful
	Game/U	2014	< \$5K	1%	< 150	1	No	No	Unsuccessful
Household gadgets	Gadget/S	2014	\$50K - \$100K	394%	1,000 - 2,499	1	No	No	Successful
	Gadget/U	2013	\$10K - \$25K	35%	< 150	1	No	No	Unsuccessful
Smartphone lenses	Lens/S	2014	\$250K - \$500K	903%	2,500 - 4,999	2	No	Yes	Successful
	Lens/U	2014	< \$5K	10%	< 150	1	No	Yes	Unsuccessful
3D Printers	Printer/S	2012	\$1M+	2946%	1,000 - 2,499	3	No	No	Successful
	Printer/U	2012	\$10K - \$25K	27%	< 150	3	No	No	Unsuccessful

I matched the venture pairs on certain venture- and founder-level criteria to guard against such variables contributing to meaningful differences in funding success (Eisenhardt & Graebner, 2007). For example, both board-game founders hired external designers to assist with prototyping and lacked prior experience in the board-game industry. Further validating the latent quality of the unsuccessful board-game (Game/U), financial literacy instructors utilized the game in their classes after the campaign's unsuccessful conclusion. The founders of both camera lenses invested between \$50,000 and \$60,000 into design and prototyping, both had prior industry experience, and both developed lenses that aligned with prevalent industry norms. Further validating its latent quality, the founder of the unsuccessful lens (Lens/U) produced its lens after receiving a large post-campaign capital investment from a Japanese investor. For both household gadgets, the founders iterated numerous prototypes to arrive at their designs. Further validating its latent quality, the unsuccessful gadget (Gadget/U) licensed its technology to a major retail department store after failing to reach its Kickstarter funding goal. Finally, both 3D printers

complied with industry norms regarding product dimensions, including nozzle width, build volume, weight, layer thickness, speed, and precision. Further validating the perceived quality of the unsuccessful printer (Printer/U), Kickstarter named it a “Project We Love” during its campaign, a designation Kickstarter uses to recognize “best-in-class projects” (Kickstarter, 2016), and the only campaign to receive such a designation in the sample¹⁰. To ensure comparable teams across categories, I sampled on founders as well, ensuring none of the founders had prior crowdfunding experience or success to control for learning effects and reputation spillover effects from prior campaigns as these variables have been previously shown to impact a campaign’s success (Butticé et al. 2017; Colombo et al., 2015).

3.4.3. Data Collection

I collected and analyzed qualitative and quantitative data for each venture in the sample from the following sources: (1) interviews with venture founders; (2) interviews with backers; (3) interviews with industry experts, video producers, and journalists; (4) textual analyses of Kickstarter campaign pages, videos, updates, and comments; and (5) archival sources such as venture websites, personal blogs, podcasts, media articles, social media pages, and external sites that track longitudinal crowdfunding activity. Triangulating across multiple data sources enabled me to construct a comprehensive account of the ventures’ campaign activities (Howard-Grenville et al. 2013). My data sources are depicted in Table 3.2.

¹⁰ I acknowledge the 3D printers in our sample were designed for distinct consumer segments. Printer/S was designed for a “prosumer” market to prototype products and projects for various applications, while Printer/U was designed as a DIY hobbyist machine. By matching 3D printers that target different consumer audiences, I mitigate the concern that the temporal sequencing of the 3D printers’ campaigns will influence the outcomes due to market saturation. Further review of 3D printers launched on Kickstarter reveals several 3D printers ranging from hobbyist machines to prosumer machines have successfully met their funding goals, suggesting the respective markets exist for each 3D printer in the sample.

Table 3.2: Description of Data

Venture	Interviews	Archival	Campaign data
Game/S	1 (founder) 5 (backers) 3 (in situ) 2 (podcasts)	10 media articles 60 blog posts (founder)	1 campaign page 28 updates 449 comments (general) 300 comments (to updates)
Game/U	1 (founder)	1 media article	1 campaign page 5 comments (general)
Gadget/S	3 (founder) 1 (Chief of Community) 4 (backers) 3 (in situ) 1 (podcast)	1 media article 23 blog posts (company)	1 campaign page 16 updates 159 comments (general) 33 comments (to updates)
Gadget/U	1 (founder) 1 (backer) 1 (in situ)	5 media articles	1 campaign page 3 updates 18 comments (general) 2 updates (to updates)
Lens/S	3 (co-founders) 4 (backers) 9 (in situ) 1 (podcast)	17 media articles 58 blog posts (co-founder) 14 photoblogs (co-founder)	1 campaign page 10 updates 448 comments (general) 55 comments (to updates)
Lens/U	1 (founder)	2 product reviews	1 campaign page 4 updates
Printer/S	1 (founder) 3 (backers) 18 (in situ) 3 (podcasts)	10 media articles 33 blog posts (company)	1 campaign page 18 updates 1,830 comments (general) 161 comments (to updates)
Printer/U	1 (founder)	2 media articles 5 blog posts (co-founder)	1 campaign page 3 updates 3 comments (general) 2 comments (to updates)

Interviews. Interviews served as the primary data source. Between 2014 and 2017, I conducted 38 semi-structured interviews in two waves focused on retrospective events that took place during the respective campaigns. In the first wave, I interviewed each venture founder. Since the research question emphasized how early-stage ventures acquire financial resources from distributed resource providers, focal entrepreneurs provided the most informative and appropriate source of information for this study due to their unique and deep understanding of actions taken before and during their campaigns. The interviews lasted an average of 63 minutes and consisted of four primary parts: (1) how the entrepreneur recognized an unmet need and

generated the idea; (2) motivations for actions taken before, during, and after the campaign; (3) components of the venture's initial campaign projections; and (4) how the entrepreneur interacted with external resource providers before, during, and after the campaign.

I conducted a second wave of interviews with backers of the successful campaigns. These interviews allowed me to better understand the temporal dimensions of the two-sided interactions in the successful resource acquisition efforts of early-stage ventures on Kickstarter, thereby expanding on the emergent insights derived from the founder interviews. The interviews with backers lasted an average of 70 minutes and consisted of three primary sections: (1) general experience with crowdfunding as a backer and founder (if applicable), (2) key events that preceded and followed the backer's contribution to the focal venture, and (3) interactions with founder(s) and other backers. I also conducted general interviews with crowdfunding platform employees, video producers specializing in crowdfunding, and journalists to gain additional conceptual clarity around crowdfunding campaign processes (Rogers, Toubiana, & DeCelles, 2016).

Archival data. Archival sources constituted the second data source. I conducted textual analyses of updates to Kickstarter campaigns (approximately 10 updates per venture), general comments on Kickstarter pages (ranging from 0 to 1,827 with an average of 363), comments to specific updates (553 total), and comments posted to online media articles (ranging from 0 to 138 per venture). I assessed a variety of archival sources including Kickstarter pages (one per venture), company websites (hosted by five ventures), personal blogs (utilized by three founders), company blogs (used by two ventures), media articles relating to each campaign (approximately six per venture), and founders' personal and professional social media accounts provided on Facebook, Instagram, Twitter, and LinkedIn. I also collected quantitative data from

Kicktraq, a third-party website that collects daily metrics on crowdfunding campaigns such as number of funders, amount raised, and number of comments. When available, I also collected and analyzed transcripts from *in situ* interviews (34 total) and podcasts (7 total) that occurred between the founders and external interviewers during and after the respective campaigns (e.g., Anthony et al. 2016). To broaden my understanding of the resource acquisition process in this domain, I immersed myself deeply in the crowdfunding phenomenon by watching campaigns unfold in real-time and consulting relevant books, blogs, videos, and popular press articles (e.g., Toubiana & Zietsma, 2016).

Mitigating informant biases. Consistent with both theory building and theory elaboration approaches, I employed the following measures to minimize retrospective informant bias concerns. First, I asked open-ended questions—both nondirective and directive—of knowledgeable informants about recently concluded campaigns to limit recall bias and enhance accuracy (Koriat, Goldsmith, & Pansky, 2000). Second, I ensured anonymity to each informant to encourage candid and open conversations. Third, I triangulated the data from qualitative anecdotes with retrospective quantitative data for each venture (e.g., media mentions, comments, and updates) to gain a more accurate and complete understanding of how the process of events unfolded during each campaign (Leonard-Barton, 1990). In sum, the interview techniques I employed, including nondirective questioning and event tracking, provided convergent information between the qualitative and archival data sources used in my analyses (Brown & Eisenhardt, 1997).

3.4.4. Data Analysis

To analyze the rich fine-grained data, I synthesized the interview and archival information into extensive case studies ranging from 35 to 60 single-spaced pages in length for each venture.

These cases contained full quotations, data tables, and timelines to richly capture triangulated event sequences and underlying actions, decision processes, and motives for each venture (Jick, 1979). I then assessed each case through the lens of the research question. To analyze how early-stage ventures acquire resources from distributed backers, I adhered to standard procedures for case-based analytical induction (Yin, 2009). I apportioned the data using open coding; identified patterns and pertinent construct dimensions; and mapped the emergent insights to the outcome of interest (i.e., resource acquisition). I then sought theoretical validation for the observed relationships, linking my insights to develop a broad conceptual framework. This process is described in greater detail below.

I first focused my analysis on the ventures' narrative components previously addressed by organizational theorists in resource acquisition studies. I coded the data across four stocks of resources communicated in the ventures' baseline narrative projections: (1) prior experiences, (2) personal motivations, (3) opportunity descriptions, and (4) prototype depictions (e.g., Lounsbury & Glynn, 2001; Navis & Glynn, 2011). I then addressed the longitudinal aspects of founder-to-backer and backer-to-founder interactions, coding the actions and exchanges that transpired between the founders and backers during the ventures' crowdfunding campaigns. Alongside a research assistant, each of us individually hand-coded each campaign update and discussed any discrepancies to arrive at a consensus coding for each update based on the following content categories: to *involve*, *share*, *appreciate*, *reciprocate*, *describe*, or *request*. Given the multipurpose nature of some updates, categories were not mutually exclusive.

In accordance with an inductive approach, I then conducted within-case analyses to identify emergent relationships and patterns through the lens of the research question. I visually mapped actions taken by the ventures and interactions between founders and backers during each

campaign to identify process patterns (Langley, 1999). These provided an intermediary step between raw data and more abstract conceptualizations by simultaneously representing numerous dimensions to show precedence, parallel processes, and the passage of time (see Figures 3.3 and 3.4 for examples from the successful and unsuccessful board games). Through this process, I identified eight themes that clustered into three distinct higher-order mechanisms (Eisenhardt, Graebner, & Sonenshein, 2016; Miles & Huberman, 1994).

Figure 3.3: Game/S Visual Map

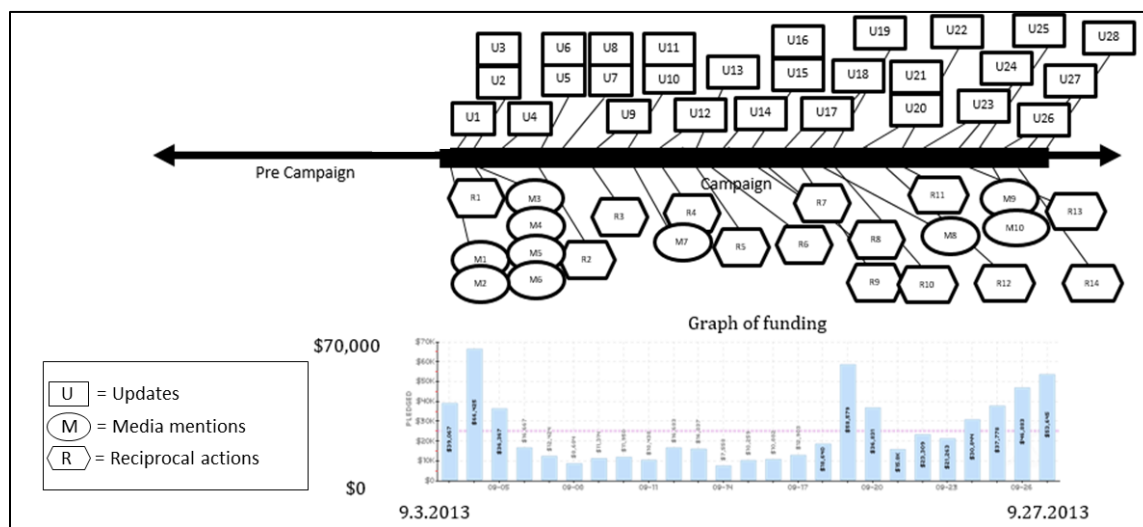
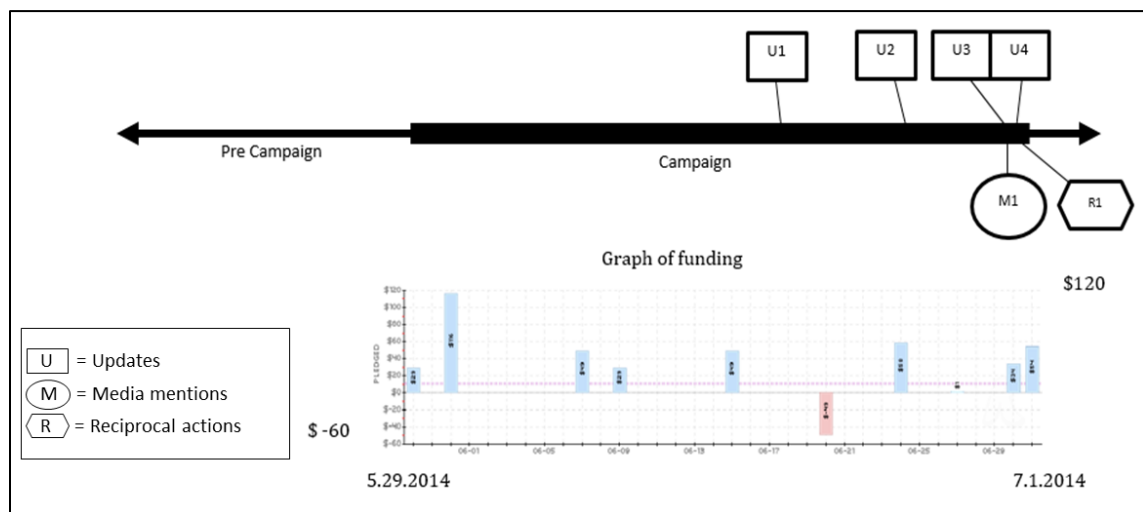


Figure 3.4: Game/U Visual Map

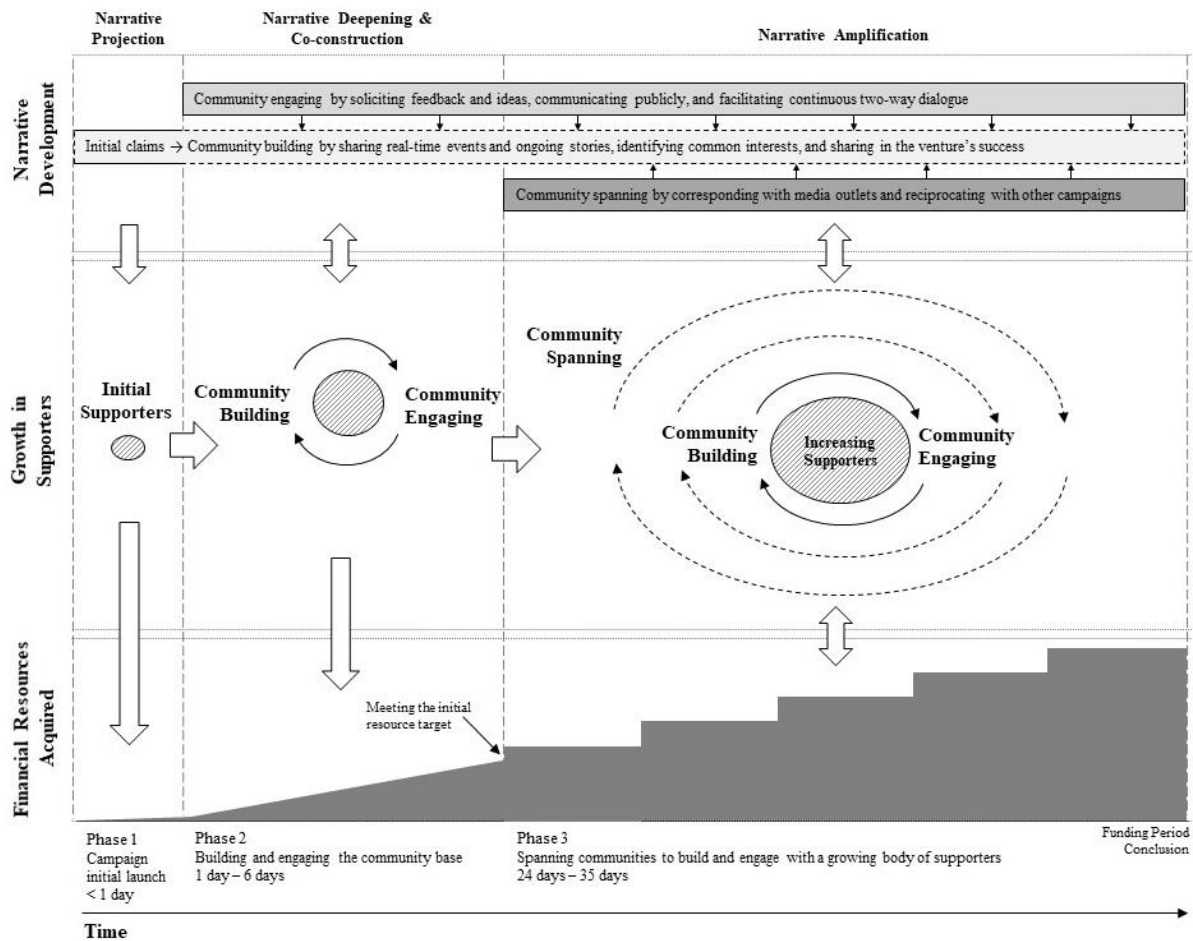


Consistent with qualitative comparative methods, I used pattern matching based on the data to make inferences on possible causal relationships (Eisenhardt & Graebner, 2007). Specifically, I compared similarities and differences in the ventures' actions and interactions to identify distinct themes and mechanisms associated with the outcome of resource acquisition. Similar to prior research (e.g., Rindova, Petkova, & Kotha, 2007), I discerned that certain actions contributed to a particular outcome when similar actions co-occurred with similar outcomes and different actions co-occurred with dissimilar outcomes.

Once causal relationships emerged from pattern matching, I conducted cross-case analyses to compare the themes and mechanisms that emerged in one case to the other cases in the sample with regards to frequency, consistency, and temporal sequencing. I grouped the ventures based on the dichotomous variable of funding success to look for the emergence of similar and dissimilar patterns across successful and unsuccessful ventures (Eisenhardt, 1989; Miles & Huberman, 1994). I also grouped the ventures by product category to assess whether discernable differences existed across categories. Presented with emerging patterns, I formulated possible theoretical linkages and examined the theoretical relationships across and within ventures in adherence with replication logic (Eisenhardt & Graebner, 2007). This intermediary process model is depicted in Figure 3.5.

Finally, I built upon these analyses to develop a theoretical explanation of how early-stage ventures acquire resources from distributed resource providers. During this stage, I sought theoretical validation for the observed relationships and brought emergent insights together in the emergent process framework as discussed below.

Figure 3.5: Intermediary Process Model of Successful Venture Resource Acquisition



3.5. The Dynamics of Community-Based Resource Acquisition

Consistent with prior research, all the ventures in the sample—both successful and unsuccessful—employed *narrative claims* to convey “who we are,” “what we do,” and “why we do it” (Chen et al., 2009; Navis & Glynn, 2011). These initial narrative claims represent a venture’s *articulation of extant stocks of resources to gain legitimacy in the eyes of potential resource providers, which in turn assists in garnering resources for the proposed venture*. From my analyses, a key distinction emerged between *narrative claims* and *community-based mechanisms* that serve to deepen, co-construct, and amplify emergent narratives. Although

unsuccessful ventures appeared to expect the inherent quality of their products to deliver backers and financial resources via their initial projections, successful ventures utilized actions to *build community* alongside these claims. These ventures soon *engaged their emergent backer communities* to co-construct content that was integrated into ongoing community building efforts. These ventures then leveraged the legitimacy garnered within backer communities to *span into broader existing communities* via intermediaries to generate greater visibility with prospective backers who could then make sense of a venture's initial claims, its founder-generated content, and its integrated co-constructed content. Figure 3.6 depicts the inducted process model of community-based resource acquisition, while Figure 3.7 depicts a complementary process model for the unsuccessful ventures. I then discuss the mechanisms accounted for in the process model below.

Figure 3.6: Community-Based Resource Acquisition Process Model

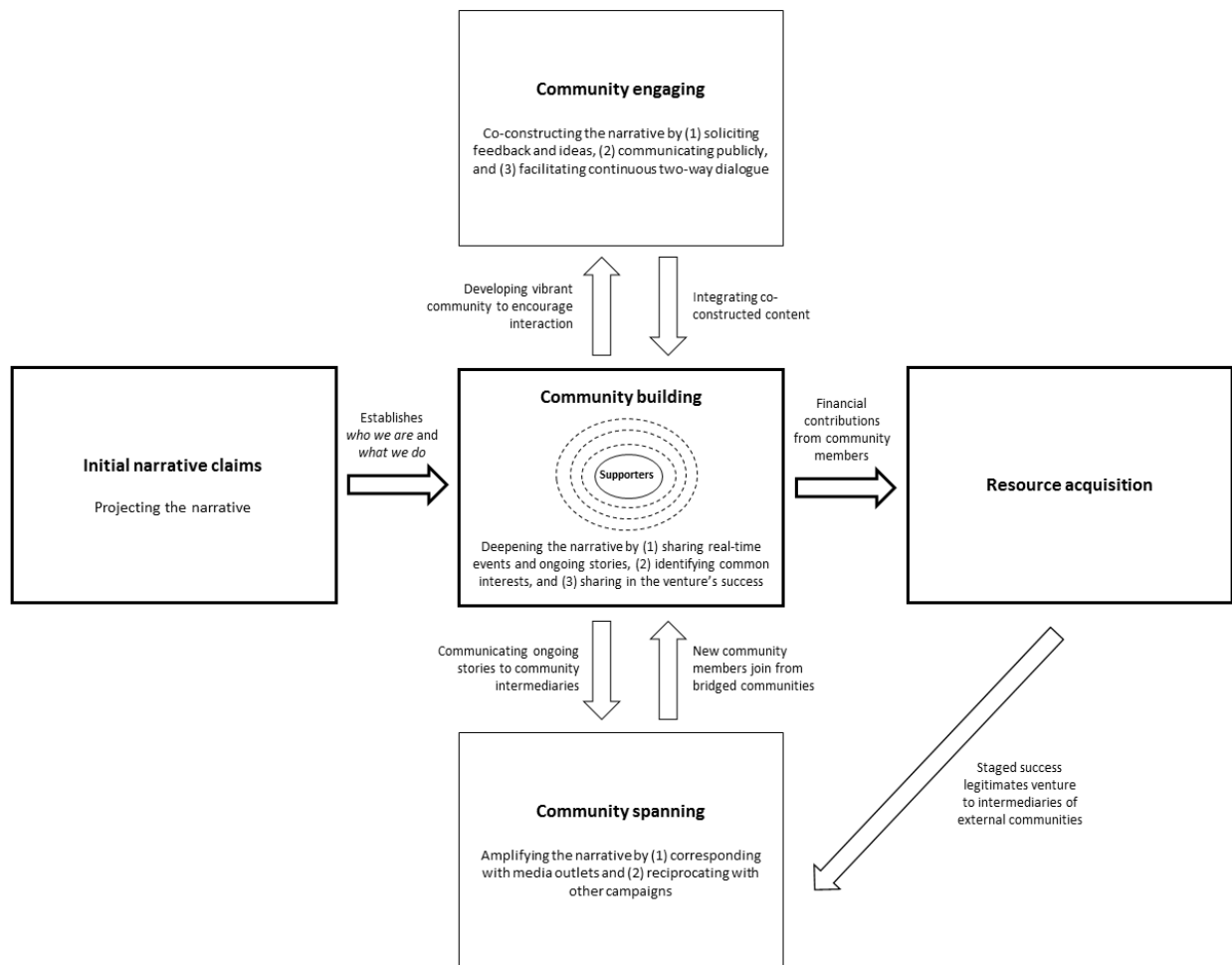
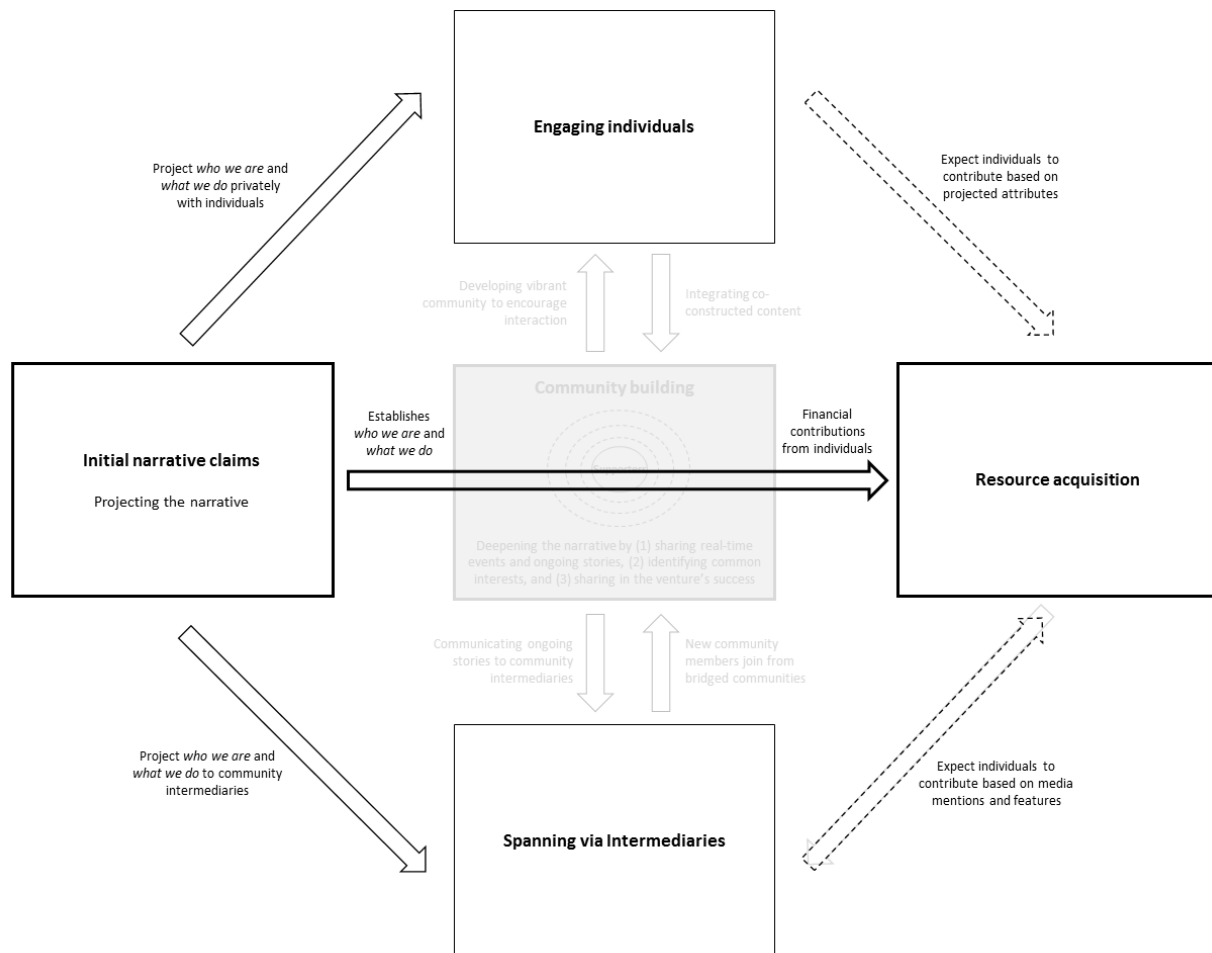


Figure 3.7: Process Model of Unsuccessful Resource Acquisition Efforts



3.5.1. Narrative Claims: Projecting Who, What, and Why

Extant cultural entrepreneurship research indicates the effectiveness of concise and purposeful narratives—comprehensible venture identities formed by utilizing firm-specific and industry-level institutional capital—in establishing legitimacy to appeal to external resource providers (Aldrich & Fiol, 1994; Garud et al., 2014b; Lounsbury & Glynn, 2001). As Table 3.3 indicates, all ventures in the sample incorporated components identified in prior research into their narrative claims, including: (1) “what we do,” or explanations of the opportunity, depictions of the prototype, and descriptions of the unmet market need being solved (Baron & Ensley, 2006, Navis & Glynn, 2010); (2) “who we are,” or descriptions of prior experiences to establish

credibility and authority within a domain (Zott & Huy, 2007); and (3) “why we do it,” or articulations of personal motivations for pursuing a venture (Chen et al., 2009). These components served as extant resources upon which entrepreneurs derived their initial claims to communicate clear identities, articulate proposed means of exploitation, and ground unfamiliar elements in the familiar (Garud et al., 2014b; Lounsbury & Glynn, 2001; Martens et al., 2007). Interestingly, as Table 3.3 indicates, although prior research has emphasized the importance of narrative claims for new venture resource acquisition, I found only nominal differences between the content put forth in initial narrative claims used by both successful and unsuccessful ventures. In other words, initial narrative claims appeared to account for little or no difference in resources acquired among the entrepreneurial ventures analyzed in this study.

Table 3.3: Narrative Claims

Venture	What we do (from Kickstarter)	Who we are (from Kickstarter)	Why we do it (from Kickstarter)	Request (from Kickstarter)
Game/S	"[Game/S] is a board game you play with your favorite 3-8 year old. It sneakily teaches programming fundamentals." (<i>Home page</i>)	"I'm a software guy who's been programming since I was 7 years old." (<i>Home page</i>)	"I'm a father of four year old twins. Teaching them to program a computer is the single greatest superpower I can give them. I made [Game/S] so that my kids could learn programming basics without needing a computer." (<i>Home page</i>)	"That's why I'm here on Kickstarter. If there are a thousand of us, we can do this. I don't think I'm alone in believing that programming literacy is going to be key to our children's future." (<i>Home page</i>)
Game/U	"[Game/U] is a board game for the entire family, ages 10 and up. The game only takes some basic reading, addition and subtraction. While you're having fun playing a game, you're also teaching your kids all about the importance of credit scores" (<i>Home page</i>)	"I achieved an 800 credit score at only 30 years of age I share that only to give myself some creditability. I want you and your children to reach a good credit score as well, and that is why I created this game!" (<i>Home page</i>)	"I strongly believed if there was an exciting way to learn about credit scores early in life, then we wouldn't need so many credit repair companies, and people would have more money in their bank accounts by paying less interest on purchases like cars, T.V.'s, mortgages, credit cards, student loans, business loans, boat loans, auto insurance, etc." (<i>Home page</i>)	"For whatever reason school on any level doesn't want to teach credit scores. Well how about finally you can take a fun product home that will get you and your kids ready for the credit world! Well what do you say? Are you ready to change the credit score world together!" (<i>Home page</i>)
Gadget/S	"[Gadget/S] is the first-ever clip with a rotating hook so that it can hold your stuff anywhere, any time. At first, it looks like a snazzy carabiner, but wait... there's also an arm that unfolds and rotates into a hook that can hang anywhere and can rest on any surface" (<i>Home page</i>)	"I love lots of things. I love Crossfit, hiking, swimming in the lake, running, skiing, pilates, playing poker, eating delicious food and wine-tasting. Most of all, though, I love coming up with ideas that will make life easier and more convenient for busy, active people." (<i>Founder bio</i>)	"I came up with the general idea for [Gadget/S] a few years ago, in 2011. That was the year I challenged myself to summit Mt. Rainier...I wished there was some easy way to hang the backpack on a tree - I tried Macgyvering together a way to hang up my backpack to a tree, but it wasn't worth the effort. I kept trudging on, with my muddy, wet backpack bouncing on my body." (<i>Home page</i>)	"I am ready for [Gadget/S] to change how I go out, whether it is to the many mountains in Washington or to a restaurant with my kids or to a store downtown. I know I am not the only one who could use this help. With 1000 pledges, we can make this happen!" (<i>Home page</i>)
Gadget/U	"[Gadget/U] features a patented gearing design that allows it to transform into different shapes and access spaces inaccessible to other power tools." (<i>Home page</i>)	"I'm an inventor with a serious passion for gadgets. I've been working on [Gadget/U] since 2003 and I'm so excited that it's gotten this far." (<i>Founder bio</i>)	"I came up with the idea in 2003 after trying to replace a stereo speaker in the door of my car. I was studying electronics and robotics at the time and I thought why not develop a new kind of power tool? I wanted to design something that was compact, lightweight, and something that brought a whole new level of versatility to the table." (<i>Video</i>)	"By being one of the first Kickstarter backers, you'll be getting your [Gadget/U] long before they hit shelves. Help us make power tool history and order yours today! Your card will only be charged if we meet our goal." (<i>Home page</i>)
Lens/S	"The highest quality lenses to empower mobile picture takers everywhere to capture incredible images with their phones." (<i>Home page</i>)	"As active picture takers we understand that with the right lenses, we can have creative freedom of what's most important — capturing life's most inspiring moments with the quality they deserve." (<i>Founder bio</i>)	"We started [Lens/S] because we believe the future of photography is in our pockets. We love taking pictures and over the years we have found that the camera we rely on the most, is our phones. So we set out on a mission to make the camera in our pockets, the best that it can be." (<i>Founder bio</i>)	"We're thrilled with the product and we think you will be too. If you are a mobile picture taker with a passion for capturing beautiful images, please help us make [Lens/S] a reality. Together, we can put the future of mobile photography in our pockets." (<i>Home page</i>)
Lens/U	"If you like taking pictures on your smartphone then you will be excited to hear about our new super wide lens. [Lens/U] will let you capture images at a super wide angle!" (<i>Home page</i>)	"Using our knowledge and experience from previously manufacturing lens under [a different brand], we were able to come up with an amazing super wide lens with super high quality lens and coating." (<i>Home page</i>)	"We believe that the smartphone photography has become a widely accepted form of photography. Our goal is to provide you with premium quality lenses for your smartphone." (<i>Video</i>)	"Thank you for watching our video. And thank you for supporting our project. Please help us by funding this project so that we can bring this lens to you." (<i>Video</i>)
Printer/S	"We've gone to extraordinary lengths to design a complete 3D printing experience. The [Printer/S] is engineered to produce high resolution parts with the touch of a button" (<i>Home page</i>)	"I've been involved in the field of personal fabrication for five years now and I've seen what an amazing impact these tools can have, but I've also realized these tools are just a fraction of what's possible" (<i>Video</i>)	"Our reason for starting this project is simple: there are no low-cost 3D printers that meet the quality standards of the professional designer." (<i>Home page</i>)	"We've been hard at work for over a year, and with your help, we're ready to take [Printer/S] into full-fledged production. By supporting this effort, you'll be the first to get your hands on an amazing 3D printer AND help usher in a new era of 3D printing." (<i>Home page</i>)
Printer/U	"If you are looking for something original and you are interested in 3D printing, [Printer/U] is what you have been looking for!" (<i>Home page</i>)	"[We are] a team of passionate designers and engineers that love 3D printing...We bring our dedication to developing open source 3D printing technologies having over 2 years of experience on the battlefield." (<i>Founder bio</i>)	"[Printer/U] is our take on how a 3D printer should perform, work, and look. I believe that art, engineering, and design needs to be introduced in the 3D printing revolution." (<i>Video</i>)	"We ask for your support to go global. If you can back us, you can be the first to own a 3D printer that performs and looks fantastic." (<i>Video</i>)

To further illustrate and elaborate, Lens/S and Lens/U expressed several similarities in their initial claims. Lens/S's campaign discussed the founder's prior experience as the CEO of a high-definition action camera company and described the team's collective expertise in developing high-quality cinematic lenses and commercial products: *"All great lenses start with the glass. We've been developing high-end cinematic lenses for over 25 years. We've taken that same optical design process and applied it to the mobile platform"* (Lens/S, Campaign video).

The founders also articulated their motivation to pursue Lens/S:

We started [Lens/S] because we believe the future of photography is in our pockets. We love taking pictures and over the years we have found that the camera we rely on the most, is our phones. What we love about our phone is [sic] that they are available, connected, and accessible. But despite their convenience we miss the creativity of what traditional lenses can provide. So we set out on a mission to make the camera in our pockets, the best that it can be (Campaign home page)

The founding team's professional and personal experiences further enabled them to recognize the unmet market need as they articulated, *"We were tired of sacrificing quality for convenience, so we made lenses that put photographic finesse in your pocket"* (Lens/S, Campaign home page).

To implement this vision, Lens/S assembled a team of designers and spent over \$50,000 to develop the prototype that was prominently displayed in its campaign video.

Similarly, Lens/U's founder emphasized prior experiences that preceded the campaign, *"We've been in the iPhone camera accessory industry since the iPhone4 and have offered many iPhone camera related products under [a different brand name]"* (Lens/U, Campaign video). Lens/U's founder also articulated his motivation for pursuing the current venture, *"We wanted to introduce a new lens that's capable of taking pictures that weren't possible before with a smartphone"* (Lens/U, Campaign video). Seeing an opportunity to integrate high-end glass into mobile lenses, Lens/U spent over \$60,000 to develop a prototype that *"optimized multi-element designs using the same recipe in designing professional cinema glass for HD film"* (Lens/U,

Campaign home page). This suggests the content of both ventures' initial narrative claims were similar in many respects.

Consistent with prior literature, initial narrative claims played a role in projecting future trajectories based on resources and capabilities amassed to date (Garud et al., 2014b; Lousbury & Glynn, 2001). By projecting present identities and proposed future states of being, such claims were designed to reduce uncertainty among potential resource providers and catalyze external interest in the venture's product offering. Since the successful and unsuccessful ventures did not differ significantly, narrative claims alone failed to explain key differences in the outcome of resources garnered by the ventures in the sample. We therefore explored subsequent interactions and events to examine how and why some ventures attracted financial capital from resource providers while others garnered little financial support.

3.5.2. Community Building: Deepening the Narrative

My analyses suggest the successful ventures in the sample actively worked to *build a community* by (1) communicating real-time events and ongoing narratives, (2) identifying common interests, and (3) sharing in the venture's accomplishments. As Table 3.4 indicates, the successful ventures used campaign updates to *involve* the backers; *share* developments, anecdotes, and ideas; *appreciate* backer contributions; and *reciprocate* with other campaigns (further described in the section on community spanning). In contrast, the unsuccessful ventures conversed privately and infrequently to *describe* their products and *request* financial support. These differences highlighted how successful ventures treated backers as active members in their ongoing campaign journeys, while unsuccessful ventures attempted to appeal to prospective backers by reiterating static claims detailing a product's capabilities. In this way, the successful ventures developed an emergent community of supporters as described below.

Table 3.4: Community Building

Venture	Updates*	Update Content**	Example of update content (from Kickstarter)	Representative quotes (from interviews)
Game/S	Launch (8) Middle (16) <u>Close (4)</u> Total (28)	Involve (50%) Share (86%) Appreciate (39%) Reciprocate (61%) Describe (29%) Request (18%) Private (7%)	"As you may remember from our previous update, I've been working on a set of rules to make [Game/S] great to play for grownups and older kids...Tonight we played [this version] again with some friends. And it was crazy fun! The game was a tossup until the very end who was going to win. Here's a quick snapshot of us chasing each other around the game board." (<i>Update 10</i>)	"I decided I'd have very frequent updates. It's not my nature to spam people almost daily, but I did. Personally, I hate frequent updates. I don't like it at all. I don't want to read them. It seemed that I was in the minority. So I did what I thought would work rather than what I personally wanted." (<i>Founder</i>)
Game/U	Launch (0) Middle (1) <u>Close (3)</u> Total (4)	Private (100%)	N/A	"I really made the mistake that I was thinking, okay once I put this nice project on Kickstarter it's going to be successful because it's a great project. And that's a wrong way to look at it. You get into it what you put out there" (<i>Founder</i>)
Gadget/S	Launch (1) Middle (11) <u>Close (4)</u> Total (16)	Involve (50%) Share (90%) Appreciate (80%) Reciprocate (50%) Describe (50%) Request (50%)	"We got feedback from some of our backers that they want to see more use case pictures. What a great idea! Today, we have some pictures from Suzi (of Team [Gadget/S]) using the [Gadget/S] on her recent Las Vegas trip and one from my recent ride in a tow truck (while my over-heated vehicle was being taken to the shop). The [Gadget/S] can be used any where!" (<i>Update 12</i>)	"There was this one guy...who spent an hour making this review video and I think that was really helpful because I put it on my Kickstarter page and the fact that some guy took all this time to endorse a product without any kind of payment or anything rang true to a lot of people." (<i>Founder</i>)
Gadget/U	Launch (0) Middle (2) <u>Close (1)</u> Total (3)	Describe (100%)	"I wanted to take this opportunity to personally thank you for supporting my Kickstarter Project! Thanks to your early donations, [the campaign] is nearly 20% funded, and we're just getting started! Your donations are helping to bring a very exciting new product to the table. Stay Tuned for more updates, as we push to get this product off the ground" (<i>Update 1</i>)	"I put most of my energy into the video which was a big mistake. I didn't do enough research into like behind the scenes stuff." (<i>Founder</i>)
Lens/S	Launch (4) Middle (4) <u>Close (2)</u> Total (10)	Involve (50%) Share (88%) Appreciate (75%) Reciprocate (81%) Request (31%)	"We love the Instagram community. It's depth and quality has really inspired us while creating [the project]. Well beyond the jaw dropping pictures, what we have really enjoyed is getting to know the amazing people behind the lens. So during the campaign we want to share local Instagrammers who have helped [Lens/S] with their work, feedback, and support" (<i>Update 2</i>)	"You're telling a story. You sold your belief in what you believe in and then you have to bring people along with the story both good and bad, ups and downs...You're constantly telling a story. When you tell a story both good news and bad news, some information based, some inspiration based but you're storytelling. Building a brand today, storytelling, you're just starting with the crowdfunding as part of it." (<i>Co-founder</i>)
Lens/U	Launch (2) Middle (2) <u>Close (0)</u> Total (4)	Share (33%) Appreciate (67%) Private (33%)	"The image below show a picture taken with and without all the lenses offered from this project. All images are shot from the same position." (<i>Update 1</i>) Here is another picture shot with the [lens]. What better place to test the [lens] than the world cup arena! (<i>Update 2</i>)	"[T]he update was to sort of let us [show how] our prototype gets better. We've improved on our prototype, we've managed to grab more devices for testing; like we'll try to test on certain applications, certain camera apps, you know a certain way of using it." (<i>Co-founder</i>)
Printer/S	Launch (5) Middle (8) <u>Close (5)</u> Total (18)	Involve (22%) Share (83%) Appreciate (39%) Describe (28%)	"To start off a relatively calm week thanks to Maker Faire being behind us, we thought we'd share a few awesome photos. For those of you Game of Thrones fans, the 6.5 inch White Walker bust (credit to [Tester]) should remind you that winter is indeed coming. At least we can feel it [here]!" (<i>Update 8</i>)	"We continuously updated our backers with more exciting content throughout the campaign, including new videos and posts about what the printer can do...Afterwards, we created [an outlet] on our own site, where backers can discuss the product and build a community." (<i>CMO</i>)
Printer/U	Launch (1) Middle (2) <u>Close (0)</u> Total (3)	Share (67%) Appreciate (33%) Describe (67%) Request (67%)	"Small objects printing. We are testing and tweaking [the printer] to print small objects with quality. You can see in the gallery. Next up: a whole series of printing even smaller objects. Next update will be on Video and we will show the whole process and pro prints using [the printer]." (<i>Update 2</i>)	"There are many outrageous Kickstarter projects that work and raise a whole lot of money because people want to believe that the people behind them will be able to do it so it's all about the story I guess. And that's I think probably what I would focus on on my next campaign to build the whole story behind the project and then actually launch it and show it to the public and then try to raise money to continue that story I guess" (<i>Co-founder</i>)

***Updates:** (1) Launch = occurred during first five days of campaign; (2) Middle = occurred during period between campaign launch and close; (3) Close = occurred during the final five days of campaign.

****Update content:** Percent of updates containing each type of content as coded by the authors (individual updates may contain more than one type).

Communicating real-time events and ongoing stories. The successful ventures publicly shared events and ideas as, or soon after, they occurred; thereby crafting an ongoing story about their respective ventures. Rather than reiterating product descriptions, sales pitches, and requests for funding that were projected in initial claims of “who we *intend* to be,” the successful ventures communicated real-time original content to illustrate “who we are *now*” at each step of the campaign’s unfolding journey. These updates synthesized both founder-generated content, including depictions of novel product uses and highlights from live events; and community-generated content, including use cases and prototype reviews (community-generated content is further described in the community engaging section). By continually developing and expanding their stories, the successful ventures seemed to consistently remind backers of a venture’s vision and the founders’ dedication to bring a product into existence. Lens/S’s co-founder described how Lens/S told its unfolding story: *“If you want to build a totally open company there is no more open you can be, than allowing the world to watch as you create your product”* (Lens/S co-founder, Blog). Lens/S’s co-founder then described how Lens/S used continuous updates to communicate its unfolding story:

We created an update every day for the first 5 days and then slowly began to space them out over the campaign. We wanted to make sure that with each update we provided a mixture of news, project updates, inspiring content, and other projects we liked...The more honest you make this, including what you struggled with, the more interesting the content will be (Lens/S co-founder, Blog)

He further articulated how backers internalize and follow nascent ventures’ ongoing journeys to build an emotional connection with a venture over time:

Startups are the romantic fables of our time. They are filled with hope and despair, good and evil, hero and villain, success and failure. Insiders are fascinated with how they are created, how they work, and how to make them last. Outsiders hang onto their every peak and valley, creating their own stories for how they might succeed or fail... Tap into emotion and purpose as much as you can. It’s the narrative that people want to connect with. Your stories may suck at first and that’s ok. It takes a lot of practice to get good at telling stories. If you are just competing on a check list of features it is a very long road to winning hearts. And even longer road to winning the market (Lens/S co-founder, Blog)

Sharing real-time events and ideas allowed the successful ventures to continually craft and elaborate their unfolding stories. Game/S exemplified this by developing and depicting a novel use of its product during its campaign. Initially, Game/S's founder described Game/S as, *"a ridiculously fun way for kids to learn the fundamentals of programming"* (Game/S, Campaign video). As the campaign progressed, the founder developed a *"grownup"* set of rules to *"make [Game/S] fun for ages 8+"* and recounted having his friends over for the first test of the new rules: *"We had a hoot tonight, but who knows – it could have just been my wife's homemade cheesecake. We're having more friends/playtesters over tomorrow night so we'll see if we're on the right track"* (Game/S, Update 9). The next day, Game/S's founder continued this story, posting images from playing the game and proving a personal play-by-play of what transpired:

For the curious, Jordan was a few moves from winning when I zapped him in to last place. Then he quietly built a monster program, ran up from behind while we were all messing around near the finish line, and sprinted directly in the wrong direction, nearly snatching defeat from the jaws of victory. I retaliated with a 17-card program of my own which blasted Dawne out of my way and rocketed me up to the win, but had an off-by-one error and came up a square short. Leslie snuck up behind me, ready to laser me back to the start, but Jordan rebounded off a wall and dashed in for the win (Game/S, Update 10)

The successful ventures also shared real-time events via videos and pictures from live events such as product fairs and expositions. Printer/S's co-founder even described timing the launch of Printer/S's campaign to coincide with New York's Maker Faire, *"We wanted to go to Maker Faire in New York at the same time so we had kind of a date [for the launch]"* (Printer/S founder, in situ interview). Attending Maker Faire also provided Printer/S with live content to showcase its product's capabilities. In Printer/S's fourth update, Printer/S shared a series of four photos from Maker Faire showing its 3D printer in use. A co-founder also provided video footage of people using products made with Printer/S's 3D printer, *"Over here we have someone testing one of the beautiful butterfly hairclips that we've made"* (Printer/S, Update 5), and

watching the 3D printer in action, *“it's making the top of the Eiffel Tower. You can really start to see some of those great details. It should take a few more hours, but it's looking good”*

(Printer/S, Update 5). Printer/S continued to broadcast from live events such as London's 3D Print Show, further enhancing its transparency with potential backers who could watch videos of the actual prototype in use rather than studio-edited footage and computer-generated images of the product's capabilities.

In contrast, the unsuccessful ventures reiterated their initial claims to demonstrate a product's functionalities in hope that prospective backers would recognize their product's inherent quality. Rather than telling ongoing stories that captured the emotional journeys of the ventures and their founders for prospective backers to follow in real-time, the unsuccessful ventures used updates to inconsistently express appreciation to their existing backers and request further financial support from prospective backers. For example, Lens/U provided three updates in the first week of its campaign, but then provided only one update to list lens-compatible smartphones for the remainder of its campaign. Even in the initial three updates, Lens/U continued to describe the lens's features rather than communicate ongoing ideas and events that expanded on its initial descriptions of “what we do.” Having invested over \$60,000 into prototyping the lens, Lens/U's founder expressed his belief in the product and personal desire for it, *“The product itself it was something that we wanted really. We like selfishly wanted...I genuinely thought that people would be a lot more interested in this particular product”* (Lens/U founder). He continued to express describe the product's capabilities during the campaign:

Besides using the [Lens/U] for capturing dynamic and super wide images, it is also excellent for things like group shots. Especially in confined area where you're limited to move back to get everyone in! With the [Lens/U] you can conveniently get everyone in the picture and even the view behind (Lens/U, Update 2)

Similarly, Gadget/U provided two updates during its campaign to express appreciation and request additional financial support, but these were released late in the campaign's lifecycle.

Identifying common interests. The successful ventures provided ample opportunities for prospective backers to identify common interests with both the venture and its founders. Areas on which backers resonated with the early-stage ventures included a shared vision, geographic location, and shared experiences with founders. These commonalities were strengthened through ongoing communications in which the founders deepened their portrayals of themselves and their ventures.

Game/S's founder described the importance of establishing a common interest with backers around the board-game's objective of teaching computer programming to children:

This was very much a product that was suited for people passionate about computers and with kids passionate about computers. This segment of people is connected, likely to use Kickstarter, and likely to use social media. If I had an equally compelling product, but targeted people who sew, the target segment would be less likely to use social media (Game/S founder)

Several backers resonated with Game/S's objective based on the value they placed on teaching their children to program, as described by one backer:

I'm so excited. We are making schooling decisions for our kids, aged 4 1/2 and 21 months, and decided to homeschool so that our kids could learn real world, marketable skills like programming. This is a fabulous idea. My son just watched the video and said "we should buy that." So we did (Game/S, Backer comment)

Some Game/S backers even contributed to the campaign in anticipation of teaching their future children to program, said one backer, *"I don't even have kids yet but I became a backer for the day I do!"*; said another, *"I'm excited about this game and I don't even have kids. I'm a software tester and I love that this game teaches testing and debugging along with programming"* (Game/S, Backer comments). These backers shared Game/S's enthusiasm for

programming and recognized the importance of teaching children to program even if they did not yet have children of their own.

Common interests resulted from backers' professional and hobbyist pursuits. A former Microsoft executive who backed Printer/S described the increasingly abstract nature of his job and his resulting interest in 3D printing to "make something concrete," stating:

Gosh this must have been about like five or ten years ago. I went to my first Maker Faire and I had no idea what the heck was going on. I was like what is this thing, and who are these people, and what are they doing? So, I kind of got involved in the hobby and started Maker from that (Printer/S backer)

This common interest in the Maker movement, and 3D printing specifically, influenced his decision to contribute financial capital to Printer/S's campaign to attain the completed product.

Backers also connected with founders based on shared geographic locations. Some backers were excited to enable projects "right in [their] backyard," as articulated by another Game/S backer:

I was sitting in [U.S city] and here was this other guy in [same U.S. city] and so there was sort of a local community element to feeling like I was supporting someone in my own backyard by doing this

Experiencing a common bond with founders located in the same town or city allowed co-located backers to feel closer to a venture and even volunteer to assist beyond financial contributions:

I'm local to you. If you hand-ship international pledges (or any others), I'm happy to help in your "shipping room" aka garage or living room. I've done this for other Kickstarter campaigns, and because I didn't have to, it was fun, and I was glad to make new friends (Game/S, Backer comment)

The unsuccessful ventures differed from the successful ones in this regard. Rather than deepening portrayals of the ventures and/or the founder(s) to further identity common interests with potential backers, they appeared to expect prospective backers to recognize a product's underlying quality based on descriptive projections to a general audience. These ventures relied

on projections of a product's quality and capabilities to incentivize prospective backers to contribute, much like a traditional advertisement. For example, Gadget/U used its campaign video to project a refined and professional narrative that described the functionality of its final product. Gadget/U's founder further expressed the importance of succinctly marketing the product's quality and capabilities:

Tell your story, but focus on the product and just kind of tell the story in the background or really, you know, concisely so the entire video is basically you rolling about the benefits, the user benefits of the product so to speak (Gadget/U founder)

Game/U's founder also focused on articulating the quality of its board-game, expecting potential resource providers to interpret the product's value as self-evident:

I really made the mistake that I was thinking, okay once I put this nice project on Kickstarter it's going to be successful because it's a great project. And that's a wrong way to look at it. You get into it what you put out there (Game/U founder)

Given the expectation amongst the unsuccessful ventures that prospective backers within a general audience would recognize their products' inherent value and experience an objective need for them, these ventures failed to identify common interests relating to a product's domain, geographic location, and shared experiences.

Sharing in the venture's accomplishments. The successful ventures also shared in the venture's accomplishments with backers. They appeared to make backers feel as if they played an active role in mutually achieving the campaign's goal and enacting the venture's longer-term vision. In this way, backers supported the campaigns over and above a financial contribution. Many followed a campaign's progress and expressed personal excitement as it approached, reached, and surpassed its funding goal.

Game/S's founder described how backers viewed the mutual attainment of Game/S's campaign goal, *"They want to be part of a success. People get involved with Kickstarter because*

they get a vicarious experience as part of the company. Everyone wants to be a part of something” (Game/S founder). A Gadget/S backer validated this sentiment when describing the positive feeling he experienced as an early backer, *“I like to feel like I’m part of something new, in essence, that I can participate in essentially the birth of a new venture or a new little organization and that I can be part of that”* (Gadget/S backer).

A Lens/S backer described the personal excitement generated from contributing to a campaign during its early stages, *“I like to get in with folks in their beginning and try to help them with their vision”* (Lens/S backer). A Gadget/S backer also described his role in helping an early venture realize success, *“You invest to help this company to move forward. You know you’re investing in the first production. You’re not investing in the company”* (Gadget/S backer). Another Gadget/S backer described the excitement of getting involved with an early-stage venture from the ground-up, *“I’m not the one who really gives a [hoot] about going in and helping companies that have already grown. It’s to further grow. I like messing around with absolutely nothing into something,”* he continued, *“I’m going to Kickstarter actually less for the product and more for supporting the team”* (Gadget/S backer).

The emphasis on supporting a venture and its founder(s) in their efforts to realize a goal led many backers with limited financial resources to contribute amounts below the threshold necessary to receive the completed product. For example, a Gadget/S backer described the importance of contributing small financial amounts to show support for an early-stage venture:

And so, sure it’s cool to get cool stuff. It’s nice to get stuff early, but to me it’s not that. To me it’s helping a group of entrepreneurs get Kickstarted. What’s 10 bucks to us, 10, 20 bucks? Even when I’m broke, I swipe the credit card and I give 10 bucks. If I can go out and drink five beers tonight right, what’s my 10 bucks? (Gadget/S backer)

A Game/S backer also described the ongoing excitement of watching a venture not only hit its campaign goal, but realize longer-term milestones in bringing its vision to life:

It's almost for me like a way to sign up to keep hearing about what they're doing. I'm maybe weird in this but I like getting emails where people are like, "Yeah we just finished building this thing that we've been trying to build for two years." Those are really exciting to me to see people accomplishing what they've kind of been out to accomplish. And so, I like following along with what they're doing (Game/S backer)

The importance of these backers in bringing a venture to life was further captured by Gadget/S's Chief of Community who stressed the unique emotional connection felt by backers:

We have quite a community of people who are literal backers and supporters. I call them our influencer network. They feel very connected with the fact that they helped bring this to life. There's a bit of pride there. Some of the emails are very intense. They have a lot of emotion behind the product (Gadget/S, Chief of Community)

In contrast, the unsuccessful ventures appeared to view prospective backers as consumers and/or investors rather than individuals with a desire to take part in their ventures' emergent journeys. Thus, instead of sharing in their success with backers, the unsuccessful ventures seemed to view backers as beneficiaries of their efforts to develop high-quality products. For example, Gadget/U's founder viewed prospective backers as a disparate "*consumer audience*" who would inherently recognize his product's value and act on objective needs for his patented "*new kind of power tool*" (Gadget/U founder). He emphasized "trying to convince an investor that hey I actually do have a company" instead of an emergent project to which backers could partake in its ongoing development and success. In this vein, Gadget/U's founder believed prospective backers would respond to signals of prior success rather than opportunities to mutually share in the venture's success, stating "*I had won an award about a couple of months before Kickstarter started and with the award there was a lot of press with it and so I was hoping that would be enough to kind of drive traffic*" (Gadget/U founder).

Impact of community building on resource acquisition. These emergent findings reflect a process through which the successful ventures concurrently expanded on their initial narrative claims through three community building actions: (1) communicating real-time events

and ongoing stories, (2) identifying common interests, and (3) sharing in the venture's success. Communicating real-time events and ongoing stories allowed the successful ventures to generate meaningful content for backers to follow, thereby enhancing backers' emotional connections with a venture and updating their cognitive understanding of a venture and its product offering. In turn, prospective backers could assess a venture's collective communications at a given point in time to more deeply understand its narrative and increase their likelihood of contributing financially. These ongoing communications also enabled the successful ventures to identify common interests with prospective backers. In this way, prospective backers were provided with opportunities to resonate with both a venture and its founder(s) beyond a general need for its product offering. This appeared to influence financial contributions amongst prospective backers. The successful ventures also shared in their accomplishments with backers. This seemed to influence financial contributions amongst prospective backers who wanted to partake in achieving a campaign's goal, bringing an early-stage idea into existence, and mutually enacting a venture's long-term vision. Taken together, these community building actions allowed the successful ventures to continually "bring the inside [of a venture] out" as discussed conceptually by Garud and colleagues (2014a: 1183).

In contrast to the process of community building, the unsuccessful ventures used sparse updates to describe and demonstrate a product's functionality, expected the product's inherent quality to market itself, and viewed prospective backers as third-party investors rather than members of an emergent community. In this way, the unsuccessful ventures failed to deepen their narratives over time, but instead inconsistently reiterated their initial claims in an effort to resonate with general audience members who they hoped would experience an objective need for

their products. Through these unidirectional and projective efforts, the unsuccessful ventures failed to build a backer community of resource providers.

In the subsequent sections, I expand on the discussion of community building to address how community engaging and community spanning temporally and recursively impact the community building efforts employed by the successful ventures over the course of their resource acquisition efforts.

3.5.3. Community Engaging: Co-Constructing the Narrative

My analyses suggest the successful ventures in the sample actively worked to *engage their emergent communities* by (1) soliciting feedback and ideas, (2) communicating publicly, and (3) facilitating continuous two-way dialogue. As Table 3.5 indicates, the analyses reveal the successful ventures solicited feedback and publicly acknowledged ideas provided by backers. In this way, a founder's observable responses enabled other backers to partake in ongoing and inclusive conversations; allowing initial suggestions to become impromptu and serendipitous open-sourced product features involving multiple backers. In contrast, the unsuccessful ventures communicated with prospective backers via private and dyadic mediums which did not facilitate expansive interaction with other backers. These interactions with emergent backer communities allowed the successful ventures to co-construct their ongoing narratives by dynamically incorporating backers' feedback and ideas into subsequent community building efforts in the form of real-time events. Sharing this co-constructed content further substantiated commonly held interests with backers to encourage other prospective backers to join the venture's emergent journey. The process of community engaging and its temporal impact on community building is further described below.

Table 3.5: Community Engaging

Venture	Description of solicited feedback*	Description of unsolicited ideas**	Example of solicited feedback (from updates)	Example of backer responses (from comments)	Representative quotes (from interviews)
Game/S	++++ Released the gameplay rules to enable suggestions for clarifications and product fixes; Invited local families to test the game; Requested input on gameplay rules and design	++++ Comments from supporters resulted in instruction manual translated into 28 languages; Feedback led to “grownup” rules to encourage gameplay with older users	“A few people have made the excellent suggestion of having different colored jewels to enable more forms of creative play. And to look prettier...I caught the artist right before he wrapped on the final art for the tiles. Tah dah!...Now as long as we’ve got some jewels to choose from, why not reconsider the green gem on the box front? Comment on this update with the color you like best!” (<i>Update 12</i>) “@[Backer]: Thanks for the note about R/G colorblind. I wonder if I can do something with brightness or saturation to differentiate?” (<i>Response to backers in Update 12</i>)	“Great idea going multicolor on the jewels. As a red-green colorblind though (the most common form of colorblindness) I’m a little concerned about two of the colors being red and green...If you keep that color combination, I would just caution you to make sure the physical/printed colors on the tiles are as depicted and don’t end up even harder to distinguish for CB people. Thanks!” “+1 for purple – easier for me to tell apart, being colorblind. Notably, for my peculiar version of colorblindness, the purple is the most easily distinguished from the green” (<i>Responses to Update 12</i>)	“At the \$300,000 level we unlock the bug card...One of the backers said, “Boy this really needs a bug. Like you need a bug card.” And so I’ve got the most awesome artwork now for a bug. And it’s a little tricky because it turns out that in the paper world as soon as you add one card, you suddenly have to print a whole nother sheet of cards so it all gets more complex and the bug puts us over. But that’s alright. If we get to \$300,000 we’ll put a bug in the game.” (<i>Founder, podcast</i>)
Game/U	+ Believed quality of board game would market itself	+ Did not receive or incorporate feedback during campaign; Provided private updates for backers only	N/A	N/A	“I put all my efforts towards making this game very fun and very eye catching and appealing and it looks really good, and you can tell that obviously I spent some money. I just didn’t throw this thing together.” (<i>Founder</i>)
Gadget/S	++++ Hosted a vote for supporters to select special edition color; Attended a gear expo to meet backers in person and receive input on how supporters intended to use the product	+++ Backer suggested titanium version of the product which founder incorporated into subsequent iteration of the product	“Because as backers, you have already been so critical to the start of the [Gadget/S], we would love for YOU to select our new color option from these three: 1. Tangerine, 2. Black Pearl Chrome, 3. Olive” (<i>Update 3</i>) “[W]e caused a mini riot! Several of you messaged us asking, “What about Kickstarter Green?” When we thought about it, given the critical role Kickstarter is playing in the [Gadget/S]’s life, we wanted to give this color a chance. So we added “Kickstarter Green” to our poll!” (<i>Update 4</i>)	“I voted on the FB poll but I really like the Olive green color. Tangerine would be a close 2nd” “I’d prefer the stretch goal’s reward to be a Kickstarter exclusive [Gadget/S], as in offering the [Gadget/S] in a “Kickstarter green.” “Kickstarter green would be pretty fly IMO, but I vote for the olive” (<i>Responses to Update 3</i>)	“Every comment I ever got I immediately responded to. Every message I got I replied to within hours I would say. And I think that creates goodwill and one of the nicer things about running this campaign were all the positive comments I got. Not just about the product, but about how the campaign was run. So I think people really respond well to that and appreciate it.” (<i>Founder</i>)
Gadget/U	++ Emphasized video quality; Worked with consultant to manage social media accounts during campaign	++ Responded to feedback on improving product features; Licensed product post-campaign without incorporating suggestions	“First off... a HUUUGGGGE thank you to all of you for believing in this project from the beginning and sticking with it until the end...As always – feel free to message me with any comments or suggestions – I would love to hear from you guys as you are the most important people to this company.” (<i>Update 3</i>)	“I hope you figure something out, because I needed this product a few weeks ago while I was working in a tight space. Ended up using glue instead of screws. :-(“ (<i>Response to Update 3</i>)	“There was quite a bit of emailing and dialogue with the actual Kickstarter backers which was free. It was another way to learn from them and get more feedback, but yeah they had a lot of questions so there was quite a bit of emailings with them too.” (<i>Founder</i>)

Lens/S	++++ Shared prototype with many users and testers; Travelled to demonstrate the product's capabilities; Surveyed backers on product lens and case specifications for future products	++++ Feedback altered the number of mounts included in each presale as founders realized backers desired a mount for each lens	"Having over 1,600 backers is an amazing customer base to learn from. We want to include you in the process so if you have 5 minutes to take a quick survey, we would really appreciate it. This information will help us better understand which type of lens to focus on next." <i>(Update 3)</i> "@[Backer] - thanks for the comments. The data helps us better understand the intention of our customers. We love to hear how you think and imagine in taking pictures" <i>(Response to backer in Update 3)</i> "Thank you to everyone who took the lens survey. We had 432 responses which is amazing! We are so grateful for your energy to help us make [Lens/S] the best it can be. A link to the full set of data is below" <i>(Update 4)</i>	"I started to respond to your lens survey, but then I stopped, because most likely the two lenses will be enough for me. And if not, it won't be for the focal length. The two things I'd most want in a third lens are more light and more focus separation." "Took the survey. I voted for Tele but I wasn't sure. Is it the one that would be able to create the most shallow depth of field or is that not really possible at this small scale?" "I'm anxious to receive both lenses next June. But, as far as a 'case', does it have to be leather? Just thinking about those of us who prefer avoiding it. Otherwise, I am psyched." "Thank you for the updates. Please, no leather. Keep it vegan." <i>(Responses to Updates 3 and 4)</i>	"At the end of the day, crowdfunding is all about the backers. They are the backbone of this movement and the reason you can turn a dream into a reality. Interacting with them on a minute by minute basis is an exhilarating experience that you may never experience again as a company...One of our team members spent their entire days responding to comments because our goal was to be very responsive." <i>(Founder, company blog)</i>
Lens/U	+ Believed others would recognize the product's quality without additional efforts	++ Did not receive or incorporate feedback during campaign; Described compatible devices as requested	Provide updated list of compatible smartphone devices <i>(Updates 2 and 4)</i>	No backer responses	"We didn't have enough devices to pass the lens on because every smartphone has a different camera and what not. So we were rushing to places, to friends, to relatives, to shops, like running around places to try to ask them to lend us a device so that we could test out the product and what not." <i>(Founder)</i>
Printer/S	+++ Emphasized public forums and events to demonstrate the product's capabilities and allow external actors to test the product; Asked backers to share intended uses	+++ Incorporated comments on product warranty; Received suggestions regarding resin colors and visualization that were incorporated at a later date	"We want to know about your plans for the [Printer/S] as well as your concerns and ideas. We want to see your jewelry, architectural models, engineering prototypes, and pieces of art. But we also want to learn about what can and actually does go wrong so that together we can come up with the best solution." <i>(Update 14)</i>	"Appreciate the frequent communication and the steady progress on the printer. Sets a great example for other Kickstarter projects. Looking forward with anticipation to the arrival of my [Printer/S]!" "For me, this is an enabling technology to share with others. Personally, I'm going to make BEAM robot frames and limbs, and wargame miniatures. My girlfriend will probably print/paint HO or perhaps N scale models ...which will be mounted as tiny cities on our ceilings." <i>(Responses to Update 14)</i>	"Your goals kind of keep moving if things go well and Kickstarter, you know, you get a lot of interest in your product, you want it to be even better so you're going to need to plan on a lot of time and resources after that production prototype stage." <i>(Co-founder, in situ interview)</i>
Printer/U	+ Believed Kickstarter would generate excitement and funding; Minimal interaction during campaign	+ Did not receive or incorporate feedback during the campaign	"3D Scanner prototype rig for [Printer/U] is ready. If you wish to have a 3D scanner integration please let us know we will add a special backing for this kind of requests." <i>(Update 3)</i>	"Thank you for update. 3D scanner looks very interesting. I wish you will reach your USD 50,000 goal. I will let my friends know (potential clients) you looking for funds! Good luck!" <i>(Response to Update 3)</i>	"We thought that maybe putting a printer up on Kickstarter would get people excited and we'd be able to build a whole business but running the campaign itself is the hardest part. The 30 days that you actually have to manage, do everything, and inform people that basically probably lacked in the project." <i>(Founder)</i>

Soliciting feedback and ideas. The successful ventures in the sample engaged with their backer communities by actively soliciting feedback through in-person and online interactions. Backers responded by offering advice and/or voted on product developments via virtual polls and queries. This allowed the successful ventures to better understand the intended uses for the product, gather information on its market segment, make product refinements, and validate product decisions.

For example, Gadget/S engaged its emergent backer community in-person at a local gear exposition to gather feedback on how the backers intended to use the product. The array of uses included “*scuba diving, horse-back riding, boating, hanging up baseball gear, and camel-back riding*” (Gadget/S, Update 8). Through such engagement, Gadget/S attained valuable feedback on how to adapt its product to fit future users’ needs. Gadget/S also directly solicited feedback through an online survey asking backers to select a special edition color for the product from three possible options (see Table 3.5). This solicitation encouraged 49 public responses from the venture’s backer community, many of whom suggested a fourth color: “Kickstarter green.” Based on this feedback, Gadget/S added “Kickstarter green” as an official option which handily won over the other three choices. A Gadget/S backer described the excitement of voting on the new color:

And I remember at some stage voting on a color for a [Gadget/S] and that was quite cool just in the sense that she was saying these are the three we’ve already got. We’re going to create a fourth color but all the backers can vote on which color they want and then potentially choose one of those, that new color to include in their bundle. And so that sort of reengaged me with the campaign because you know I could foreseeably get a different color. That would be intriguing. That would be relevant to me (Gadget/S backer)

Game/S also solicited both general and specific feedback throughout its campaign. In an early campaign update, Game/S’s founder sought to further understand the broad expectations

and desires of Game/S's backers, stating *"Let me know what would excite you. We're in this together and I want to create the best experience possible for you and your kids!"* (Game/S, Update 2). This request generated excitement and creative responses amongst the backers as exemplified by the following comment:

I'd love to see a game addendum that captures "if - then - else" possibilities for older kids. Possibly something like the stone or ice walls that require rolling a die or flipping a coin and going left around it or right around it depending on the result? Or use the flowers and have a die with blue/yellow/purple that determines how the path should be (Game/S, Backer comment)

Game/S's founder also solicited specific feedback. For example, he gauged backers' interest in a *"choose-your-own-adventure book"* which prompted several enthusiastic responses from backers, ultimately resulting in the book's development. One backer responded, *"love the idea of a [Game/S] choose-your-own-adventure book!!!! a very good idea. My son and I love to read every night and that would just be wonderful."* Another stated *"I am a HUGE fan of choose-your-adventure books. Sounds great. I also would love to help out with the community page"* (Game/S, Backer comments).

Lens/S also sought feedback to determine which smartphones to emphasize when developing smartphone-compatible lenses. After posting a survey on its Kickstarter campaign page, Lens/S shared the results with its emergent community:

In the middle of the Kickstarter page we included a link to a phone compatibility survey. This survey has helped us understand which phones to focus on next. And because we have received so many inquiries into new phones, we wanted to publish the data so everyone can see which phones have the highest level of interest. Thank you for taking a few minutes to tell us what phone you have. This data is important as we decide which phones to focus on (Lens/S, Update 8)

By engaging backers, Lens/S gained valuable knowledge and verified its strategic decisions as described by a co-founder, *"Sometimes you're getting new ideas from talking to customers and a lot of time you're just verifying that the things that you're already planning on doing are correct"* (Lens/S co-founder).

In contrast, the unsuccessful ventures failed to solicit feedback in-person or online. For example, Lens/U developed its product in a vacuum, based on prior experience in the camera-lens industry, and presented the product as a finished project rather than an ongoing process where he could invite backers to provide feedback on various components. Lens/U's founder emphasized high-quality materials rather than interactions with backers to gain their insights and feedback on their personal needs and desires:

Well you know the actual product that we actually did make, it's made of super high-quality stuff but I can say that not everyone is looking for super high-grade glass with Canon coating and things like that. I mean I think it's good to be sensitive about what people want really and not just what you want because in the end if they don't buy it then it just doesn't work no matter how well you do, like how nice it looks, what excellent material you use. These things don't matter if they don't buy into it (Lens/U founder)

Printer/U received some interest from backers, but instead of responding to these backers with opportunities to engage in the product's development, the founders focused on closed-door research, tooling, and impending production. While these efforts are important in delivering on the product's presales, they occurred in isolation as the founders did not solicit feedback or attempt to engage backers in an ongoing process to better understand their needs. This was described by Printer/U's co-founder:

When we posted it and started getting a lot of contacts of people and some people backing the project, some with a substantial amount of money. We basically rushed and focused mainly on getting the machine and production, tooling, and everything to be able to make these machines for people that were backing them.

Responding to comments publicly. The successful ventures' founders publicly responded to backers over the course of their ventures' campaigns. This enabled other backers to observe interactions in real-time and in retrospect, allowing dyadic founder-backer exchanges to expand by encompassing many backers in a conversation about a topic of common interest. Through this expansive process, initial suggestions grew to catalyze collaborative ideas amongst many backers.

For example, Lens/S received several comments from backers regarding various product features and add-ons, including lens mounts, phone cases, lens types, lens colors, and lens carrying cases. Lens/S backers initially requested *“additional details on how [the lens] attaches”* and asked *“how does the use of a metal mounting plate affect phone signal quality?”* (Lens/S, Backer comments). Lens/S publicly responded to these comments and offered to create a video demonstrating the lens mounting process when the refined parts arrived the following week. As backers publicly discussed functional mounting concerns with the founding team, another backer raised the issue of the number of mounts:

Just changed my pledge from just one to two [Lens/S] lenses! I second the option of having a hard case and a lens cap being made available. I don't worry to [sic] much about the mounting plate being not sturdy or solid enough. However having a spare mounting plate sure would come in handy (Lens/S, backer comment)

Several backers followed up by engaging in this conversation: *“Hi guys, I pledged for both lenses but there’s one mount included. Is it possible to add a second mount so both lenses can be used on two devices at the same time?”*; and *“Two lenses mounts in the \$99 pledge level is a logical, makes sense, and I also agree with the previous comment”* (Lens/S, Backer comments).

The Lens/S co-founders publicly acknowledged the community’s suggestion and incorporated it into the venture’s campaign offering:

Because of your feedback, we now realize that the product would be even better if there was one mount for every lens. Sharing these lenses between multiple phones should be as seamless as possible. Therefore the backer levels with two lenses will now have two mounts in the box (Lens/S, Update 7)

Similarly, several backers discussed the value of Lens/S creating lens-compatible phone cases for Apple and Android products to ensure the lens mounted on a smartphone’s case. The Lens/S founders responded to these comments by emphasizing their focus on delivering the best-possible lenses without drawing themselves too thin during the manufacturing phase by focusing on additional products:

The trade-off for every product decision you make affects the schedule. If you add one thing, no matter the size it puts everything else at risk. Instead we plan to continue working hard on making the product even better and when we are ready we will make these available to our backers
(Lens/S, Response to backer comment)

However, Lens/S harnessed this feedback to develop Lens/S-compatible smartphone cases which were successfully funded in a subsequent Kickstarter campaign. Similarly, Gadget/S received suggestions to create the product using titanium. Since Gadget/S's R&D budget did not allow for experimentation with titanium during the campaign, the founder openly communicated her appreciation for the idea and noted that the advice will be considered in subsequent product iterations. This willingness to listen to her supporters influenced product development after the campaign concluded. She successfully crowdfunded a second-generation titanium version of the product a year later.

Publicly responding to comments prompted other backers to extend backer-proposed ideas by contributing additional suggestions. The successful ventures carefully incorporated manageable feedback into their product offerings during their respective campaigns, and acknowledged the value of more R&D-intensive feedback for post-campaign exploration. This appeared to allow the successful ventures to generate further backer interest during their campaigns and better anticipate future allocation of resources based on community feedback.

In contrast, the unsuccessful ventures communicated privately and dyadically, which did not provide opportunities for initial questions or comments to expand into conversations with other backers on the Kickstarter platform. For example, Gadget/U's founder described interacting with the venture's backers dyadically via messages and emails, *"there was quite a bit of emailing and dialogue with the actual Kickstarter backers which was free. It was another way to learn from them and get more feedback, but yeah, they had a lot of questions so there was quite a bit of emailings with them too"* (Gadget/U founder). Despite receiving several questions

and feedback, the private and dyadic nature of these interactions did not facilitate expansive conversations that could result in collective product ideas. Similarly, Game/U utilized four private updates during its campaign. Since these were exclusively visible to existing backers—a total of 18 people—Game/U’s founder did not attempt to facilitate broader conversations about the venture’s development. Instead, he solely relied on his experiences related to the game’s content domain rather than conversations with others to develop the product.

Facilitating continuous two-way dialogue. The successful ventures in the sample also fostered continuous two-way dialogue by responding frequently to backers. This level of responsiveness appeared to make the successful ventures’ founders seem more approachable and relatable to the backers. Thus, the perceived distance between founders and backers was reduced as backers interacted with founders continuously and observed ongoing interactions between founders and other backers.

Gadget/S’s founder described her approach to facilitating ongoing dialogue with the venture’s community of backers, *“Every comment I ever got I immediately responded to. Every message I got I replied to within hours”* (Gadget/S founder). She said this continuous two-way dialogue fostered *“goodwill”* with Gadget/S’s emergent community:

Finally, given the millions of things that go into a crowdfunding campaign, we had to prioritize what we would do on a daily basis. One thing we found ourselves trying to never let slip – interacting with our customers (Gadget/S founder, in situ interview)

Gadget/S’s continuous engagement with the venture’s backer community was also positively received by several backers who felt closer to the campaign because of her continuous communication:

It was a great idea and she’s very fast answering questions on Kickstarter... She also will start a dialogue if you have a good idea or you have an idea that is possible to implement, and how that affects the timeline and the project getting complete. So, I think you know the way she’s communicating is one of the keys (Gadget/S backer)

Another backer attributed the frequent responses from Gadget/S's founder as a key to bringing the campaign to life:

I remember her being very responsive to anything that happened on the site. So, if someone asked a question she would answer very quickly, her or her team if she had one, I don't know. So being very responsive sort of brought the campaign to life. It made you feel like there was action on the other end (Gadget/S backer)

One of Game/S's backers also discussed the importance of the founder's ongoing and continuous responses to backers that *"brought that campaign to life in many respects just by keeping backers informed and engaged throughout the process"* (Game/S backer). Another backer even attributed the excitement generated by the continuous communications between the founder and the backers to her decision to increase the amount of her contribution:

I originally only backed for one game...But then later that day I went to three games...over the course of it I got more and more excited and upped and upped what I was giving...I ended up getting 10 games (Game/S backer)

In contrast, the unsuccessful ventures did little to facilitate continuous two-way dialogue with backers. Instead, many of the unsuccessful ventures' founders described feeling overrun with new contacts and had trouble responding to them in a timely manner. For example, Printer/U's co-founder said *"the three people running the campaign weren't able to support the whole of incoming messages" in addition to their efforts "to get a printer up and running"* (Printer/U co-founder). He went on to say:

When the campaign started we got overwhelmed with contacts. It was something that we couldn't possibly manage and that was probably one of the things that I remember doesn't work in Kickstarter campaign where you get a lot of contacts and you're not able to respond to them and try to basically support the customer (Printer/U co-founder)

Lens/U's founder also described the difficulty he experienced trying to respond to questions from the venture's backers:

Even though we didn't have a lot of backers we still had a lot of people asking questions about the lens...So what happened is that we tried to answer those questions by running around like

monkeys to try to figure out how the product actually worked in certain applications (Lens/U founder)

Instead of facilitating a continuous two-way dialogue, Lens/U used four projective updates to list compatible smartphones and demonstrate the capabilities of the lens through anonymous images. While these updates answered prospective backers' questions, Lens/U did not engage them in a continuous dialogue, but instead provided one-off descriptive answers.

Gadget/U's founder, in his efforts to respond to backers' ongoing questions and requests, went on to hire a third-party consultant, stating *"I actually hired another guy to help me with some of the marketing stuff just to take some of the weight off my shoulders"* (Gadget/U founder). This seemed to further reinforce the perception of distance between the venture and its backers as Gadget/U's founder did not directly interact with backers as the campaign progressed.

Impact of community engaging on community building. These emergent findings reflect a process wherein the successful ventures catalyzed involvement amongst existing backers who had contributed based on a venture's community building efforts to date using three community engaging actions: (1) soliciting feedback, (2) responding publicly, and (3) facilitating two-way dialogue. Occurring alongside ongoing community building actions, these actions to engage community also served as a generative resource by producing co-constructed content between founders and backers (now members of the venture's emergent community). This content then flowed back to the ventures' ongoing and dynamic community building efforts to influence the real-time sensemaking processes of prospective backers who internalized a venture as a product of three distinct sources of information: initial venture projections, ongoing founder-generated content, and integrated co-constructed content. I further discuss the process of generating co-constructed content via community engaging efforts and integrating this content into ongoing community building actions below.

Instead of describing the functionalities and uses for their products, the successful ventures solicited feedback from community members who tested their products. The successful ventures then featured the backers' stories and use cases in their ongoing stories, enveloping community members as actors in their real-time stories. Thus, the successful ventures showcased their products in action to go beyond descriptive portrayals of their product offerings. For example, backers played an integral role in generating content for Lens/S's campaign:

There is a ton of interesting content you can create during your campaign. [Lens/S] lenses are a bit easier because by using the product with Instagrammers we were able to create compelling content...that adds depth to your story. You can use this content in your updates and through social channels (Lens/S, founder blog)

Lens/S's co-founder described meeting with community members to lend out two \$15,000 lens prototypes to garner photographic content for use in subsequent community building efforts:

We were basically letting people have the lenses for like two days and then going, picking them up, handing them off to another person. So, it was like meeting random people in a parking lot somewhere to get the lenses back and sort of like hand them off to somebody else in a parking lot. It was hilarious how it was all happening. But yeah, we did get a lot of awesome content out of that...Somehow, we magically did not lose or break the initial prototypes (Lens/S co-founder)

These community members used the lens to capture their daily lives from outdoor adventures to new culinary pursuits. These images were then shared and credited to the backers in Lens/S's updates:

Additional photos has been the top request and we're excited to finally start publishing some. Test charts are coming later this week, but those are not nearly as interesting as what our friend [backer] was able to capture on Mt. Rainier this weekend with the [Lens/S] lenses. His shots begin to show the creativity of what you can capture. Rather than share compressed images on Kickstarter we wrote a post about [backer] and displayed some of his work for you to enjoy. If you like his work, follow him on Instagram (Lens/S, Update 5)

Each of the successful campaigns shared user-generated content to enhance their community building efforts. Gadget/S provided images from the product's use in updates, "Today, we'd like to share some pictures we have been receiving from our testers," showing an

image from a Tokyo restroom, “*The tester wrote, ‘[Lens/S] Saves My Camera Equip in Skanky Tokyo Subway Bathroom’*” (Lens/S, Update 9). Printer/S also shared how a tester within the community used the 3D printer in product design:

Once rendered virtually, [tester] had a big question: where to print in 3D? The [Printer/S], of course! Check out the whole process on [tester]’s blog. This real life to computer to real life example of 3D printing is just one example of millions of ways to put the [Printer/S] to work. What will you create with your [Printer/S]? (Printer/S, Update 16)

The interplay between community *building* and community *engaging* actions is further captured by public responses and continuous two-way dialogue within Game/S’s campaign as shown in Table 3.6 below. On the campaign’s second day, a backer suggested bilingual instructions to play the game with English and Spanish-speaking children at her local elementary school. Game/S’s founder enthusiastically responded, “*if you know someone who would be up for translating the manual, I would be happy to make that available!*” (Game/S, Founder response). Other backers observed this public exchange and engaged in the dialogue by offering to translate the instructions. Game/S’s founder then harnessed the community’s engagement to announce the translation of the manual into several languages. As the campaign progressed, he repeatedly recounted that backers had volunteered to translate the instructions into over 28 languages, including Afrikaans, Polish, and Romanian, in interviews and updates to generate interest with a broader swath of prospective backers from around the world. This example exemplifies the process by which engaging with existing backers can generate content that is then integrated into subsequent community building efforts. Prospective backers can then resonate with a founder’s communication of these events as a campaign unfolds. Yet the content, and the ensuing sensemaking processes amongst prospective backers, could not have been facilitated by the founder alone.

Table 3.6: Impact of Community Engaging on Community Building (Game/S Example)

Day of campaign	Actor	Community building and community engaging actions
2	Founder	Let me know what would excite you. We're in this together and I want to create the best experience possible for you and your kids! (<i>Update 2</i>) (Engaging)
	Backer1	One more idea: my spouse was hoping to have the instructions translated and printed in Spanish as well as English. We were going to give some copies to our local school, and having Spanish instructions would make it easier for some of the underprivileged kids in our area to play and learn too. Thanks! (<i>Comment to Update 2</i>) (Engaging)
	Founder	[Backer1], if you know someone who would be up for translating the manual, I would be happy to make that available! (<i>Founder response to Update 2</i>) (Engaging)
	Backer1	I'll have to ask around for Spanish translators. I don't have anybody I know specifically, but just think it would be great to have Spanish instructions. (<i>Comment to Update 2</i>) (Engaging)
	Backer2	My native language is spanish. I don't work as a translator, but i could commit into producing an excellent translation to spanish, i can find people with those skills that can help me out with that. (<i>Comment to Update 2</i>) (Engaging)
5	Backer3	I think the manual should be available in other languages then English. I have told Dan I want to help out to get the manual translated. (At least in PDF format) Who agrees? What language are you looking for? How can you help? (<i>General comment</i>) (Engaging)
	Backer4	If you need it translated into danish i can help (<i>General comment</i>) (Engaging)
	Founder	Thank you so much for offering to help translate [Game/S]! I'm going to work on getting something together so that I can collect feedback on the english language manual first. Once that's locked, I'll take you up on your help translating (<i>Founder response to general comment</i>) (Engaging)
6	Backer5	Should you need someone to translate it to Bahasa Indonesia, just let me know (<i>General comment</i>) (Engaging)
	Backer6	Has anyone volunteered to translate into Spanish? I would love to translate it to Spanish or proofread the Spanish instructions. I spent two years in Guatemala and regularly interact with Hispanic families. I believe they would love this game as well. (<i>General comment</i>) (Engaging)
	Founder	Some fantastic backers [Backer7, Backer6, Backer5], apologies if I missed anyone have offered to help translate the manual. [Game/S] lends itself particularly well to this because the only text is on the box and in the manual - the game itself has no words on it at all. The one part of the game that's not totally buttoned up is the manual, and I'd hate to have it translated only to have it improved later. I'm going to work on something that will allow you all to see the manual and provide feedback, then help contribute translations. What awesome backers this project has! (<i>Update 9</i>) (Building)
	Backer7	Let me know if you need help translating it into German. Cheers (<i>Comment to Update 9</i>) (Engaging)
	Founder	Thanks [Backer7]! I do, and when I get things set up, I will put it out in a backer update. (<i>Founder response to Update 9</i>) (Engaging)
7	Backer8	Are you considering to translate the rules to other languages? Thanks (<i>General comment</i>) (Engaging)
	Founder	Backers, look out! Both [sets of] rules are headed your way in a separate, backer-only update. I'll try to send that tonight before bed. :) You'll be able to comment to suggest fixes and clarifications to the rules. Then, once I finalize the English rules, you'll be able to help me translate. (<i>Update 10</i>) (Engaging)
8	Founder	Last week I asked for help editing the rules (backers-only link). You came through in spades - 10 or so pages of edits, comments, clarifications, and other goodness. Wow! I tried to reply to every comment and there were tons of good edits. You can use the link above to go back and see the new, cleaned-up rules. I'm going to collect comments for one more day before handing it over for translation (<i>Update 12</i>) (Engaging)
	Founder	I cannot believe what a phenomenal group of backers this project has. I've had 28 volunteers to translate the instructions, and the number keeps going up. Here's the list so far: Afrikaans, Bahasa Indonesia, Catalan, Danish, Dutch, English (Australia), English (UK), French, German, Greek, Hebrew, Polish, Portuguese, Romanian, Russian, Spanish (Latin America), Spanish (Spain). I'm very curious to see what the UK and Australian translators come up with. :) (<i>Update 12</i>) (Building)
	Founder	When (ok, if) [Game/S] hits \$200,000, we are going to get a [Game/S] community site. It's going to let us do at least the following...Collaborate on more translations, alternate rule sets, and so on (I've already heard from backers who are developing even more cool things you can do with the [Game/S] games) (<i>Update 12</i>) (Engaging)
13	Backer9	When can we start translating? I offered to translate everything into Dutch. (<i>General comment</i>) (Engaging)
	Founder	I've had a few questions about when the translations are going to start. I want to be 100% sure the directions are locked down before they do, so it will probably not be until the end of the kickstarter or close to it, in case we add any stretch goals that require changes to the rules. Don't worry - we'll have plenty of time to get them done during the manufacturing and shipping cycle. Huge thanks to the 55 people who are now signed up! (<i>Update 17</i>) (Engaging)
	Founder	@[Backer9]: Translations will start when the manual text is locked down - probably right after the kickstarter is over. Thanks so much for volunteering to help! (<i>General comment</i>) (Engaging)
21	Founder	40 or 50 folks volunteered to translate it into 25 different languages. I had one person who volunteered to translate it into UK English. I don't know what they're going to do (<i>Podcast</i>) (Building)
25	Backer9	Do you already know when we can start translating? (<i>General comment</i>) (Engaging)
	Founder	@[Backer9]: I still have some major changes to make to the manual... I can't wait either but it may be a little longer. :) (<i>Founder response to general comment</i>) (Engaging)
Post-campaign	Founder	I had 65 countries represented [as backers] and the backers actually volunteered to translate into 50 different languages including, there's a really thoughtful, there's a huge argument in the Danish translation which was hilarious for me to try and follow with Google translate. Somebody translated into, I can't remember the name of it because I had to look it up, but it's a language that I believe are spoken by Inuit people and so they could use it in schools that were teaching Inuit kids...You go to [Game/S's website] and there's links to everything. I think I even have someone doing a Yiddish translation (<i>Podcast</i>) (Building)

Each of the community engaging actions served to generate co-constructed content between founders and existing community members that was then integrated into subsequent community building efforts. By soliciting feedback from backers, backers offered ideas and suggestions that were then incorporated into real-time stories and events. Publicly responding to backers' suggestions catalyzed collaborative discussions that provided ongoing content for founders to integrate into their real-time narratives. Facilitating two-way dialogue also made founders seem easier to approach, thereby inciting even more backer-generated feedback and suggestions. My analyses of community engaging and the continuous flow of co-constructed content into ongoing community building efforts highlight how the successful ventures appear to “bring the outside [of a venture] in” as conceptually discussed by Garud and colleagues (2014a:1183). Yet I advance this conceptualization by suggesting continuous efforts to “bring the outside in” recursively influence efforts to “bring the inside out” by updating the sensegiving devices with content partially derived with an expanding support community.

In contrast, the unsuccessful ventures doubled down on their initial narrative claims. They projected their static claims in hope that prospective backers would resonate with a venture's effort to develop a high-quality product. As such, the unsuccessful ventures emphasized internal product development rather than ongoing interactions to generate feedback and validation, private and dyadic communications rather than public interactions that would facilitate a public forum for backers to communicate openly and collectively influence product development, and projective communications rather than ongoing two-way dialogue.

3.5.4. Community Spanning: Amplifying the Narrative

My analyses suggest that the successful ventures *spanned their communities* by (1) corresponding with media outlets and (2) reciprocating with other campaigns. As shown in Table

3.7, my analyses reveal the successful ventures actively bridged their emergent backer communities with existing communities and external audiences by way of established intermediaries (i.e., media outlets, bloggers, external venture founders) who curated content for broader communities and audiences. In this way, the successful ventures leveraged their community building efforts to date (and the observable resources acquired) as verifiable indicators of quality. External intermediaries seemed to interpret and consider these signals in their decisions to share a venture with their follower groups. In contrast, the unsuccessful ventures attempted to gain visibility with established intermediaries by projecting their initial claims of quality and merit. These actions were less effective in bridging communities than observable and verifiable proof points such as exceeding a predetermined campaign funding goal. In other words, by effectively building a community of supporters, the successful ventures gained legitimacy in the eyes of external intermediaries who then shared the ventures with their broader, existing follower groups whose members could choose to join the focal venture's emergent backer community.

Table 3.7: Community Spanning

Venture	# of Featured Campaigns	# of Campaign Contributions	Media Mentions	Example of featured campaign (from updates)	Quotes from media articles
Game/S	14	Pre-campaign (21) During campaign (16) <u>Post-campaign (41)</u> Total (78)	Pre-goal (1) <u>Post-goal (9)</u> Total (10)	"Today's spotlight is on a computer game for grownups, [Project A] - an homage to 8-bit games from the classic Nintendo Entertainment System (but available on more, ahem, current devices)...They finished their Kickstarter with over \$300,000 (you can see it here) but you can still pre-order it here. I did!." (<i>Update 5</i>)	"[Game/S's founder] has taken to Kickstarter to raise funding to produce a minimum run of [Game/S] — and has nearly doubled his \$25,000 funding target after just one day of the crowdfunding campaign so he's clearly onto something." (<i>TechCrunch</i>)
Game/U	0	Pre-campaign (3) During campaign (2) <u>Post-campaign (2)</u> Total (7)	Total (1)	Did not feature other campaigns	"What makes [Printer/U] different from other 3D printers? Almost the whole construction of Printer/U] is made of aluminum, which is light-weight and solid...The printer has a built-in activated charcoal filter and screen cables to purify air and absorb harmful gases while processing some of materials." (<i>3ders.org</i>)
Gadget/S	18	Pre-campaign (6) During campaign (25) <u>Post-campaign (8)</u> Total (39)	Pre-goal (0) <u>Post-goal (1)</u> Total (1)	"OK, over 4000 people already think this is awesome, but I have to talk about [Project B] here in case you haven't already heard about it. These jeans were designed for MOVEMENT and are especially great for athletic people with muscular legs. I got a pair for myself and a pair for my hubby." (<i>Update 10</i>)	"[Gadget/S's founder] managed not only to get her invention the \$20,000 in startup funding it needed to head to the manufacturer, she also met her Kickstarter goal in six days. The inventor of a device that she describes at the "Swiss Army knife of carabiners" is now on to a "stretch" goal of \$50,000, with 36 days left in the campaign" (<i>Local business journal</i>)
Gadget/U	0	Pre-campaign (2) During campaign (0) <u>Post-campaign (0)</u> Total (2)	Total (5)	Did not feature other campaigns	"Electric drills that can twist from a stick to a pistol configuration are already common, but the [Gadget/U] takes this further by allowing a wide range of angles as well as a head that can be angled independently. In all, the tool can be set into 168 positions." (<i>gizmag</i>)
Lens/S	4	Pre-campaign (6) During campaign (3) <u>Post-campaign (5)</u> Total (14)	Pre-goal (8) <u>Post-goal (9)</u> Total (17)	"Kickstarter is full of amazing projects, but [Project C] by [Founder C] is something we backed and think you should too. Also focused on making better products for mobile devices, [Founder C] has come up with a clever battery and charger combination...It's perfect for picture takers who are constantly running out of battery." (<i>Update 5</i>)	"Photo lens maker [Lens/S] nears \$500K on Kickstarter - ten times original goal." (<i>GeekWire</i>)
Lens/U	0	Total (0)	None	Did not feature other campaigns	N/A
Printer/S	0	Pre-campaign (2) During campaign (1) <u>Post-campaign (1)</u> Total (4)	Pre-goal (4) <u>Post-goal (6)</u> Total (10)	Did not feature other campaigns	"Today, they've received about \$660,000 and have over 400 backers. And the number keeps climbing. I spoke with [Printer/S's co-founder] about his sudden success, asking him how the Form 1 differentiates in the space." (<i>TechCrunch</i>)
Printer/U	0	Pre-campaign (1) During campaign (1) <u>Post-campaign (0)</u> Total (2)	None	Did not feature other campaigns	"[T]he two- to four-player game involves navigating a board filled with credit-related details with the help of a dice. Players start with a mid-level credit score of 620 and gain or lose points depending on where they land. The first player to reach the impressive credit score of 740 wins the game." (<i>U.S. News</i>)

Corresponding with media outlets. Every venture I examined, both successful and unsuccessful, contacted media outlets to gain visibility at the time of launch. This practice was met with mixed results since initial inquiries at a campaign's inception depended on gatekeepers who resonated with a venture's initial claims, as described by a U.S. News journalist who wrote about Game/U, *"I choose to write about topics based on my own interest and how interested I think readers will be"* (Interview data). However, as ventures built backer communities and eclipsed their funding goals, the successful ventures realized increased media attention in response to their staged success.

This is best illustrated by Gadget/S's campaign, whose founder described her attempt to span her community via a prominent regional publication, *"I reached out to [the editor] and she told me that they don't cover unsuccessful campaigns...when you're successful let me know. So I reached my goal in six days, so I reached back out to her and then she wrote the story"* (Gadget/S founder). To further illustrate, Game/S received 10 media mentions during its campaign, nine of which occurred after surpassing its funding goal. Prior to reaching its goal, Game/S received media attention from a regional technology publication that depicted the venture speculatively, "The goal is to raise \$25,000 and get 1,000 copies sold, which will allow him to get the initial print run of the game going." In contrast, after reaching its goal, numerous publications touted the quality of Game/S, including TechCrunch which described the game as follows, "[Game/S's founder] has nearly doubled his \$25,000 funding target after just one day of the crowdfunding campaign so he's clearly onto something" (TechCrunch).

Though Game/S's founder briefed a TechCrunch reporter prior to the campaign's launch, he stated *"They picked it up because [the campaign] had gone out and was successful at the end of the first day. The reporter who I briefed didn't end up writing about it. It was someone else"*

(Game/S founder). The article received 760 shares on Twitter (compared to 46 shares for the aforementioned pre-goal article), and he attributed the corresponding funding spike to the publication's expansive readership. Game/S raised \$39,067 on the campaign's launch day to surpass its funding goal of \$25,000, and another \$66,425 on the second day when the TechCrunch story was published.

As Game/S's campaign progressed to reach greater funding milestones, it continued to receive attention from larger publication with broader-reaching follower groups. For example, the major periodical in Game/S's home city wrote about the venture on the ninth day of its campaign. Game/S's founder described the visibility garnered from the article:

There have been incredible articles [about Game/S] from outlets like Techcrunch, AllThingsD, Geekwire, Fast Company, and Geek Dad. But you may notice one thing they have in common - they're for people who are probably already exposing their kids to programming. Today was the first time I've had a chance to tell the story to a non-geeky audience, when a piece ran online in [city's periodical]. And it's been amazing! Despite the post only being up for 15 hours (as of right now), it's sent as many people as some of the geeky articles that have been up for a week. And this is a local paper. And they're not geeks! (Game/S, Update 14)

Interestingly, the article claimed, “[The founder] first told me about the game last month, and nothing about its success surprises me,” yet the article was not published until the journalist had sufficient information to recognize the board-game's success, rather than describing its merits *a priori* based on initial claims.

Consistent with this pattern, Game/S also received a bump in funding after NPR published an article on Game/S midway through its campaign; said Game/S's founder, “*My brother was the White House correspondent for NPR. He introduced me to the team at All Tech Considered. NPR heard about it from Facebook, not from my brother. It was a press story that came through social media. It was organic*” (Game/S founder). Although Game/S's founder had

personal connections at NPR, he gained traction with the outlet two weeks into the campaign after reaching a critical mass of backers and funding support.

These spanning efforts via established media outlets with built-in followings of readers and listeners allowed the successful ventures to leverage the credibility gained from reaching their self-selected funding goals to garner legitimacy conferrals from external media outlets and thereby gain visibility with prospective backers. In turn, these potential backers could observe and interpret ongoing community building efforts to determine if they wanted to contribute to the respective ventures.

In contrast, the unsuccessful ventures also attempted to garner third-party media attention, yet they depended on carefully crafting and reiterating their initial claims to generate interest amongst intermediaries rather than building a groundswell of community support for intermediaries to recognize. They instead expected the intermediaries to deliver backers beginning at the campaign's inception. As such, these ventures did not attain legitimating proof points through staged success (and risk reduction), and intermediaries rarely highlighted them to their readers, listeners, and/or supporters.

For example, Gadget/U's founder described his efforts to perfect his venture's initial claims to project them in emails to journalists and bloggers:

I did a lot of work on the video and putting all that stuff together but I felt like afterwards we were playing catch up with the blog. It was so much work emailing all these media contacts trying to create the buzz to drive people to the Kickstarter page (Gadget/U founder)

Thus, Gadget/U did not allocate his time to building a community of active supporters, but instead described “*spending anywhere from three to four hours a day mostly doing emails, emailing blogs and writers and what not, trying to keep it alive so to speak*” (Gadget/U founder).

As the campaign progressed, Gadget/U described how he appeared more desperate in his emails

to media outlets and bloggers. Without proof points of staged success, Gadget/U's projective claims increasingly "*came across [like] we're desperate like, 'Hey, you know, write about us so people will check out our Kickstarter or whatever' "*" (Gadget/U founder).

Lens/U also experienced challenges when attempting to contact media outlets and bloggers to "*promote*" the venture. Lens/U's founder described how he had received media attention for his prior endeavor, but when he reached out to media outlets at the start of Lens/U's campaign he said, "*there wasn't much feedback*" (Lens/U founder). Lens/U did not receive any media mentions during its campaign.

Reciprocating with other campaigns. The successful ventures reciprocated with other campaigns via features and financial contributions. Three of the four successful ventures featured external campaigns in their updates. These features informed a venture's emergent backer community about external campaigns to which they may want to contribute. In response, the featured campaigns often provided reciprocal features. In this way, the campaigns bridged their emergent communities with outside communities through mutual features that exposed their respective ventures to a broader audience of potential backers. Examples of this practice are depicted in Table 3.7.

Many of the successful ventures featured campaigns they believed would resonate with their backers' interests rather than featuring only the most successful ventures. This was described by Gadget/S's founder who featured 18 external ventures during Gadget/S's campaign (10 of which were initiated by Gadget/S and eight of which were initiated by other firms first featuring Gadget/S):

I tried to only introduce my project to projects I had already backed. That I thought they would be interested in rather than just targeting the most successful campaigns. And you know

[Venture/A] they probably brought me 10 thousand dollars because by the time they mentioned me they had thousands of backers (Gadget/S founder)

Similarly, Game/S's founder, who featured 14 external ventures during Game/S's campaign, curated content that Game/S's backers would find interesting rather trying to guarantee mutual features:

I set an expectation from the beginning that I would highlight a new Kickstarter campaign each [update]. I liked doing it. It helped people figure out things that I liked and found interesting. Sometimes they would turn around and highlight me (Game/S founder)

Game/S's backers expressed their gratitude for gaining awareness of other campaigns, *"I have gotten in on several of the projects you've promoted. I am tickled to see you suggest stuff as I don't find the COOL things often. Thanks and we can't wait to get our game!"* (Game/S, Backer comment).

Each of the successful ventures also contributed to other campaigns before and during their respective Kickstarter campaigns. These contributions are publicly visible, and therefore seemed to embed the successful ventures in the broader Kickstarter ecosystem by fostering goodwill with the ventures to which they contributed. These financial contributions indicated a commitment to the funded venture and its product offering, often resulting in reciprocal financial contributions and features.

Game/S's founder contributed to *"a huge number of campaigns—round 50 now"* (Game/S founder). He watched how they performed during their campaigns and shared the excitement he experienced as a backer with his backer community: *"Ever wonder if Gandalf could take on the USS Enterprise? [Venture/X] is the game that answers that question, definitively... I backed a copy, received it, and highly recommend it"* (Game/S, Update 4). In response, Venture/X's founder backed Game/S's campaign and updated his backers, *"If you*

backed [Venture/X] for educational reasons you should check [Game/S] out - it's like the left brain counterpart to [Venture/X]'s right brain exercises."

In contrast, the unsuccessful ventures isolated their campaigns on the Kickstarter platform, attempting to enhance their campaigns' visibility through independent actions rather than positioning their campaigns within munificent communities by featuring and contributing to other campaigns. This was evidenced by the fact that none of the unsuccessful campaigns featured other campaigns in their updates to backers. Instead, Printer/U's co-founder described the venture's focus on unilateral actions to project quality and create visibility rather than reciprocating with other campaigns, stating the venture *"focused on being seen rather than trying to figure out how the campaign could succeed"* (Printer/U founder).

Impact of community spanning on community building. Community spanning served as a way for the successful ventures to leverage their emergent backer communities as a legitimating resource to bridge their communities with existing audiences by way of established intermediaries. Actions to span communities included: (1) corresponding with media outlets and (2) reciprocating with other campaigns. Each of these actions increased awareness for a venture amongst existing communities and audiences including readerships of publications and blogs, and backers of other crowdfunding campaigns. Interestingly, reaching a self-determined funding goal seemed to enhance the effectiveness of efforts to span into extant communities by serving as an objective quality signal (Hsu & Ziedonis, 2013) that indicated the attainment of an early-stage legitimacy threshold (Fisher et al., 2016). In this way, reaching funding goals and key milestones served as critical proof points for external intermediaries to interpret (Hallen & Eisenhardt, 2012). As such, the successful ventures leveraged their effective community building efforts to amplify their narratives with external communities. Members of these communities were then

made aware of the focal ventures to make sense of their ongoing community building efforts and determine if they desired to contribute financial resources. Simultaneously, the media outlets and crowdfunding campaigns that highlighted a focal venture also garnered readers and contributors from a venture's backer community.

As borne out by my data analyses, the unsuccessful ventures attempted to garner third-party media attention through their initial claims, yet they attempted to do so without building community to further validate their ventures. The unsuccessful ventures failed to craft ongoing narratives of “what we are now” but instead relied on static projections of “what we intend to be” (Garud et al., 2014a). By relying on these initial claims, the unsuccessful ventures did not establish legitimating proof points of staged success (and risk reduction) that the successful ventures garnered through continuous community building and resource acquisition. Thus, intermediaries did not highlight the ventures in curated content (i.e., articles, blogposts, updates) for their audiences of readers, listeners, and/or supporters; and the unsuccessful ventures failed to amplify their narratives with broader communities of prospective backers who could observe (and possibly resonate) with a venture's ongoing community building efforts.

3.6. Discussion

I began this study with the question of how early-stage ventures (such as Pebble) acquire resources from distributed resource providers via increasingly prevalent crowdfunding platforms (like Kickstarter). By mainly focusing on how ventures acquire resources using projective strategies to gain legitimacy in the eyes of professional investors (Chen et al., 2009; Elsbach & Kramer, 2003; Fisher et al., 2016; Garud et al., 2014b; Lounsbury & Glynn, 2001; Navis & Glynn, 2011), prior studies neglect the rich processes used by ventures at their earliest stages of conception (Martens et al., 2007; Zott & Huy, 2007) to acquire financial resources through

dynamic interactions with diverse stakeholders (Garud et al., 2014a; Glynn & Navis, 2013, McMullen & Dimov, 2013) who possess a vast array of motivations and objectives (Drover et al., 2017; Fisher et al., 2017). Exploring an emergent line of inquiry on the tension between developing legitimacy *and* projecting claims to garner legitimacy judgments, this chapter presents a theoretical framework to understand how early-stage ventures dynamically build, engage, and span supporter communities. Through this process of community-based resource acquisition, founders interact with prospective resource providers to co-construct a venture's narrative for subsequent supporters to interpret and base their funding decisions.

Through an inductive multiple-case study of eight early-stage ventures seeking resource via crowdfunding, I traced the dynamic interactions through their respective campaigns that transpired between 2012 and 2014. The ventures followed dissimilar paths; the four successful ventures dynamically interacting with backers to deepen, co-construct, and amplify their narratives and thereby attain financial resources; while the four unsuccessful ventures expected their projective actions to showcase a product's inherent quality for general audience members to recognize and contribute financially. By comparing the actions and interactions that occurred during the crowdfunding campaigns of these early-stage ventures, the theoretical framework proposes a grounded explanation for the process of resource acquisition amongst ventures at their earliest stages of conception. Taken together, my findings contribute at the nexus of the organizational theory and entrepreneurship literatures by expanding on recent conceptual frameworks that suggest, but do not empirically demonstrate, that resource acquisition constitutes an ongoing and dynamic process (Fisher et al., 2016; Garud et al., 2014b). I also provide novel insights to the emergent crowdfunding literature by empirically unpacking the

temporal dynamics of ongoing founder-to-backer interactions and their impact on resource acquisition.

Early-stage venture legitimacy through projective actions. I began with assertions from prior studies that ventures acquire resources by projecting legitimating claims to professional investors (Garud et al., 2014b; Lounsbury & Glynn, 2001). Yet the process by which early-stage ventures attain resources from distributed resource providers diverges from the traditional conceptualizations amongst scholars of organizations and entrepreneurship. Previous studies emphasize how later-stage ventures with recognizable product offerings and prior investment histories acquire financial resources by employing narratives to attain resources from institutional investors (Martens et al., 2007). Such theorizing implies establishing legitimacy through projective strategies is a sufficient condition to generate financial support. Yet during a venture's earliest stages, as characterized by underdeveloped capabilities (Burton & Beckman, 2007; Rindova & Kotha, 2001), ambiguous firm boundaries (Santos & Eisenhardt, 2005; 2009), and limited power (Ozcan & Eisenhardt, 2009), such ventures employ narratives to coalesce disparate parts into a comprehensive whole and thereby make a venture real for external observers (Garud et al., 2014a). Thus, narratives used by later-stage ventures to generate legitimacy amongst professional investors by reducing inherent risk may not translate to ventures during their earliest stages of conception when merely projecting legitimating claims may not draw people into an emergent venture and sustain their involvement. During this period in a venture's lifecycle, legitimacy alone may constitute a necessary but insufficient condition for resource acquisition.

Scholars of organizations and entrepreneurship have begun to address the temporal dynamics of projective actions and how entrepreneurs use them to garner and maintain

legitimacy over time (e.g., Fisher et al., 2016; Garud et al., 2014b). Conceptual work has suggested ventures revise their projective strategies at various stages in their lifecycles, yet this work has largely emphasized how ventures anticipate expectations amongst different groups of resource providers (Fisher et al., 2016), or react to external events that may delegitimize a venture based on its initial claims (Garud et al., 2014b). While recent work has more broadly suggested various stakeholders partake in an early-stage venture's formation and trajectory (Garud et al., 2014a; McMullen & Dimov, 2013), this work has yet to empirically demonstrate whether and how such stakeholders dynamically influence the projective strategies employed in ongoing resource acquisition efforts. This study points to a process I deem *community-based resource acquisition* in which such ventures generate financial resource via dynamic actions and interactions with a growing supporter community.

Community-based resource acquisition: Building, engaging, and spanning. Ventures that successfully attained resources utilized actions to build community alongside their initial narrative claims. The three community building actions I identified motivate backers to care about a venture and its development, more so than a typical user or investor in other contexts. Drawing on research in psychology and cognitive science, I suggest these community building actions, in the absence of equity ownership, appear to impart a feeling of psychological ownership amongst backers who are outside the traditional boundaries of the organization (i.e., the founding team) over the ventures to which they financially contribute (e.g., Avey, Avolio, Crossley, & Luthans, 2009; Pierce, Kostova, & Dirks, 2001). This deep connection to a venture and its outcomes depends on more than just a product's quality and its portrayal in initial narrative claims. Instead, it depends on the opportunities founders enact for supporters to discover commonalities and partake in a venture's ongoing journey (Adler & Kwon, 2002).

Hence, the community building actions I identified facilitate the formation of a collection of actors whose interests overlap to influence their decisions to contribute financial resources (O'Mahony & Lakhani, 2011). In this way, the successful invited prospective backers to not only contribute financially, but also to join a venture's vibrant supporter community and partake in a shared journey in which every action was part of a transparent script and every individual was a character in an unfolding narrative to mutually attain the campaign's goal and enact the venture's long-term vision.

The successful ventures engaged their emergent backer communities to generate co-constructed content that was integrated into subsequent community building efforts for prospective backers to observe and interpret in real-time. These findings directly parallel research on community-based innovation in which innovators harness online communities such that members contribute their time and energy to build, refine, and validate ideas for little or no financial reward (Adams et al., 2015; Lerner & Tirole, 2002; von Krogh & von Hippel 2006). I extend this literature to the arena of venture resource acquisition by capturing how community-generated content can also enable ongoing sensemaking activities amongst prospective backers in dynamic entrepreneurial settings. When such engagement occurs on an open platform such as Kickstarter, others can observe existing interactions, which encourages further interactions and thereby reinforces community members' connections with the founder and with each other. In this way, entrepreneurs not only engage community members through actions to garner feedback on product improvements, but also update components of the ventures' narrative to appeal to more users, expanding their emergent backer community and enlarging the amount of resources they acquire.

Using the legitimacy generated from vibrant and engaged backer communities, the successful ventures utilized this initial signal as a proof point to span their ventures into broader audiences via established intermediaries. My findings highlight that beyond the active development of communities through building and engaging actions, successful ventures garnered additional visibility, and thereby increased community members and financial support, by more passively amplifying their narratives with broader communities. While prior work has discussed the importance of embedding a venture in an appropriate community of supporters (i.e., Faraj et al., 2011; Jeppesen & Frederiksen, 2016; Mollick, 2016), my analyses suggest that it may be more effective to initially construct a community of supporters with a high level of identification with a focal venture before seeking validation with external communities who may resonate with a venture's offering. Generating this community involvement signals to intermediaries (i.e., gatekeepers to external communities) that there is deep interest in the venture from which both entities (and their communities) can benefit by facilitating reciprocal bridges.

A process framework of crowdfunding. Several studies explicate relationships in the crowdfunding setting. I synthesized these existing relationships to provide a suggestive model of the identified mechanisms that underlie resource acquisition in the distributed setting of crowdfunding. Yet such findings largely address the impact of static venture and founder attributes on a venture's campaign success (Greenberg & Mollick, 2017; Mollick, 2014; Mollick & Nanda, 2016; Younkin & Kuppuswamy, 2017), rather than fully theorizing on the dynamics that occur in this setting where backers and founders can interact in real-time and observe prior interactions in retrospect. Backers' funding decisions are therefore not limited to interpretations of a venture's initial projections (Calic & Mosakowski, 2016; Mollick, 2014; Parhankangas & Renko, 2017) nor observations of other backers' funding decisions (Burtch et al., 2015; 2016).

Instead, acts of sensegiving and sensemaking are ongoing and recursive as a venture deepens, co-constructs, and amplifies its narrative with several backers that possess divergent motivations and incentives.

3.7. Conclusion

This paper explores how early-stage ventures attain resources from distributed resource providers during their earliest stages of conception. Through assessing the dynamic interactions between founders and backers, I examine how projective actions alone may fail to generate resource acquisition amongst ventures without operating histories and investment histories seeking financial resources from many non-professional investors. The theoretical framework of community-based resource acquisition proposes a set of three mechanisms—community building, engaging, and spanning—and their temporal dynamics that lead to resource acquisition. This study explicates how early-stage ventures cannot expect initial projections to resonate with general audiences, nor can they resort to engaging and spanning actions right away. Instead, ventures must build a community which they engage and leverage as a proof point with established intermediaries. In this way, backers continually generate content and interact with existing backers to allow prospective backers to engage in a process of real-time sensegiving and sensemaking that ultimately leads to resource acquisition.

4. WITHHOLDING SIGNALS OF EXPERIENCE AND EXPERTISE IN RESOURCE ACQUISITION EFFORTS VIA CROWDFUNDING

The problem of legitimation inevitably arises when the objectivations of the (now historic) institutional order are to be transmitted to a new generation. At that point, as we have seen, the self-evident character of the institutions can no longer be maintained by means of the individual's own recollection and habitualization. In order to restore it there must be "explanations" and justifications of the salient elements of the institutional tradition. Legitimation is this process of "explaining" and justifying.

- Peter L. Berger and Thomas Luckmann, *The Social Construction of Reality* (1966: 110)

4.1. Abstract

While ongoing interactions between founders and backers play a pronounced role in the outcome of resource acquisition from distributed resource providers as suggested in Chapter 3, founders must still signal their intent and ability to follow through on uncertain early-stage ideas in their initial crowdfunding pitches. This is consistent with arguments from signaling theory that suggest investors rely on observable signals to judge an early-stage venture's plausibility amidst inherently uncertain conditions (Spence, 1973). Interestingly, my initial findings from an original dataset of early-stage ventures seeking resources via Kickstarter reveal many founders select not to employ available signals of achievement and experience such as educational affiliations, professional backgrounds, and startup experience in their crowdfunding pitches. I therefore address the following question in this chapter: *Why do entrepreneurs select not to use available signals of past experience and accomplishment when seeking resources via crowdfunding?*

4.2. Introduction

Signaling theory describes how investors rely on observable quality signals emitted by entrepreneurs to judge a venture's plausibility and quality amidst inherently uncertain conditions

(Spence, 1973). Extant research on signaling in entrepreneurship suggests that a variety of indicators impact the investment decisions of prospective resource providers, including reputations and backgrounds of board members and top managers (Certo, 2003; Eisenhardt & Schoonhoven, 1990; Higgins & Gulati, 2006; Sanders & Boivie, 2004), relationships with high-power exchange partners (Hallen & Eisenhardt, 2012; Khaire, 2010), certifications (King et al., 2005; Sine et al., 2007), and third-party endorsements (Podolny, 1993; Rao, 1994). Given the importance of high-quality signals in extrapolating a venture's quality under uncertain conditions, the online crowdfunding context seemingly provides an apt setting for entrepreneurs to use signals to influence resource providers' decisions (Gregg & Walczak, 2008). While this assertion is initially borne out in an empirical analysis of equity crowdfunding (Ahlers et al., 2015) and descriptive crowdfunding studies (Mollick & Robb, 2016), qualitative anecdotes and initial exploratory results from the rewards-based crowdfunding context seem to suggest founders withhold several individual-level signals in their pitches to the crowd.

Several possible explanations exist for why entrepreneurs select not to use signals pertaining to their prior academic, professional, and entrepreneurial experiences in their efforts to attain financial resources via crowdfunding. First, these signals may constitute weak signals, or poor indicators of a project's quality and plausibility, in a crowdfunding setting. This would suggest the founders' individual-level signals have no bearing on a campaign's ability to successfully deliver a product after reaching its funding goal. Second, entrepreneurs could possess stronger superseding signals that pertain directly to the project (Ndofor & Levitas, 2004; Park & Mezas, 2005). Such signals include whether they have formed a company, developed a prototype, or defined a post-campaign timeline and budget.

Preliminary interviews with founders also suggest a third explanation as to why entrepreneurs chose not to reveal available signals pertaining to education, professional background, and start-up experience: a belief that such signals inhibit their ability to appear relatable to the general population who constitute the prospective resource providers in the crowdfunding setting. In interviews reported in Chapter 3 of this dissertation, many entrepreneurs described crowdfunding not only as way to fund their ventures, but also as a means to validate a product offering with user-backers. Some crowdfunding founders even possessed the necessary financial capital to self-fund a product's research, development, and manufacturing; yet they used crowdfunding to generate broader-reaching community benefits (e.g., product validation and product-related feedback) over and above presale orders. In other words, crowdfunding may provide a means for entrepreneurs to better understand their users rather than exclusively serving as a bootstrapping mechanism for early-stage ventures to finance their early-stage venture ideas. This suggests entrepreneurs may hesitate to use signals associated with wealth or power (i.e., educational and professional affiliations), since revealing such information could make them seem less approachable and possibly cause potential backers to question why a founder is asking for money in the first place.

To empirically investigate these three alternative explanations, I collected an original dataset of all U.S.-based technology and design Kickstarter campaigns that occurred between August and November 2014. I then matched this dataset with founder-level data collected from LinkedIn, Facebook, Twitter, and founders' personal blogs to gain a more comprehensive understanding of the founders' backgrounds above and beyond what was posted in their Kickstarter campaigns. In this way, I compared the possession of signals (i.e., founder attributes)

and the decision to reveal them (i.e., revealed founder-level signals) in projects' attempts to acquire financial resources via Kickstarter.

Using this dataset, I first empirically validate the notion that many founders possess academic, professional, and entrepreneurial signals that they select not to portray in their efforts to acquire resources via crowdfunding. Using these descriptive findings as my point of departure, I assess the predictive power of these founder-level attributes on a campaign's quality by assessing their impact on long-term post-campaign outcomes: *product delivery*, *delay in delivery*, and *tenor of post-campaign backer comments*. This analysis revealed founder-level attributes, by and large, are not predictive of a campaign's long-term success. This finding suggests founders' pre-entry experience and human capital have little bearing on campaign follow-through, or execution. I then assess the impact of revealed founder-level signals on campaign-level outcomes: *funding success*, *amount raised*, and *number of backers*. This analysis showed founder-level signals did not have a significant impact on campaign-level outcomes. However, nearly all of the project-level signals had a significant impact on the campaign-level outcomes, suggesting backers positively receive signals relating to the project's development when making their funding decisions. Perhaps more interesting, these project-level signals did not have a significant impact on a campaign's long-term success, suggesting there are few actual signals—whether individual-level or project-level—of a project's long-term success, although backers naively interpret readily available and obvious project-level signals as predictors of a project's quality and ability to deliver on its intended campaign promises.

When considering the analyses of both campaign and long-term outcomes, the explanation of founders suppressing individual-level signals to enhance their resource acquisition efforts received little empirical support with two notable exceptions. Revealing *advanced*

degrees had a significant and negative impact on the number of backers, and revealing prior *entrepreneurial experience* had a significant and negative impact on funding success. Since advanced degrees are more indicative of a high-status achievement than the other individual-level signals used in this analysis, it may suggest further stratifying the individual-level signals across high- and low-status categories may reveal additional insights on the impact of revealing high-status versus low-status founder-level signals on campaign outcomes. Finally, while founders' prior *entrepreneurial experience* is indicative of backers' satisfaction with a delivered product's quality, revealing this experience to backers inhibits resource acquisition in the first place, which differs from the traditional signaling literature that indicates such signals are viable indicators of a venture's future quality (Spence, 1973). This raises the possibility that founders who choose to reveal signals associated with elitism and wealth may suffer from what I term a *privilege penalty* in the crowdfunding setting, wherein backers are less likely to fund projects founded by individuals with high-status backgrounds.

Taken together, these findings contribute to the robust literature on signaling, particularly in the context of crowdfunding where entrepreneurs seek financial resources from non-professional resource providers who lack the prior investment experience of professional investors (e.g., Mollick & Nanda, 2016). While prior research often assumes available signals are utilized and thereby publicly discernable under conditions of uncertainty (e.g., Benjamin & Podolny, 1999; Hahl & Zuckerman, 2014), the online crowdfunding setting provides an interesting context where founders can control which aspects of themselves they reveal to potential resource providers. These findings suggest very few signals are predictive of long-term success in the crowdfunding context, meaning founder-level and project-level signals are largely weak signals in this setting. However, backers seem to positively interpret superseding project-

level signals in their decisions to fund projects on the crowdfunding platform. This suggests that while backers may internalize advanced projects as worthier of financial contributions, such ventures are no more likely to deliver on their campaign promises than those lacking the advanced project-level signals. This is interesting since the literature on signaling has largely assumed signals are valid and strong proxies of quality.

In the next sections, I describe the three alternative explanations in greater depth and the empirical patterns consistent with each of these explanations. I then detail my empirical strategy and report the results from this study. Finally, I synthesize the findings and discuss their implications to prior theorizing on the role of signals in entrepreneurial resource acquisition.

4.3. Possible Explanations

Given the interesting observation that many founder(s) in the crowdfunding domain choose to withhold signals of competence and expertise, I examine the following question: *Why do entrepreneurs select not to use signals of past accomplishment and status in their efforts to attain financial resources via crowdfunding?* I elaborate on three potential explanations to this puzzle and empirically test these explanations using a unique combination of data from Kickstarter, LinkedIn, Facebook, Twitter, and personal websites/blogs. Each of these explanations is described in Table 4.1 and the empirical patterns I expect to find in the data that are associated with each of these mechanisms are detailed as well.

Table 4.1: Descriptions and Depictions of Alternative Explanations

Explanation	Conceptual Explanation	Empirical Pattern	Illustrations of empirical patterns	
			Impact on Long-Term Success	Impact on Campaign Success
1) Founder-level attributes are weak signals	Founders' individual-level attributes are not predictive of a project's long-term success (i.e., quality, plausibility, or ability to deliver).	Irrespective of founders' decisions to reveal individual-level signals, founders' individual-level attributes will not have a significant impact on long-term success metrics including <i>product delivery</i> , <i>delivery delays</i> , and backers' satisfaction with the product (evidenced by <i>tenor of backer comments</i>).	Founder-level attributes → NS → Long-Term Success	Founder-level attributes → NS → Campaign Success
2) Possessing superseding project-level signals that are more effective and predictive	Possessing project-level signals is more predictive of a project's long-term-success (i.e., quality, plausibility, and ability to deliver) since they suggest founders have invested resources in the project to-date. Not only should these projects be more likely to deliver after their campaigns, but also attract financial capital from backers who recognize the validity of these signals.	Project-level signals will have a positive impact on long-term project success that is more significant than the impact of founder-level attributes on this outcome. Revealing project-level signals will have a positive impact on funding success that is more significant than the impact of revealing individual-level signals on this outcome.	Founder-level attributes → NS → Long-Term Success Project-level signals → + → Long-Term Success	Revealing founder-level signals → NS → Campaign Success Project-level signals → + → Campaign Success
3) Founder-level attributes are effective signals but decrease reliability when revealed	Founders' individual level attributes are predictive of a project's long-term success, but founders select to withhold these signals to appear more reliable and less wealthy to prospective resource providers.	Founders' individual-level attributes will positively impact a project's long-term success, yet revealing these founder-level individual signals will negatively impact funding success.*	Founder-level attributes → + → Long-Term Success	Revealing founder-level signals → - → Campaign Success

* In this study, I operationalize long-term success using product delivery within the subset of projects that were successfully funded via crowdfunding. However, I have also coded whether the projects are operational three years after their respective campaigns. In future studies, I plan to look at the role of founders' individual attributes on the entire sample using this long-term outcome variable.

4.3.1. Explanation 1: Individual-level founder attributes are weak signals of venture plausibility and quality

A possible explanation as to why founder(s) suppress individual-level signals in the crowdfunding domain is that individual-level signals (educational, professional, and entrepreneurial) are poor indicators of a venture's plausibility and quality. Based on this logic, founders do not portray these signals because they are aware that such signals are not indicative of their ability to deliver a quality product in a timely manner following a campaign's successful conclusion.

Amidst conditions of information asymmetry, various entities (i.e., people, institutions, ventures, organizations) employ signals that are costly and difficult to attain to portray their quality to external observers (Spence 1973). For example, early-stage ventures with sparse operating histories and scant investment round track records convince investors to provide financial capital amidst high levels of uncertainty by signaling founder backgrounds (Higgins & Gulati, 2006; Zhang & Wiersema, 2009). Early-stage ventures therefore benefit from the high-status backgrounds of their founding teams. Similarly, empirical studies have demonstrated the effectiveness of a variety of individual- and firm-level signals in addressing information asymmetries amongst external stakeholders who lack perfect information, including firm names (Lee, 2001), number of patents (McGrath & Nerkar, 2004), insider ownership (Filatochev & Bishop, 2002), and alliances (Gulati & Higgins, 2003). Each of these signals is shown to impact resource acquisition for entrepreneurial ventures.

Prior empirical studies predominantly focus on the usage of signals (i.e., Gulati & Higgins, 2006; Zhang & Wiersema, 2009) rather than the possession of signals. However, in assessing the impact of signal possession versus use, researchers can better attend to the predictive accuracy of signals on various outcomes of interest (i.e., product delivery). In other

words, by assessing whether an entrepreneur possesses a signal, irrespective of its use, studies can discern the impact of a signal on outcomes they are purported to influence over and above their immediate impact on funding success.

The crowdfunding setting provides a context where multiple outcomes are available to analyze. For example, the outcome of funding success is immediately accessible when assessing a concluded crowdfunding campaign. Yet it is also possible to assess long-term outcomes of successfully-funded campaigns such as product delivery and backer satisfaction with a delivered product. It is therefore possible to assess the impact of both signal possession and use on various short- and long-term outcomes. It may be the case that founder(s) select not to employ individual-level signals in their pitches because they are aware that such signals do not accurately relate to their ability to deliver on a campaign's presales, thus making individual-level signals misrepresentative in the crowdfunding setting regardless of their impact on funding success.

Given the large body of literature that emphasizes the importance and credibility of founder-level signals that are costly and difficult to attain amidst conditions of uncertainty (e.g., Certo, 2003; Gulati & Higgins, 2003; Podolny, 1994), this explanation seems unlikely despite apparent differences between traditional resource acquisition settings and crowdfunding (Fisher et al., 2017).

4.3.2. Explanation 2: The founder(s) possess superseding project-level signals that are more effective and predictive

A second explanation is that founder(s) possess superseding signals they choose to highlight in lieu of personal signals relating to individual-level education, professional background, and prior startup experience. These signals are likely more pertinent to the entrepreneurial project on hand

than signals that reflect founders' prior experiences and may therefore better reflect a founder's ability to follow-through on campaign commitments following a campaign's successful conclusion (Ndofor & Levitas, 2004; Park & Mezas, 2005).

For example, depicting and describing a prototype is a signal of a project's progress to date since it provides a tangible metric by which external observers can assess the quality of a project and its offering. If a campaign presents a developed prototype rather than a conceptual idea, its likelihood of successfully manufacturing and delivering its product offering would seemingly be greater than campaigns consisting of conceptual ideas alone. Another superseding signal is the venture's stage of development as determined by whether a campaign presents itself as a one-off project or a more established venture seeking capital to launch a project. In the crowdfunding setting, a venture's stage of development is reflected in various campaign communications. For example, a campaign that describes itself using terms such as *LLC* or *Inc.*, or uses a venture name that differs from the product being offered, represents a more advanced venture than those that do not indicate an affiliation with a larger venture.

Founders also showcase superseding signals in the form of preparedness for post-campaign product manufacturing and delivery (Chen et al., 2009). For example, founders often use timelines to reflect the steps they intend to implement after a campaign concludes, and budgets to depict how funding would be utilized in subsequent product development, manufacturing, and delivery. In this way, founders signal that they have considered the longer-term objectives after the campaign to reduce uncertainty pertaining to the likelihood of a campaign's ability to deliver on its presales to backers.

Based on existing findings, this explanation seems most probable since founder-level signals of achievement and experience have been shown to be less predictive of successful

resource acquisition once ventures have achieved visible progress toward enacting their visions and attaining their goals (Hallen, 2008). However, if this explanation holds true in the crowdfunding setting, it does suggest that Kickstarter audiences expect crowdfunding projects to have realized a high level of progress at the time that a campaign launches. This counters some of the argumentation in Chapter 3, which presents crowdfunding as a means for entrepreneurs to interact with backers and generate ongoing feedback to co-construct their narratives, validate their product offerings, and mutually enact a project's goals and vision.

4.3.3. Explanation 3: Founder(s) want to appear relatable by withholding signals of individual-level attributes

This explanation suggests that by withholding signals of competence and expertise (i.e., educational, professional, and entrepreneurial), founder(s) attempt to align with expected audience preferences. In this way, founders of crowdfunding campaigns explicitly and/or implicitly assume the expectations and preferences of crowdfunding backers diverge from those of professional investors such as VCs and angels. For example, if a founder is educated at an Ivy League university, worked at a recognized Wall Street investment bank, or successfully founded several prior ventures, he/she may not appear as relatable to prospective backers by signaling these prior accomplishments and affiliations in pitches for financial contributions.

This potential explanation extends findings that depict the crowdfunding domain as a setting to develop a community of backers who buy-in to a vision and provide financial resources to receive a product and/or service once completed rather than attain equity in an early-stage venture (see Chapter 3). As such, founder(s) may aim to reduce the appearance of wealth since this could lead potential backers to wonder why the founder(s) are not self-funding the product's research and development on their own.

Despite the underlying rationale for why founder(s) may suppress individual-level signals, it is unclear whether this is an optimal strategy for early-stage ventures seeking resources via crowdfunding. Much like traditional VCs or angel investors seeking financial returns on their investments, crowdfunding backers still want assurance amidst inherent uncertainty that a founder can follow through on a campaign. This is accomplished by delivering on the campaign promises (often delivering its presale orders) in accordance with an intended delivery date laid out in the crowdfunding campaign. This intended delivery date does not represent an official contract between founders and backers, but backers still expect founders to put forth their best efforts to deliver on these promises. As such, signaling individual-level competence and expertise may reduce uncertainty and lead backers to contribute financial resources.

While the prior two explanations are grounded in existing literature on signaling in entrepreneurial resource acquisition, this explanation is more novel in the resource acquisition setting. Prior studies across strategy and entrepreneurship broadly assume individuals utilize signals of achievement and experience when they possess them (e.g., Benjamin & Podolny, 1999; Hahl & Zuckerman, 2014). However, this explanation suggests founders intentionally withhold these signals due to expectations they hold regarding the preferences and expectations of prospective resource providers in the crowd. This connects to prior literature on legitimacy that suggests founders tailor their messages to different audiences based on their understanding of an audience's expectations (Fisher et al., 2016).

4.4. Methods

I employ a research design that analyzes both long-term success (Model A) and campaign success (Model B) to help rule out effects driven entirely by selection or sorting since the mechanisms are not causal. However, this leaves the question as to whether the observed effects

are driven by the strength of the signals (Explanation 1), the availability of superseding signals (Explanation 2), or decisions to withhold signals to appear more relatable (Explanation 3). I therefore follow Hall and Ziedonis (2001) to examine contingencies where the three logics suggest different effects. Specifically, if founder-level signals are weak indicators, it suggests a weak or non-significant effect on long-term success, as the strength of these signals should be indicative of a project's post-campaign success; superseding signals suggests the effect of project-level signals on both long-term success and campaign success should be greater than the effects of individual-level attributes on long-term success and revealing such signals on campaign success; and withholding signals to appear more relatable suggests founder-level attributes will have a positive impact on long-term success but revealing them will have a negative impact on campaign success since they are valid signals but prospective resource providers view them otherwise. I next describe the context and sample on which I deploy this research design.

4.4.1. Empirical Context

Kickstarter provides an ideal setting to evaluate the signals entrepreneurs employ in their efforts to attain financial resources for their early-stage ventures. First, crowdfunding provides a context where entrepreneurs interact with mass audiences to attain resources for early-stage prototypes yet to receive substantial funding or recognition from professional investors. As such, their efforts are catalyzed by the initial descriptive content they project via the crowdfunding platform (i.e., founder bio, campaign description, campaign video). Second, since Kickstarter hosts hundreds of campaigns at any given time, entrepreneurs compete for scarce financial resources, and thus need to persuade individuals to contribute over the course of relatively short campaign periods (average length of 30 days). As such, Kickstarter provides an uncertain and competitive

setting where campaigns should benefit from reducing uncertainty amongst prospective resource providers.

4.4.2. Data Collection and Sample

To assess whether entrepreneurs elect to use available individual-level signals in the crowdfunding setting, I longitudinally scraped data on all U.S.-based Kickstarter campaigns listed in the technology and design categories from August to November 2014 for a total of 477 campaigns and 6,536 observations¹¹. I then matched the Kickstarter data with founder data from the following sources when available: LinkedIn, Facebook, Twitter, and founders' websites and blogs. This allowed me to code prior academic, professional, and entrepreneurial experiences for each founder. I then assessed each of the campaigns to identify discrepancies between the signals that founders used on Kickstarter (i.e., *founder-level signals*) and signals available for them to use (i.e., *founder-level attributes*). I also collected several superseding signals used in the campaigns (i.e., *project-level signals*) and several control variables identified in the prior literature on crowdfunding. To test the patterns identified above, these variables were then regressed in two sets of models: (1) long-term outcomes including (a) *product delivery*, (b) *campaign follow-through delay*, and (c) *tenor of backer comments*; and (2) campaign outcomes including (a) *campaign goal reached*, (b) *amount raised*, and (c) *number of backers*. The models and variables are described in greater detail below.

¹¹Initially, the data set contained 1,218 campaigns and 17,669 observations. I initially intended to assess the dynamics of community building, engaging, and spanning (as inducted in Chapter 3) using this dataset. I therefore reduced the dataset to contain only campaigns for which I had complete observations (i.e., the campaigns started and closed within August to November 2014). In subsequent post-dissertation iterations of this project I intend to code the dropped campaigns to enhance the sample size in future analyses.

4.4.3. Model A: Long-Term Post-Campaign Outcomes

Model A examines the impact of founder-level attributes, founder-level signals, and superseding project-level signals on the long-term outcomes that occurred following a campaign's conclusion. Each of these outcomes reflects an aspect of a project's actual quality. I collected the data from a variety of sources. Revealed founder-level signals were collected from the Kickstarter campaign pages, while founder-level attributes were collected from an assortment of external sources including LinkedIn, Facebook, Twitter, and personal websites/blogs. In this way, I was able to discern discrepancies between possessed founder attributes and revealed founder signals. Project-level signals and project-level control variables were collected from the Kickstarter platform. Since these outcomes are dependent on a campaign's initial success, Model A assesses a subset of projects that realized their goals on Kickstarter (N = 106). The sample was further subset to analyze the outcome variables of *campaign follow-through delays* and *tenor of backer comments* because these outcomes were also dependent on a project's delivery. This resulted in the omission of 16 projects that failed to follow-through on their successful campaigns (N = 90).

Dependent variables. The first dependent variable is *product delivery*, a binary measure indicating whether a successfully funded campaign delivered its product to backers at the time of data coding (approximately three years post-campaign conclusion). This measure reflects a venture's ability to successfully develop, manufacture, and deliver its product, and thus constitutes a critical measure of long-term success since many backers express their twofold desires when funding a campaign: (1) bringing a venture to life, as indicated by the following backer, "*I've done a lot where just like I do the very lowest tier because it's not so much that I actually want the product, it's that I want to say go ahead keep doing this*" and (2) receiving a

product offering, as indicated by another backer, “*If I’m going to invest in their technology I wanted something that I could use...I wanted the actual technology in my hands so I could evaluate it, use it, modify it.*” Both motivations suggest product delivery represents an important measure of long-term success, since it indicates both successful enactment of a vision and fulfillment of a presale.

The second dependent variable for the subset of campaigns that reached their funding goal is *campaign follow-through delay*. At the time that a campaign launches, the Kickstarter platform requires its founder(s) to select a date by which they intend to ship their completed product. This is displayed publicly on the Kickstarter platform. Since Kickstarter does not guarantee that a campaign will deliver by its self-selected date, many campaigns miss their deadlines due to difficulties that arise for a variety of reasons, including scaling to meet unanticipated backer demand, tooling and manufacturing difficulties, overpromising on the campaign’s features and delivery timeline, and/or insufficient funds (Murray & Fisher, working paper). This variable is measured as the number of months after a campaign’s stated delivery date that it began shipping its product to backers. If a campaign shipped its product early or on-time, this was coded as “zero” since the campaign did not experience a delay of any sorts.

The third dependent variable for the successful subset of campaigns is *tenor of backer comments*, a categorical variable that assesses backers’ satisfaction with the post-campaign actions of a venture (i.e., communications, delivery timeline, and product quality). For purposes of this dissertation, I hand-coded each comment that occurred after a campaign’s conclusion. In future iterations of this study, I intend to use Linguistic Inquiry Word Count (LIWC) techniques to assess the tenor of comments by way of natural language processing. Using manual coding, four categories were utilized. When backers provided predominantly *satisfactory* comments, the

tenor was coded as “4.” When backers provided *no feedback* or *neutral* comments, the tenor was coded as “3.” Lack of feedback was coded as “3” since this would suggest backers did not experience noteworthy issues that they deemed necessary to express publicly via comments nor did their pleasure with a product warrant a public declaration. When backers expressed both *satisfactory* comments and *unsatisfactory* comments, the tenor was coded as “2” to suggest sufficiently mixed responses amongst backers. Finally, when backers expressed *unsatisfactory* comments, the tenor was coded as “1.”

Founder attribute measures. I also collected founder measures to understand the individual-level signals available for the founder(s) to use in their respective campaigns. Since many founding teams were comprised of more than one individual, founders’ attributes were aggregated at the campaign-level for purposes of these analyses.

I first include three measures of formal education including (1) *college degree*, (2) *advanced degree*, and (3) *educational domain*. I assess these measures since formal education may enhance the likelihood that founders possess the technical ability and social capital to deliver on their campaigns (Hsu, 2007; Palmer & Barber, 2001). *College degree* represents a dummy variable to indicate if any of the founders possess a college degree from an accredited academic institution. *Advanced degree* represents a dummy variable indicating whether any founding team member possesses an advanced formal education (i.e., JD, MBA, MD, technical masters, or PhD). *Educational domain* is a dummy variable indicating whether a founder received a degree in any academic discipline. While a founder who attended an academic institution should logically also have a functional educational background, these variables are distinct because founder(s) can choose to signal neither, both, or one without the other.

I also include a single measure of founding team members' professional backgrounds, *prior employers*.¹² I assess this measure since prior professional work experience may provide founders with technical insights that are more advantageous in starting a new venture and delivering on its promises to resource providers (i.e., Agarwal, Echambadi, Franco & Sarkar, 2004; Burton, Sorensen & Beckman, 2002). *Prior employers* is a dummy variable to indicate whether a founding team has a founder that worked for a recognized and legitimate employer.

Finally, I include a single measure of prior *start-up experience* to assess whether a founder has previously been a member of another nascent venture's founding team. This measure is included since prior entrepreneurial experience increases the probability that founders have developed relevant experience and social networks to positively influence the likelihood of a venture's success (Eesley & Roberts, 2012). It constitutes a dummy variable.

Founder-level signal measures. I also collected and coded the founder-level signals used in the campaigns. Similar to the construction of the founder-level attribute variables, the founder-level signals were aggregated at the campaign-level for purposes of these analyses. These signals were revealed in one of two locations: the campaign homepage which featured detailed descriptions and illustrations of the project, and/or the founder biography pages which depicted information at the discretion of the founders.¹³ Each of these variables map onto the

¹² I initially included *prior experience* as a second indicator of professional experience. This represented whether a project's founding team contained a founder with discernable prior work experience. However, this variable was dropped from the analyses conducted on the subset of the successful campaigns because all successful campaigns contained at least one founder with professional work experience (see Table 4.4). As such, the dummy variable was perfectly correlated with the criteria on which the subset was taken. I then attempted to redefine the *prior experience* variable as a proportion of founder(s) with discernable prior professional experience. Interestingly, this variable was also perfectly correlated with the criteria on which the subset was determined. This indicates that each of the founders of the successful campaigns had prior professional work experience.

¹³ Another outlet for founders to reveal founder-level signals is the campaign video. While I use a dummy variable to indicate whether the campaign includes a video as a project-level signal, I do not code the videos for the founder-level signals revealed in them for purposes of this dissertation. I intend to code these videos in greater depth during future analyses.

founder-level attributes listed above, except for *revealed prior experience* which is included as a revealed signal despite being dropped as a founder attribute.

First, I included three measures of academic signals revealed in the crowdfunding campaigns: (1) *revealed college degree*, (2) *revealed advanced degrees*, and (3) *revealed educational domain*. Revealing high-cost signals of rigorous higher education is shown to reduce information asymmetries under conditions of uncertainty (Spence, 1973). In this way, prior literature suggests signaling higher education serves as a proxy for prospective resource providers to extrapolate the quality and plausibility of uncertain entrepreneurial endeavors. *Revealed college degree* represents a dummy variable to indicate whether a member of a project's founding team reveals an academic institution that they attended. *Revealed advanced degrees* represents a dummy variable to indicate whether a member of the project's founding team reveals that they possess an advanced degree (i.e., JD, MBA, MD, technical masters, or PhD). Finally, *revealed educational domain* is a dummy variable to indicate whether a member of a founding team revealed the discipline of their academic degree.

Second, I also include two measures of professional work experience signals revealed in the crowdfunding campaigns including (1) *revealed prior experience* and (2) *revealed prior employers*. *Revealed prior experience* represents the proportion of founding team members that revealed their prior work experience in the crowdfunding campaign. *Revealed prior employers* is a dummy variable to indicate whether at least one member of a founding team revealed their prior employer in the crowdfunding campaign.

Third, I include a single measure of *revealed start-up experience* to assess whether a member of the founding team reveals prior entrepreneurial experience in the crowdfunding campaign. This measure is a dummy variable.

Finally, I include two measures of personal commitment and preparedness pertaining to the focal project. *Motivation* is a dichotomous variable to indicate whether the founding team described how they identified the unmet need and why they decided to pursue it. For example, the founder of an advanced electric screwdriver described his personal frustration trying to reach into tight spaces while working on his car with a traditional screwdriver. This would constitute a personal motivation for pursuing a venture. In contrast, simply describing a product's value, applications, and superiority over alternatives did not represent a revealed motivation for pursuing the project. *Personal life* is a dummy variable to indicate whether the founders described details from their personal lives that did not directly pertain to the project on hand. For example, some founders revealed information about their hobbies, personal interests, families, pets, and childhoods. This information seemingly makes founders appear more relatable and approachable, but otherwise does not implicate their ultimate ability to deliver on the campaign's promises.

Project-level signal measures. I collected and coded several project-level signals that were used in the crowdfunding campaigns as well. These signals directly pertained to the stage and development of the project for which the founder(s) sought funding. These signals were more directly indicative of the underlying plausibility and quality of a project than the founder-level signals listed above. The five project-level signals are described in greater detail below.

First, I coded whether a project was a *company* or a *project* using a dummy variable. A campaign that described itself using terms such as *LLC* or *Inc.*, or used an organizational name that differed from the product being offered suggested it was a more advanced venture than those that did not indicate an affiliation with a larger organization. Campaigns that indicated their product offering was part of a company seemingly appear more established to potential resource

providers. Second, I coded whether a campaign described or depicted a working *prototype*. In showing and/or discussing a prototype rather than a mere conceptual idea, campaigns highlighted the financial and human capital that was already invested in the project to suggest it was in a more advanced stage. Third, I coded whether a campaign used a *video* in its crowdfunding campaign. The videos often depict the product in action and therefore provide more direct support for a project's level of development. Fourth, I coded whether the campaign provided a detailed *timeline* to reflect the steps they intend to follow once a campaign concludes. Finally, I coded whether the campaign provided an in-depth *budget* to highlight how funding (once received) would be used for various aspects of product development, manufacturing, and delivery. The *timeline* and *budget* measures each proxy the degree of founder preparedness since they indicate founders' understanding of the necessary actions to deliver on a campaign once it reaches its goal (e.g. Chen et al., 2009).

Controls. Finally, based on prior crowdfunding literature, I coded several campaign- and founder-level control variables as described below. At the campaign-level, I coded *campaign length* as the number of days the campaign actively sought resources from the crowdfunding platform (Mollick, 2014). I also coded the *campaign goal* to indicate the amount of financial capital the founders sought to raise (Kuppuswamy & Bayus, 2017, Mollick, 2014). This variable was logged to reduce skewness. I also included a dummy variable to indicate *Kickstarter category*. All of the projects in the sample were selected from the design and technology categories on Kickstarter since these campaigns are most comparable to the types of technology-driven startups typically theorized about in research on entrepreneurial resource acquisition (e.g., Hallen & Eisenhardt, 2012; Hallen & Pahnke, 2016; Pahnke, Katila, & Eisenhardt, 2015). I also coded the campaign's *location* to control for the network **effects**, social capital, and prior

learning from being in an expansive entrepreneurial ecosystem. To indicate location, I used three dummy variables for whether a campaign was in California, New York, or Florida¹⁴.

I also included two outcome variables from Model B (described in further detail below): *amount raised* and *number of backers*. *Amount raised* represents the total amount of financial resources raised during a project's crowdfunding campaign. This variable is included since attaining sufficient financial resources should catalyze long-term success by enabling product manufacturing and delivery. *Number of backers* represents the number of backers that contributed financial capital to a respective campaign. This variable is logged to reduce skewness. While each of these variables may enhance a project's ability to deliver, prior research also suggests that when campaigns exceed their funding goals and must therefore deliver their product to more backers than initially anticipated, it may lead to delays in product manufacturing and delivery as founders work to meet unexpected demand (Mollick, 2014).

In addition to the campaign-level controls, I also include a variety of founder-level controls. Prior literature suggests female backers are more likely to recognize the structural barriers females have had to overcome in the technology industry and are therefore more likely to fund other female entrepreneurs, thereby increasing the likelihood of funding for campaigns founded by females in the crowdfunding setting (Greenberg & Mollick, 2017). I therefore use a dummy variable to indicate whether there is a *female* present on a campaign's founding team. Prior research also shows black males are less likely to receive funding than their white counterparts (Younkin & Kuppuswamy, 2017). I therefore use a dummy variable to indicate whether there is a non-white *minority* on a campaign's founding team. I also indicate whether a

¹⁴ While Florida does not constitute a traditional entrepreneurial ecosystem, a large number of projects in the sample were located in Florida, so I included this as a distinct dummy variable.

founder appears in the campaign's *profile picture* since this may increase a founder's verifiability with potential backers.

I also include three measures of founding team members' previous involvement with the Kickstarter platform since such actions are found to increase social capital within the crowdfunding platform and thereby influence funding success due to built-in support networks at time of launch (Buttice et al., 2017; Colombo et al., 2015). First, I code the number of *campaigns backed by founder* to indicate the degree to which founders are involved in financially assisting other campaigns reach their funding goals on the Kickstarter platform. This variable is logged to reduce skewness. Second, I code for the number of prior *Kickstarter successes* to indicate the number of prior campaigns the founder(s) have successfully funded via Kickstarter. Realizing prior success on the platform leads to learning effects, but also provides a base of supporters who are more likely to fund a founder's subsequent endeavors on the Kickstarter platform (Buttice et al., 2017). Third, I code for the number of prior *Kickstarter failures* to indicate the number of campaigns the founder(s) have unsuccessfully funded via Kickstarter. Having founded prior campaigns, even if unsuccessful, is a means by which founders learn about the process of crowdfunding and the actions that may lead to success in subsequent attempts.

4.4.4. Model B: Campaign Outcomes

Model B examines the impact of founder-level attributes, founder-level signals, and superseding project-level signals on a campaign's success. Each of these outcomes reflects an aspect of success on the crowdfunding platform. Similar to Model A, I used data collected from a variety of sources. Since these models assess variance in campaign success, I included all campaigns for which I had external information on the founding team (N = 364). These founder-level attributes

were collected from the following sources: LinkedIn, Facebook, Twitter, and/or personal websites/blogs.

Dependent variables. The first dependent variable is *campaign goal reached*, a binary measure indicating whether a project reached its self-determined campaign funding goal (Mollick, 2014). This measure reflects whether a campaign reached its founder-selected threshold for success. The second dependent variable is *amount raised*, a continuous variable to reflect the amount raised by a campaign (Mollick, 2014). The third dependent variable is *number of backers*, a count variable that reflects the number of backers who contributed to a campaign. This variable is logged to reduce skewness. Each of these variables indicates the degree to which a campaign succeeded during its resource acquisition efforts.

Founder attribute measures. In addition to the *previous employers* variable detailed in Model A, I include *prior experience* as a dummy variable to indicate whether a campaign contains a founder with discernable work experience.

Founder-level signal measures. The founder-level signal measures are identical to those used in Model A.

Project-level signal measures. The project-level signal measures are identical to those used in Model A.

Controls. The controls are identical to those used in Model A with the exception of *amount raised*. This measure constitutes an outcome measure in Model B.

4.5. Results

I first illustrate the descriptive patterns in the data from a comparison of founder-level attributes and revealed founder-level signals. This analysis shows a large number of founders withheld

available signals relating to their academic, professional, and entrepreneurial experience. I first assess this at the individual founder-level of analysis (i.e., all founders irrespective of project). I then collapse the founder-level data across campaigns for a more conservative measure of signal use. In this way, if a project consists of four founders, but only reveals the signal of a single founder, the project is deemed to have revealed the respective signal. I then use the collapsed campaign-level data to assess the impact of founder attributes on long-term success to understand whether these signals are predictive of a project's ultimate quality (Model A). Finally, I use the collapsed data to assess the role of revealed founder-level and project-level signals on a project's campaign success (Model B). Each of these models are illustrated and described in greater detail below.

4.5.1. Descriptive Patterns

I assess the availability and use of signals using a dataset of 477 Kickstarter campaigns combined with founder-level data gathered from LinkedIn, Facebook, Twitter, and/or personal blogs when available. I was able to generate founder-level background information on 473 individuals representing 364 projects (76.3% of the entire sample). It was on this subset that I conducted the analyses. When assessing whether signals were used in the crowdfunding campaigns, data was collected from two locations: the *Founder Bio* page and the *Campaign homepage*. These locations are also indicated in the tables below.

First, I assess the availability and use of signals amongst all founders irrespective of the project they founded. Using this methodology, all founders in the sample with background information collected from a source other than Kickstarter were included in the analysis (N = 473). The descriptive results are depicted in Table 4.2. Next, I assess the availability and use of signals at the campaign level of analysis. To do this, I collapsed the founder-level data across

projects (N = 364). In this way, projects were coded as “1” if they contained at least one founder who revealed the focal signal and “0” if they did not contain at least one founder who revealed the focal signal. The results are depicted in Table 4.3. Finally, I assess the availability and use of signals at the campaign level of analysis amongst successful campaigns (N = 106). Table 4.4 depicts descriptive results amongst the successful campaigns.

These tables statistically maintain the anecdotal pattern identified in my qualitative interviews with project founders and backers. I therefore carried out subsequent analyses to better understand the underlying mechanisms and present the results of Models A and B in the subsequent sections.

Table 4.2: Signal Possession and Use amongst Crowdfunding Founders¹⁵

Signal	Number of founders who possess signal	Number who revealed signal**	Signal revealed in founder bio**	Signal revealed on Kickstarter page**
<i>Signal location is not exclusive</i>				
Educational:				
College degree	427	143 (33.5%)	114 (26.7%)	51 (11.9%)
Advanced degree	126	36 (28.6%)	31 (24.6%)	11 (8.7%)
Functional background	384	135 (35.2%)	109 (28.4%)	46 (12.0%)
Professional:				
Functional experience	483	284 (58.8%)	230 (47.6%)	101 (20.9%)
Employers	396	87 (22.0%)	67 (16.9%)	34 (8.6%)
Entrepreneurial:				
Prior start-up experience	203	82 (40.4%)	66 (32.5%)	28 (13.8%)
Prior Kickstarter experience**	78	78 (100%)	78 (100%)	78 (100%)
Prior Kickstarter success**	46	46 (100%)	46 (100%)	46 (100%)
N = 473				

*The percentages in the Signal Revealed columns are based on the number of founders who possessed the signal (as indicated in the Signal Possessed column). This value varies by signal (row).

**Prior Kickstarter experience and success are automatically revealed on a Kickstarter campaign page. Thus, founder(s) lack discretion over this signal.

¹⁵ For purposes of this study, I evaluate whether founders possess and use educational, professional, and entrepreneurial experience. I did not distinguish between high-status educational backgrounds and professional employers, but instead measured whether a founder possessed a signal of higher education and/or prior employment, and whether these were disclosed in their crowdfunding campaigns. Similarly, I did not discern the degree of success realized by a founder's prior entrepreneurial endeavors. In future studies, I plan to further code the degree of prestige and status associated with the educational and professional affiliations, as well as the success of their prior entrepreneurial ventures.

Table 4.3: Signal Possession and Use amongst Crowdfunding Campaigns

Signal	Number of founders who possess signal	Number that revealed signal**	Signal revealed in founder bio**	Signal revealed on Kickstarter page**
<i>Signal location is not exclusive</i>				
Educational:				
College degree	304	110 (36.2%)	97 (31.9%)	30 (9.9%)
Advanced degree	100	33 (33.0%)	30 (30.0%)	9 (9.0%)
Functional background	281	108 (38.4%)	98 (34.9%)	27 (9.6%)
Professional:				
Functional experience	342	224 (65.5%)	202 (59.1%)	61 (17.8%)
Employers	285	76 (26.6%)	65 (22.7%)	22 (7.7%)
Entrepreneurial:				
Prior start-up experience	165	70 (42.4%)	61 (37.0%)	21 (12.7%)
Prior Kickstarter experience**	61	61 (100%)	61 (100%)	61 (100%)
Prior Kickstarter success**	35	35 (100%)	35 (100%)	35 (100%)
N = 364				

Table 4.4: Signal Possession and Use amongst Successful Crowdfunding Campaigns

Signal	Number of founders who possess signal	Number that revealed signal**	Signal revealed in founder bio**	Signal revealed on Kickstarter page**
<i>Signal location is not exclusive</i>				
Educational:				
College degree	95	38 (40.0%)	29 (30.5%)	17 (17.9%)
Advanced degree	38	11 (28.9%)	8 (21.1%)	6 (15.8%)
Functional background	90	35 (38.9%)	27 (30.0%)	16 (17.8%)
Professional:				
Functional experience	106	71 (67.0%)	59 (55.7%)	27 (25.5%)
Employers	97	24 (24.7%)	18 (18.6%)	13 (13.4%)
Entrepreneurial:				
Prior start-up experience	59	19 (32.0%)	13 (22.0%)	11 (18.6%)
Prior Kickstarter experience**	28	28 (100%)	28 (100%)	28 (100%)
Prior Kickstarter success**	21	21 (100%)	21 (100%)	21 (100%)
N = 106				

4.5.2. Model A: Long-Term Success Outcomes

I next analyze the drivers of long-term success for successfully funded projects in the sample. I modeled the effects of founder attributes, revealed founder signals, and project-level signals on the three distinct long-term outcomes of *product delivery*, *product delivery delays*, and *tenor of backer comments*. Models 1 through 4 are logistic regression models that assess the drivers of *product delivery*. I employ logistic regression models since *product delivery* is a binary outcome variable. Models 5 through 8 are negative binomial regression models that assess the drivers of *product delivery delays*. I use negative binomial regression models since the number of months constitutes a count variable that is over-dispersed, meaning the variance of *product delivery delays* exceeds the mean. Models 9 through 12 are ordered logistic regression models that assess the drivers of *tenor of backer comments*. I utilize ordered logistic regression models since the outcome of interests is a categorical variable with a minimum value of 1 and a maximum value of 4.

Main results. Table 4.5 shows descriptive statistics and variable correlations amongst the subset of projects that were successfully funded on Kickstarter. The variable correlations indicate the data is not subject to multicollinearity concerns. Table 4.6 reports the regression estimates across the three long-term success outcomes: (1) *product delivery*, (2) *product delivery delays*, and (3) *tenor of backer comments* on the subset of projects that reached their funding goals (Models 1 through 4) and the subset that delivered after realizing funding success (Models 5 through 12).

Table 4.5: Descriptive Statistics and Correlations for Projects with Successful Campaigns

		Mean	S.D.	Min	Max	(1)	(2)	(3)	(4)	(5)	(6)
(1)	Campaign Length (Days)	34.245	7.667	15	60	1					
(2)	Goal (ln)	9.727	0.868	8.517	12.612	-0.01	1				
(3)	Company or Product	0.566	0.498	0	1	-0.09	0.29	1			
(4)	Campaign Has Prototype	0.953	0.213	0	1	-0.11	0.07	0.07	1		
(5)	Campaign Has Timeline	0.368	0.485	0	1	0.16	0.26	0.23	0.17	1	
(6)	Campaign Has Budget	0.057	0.232	0	1	0.01	-0.07	-0.12	0.05	0.15	1
(7)	Campaigns Backed by Founder (ln)	1.623	1.119	0	4.828	-0.03	0.08	-0.08	0.1	0.07	0.06
(8)	Kickstarter Category	1.406	0.493	1	2	0.13	0.23	0.18	-0.09	0.17	-0.04
(9)	Campaign Has Video	0.972	0.167	0	1	-0.24	0.19	0.08	0.23	0.01	0.04
(10)	Founder Appears in Photo	0.604	0.491	0	1	-0.02	-0.37	-0.48	0	-0.18	0.11
(11)	Female on Founding Team	0.264	0.443	0	1	0.06	-0.02	0.05	-0.07	0.16	-0.05
(12)	Minority on Founding Team	0.179	0.385	0	1	-0.08	0.32	0.26	0.1	0.2	0.1
(13)	College Degree (Possess)	0.896	0.306	0	1	-0.18	0.04	0.01	0.07	0	0.08
(14)	Advanced Degree (Possess)	0.358	0.482	0	1	0.13	0.16	0.18	-0.02	0.25	-0.01
(15)	Educational Focus (Possess)	0.849	0.36	0	1	-0.01	0.06	-0.05	0.03	-0.01	0.1
(16)	Employers (Possess)	0.915	0.28	0	1	-0.15	0.09	0.01	-0.07	0.09	-0.07
(17)	Start-Up Experience (Possess)	0.557	0.499	0	1	-0.01	0.13	0.02	0.07	0.05	-0.03
(18)	College Degree (Revealed)	0.358	0.482	0	1	0.02	0.02	-0.1	0.07	0.08	0.16
(19)	Advanced Degree (Revealed)	0.104	0.306	0	1	0.05	0.05	0.05	0.08	0.06	0.05
(20)	Educational Focus (Revealed)	0.33	0.473	0	1	0.14	-0.09	-0.24	0.06	0.05	0.18
(21)	Professional Experience (Revealed)	0.67	0.473	0	1	0.19	-0.08	-0.25	-0.06	0.04	0
(22)	Employers (Revealed)	0.226	0.42	0	1	0.21	-0.05	-0.03	0.01	0.05	0.06
(23)	Start-Up Experience (Revealed)	0.179	0.385	0	1	0.08	0.14	0.11	0.1	0.1	-0.01
(24)	Personal Life (Revealed)	0.33	0.473	0	1	0.07	-0.01	0.01	-0.13	0.25	0.18
(25)	Motivation (Revealed)	0.491	0.502	0	1	-0.16	-0.07	-0.13	-0.05	0.07	-0.08
(26)	Past Kickstarter Success	0.198	0.4	0	1	0.01	-0.01	-0.04	0	-0.08	0.08
(27)	Past Kickstarter Failure	0.066	0.25	0	1	0	-0.04	-0.07	0.06	-0.05	0.1

		(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
(1)	Campaign Length (Days)											
(2)	Goal (ln)											
(3)	Company or Product											
(4)	Campaign Has Prototype											
(5)	Campaign Has Timeline											
(6)	Campaign Has Budget											
(7)	Campaigns Backed by Founder (ln)	1										
(8)	Kickstarter Category	-0.12	1									
(9)	Campaign Has Video	0.14	0.03	1								
(10)	Founder Appears in Photo	0.17	-0.27	-0.02	1							
(11)	Female on Founding Team	-0.2	-0.1	-0.03	-0.04	1						
(12)	Minority on Founding Team	-0.16	0.32	0.08	-0.28	0.11	1					
(13)	College Degree (Possess)	-0.05	0.03	0.13	-0.02	0.13	0.08	1				
(14)	Advanced Degree (Possess)	-0.11	0.22	0.01	-0.16	0.27	0.16	0.25	1			
(15)	Educational Focus (Possess)	-0.1	-0.03	0.09	-0.07	0.13	0.06	0.72	0.26	1		
(16)	Employers (Possess)	0.01	0.25	-0.05	-0.11	-0.05	0.05	0.23	0.16	0.16	1	
(17)	Start-Up Experience (Possess)	-0.13	0.04	-0.04	-0.14	0.06	0.17	0.07	0.07	0.15	0.14	1

(18)	College Degree (Revealed)	0.03	-0.02	0.13	0	0.22	0.16	0.25	0.1	0.26	0.02	-0.01
(19)	Advanced Degree (Revealed)	0.08	0.1	0.06	-0.04	0.08	0.24	0.12	0.46	0.14	0.1	0.12
(20)	Educational Focus (Revealed)	-0.02	0.03	0	0.08	0.17	0.09	0.17	0.14	0.3	-0.07	0.18
(21)	Professional Experience (Revealed)	-0.01	-0.16	0	0.09	0.19	-0.04	0.02	0.19	0.04	0.07	0.02
(22)	Employers (Revealed)	-0.13	0.1	-0.04	-0.02	0.08	0.22	-0.04	0.16	0.04	0.16	0.17
(23)	Start-Up Experience (Revealed)	0.07	0.06	0.08	-0.12	0.11	0.23	0.08	0.06	0.06	0.14	0.42
(24)	Personal Life (Revealed)	0.07	-0.01	0.12	0.12	0.13	0.09	0.04	0.06	0.02	-0.07	-0.14
(25)	Motivation (Revealed)	-0.03	-0.12	-0.06	0.18	0.23	0.03	0.02	0.13	-0.01	0.03	0.04
(26)	Past Kickstarter Success	0.4	-0.12	-0.06	0.02	-0.24	-0.05	0.09	0.07	0.01	-0.02	-0.13
(27)	Past Kickstarter Failure	-0.06	-0.06	0.05	0.06	0.19	-0.03	0.09	0.12	0.11	-0.06	0.01

		(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)
(1)	Campaign Length (Days)										
(2)	Goal (ln)										
(3)	Company or Product										
(4)	Campaign Has Prototype										
(5)	Campaign Has Timeline										
(6)	Campaign Has Budget										
(7)	Campaigns Backed by Founder (ln)										
(8)	Kickstarter Category										
(9)	Campaign Has Video										
(10)	Founder Appears in Photo										
(11)	Female on Founding Team										
(12)	Minority on Founding Team										
(13)	College Degree (Possess)										
(14)	Advanced Degree (Possess)										
(15)	Educational Focus (Possess)										
(16)	Employers (Possess)										
(17)	Start-Up Experience (Possess)										
(18)	College Degree (Revealed)	1									
(19)	Advanced Degree (Revealed)	0.39	1								
(20)	Educational Focus (Revealed)	0.69	0.48	1							
(21)	Professional Experience (Revealed)	0.19	0.11	0.28	1						
(22)	Employers (Revealed)	0.25	0.33	0.29	0.33	1					
(23)	Start-Up Experience (Revealed)	0.27	0.24	0.25	0.12	0.39	1				
(24)	Personal Life (Revealed)	0.14	0.02	0.06	-0.06	0	0.04	1			
(25)	Motivation (Revealed)	0.01	0.04	-0.01	0.01	0.01	-0.16	-0.01	1		
(26)	Past Kickstarter Success	-0.17	-0.01	-0.15	0.05	-0.1	0.01	0	-0.2	1	
(27)	Past Kickstarter Failure	0.28	0.16	0.14	0.11	0.13	0.17	-0.19	0.04	-0.13	1

Table 4.6: Understanding What Drives Kickstarter Project Long-Term Success; Models of Product Delivery, Delivery Delays, and Tenor of Backer Comments

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9	Model 10	Model 11	Model 12
Long-Term Outcome:	Delivered	Delivered	Delivered	Delivered	Delay	Delay	Delay	Delay	Comments	Comments	Comments	Comments
Constant	11.98** (4.93)	12.86** (5.41)	16.35** (7.17)	16.65** (7.47)	-3.86** (1.89)	-3.60* (1.90)	-5.29** (2.44)	-4.58* (2.41)				
Founder Attributes												
College Degree (Possess)	-1.46 (1.67)	-2.34 (2.05)	-2.31 (2.15)	-2.15 (2.42)	-0.67 (0.65)	-0.75 (0.65)	-0.78 (0.64)	-0.77 (0.62)	-0.20 (1.30)	-0.18 (1.34)	-0.17 (1.40)	-0.11 (1.40)
Advanced Degree (Possess)	0.24 (0.73)	0.14 (1.02)	0.69 (1.30)	0.58 (1.32)	-0.07 (0.27)	0.24 (0.32)	0.24 (0.33)	0.06 (0.34)	0.66 (0.50)	0.32 (0.66)	0.46 (0.68)	0.47 (0.70)
Educational Focus (Possess)	1.50 (1.31)	1.85 (1.79)	1.75 (1.84)	1.76 (2.11)	0.64 (0.59)	0.72 (0.60)	0.88 (0.60)	0.97* (0.58)	-1.63 (1.07)	-1.36 (1.11)	-1.44 (1.18)	-1.49 (1.19)
Employers (Possess)	0.02 (1.37)	0.86 (1.68)	0.35 (2.01)	0.04 (2.09)	-0.58 (0.51)	-0.35 (0.52)	-0.25 (0.52)	-0.30 (0.51)	-2.67** (1.31)	-2.63** (1.32)	-2.43* (1.29)	-2.31* (1.33)
Start-Up Experience (Possess)	-1.45* (0.80)	-0.71 (0.97)	-0.73 (1.03)	-0.91 (1.09)	-0.04 (0.26)	0.01 (0.29)	0.01 (0.28)	-0.05 (0.28)	0.89* (0.47)	0.78 (0.57)	1.04* (0.62)	1.06* (0.64)
Founder Revealed Signals												
College Degree (Revealed)		3.08 (1.95)	4.30 (2.70)	4.20 (2.88)		-0.39 (0.43)	-0.51 (0.43)	-0.45 (0.42)		-0.67 (0.74)	-0.91 (0.76)	-0.88 (0.77)
Advanced Degree (Revealed)		0.03 (1.86)	-0.60 (2.14)	-0.51 (2.21)		-1.12** (0.57)	-1.05* (0.56)	-0.99* (0.54)		0.48 (1.05)	0.33 (1.09)	0.40 (1.11)
Educational Focus (Revealed)		-1.40 (1.73)	-1.91 (2.24)	-1.96 (2.39)		0.52 (0.45)	0.56 (0.46)	0.40 (0.45)		0.02 (0.80)	0.37 (0.87)	0.34 (0.89)
Professional Experience (Revealed)		0.60 (0.99)	0.38 (1.00)	0.59 (1.07)		-0.11 (0.30)	-0.12 (0.30)	-0.13 (0.29)		0.47 (0.55)	0.24 (0.57)	0.23 (0.58)
Employers (Revealed)		-0.58 (1.12)	-0.56 (1.17)	-0.70 (1.27)		0.30 (0.36)	0.11 (0.38)	0.22 (0.37)		-0.38 (0.66)	-0.49 (0.73)	-0.56 (0.75)
Start-Up Experience (Revealed)		-1.94 (1.28)	-2.02 (1.39)	-1.91 (1.48)		-0.32 (0.45)	-0.20 (0.45)	-0.25 (0.43)		-0.04 (0.77)	-0.18 (0.81)	-0.12 (0.83)
Personal Life (Revealed)		1.38 (1.09)	1.59 (1.22)	1.51 (1.26)		0.22 (0.27)	0.14 (0.27)	0.08 (0.27)		-0.08 (0.51)	-0.39 (0.57)	-0.33 (0.58)
Motivation (Revealed)		0.52 (0.84)	0.10 (0.97)	0.12 (1.04)		-0.43 (0.28)	-0.27 (0.28)	-0.25 (0.27)		0.31 (0.54)	0.33 (0.56)	0.31 (0.57)
Project-Level Signals												
Company or Product			-0.78 (1.24)	-0.91 (1.34)			0.11 (0.33)	-0.02 (0.33)			0.05 (0.68)	0.04 (0.71)
Campaign Has Prototype			0.16 (2.35)	0.39 (2.37)			0.93 (0.65)	0.70 (0.65)			-2.08 (1.38)	-2.02 (1.40)
Campaign Has Timeline			0.07 (1.06)	0.19 (1.10)			0.36 (0.28)	0.40 (0.28)			0.20 (0.57)	0.11 (0.60)
Campaign Has Video			-0.53 (2.43)	0.14 (2.56)			1.25 (1.22)	1.18 (1.20)			3.38** (1.55)	3.38** (1.57)
Campaign Has Budget			-2.74 (2.20)	-2.88 (2.21)			0.31 (0.57)	0.31 (0.55)			-0.73 (1.07)	-0.72 (1.08)
Amount Raised (ln)				0.07 (0.78)				0.40 (0.28)				0.19 (0.61)
# Backers (ln)				-0.32 (0.57)				-0.29 (0.19)				0.05 (0.41)
Controls												
Campaign Length (Days)	-0.10** (0.04)	-0.11** (0.05)	-0.12** (0.06)	-0.14** (0.07)	0.01 (0.02)	0.00 (0.02)	0.00 (0.02)	-0.01 (0.02)	-0.10*** (0.04)	-0.11*** (0.04)	-0.10** (0.04)	-0.10** (0.04)
Goal (ln)	-0.45 (0.42)	-0.64 (0.48)	-0.74 (0.54)	-0.68 (0.86)	0.42** (0.17)	0.43** (0.17)	0.34* (0.17)	0.08 (0.29)	-0.32 (0.30)	-0.35 (0.31)	-0.56* (0.33)	-0.76 (0.56)
Female on Founding Team	-0.90 (0.83)	-1.07 (1.02)	-1.10 (1.14)	-1.02 (1.21)	0.50 (0.31)	0.43 (0.33)	0.58* (0.33)	0.59* (0.32)	0.82 (0.58)	0.75 (0.64)	0.73 (0.69)	0.83 (0.72)

Minority on Founding Team	1.50 (1.02)	1.40 (1.14)	1.72 (1.20)	1.75 (1.25)	-0.45 (0.39)	-0.11 (0.42)	-0.22 (0.41)	-0.03 (0.41)	-0.54 (0.67)	-0.24 (0.75)	0.02 (0.76)	0.05 (0.78)
Kickstarter Category	-1.48* (0.79)	-1.56 (1.02)	-1.83* (1.10)	-1.63 (1.18)	0.59** (0.30)	0.43 (0.30)	0.42 (0.29)	0.45 (0.30)	-0.82 (0.52)	-0.71 (0.55)	-1.02* (0.58)	-1.06* (0.60)
Founder Appears in Photo	0.39 (0.78)	0.17 (0.99)	-0.08 (1.18)	-0.04 (1.22)	-0.14 (0.29)	-0.19 (0.29)	-0.11 (0.33)	-0.21 (0.32)	0.91* (0.51)	0.97* (0.56)	1.25* (0.65)	1.22* (0.70)
Location-California	0.17 (0.79)	0.21 (0.99)	0.41 (1.12)	0.46 (1.17)	-0.67** (0.32)	-0.72** (0.32)	-0.85*** (0.32)	-0.79** (0.32)	-0.36 (0.56)	-0.30 (0.58)	-0.21 (0.62)	-0.28 (0.64)
Location-New York	1.01 (1.36)	0.97 (1.47)	1.10 (1.52)	1.06 (1.57)	-1.13** (0.44)	-1.08** (0.45)	-1.09** (0.43)	-1.14*** (0.43)	-0.39 (0.67)	-0.58 (0.70)	-0.67 (0.76)	-0.68 (0.76)
Location-Florida	-0.15 (1.71)	-0.92 (1.82)	-1.12 (1.96)	-1.08 (1.98)	-1.05 (0.79)	-1.20 (0.80)	-1.34 (0.82)	-1.24 (0.78)	-2.17** (0.98)	-2.18** (1.04)	-2.26** (1.07)	-2.21** (1.07)
Campaigns Backed by Founder (ln)	0.22 (0.34)	0.22 (0.38)	0.20 (0.44)	0.22 (0.45)	0.21 (0.14)	0.29** (0.14)	0.26* (0.14)	0.29** (0.13)	0.43* (0.25)	0.48* (0.26)	0.54** (0.27)	0.52* (0.28)
Past Kickstarter Success	0.92 (1.25)	2.49 (1.75)	2.94 (2.05)	3.24 (2.15)	-0.46 (0.34)	-0.70* (0.37)	-0.55 (0.38)	-0.52 (0.39)	0.00 (0.64)	0.01 (0.66)	0.16 (0.69)	0.03 (0.74)
Past Kickstarter Failure	0.13 (1.40)	0.24 (1.99)	-0.44 (2.37)	-0.39 (2.47)	0.18 (0.51)	0.70 (0.56)	0.60 (0.56)	0.65 (0.55)	-0.62 (0.89)	-0.30 (1.03)	-0.20 (1.08)	-0.17 (1.08)
lnalpha												
_cons					-0.43 (0.29)	-0.61* (0.31)	-0.79** (0.34)	-0.96** (0.39)				
cut1												
_cons									-12.56*** (3.51)	-12.38*** (3.57)	-13.04*** (4.58)	-12.56*** (4.71)
cut2												
_cons									-11.04*** (3.44)	-10.84*** (3.51)	-11.40** (4.54)	-10.93** (4.67)
cut3												
_cons									-9.14*** (3.39)	-8.89*** (3.45)	-9.29** (4.49)	-8.82* (4.62)
N	106	106	106	106	90	90	90	90	90	90	90	90
r2_p	0.25	0.35	0.37	0.38	0.08	0.10	0.11	0.12	0.19	0.20	0.24	0.24
pr2												
chi2	22.57	31.57	33.41	33.84	28.06	35.21	40.98	43.74	44.18	46.93	55.63	55.87

* p < 0.10, ** p < 0.05, *** p < 0.01; two-tailed tests. Models 1 through 4 include the subset of projects that successfully reached their Kickstarter funding goals. Models 5 through 12 include the subset of projects that delivered on their successful Kickstarter campaigns.

Explanation 1: Weak signals. To assess the strength (or weakness) of founder attributes that can be used as signals, I examine their impact on the projects' long-term success. If founder attributes are weak signals, it would be expected that the possession of such attributes would either negatively or non-significantly impact long-term success outcomes. Model 1 indicates prior start-up experience negatively impacts funding success ($p < 0.1$). When controlling for project-level signals, possessing a college degree also seems to be associated with greater delays in delivering a product to backers following a successful campaign as indicated in Model 8 ($p < 0.1$).

Interestingly, Models 9 through 12 indicate prior work experience is negatively related to the backers' satisfaction with the delivered product ($p < 0.05$). However, Models 9, 11, and 12 reveal prior entrepreneurial experience is positively related to backers' satisfaction with the delivered product ($p < 0.1$). This suggests that having prior work experience does not lend itself to developing a quality project, but possessing entrepreneurial experience seems to provide founders with knowledge and understanding to better anticipate what is necessary to satisfactorily fulfill preorders on an entrepreneurial project. Taken together, these results seem to suggest founder attributes pertaining to educational and professional experience are weak indicators of a venture's quality and plausibility.

Explanation 2: Superseding signals. Evaluating the use and effectiveness of superseding signals is a two-part empirical exercise that entails analyses of long-term outcomes and campaign outcomes (see Model B below). Model A informs the effectiveness of project-level signals on a project's ability to deliver a timely and quality product. Models 11 and 12 suggest campaign videos that depict a product in action seem to impact backers' satisfaction with a product's quality post-delivery ($p < 0.05$). This may suggest that projects that are able to showcase a product at the time a campaign launches are more apt to deliver quality products since their products are more developed. Alternatively, projects that use a video to depict their products may be more likely to develop a vibrant community of backers who are more likely to express their satisfaction after a campaign concludes. Overall, these analyses reveal project-level signals do not predict a project's quality.

Explanation 3: Withholding valid signals to engender relatability. To assess whether founders are actively choosing to withhold valid individual-level signals and the effectiveness of this strategy, I analyze the impact of founder-level attributes on long-term success;

complemented by a subsequent analysis of the impact of revealing founder-level signals on campaign success in Model B. As previously discussed, founder-level attributes that relate to educational background and professional experience do not predict a project's long-term success and viability. However, prior entrepreneurial experience impacts backers' satisfaction with a delivered product.

4.5.3. Model B: Campaign Success Outcomes

I next analyze the drivers of campaign success. I modeled the effects of founder attributes, revealed founder signals, and project-level signals on the three distinct campaign outcomes of *funding success*, *amount raised*, and *number of backers*. Models 13 through 15 are logistic regression models that assess the drivers of *funding success*. I employ logistic regression models since *funding success* is a binary outcome variable. Models 16 through 18 are ordinary least squares regression models that assess the drivers of *amount raised*. Models 19 through 21 are negative binomial regression models since *number of backers* constitutes a count variable that is over-dispersed¹⁶.

Main results. Table 4.7 shows descriptive statistics and variable correlations amongst the subset of projects for which I collected founders' biographic information from external sources outside the Kickstarter campaigns (N = 364). The variable correlations indicate the data is not subject to problems arising from collinearity. Table 4.8 reports the regression estimates across the three campaign success outcomes: (1) *funding success*, (2) *amount raised*, and (3) *number of backers* for projects where founder biographic information was available outside the Kickstarter campaign.

¹⁶ Since I use a subset of the overall sample based on the availability of external founder biographies, selection bias could inform the results reported in this study. In future studies, I will use a Heckman correction to correct for selection bias and associated issues arising from endogeneity.

Table 4.7: Descriptive Statistics and Correlations for Projects with External Founder Biographies

		Mean	S.D.	Min	Max	(1)	(2)	(3)	(4)	(5)	(6)	(7)
(1)	Campaign Length (Days)	33.346	8.199	7	60	1						
(2)	Goal (ln)	9.944	0.983	8.517	12.899	0.09	1					
(3)	Company or Product	0.363	0.481	0	1	-0.02	0.11	1				
(4)	Campaign Has Prototype	0.728	0.446	0	1	0.01	-0.01	0.31	1			
(5)	Campaign Has Timeline	0.217	0.413	0	1	0.06	0.21	0.21	0.19	1		
(6)	Campaign Has Budget	0.06	0.239	0	1	-0.09	0.03	-0.05	-0.03	0.03	1	
(7)	Campaigns Backed by Founder (ln)	0.93	1.064	0	4.828	0.03	-0.02	0.14	0.27	0.18	0.02	1
(8)	Kickstarter Category	1.448	0.498	1	2	0.01	0.16	-0.02	-0.31	-0.02	0.05	-0.15
(9)	Campaign Has Video	0.816	0.388	0	1	-0.04	0.11	0.11	0.33	0.22	0	0.3
(10)	Founder Appears in Photo	0.654	0.476	0	1	-0.08	-0.11	-0.39	-0.11	-0.12	0.01	0.06
(11)	Female on Founding Team	0.223	0.417	0	1	0.04	0.01	0.09	-0.01	0.05	0	-0.02
(12)	Minority on Founding Team	0.195	0.397	0	1	-0.04	0.2	0.08	-0.04	0.14	-0.01	-0.07
(13)	College Degree (Possess)	0.835	0.372	0	1	-0.08	-0.06	0.01	-0.02	0.13	0.08	0.12
(14)	Advanced Degree (Possess)	0.275	0.447	0	1	0.09	0.05	0.07	0	0.15	-0.1	0.06
(15)	Educational Focus (Possess)	0.772	0.42	0	1	0.01	-0.01	-0.04	0.04	0.08	0	0.1
(16)	Professional Experience (Possess)	0.94	0.239	0	1	0.03	-0.04	0.05	0.08	0.11	-0.03	0.13
(17)	Employers (Possess)	0.783	0.413	0	1	0	0.05	0.08	-0.02	0.12	0.02	0.19
(18)	Start-Up Experience (Possess)	0.453	0.498	0	1	-0.05	0.09	0.02	0.05	0.06	-0.05	0.09
(19)	College Degree (Revealed)	0.302	0.46	0	1	0.01	0.02	-0.07	0.03	0.07	0.03	0.06
(20)	Advanced Degree (Revealed)	0.091	0.288	0	1	0.02	-0.01	-0.02	0.04	0.04	-0.04	0.05
(21)	Educational Focus (Revealed)	0.297	0.457	0	1	0.09	-0.05	-0.11	0.02	0.01	0.04	0.06
(22)	Professional Experience (Revealed)	0.615	0.487	0	1	0.03	0.04	-0.13	0.04	0.1	-0.01	0.12
(23)	Employers (Revealed)	0.209	0.407	0	1	0.08	0.02	-0.04	-0.04	-0.01	0.07	-0.02
(24)	Start-Up Experience (Revealed)	0.192	0.395	0	1	0	0.13	0.02	0.02	0.08	-0.04	0.03
(25)	Personal Life (Revealed)	0.352	0.478	0	1	-0.04	0.03	-0.06	-0.03	0.03	0.13	0.03
(26)	Motivation (Revealed)	0.453	0.498	0	1	-0.06	-0.04	-0.12	0.06	0.02	-0.02	0.03
(27)	Past Kickstarter Success	0.096	0.295	0	1	-0.01	-0.05	0.12	0.18	0.05	0	0.44
(28)	Past Kickstarter Failure	0.071	0.258	0	1	0.05	-0.11	-0.03	0.03	-0.07	-0.03	0.06

		(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
(1)	Campaign Length (Days)											
(2)	Goal (ln)											
(3)	Company or Product											
(4)	Campaign Has Prototype											
(5)	Campaign Has Timeline											
(6)	Campaign Has Budget											
(7)	Campaigns Backed by Founder (ln)											
(8)	Kickstarter Category	1										
(9)	Campaign Has Video	-0.1	1									
(10)	Founder Appears in Photo	-0.05	0	1								
(11)	Female on Founding Team	-0.12	0.03	-0.05	1							
(12)	Minority on Founding Team	0.13	-0.05	-0.09	0.07	1						
(13)	College Degree (Possess)	0.09	0.11	0.07	0.08	-0.01	1					
(14)	Advanced Degree (Possess)	0.08	0.09	-0.08	0.19	0.12	0.24	1				
(15)	Educational Focus (Possess)	0.04	0.16	0.07	0.09	0	0.73	0.32	1			

(16)	Professional Experience (Possess)	0.02	0.15	0.06	0.05	0.01	0.29	0.13	0.27	1		
(17)	Employers (Possess)	0.11	0.08	0	0.12	0.06	0.32	0.22	0.35	0.31	1	
(18)	Start-Up Experience (Possess)	0.05	0.15	-0.01	-0.05	0.01	0.06	0.11	0.13	0.21	0.16	1
(19)	College Degree (Revealed)	0.08	0.07	0.1	0.04	0.02	0.29	0.14	0.31	0.12	0.14	0.09
(20)	Advanced Degree (Revealed)	0.04	0.05	-0.03	0.02	0.06	0.09	0.51	0.17	0.04	0.07	0.04
(21)	Educational Focus (Revealed)	0.04	0.04	0.11	0.01	0.03	0.22	0.21	0.35	0.06	0.04	0.13
(22)	Professional Experience (Revealed)	-0.07	0.11	0.13	0.11	-0.01	0.17	0.21	0.18	0.32	0.16	0.13
(23)	Employers (Revealed)	0.03	0	0.09	0.03	0.11	0.06	0.15	0.09	0.13	0.25	0.13
(24)	Start-Up Experience (Revealed)	0.08	0.12	0.02	0.01	0.06	0.05	0.14	0.08	0.12	0.09	0.54
(25)	Personal Life (Revealed)	0.05	-0.02	0.08	0.01	0.09	0.08	0.06	0.06	0.04	0.05	-0.03
(26)	Motivation (Revealed)	-0.08	-0.01	0.08	0.04	0	-0.01	0.08	-0.06	-0.05	0.02	0.07
(27)	Past Kickstarter Success	-0.09	0.08	0	-0.06	0.03	0.09	0.07	0.07	0.08	0.1	0.06
(28)	Past Kickstarter Failure	-0.04	-0.01	0.02	0.06	0.05	-0.05	-0.03	-0.05	-0.02	-0.11	-0.08

		(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)
(1)	Campaign Length (Days)										
(2)	Goal (ln)										
(3)	Company or Product										
(4)	Campaign Has Prototype										
(5)	Campaign Has Timeline										
(6)	Campaign Has Budget										
(7)	Campaigns Backed by Founder (ln)										
(8)	Kickstarter Category										
(9)	Campaign Has Video										
(10)	Founder Appears in Photo										
(11)	Female on Founding Team										
(12)	Minority on Founding Team										
(13)	College Degree (Possess)										
(14)	Advanced Degree (Possess)										
(15)	Educational Focus (Possess)										
(16)	Professional Experience (Possess)										
(17)	Employers (Possess)										
(18)	Start-Up Experience (Possess)										
(19)	College Degree (Revealed)	1									
(20)	Advanced Degree (Revealed)	0.35	1								
(21)	Educational Focus (Revealed)	0.67	0.42	1							
(22)	Professional Experience (Revealed)	0.16	0.15	0.18	1						
(23)	Employers (Revealed)	0.21	0.12	0.2	0.35	1					
(24)	Start-Up Experience (Revealed)	0.18	0.11	0.16	0.19	0.23	1				
(25)	Personal Life (Revealed)	0.08	0.05	-0.02	0.01	0.06	0.03	1			
(26)	Motivation (Revealed)	0.01	0.02	-0.02	-0.02	-0.01	-0.09	-0.03	1		
(27)	Past Kickstarter Success	-0.03	-0.04	-0.01	0.03	-0.01	0.08	-0.01	-0.05	1	
(28)	Past Kickstarter Failure	-0.02	0.02	0.01	-0.07	-0.06	-0.03	-0.03	-0.04	-0.09	1

Table 4.8: Understanding What Drives Kickstarter Campaign Success; Models of Funding Success, Amount Raised, and Number of Backers

	Model 13	Model 14	Model 15	Model 16	Model 17	Model 18	Model 19	Model 20	Model 21
Campaign Outcome:	Camp. Funded	Camp. Funded	Camp. Funded	Amt Raised	Amt Raised	Amt Raised	# Backers	# Backers	# Backers
Constant	-11.69 (575.16)	-13.05 (1154.70)	-12.71 (822.14)	1.78 (1.77)	1.82 (1.83)	0.57 (1.66)	1.38 (1.46)	0.72 (1.49)	-1.97* (1.17)
Founder Attributes									
College Degree (Possess)	-0.26 (0.63)	-0.35 (0.65)	-0.53 (0.75)	0.26 (0.59)	0.22 (0.60)	0.11 (0.54)	1.26*** (0.42)	1.31*** (0.48)	1.34*** (0.38)
Advanced Degree (Possess)	0.24 (0.32)	0.49 (0.38)	0.40 (0.44)	0.59 (0.36)	0.79* (0.43)	0.66* (0.39)	0.11 (0.23)	0.31 (0.28)	0.71*** (0.26)
Educational Focus (Possess)	0.23 (0.55)	0.23 (0.57)	0.27 (0.65)	0.02 (0.53)	0.06 (0.56)	-0.11 (0.50)	-0.37 (0.37)	-0.43 (0.44)	-0.77** (0.36)
Professional Experience (Possess)	14.04 (575.16)	15.40 (1154.70)	14.60 (822.14)	0.32 (0.67)	0.34 (0.70)	-0.34 (0.63)	0.89* (0.51)	0.95* (0.52)	-0.07 (0.43)
Employers (Possess)	0.80* (0.45)	0.75 (0.47)	1.00* (0.52)	0.73* (0.40)	0.74* (0.42)	0.88** (0.38)	0.01 (0.28)	0.01 (0.29)	0.59** (0.25)
Start-Up Experience (Possess)	0.52* (0.28)	0.84** (0.33)	0.96** (0.37)	0.56* (0.30)	0.50 (0.37)	0.45 (0.33)	0.58*** (0.20)	0.66*** (0.25)	0.72*** (0.22)
Founder Revealed Signals									
College Degree (Revealed)		0.64 (0.42)	0.48 (0.47)		0.06 (0.46)	-0.09 (0.41)		-0.13 (0.35)	-0.39 (0.28)
Advanced Degree (Revealed)		-0.45 (0.59)	-0.28 (0.69)		-0.62 (0.66)	-0.68 (0.59)		-0.65 (0.46)	-1.36*** (0.39)
Educational Focus (Revealed)		-0.37 (0.43)	-0.30 (0.51)		0.02 (0.48)	0.20 (0.43)		0.14 (0.39)	0.66** (0.32)
Professional Experience (Revealed)		-0.13 (0.32)	-0.03 (0.38)		0.07 (0.35)	0.23 (0.32)		0.05 (0.23)	0.10 (0.21)
Employers (Revealed)		0.03 (0.38)	0.08 (0.44)		-0.09 (0.41)	-0.10 (0.37)		-0.06 (0.29)	-0.32 (0.26)
Start-Up Experience (Revealed)		-0.80* (0.43)	-1.07** (0.48)		0.05 (0.46)	-0.14 (0.41)		-0.45 (0.35)	-0.48* (0.29)
Personal Life (Revealed)		-0.27 (0.30)	-0.31 (0.34)		-0.40 (0.31)	-0.33 (0.28)		-0.43** (0.21)	-0.04 (0.19)
Motivation (Revealed)		-0.02 (0.29)	-0.07 (0.35)		0.19 (0.31)	0.25 (0.28)		0.33 (0.21)	0.54*** (0.18)
Project-Level Signals									
Company or Product			1.01*** (0.37)			0.96*** (0.33)			0.81*** (0.20)
Campaign Has Prototype			1.97*** (0.58)			1.52*** (0.35)			1.73*** (0.22)
Campaign Has Timeline			0.97** (0.39)			0.90** (0.35)			0.21 (0.22)
Campaign Has Video			2.06*** (0.80)			1.78*** (0.38)			2.02*** (0.26)
Campaign Has Budget			0.21 (0.73)			0.85 (0.56)			-0.07 (0.36)
Controls									
Campaign Length (Days)	0.02 (0.02)	0.03* (0.02)	0.05** (0.02)	0.03* (0.02)	0.03* (0.02)	0.04** (0.02)	-0.02 (0.01)	-0.01 (0.01)	-0.01 (0.01)

Goal (ln)	-0.59*** (0.17)	-0.59*** (0.17)	-1.10*** (0.23)	0.42*** (0.16)	0.42*** (0.16)	0.19 (0.14)	0.10 (0.12)	0.15 (0.12)	0.09 (0.10)
Female on Founding Team	0.29 (0.33)	0.30 (0.34)	0.29 (0.41)	-0.40 (0.37)	-0.45 (0.37)	-0.51 (0.33)	0.09 (0.24)	0.01 (0.26)	-0.13 (0.23)
Minority on Founding Team	0.14 (0.37)	0.23 (0.38)	0.09 (0.44)	-0.55 (0.38)	-0.49 (0.39)	-0.48 (0.35)	0.16 (0.27)	0.11 (0.30)	-0.08 (0.23)
Kickstarter Category	0.01 (0.29)	0.03 (0.30)	0.38 (0.35)	-1.00*** (0.31)	-0.96*** (0.32)	-0.40 (0.29)	0.25 (0.24)	0.16 (0.24)	0.25 (0.20)
Founder Appears in Photo	-0.58** (0.29)	-0.54* (0.31)	-0.04 (0.38)	-0.86*** (0.31)	-0.86*** (0.33)	-0.23 (0.31)	-0.29 (0.23)	-0.27 (0.24)	0.10 (0.20)
Location-California	0.37 (0.35)	0.35 (0.36)	0.19 (0.41)	0.76** (0.38)	0.67* (0.39)	0.34 (0.35)	0.56** (0.26)	0.62** (0.29)	0.22 (0.24)
Location-New York	0.21 (0.44)	0.16 (0.46)	0.42 (0.55)	0.33 (0.52)	0.19 (0.53)	0.29 (0.47)	0.19 (0.32)	0.15 (0.32)	0.28 (0.29)
Location-Florida	0.56 (0.64)	0.54 (0.66)	0.58 (0.74)	-0.05 (0.68)	-0.15 (0.70)	-0.34 (0.62)	-0.05 (0.46)	-0.11 (0.47)	-0.67 (0.42)
Campaigns Backed by Founder (ln)	0.91*** (0.15)	0.91*** (0.15)	0.71*** (0.17)	1.04*** (0.16)	1.06*** (0.16)	0.60*** (0.15)	0.79*** (0.11)	0.81*** (0.11)	0.51*** (0.10)
Past Kickstarter Success	0.02 (0.47)	0.13 (0.49)	0.04 (0.54)	0.42 (0.56)	0.37 (0.57)	0.33 (0.51)	0.72** (0.33)	0.72** (0.33)	0.69** (0.31)
Past Kickstarter Failure	-0.28 (0.57)	-0.25 (0.57)	-0.44 (0.61)	-1.15** (0.58)	-1.14* (0.59)	-1.02* (0.52)	0.12 (0.38)	0.15 (0.40)	0.29 (0.34)
lnalpha									
_cons							1.05*** (0.07)	1.02*** (0.07)	0.72*** (0.07)
N	364	364	364	364	364	364	364	364	364
r2	0.24	0.25	0.39	0.30	0.31	0.46	0.03	0.04	0.07
chi2	103.62	110.65	171.08				136.63	151.32	290.48

* p < 0.10, ** p < 0.05, *** p < 0.01; two-tailed tests. Models 13 through 21 include the subset of projects for which external founder biographies could be located.

Explanation 1: Weak signals. As discussed above, a signal's strength (or weakness) is based on its ability to predict a project's long-term success outcomes. Since Model B assesses the campaign results, these models do not reveal information about the strength of the founder-level attributes on a project's long-term success.

Explanation 2: Superseding signals. As discussed in Model A, project-level signals do not impact the long-term success of a project seeking resources on a crowdfunding platform. In other words, despite investing resources in prototyping a product or forming an organization, these indicators of a project's development do not influence long-term plausibility and quality of the delivered product.

Interestingly, many of the project-level signals significantly impact campaign success. When founders indicate they have formed a company, rather than a one-off project for which they are seeking financial resources to further develop, they are more likely to realize funding success ($p < 0.01$) as indicated in Model 15, raise more financial capital ($p < 0.01$) as shown in Model 6, and attract more backers ($p < 0.01$) as evidenced in Model 9. This suggests backers respond favorably to the appearance of more structured and recognizable organizational forms. When founders demonstrate or describe working prototypes, they are more likely to realize funding success ($p < 0.01$) as shown in Model 15, raise more financial capital ($p < 0.01$) as shown in Model 6, and attract more backers ($p < 0.01$) as shown in Model 21. These results are consistent for using a video, which often serves as a mechanism for campaigns to further illustrate their prototype's capabilities. These findings suggest backers perceive campaigns with developed prototypes more favorably than those comprised of only conceptual ideas. Finally, as an indicator of preparedness, founders that outline post-campaign timelines are more apt to realize funding success ($p < 0.05$) as shown in Model 15 and generate greater amounts of financial resources ($p < 0.05$) as shown in Model 18.

Taken together with the results from Model A, project-level signals significantly impact backers' decisions to contribute financial capital to uncertain early-stage projects. However, these project-level indicators do not predict a campaign's long-term success as determined by ability to deliver, time to deliver, and quality of delivered product. This suggests backers interpret certain signals to be indicative of quality that are not informative in the long-run.

Explanation 3: Withholding valid signals to engender relatability. As discussed in Model A, founder-level attributes that relate to educational background and professional

experience do not predict a project's long-term success and viability. However, prior entrepreneurial experience impacts backers' satisfaction with a delivered product.

Interestingly, revealing prior entrepreneurial experience negatively impacts the outcome of funding success as shown in Model 14 ($p < 0.1$). This effect is magnified when controlling for project-level signals as shown in Model 15 ($p < 0.05$). Similarly, when controlling for the project-level signals, revealing entrepreneurial experience has a negative impact on number of backers ($p < 0.1$). When controlling for the project-level signals, revealing the possession of an advanced degree also has a negative impact on number of backers ($p < 0.01$). In contrast, revealing founders' academic disciplines, when controlling for project-level signals, positively influenced the number of backers to a campaign.

Taken together, these findings provide support for the explanation that entrepreneurs are withholding valid signals of a venture's ultimate quality to broadly appeal to prospective backers. This is supported by the dual empirical patterns wherein revealing prior entrepreneurial experience is negatively related to a campaign's funding success and possessing this experience is positively related to a project's ultimate quality. Additional inquiry is necessary to further unpack this relationship.

4.6. Discussion

I set out to examine why entrepreneurs withhold individual-level signals in the crowdfunding context. Using an empirical approach to examine three possible explanations, many interesting insights emerged from this study. Most interestingly, founders' pre-entry entrepreneurial experience and accomplishments, previously theorized to serve as valid signals of a venture's quality and plausibility given uncertain conditions (Certo, 2003; Eisenhardt & Schoonhoven, 1990; Higgins & Gulati, 2006; Sanders & Boivie, 2004), have little bearing on a campaign's

execution and a product's quality. Second, while entrepreneurial experience is indicative of backers' satisfaction with a delivered product, revealing this experience paradoxically inhibits financial resource acquisition in the first place. Running counter to classic signaling literature (Spence, 1973), this suggests founders may experience what I deem a *privilege penalty*, in which backers are less apt to fund individuals who appear adept or wealthy because the relative value of their financial contribution is diminished since such founders can be inferred to have the necessary capital on hand to self-fund their ventures. Third, backers respond strongly to project-level signals of advancement and resource investment even if they are not predictive of a campaign's long-term success. This is consistent with prior work that suggests crowds are able to interpret high-quality ventures at a similar rate to expert investors, but they also have a larger number of false positives in their funding decisions (Mollick & Nanda, 2016). Such findings contribute to this body of work by suggesting members of the crowd respond to obvious and readily available signals in their suboptimal funding decisions.

Finally, using a unique empirical approach that matches signals revealed with signal availability (i.e., founder attributes), I contribute to the existing literature on crowdfunding that has suggested founder-level signals are important for successful resource acquisition efforts (Ahlers et al., 2015; Mollick, 2014). This empirical approach provides a more nuanced understanding of the use and effectiveness of signals in the crowdfunding setting, an increasingly popular context for early-stage ventures to acquire necessary financial capital. Each of these findings is further discussed below.

Role of Founders' Pre-Entry Experience and Accomplishments. Prior theorizing and empirical findings have found founder-level attributes, such as pre-entry experience and accomplishments, influence many entrepreneurial outcomes (i.e., resource acquisition, strategic

partnerships, and early hiring) amidst conditions of uncertainty (Certo, 2003; Eisenhardt & Schoonhoven, 1990; Higgins & Gulati, 2006; Sanders & Boivie, 2004). However, these findings are based on the Spencian premise that signals are costly and difficult to attain and, therefore, in the absence of concrete indicators of quality, serve as indicators for an early-stage venture's plausibility and quality (Spence, 1973). This study, however, suggests founder-level signals of achievement and experience are not predictive of a crowdfunding project's long-term success, potentially contradicting a core assumption of signaling theory (i.e., signal validity).

This finding provides an interesting avenue for future inquiry. There are two possible reasons to explain why founder-level attributes are not strong signals in the crowdfunding setting: (1) nature of the projects and/or (2) nature of the task and execution. Since crowdfunding addresses the incongruence between entrepreneurial capital supply and demand (Bruton et al., 2015), it provides an outlet for underrepresented populations outside traditional entrepreneurial hubs to attain financial capital for their ideas (Sorenson et al., 2016). This may suggest that prior studies of signaling and resource acquisition in traditional settings suffer from a structurally-embedded and systemic selection bias at the societal level since variance in founder-level attributes is largely above a baseline threshold that is not representative of the population at large (Shane, 2008). In contrast, crowdfunding allows a wider swath of innovators, irrespective of background characteristics, to solicit resources for their novel ideas, thereby reducing (or potentially eliminating) the effects of pre-entry experience and accomplishments.

Alternatively, the skillset required to successfully deliver a product or service following a successful crowdfunding campaign may be fundamentally different than the skillset required to follow-through on a high growth venture funded by VCs and institutional investors. For example, the social capital afforded to individuals with prominent educational and professional

affiliations assists in generating high-value partnerships, gathering advice, and attaining subsequent capital, and thus may not be as relevant in the crowdfunding setting where a project's long-term success is determined by its ability to manufacture a quality product. Success is therefore a function of operations rather than continued growth. Further research is needed to explore the underlying mechanisms that influence this finding in more depth.

Privilege penalty. Another interesting insight to emerge from this analysis is the potential that a privilege penalty exists for entrepreneurs in the crowdfunding setting. This suggests founders with high-status backgrounds and affiliations who reveal this information are less apt to receive financial support from crowdfunding backers. This is particularly interesting since prior literature often assumes available signals are utilized to address inherent conditions of uncertainty (e.g., Benjamin & Podolny, 1999; Hahl & Zuckerman, 2014). Yet, in the crowdfunding setting, such signals may be interpreted as indicators of wealth and ability, thereby leading potential resource providers to conclude that the relative value of their financial contribution is low since founders should be financially able to self-fund their emergent projects. Since founders benefit from the community benefits that validate early-stage ideas in the crowdfunding setting, revealing high-status signals may suggest a suboptimal strategy for successful resource acquisition.

It is important to note the evidence of a privilege penalty was not unequivocally supported in the results of this study. It primarily came to light amongst backers who revealed prior entrepreneurial experience. While this entrepreneurial experience positively influenced successful follow-through after reaching a funding goal, revealing this experience was maladaptive for resource acquisition in the first place. When controlling for project-level signals, revealing advanced graduate degrees also negatively influenced backers' willingness to support a

crowdfunding campaign. Though entrepreneurial experience is a binary variable, founders suggest a level of personal experience, aptitude, and success in revealing it. Similarly, signaling the possession of advanced degrees also connotes wealth and status over and above the societal norm. In contrast, the other founder-level attributes in the analysis are coded as binaries that do not indicate the associated status of the attribute. For example, academic affiliations and prior employers are coded as binary variables, rather than categorical variables to distinguish these founder-level attributes with respect to status. Using techniques such as those employed by Rider (2012), where the worldwide university rankings issued by *U.S. News & World Report* were used to code university status, the impact of revealing high-status affiliations versus low-status affiliations can be better understood to further inform the findings of this study.

As a preliminary exercise, I coded the academic disciplines of founders in this study's sample across functional areas to begin to understand the degree to which founders highlight different academic disciplines in their pitches to acquire early-stage financial capital for their projects. The results of this exploratory exercise are depicted in Table 4.9. This shows founders with engineering degrees are more likely to reveal their academic disciplines than those with business degrees. While I do not include the categorical academic discipline variable in the analyses of this study, future work can also address whether backers respond more favorably to certain types of revealed academic disciplines than others in their funding decisions.

Ultimately, more nuanced coding strategies and empirical analyses can further address the possible influence of a privilege penalty on the use and effectiveness of signals in the emergent crowdfunding setting.

Table 4.9: Academic Signal Possession and Use across Disciplines amongst Crowdfunding Founders

Academic discipline	Number of founders who possess signal	Number who reveal signal*	Reveal signal in Kickstarter founder bio* <i>Signal location is not exclusive</i>	Reveal signal in Kickstarter campaign text*
Business	98	34 (34.7%)	27 (27.6%)	9 (9.2%)
Engineering	81	42 (51.9%)	32 (39.5%)	19 (23.5%)
Computer Science	24	9 (37.5%)	8 (33.3%)	1 (4.2%)
Design/Architecture	68	22 (32.4%)	19 (27.9%)	6 (8.8%)
Other	104	27 (26.0%)	23 (22.1%)	10 (9.6%)
Business + Engineering, Computer Science, or Design/Architecture	9	1 (11.1%)	1 (11.1%)	0 (0%)

*The percentages in the Signal Revealed columns are based on the number of founders who possessed the signal (as indicated in the Signal Possessed column). This value varies by signal (row).

Backer naiveté toward project-level signals. The findings of this study also indicate crowdfunding backers respond favorably to project-level signals of quality in their decisions to financially support a project in reaching its campaign goal. However, project-level superseding signals that showcase the development of a project seem to have little bearing on a project’s long-term success and quality. This is particularly interesting since the project-level indicators are more obvious and readily available than the founder-level attributes that are buried in the text of a crowdfunding campaign page or founder biography. Thus, backers’ positive responses to these project-level variables may reflect their naiveté in that they believe signals exist in this setting even though such variables do not predict a venture’s success.

This finding builds on prior theorizing that has divergently extolled both the wisdom of crowds in generating collective rationality (e.g. Budescu & Chen, 2014; Ray, 2006; Surowiecki, 2005) and the madness of crowds in fostering heightened irrationality (Mackay, 1852). Specifically, this study links to empirical work that indicates professional investors and non-

professional crowd members are equally likely to contribute to high-quality projects in the crowdfunding domain, but members of the crowd are more likely than professional investors to contribute to low-quality projects (Mollick & Nanda, 2016). In other words, members of the crowd have a higher incidence of false positives than professional investors when funding crowdfunding campaigns. The findings of this study begin to highlight the project-level indicators to which non-professional members of the crowd are potentially responding in their decisions to provide resources to early-stage ventures. Future studies can experimentally manipulate project-level attributes between professional and non-professional observers to analyze how members of each group respond to these indicators.

Crowdfunding. The findings of this study also contribute to the emergent body of literature on crowdfunding. Extant studies suggest founder-level attributes and project-level characteristics serve as important signals in generating resources via crowdfunding (Ahlers et al. 2015; Courtney et al., 2017; Mollick, 2014; Mollick & Robb, 2016). However, such studies suffer from several limitations pertaining to context and data availability. Contextually, some prior work analyzes equity crowdfunding where backers contribute to campaigns in exchange for equity, much like traditional settings of entrepreneurial resource acquisition (e.g., Ahlers et al. 2015). In contrast, rewards-based crowdfunding diverges from this setting by allowing entrepreneurs to seek resources in exchange for presales of a product rather than ownership stakes in a company. As such, the signals to which backers respond may differ across the various types of crowdfunding.

Studies of signaling in rewards-based crowdfunding also suffer from data limitations. Broadly, the findings of this study are consistent with those of Mollick (2014) that suggest project-level signals of quality are predictive of a campaign's success. However, this study

further suggests project-level signals are not predictive of a project's long-term viability and success. Interestingly, few studies have examined the impact of founder-level signals in crowdfunding campaigns, and to the best of my knowledge, none have assessed the validity of these signals by collecting data on founder attributes outside what founders indicate on the crowdfunding platform. This research design and empirical strategy further highlight the impact of founder attributes and revealed signals in the crowdfunding setting on both the oft-explored outcome of campaign success and the less-explored outcome of long-term post-campaign success.

Future directions. Several opportunities exist to extend and explicate the findings presented in this study. First, future research can examine an underlying assumption of signaling theory in the crowdfunding domain; that in the absence of direct indicators of a venture's quality, costly signals that are difficult to attain can proxy the likelihood a venture will realize long-term success (Spence, 1973). Beyond the short-term effectiveness of signals on immediate outcomes of interest (i.e., campaign funding success), future studies can assess whether certain signals are more predictive than others in terms of long-term success. Future studies can also manipulate founder- and project-level signals in an experimental setting with non-professional and professional observers to understand how different audience members interpret different signals when making funding decisions. (Fisher et al., 2016, 2017). Second, more research is required to understand whether a privilege penalty exists in settings where entrepreneurial projects seek financial capital from broad swaths of the population (i.e., crowds). This study begins to suggest the crowd penalizes founders who reveal prior entrepreneurial experience and advanced degrees, the two variables in this study most indicative of status. Future work can segment the other variables in this study (i.e., prior employers, academic affiliations) based on associated status to

better understand how prospective backers respond not only to the use of signals, but the use of high-status versus low-status signals. Experimental research designs can also manipulate entrepreneurial attributes (high- and low-status) as well as decisions to reveal them in campaigns to further explicate the role of signaling in the crowdfunding setting.

4.7. Conclusion

This study began with puzzle: *founder(s) of crowdfunding campaigns often withhold founder-level attributes associated with past experience and expertise*. This is perplexing since prior work largely suggests entrepreneurs benefit from sharing their past experience to reduce present uncertainty. Yet prior research largely focuses on intermediated markets where entrepreneurs seek resources from professional investors. By examining three possible explanations to this question, this study provides insights into the signaling literature and suggests a number of avenues for further exploration.

5. CONCLUSION

It is not the man who has too little, but the man who craves more, that is poor.

- Seneca

This dissertation explores the role of emergent communities of supporters in early-stage venture resource acquisition. I explore this question in the context of rewards-based crowdfunding where entrepreneurs solicit relatively small contributions from a relatively large number of distributed resource providers who seek to access a venture's product offering (once developed) or support its broader purpose.

In Chapter 2, I surveyed the literature on crowdfunding to develop a typology of theoretical mechanisms: *project-centric quality mechanisms*, *backer-centric behavioral mechanisms*, and *environment-centric institutional mechanisms*. Research on project-centric quality mechanisms largely reflects research conducted in traditional venture financing contexts where entrepreneurs draw on their institutional environments and cultural contexts to align their ventures with generally accepted norms and expectations of expert resource providers. Research on backer-centric behavioral mechanisms diverges from prior theorizing on entrepreneurial resource acquisition by emphasizing the cascading effects of early resource providers on later resource providers. While largely outside the scope of this dissertation, research on environment-centric institutional mechanisms addresses the formation and institutionalization of generally accepted norms and values amongst geographically disperse resource providers in this setting. I then reviewed the literature on communities in organizations to suggest the role of community-centric social capital in facilitating successful resource acquisition for early-stage ventures.

Since prior literature offered an incomplete perspective on how entrepreneurs attain resources from distributed non-professional resource providers, I used two complementary studies to address this research gap. In Chapter 3, I qualitatively examined how early-stage ventures acquire resources from geographically distributed crowds. This study's central contribution is a process model of *community-based resource acquisition* consisting of three distinct mechanisms: *community building*, *community engaging*, and *community spanning*.

Community building entails sharing real-time ideas and events to identify a common domain of interest and share in the attainment of a new venture's vision. Community engaging is the co-construction of content and concepts between a venture's founder(s) and supporters that are then integrated into subsequent product development and community building efforts. Community spanning entails leveraging emergent backer communities to span into broader existing audiences to generate greater visibility for the venture. Through this ongoing process, early-stage ventures deepen, co-construct, and amplify their narratives. By temporally analyzing resource acquisition in the crowdfunding setting, I illustrate and theoretically conceptualize the dynamic nature of ongoing sensegiving and sensemaking between founders and backers as early-stage ventures create vibrant and interactive forums where they can attain valuable feedback, financial capital, and establish supporter communities.

In Chapter 4, I complemented the inductive portion of this dissertation with a quantitative analysis of possible explanations as to why crowdfunding campaign founders elect not to reveal signals of past accomplishment and experience. Using an original dataset of Kickstarter campaigns launched between August 2014 and November 2014, I examined three possible explanations to reveal several interesting insights. First, founders' pre-entry entrepreneurial experience and accomplishments, previously theorized to serve as valid signals of a venture's

quality and plausibility given uncertain conditions (Certo, 2003; Eisenhardt & Schoonhoven, 1990; Higgins & Gulati, 2006; Sanders & Boivie, 2004), have little bearing on a campaign's execution and a product's quality. Second, while entrepreneurial experience is indicative of backers' satisfaction with a delivered product, revealing this experience paradoxically inhibits financial resource acquisition in the first place. Third, backers respond strongly to project-level signals of advancement and resource investment even if they are not predictive of a campaign's long-term success. Using this approach, I shed light on the use of signals and their reception amongst prospective resource providers in the crowdfunding domain.

5.1. Contributions

Taken together, these studies explain how entrepreneurs form communities of supporters around their early-stage projects to facilitate the acquisition of resources. For research on communities in organizations, I extend prior work that depicts how online communities form horizontal structures to develop innovative solutions (Bagozzi & Dholakia, 2006; Faraj, Jarvenpaa, & Majchrzak, 2011; Faraj & Johnson, 2011; Fleming & Waguespack, 2007) and how organizations tap into online communities as sources of human capital and intellectual capital (Dahlander & Wallin, 2006; Jeppesen & Frederiksen, 2006) to better understand community-based resource acquisition. Prior work at the intersection of entrepreneurship and communities addresses the role of communities in opportunity recognition (Autio et al., 2013) and the propensity of community members to commercialize innovative ideas (Mollick, 2016). Yet such research does not discuss how communities serve as sources of resource capital. I further suggest that entrepreneurs, fueled by the interconnectivity of online crowdfunding platforms, play an active role in building and engaging geographically-unbounded communities around a common purpose to generate expansive social capital and attain resources for their early-stage ideas in a

divergent process from those executed by user-generated communities and firm-hosted-communities.

For research on entrepreneurial resource acquisition, I address the shifting landscape of entrepreneurial finance and the factors that influence non-professional resource providers in online, geographically unbridled settings (Drover et al., 2017). Prior literature offers valuable conceptual frameworks and empirical findings to better understand how institutional norms (e.g., Martens et al., 2007; Navis & Glynn, 2011; Zimmerman & Zeitz, 2002) and network ties (e.g., Hallen & Eisenhardt, 2012; Stuart et al., 1999) influence the outcomes of resource acquisition efforts for nascent ventures. Yet our understanding of venture finance is mostly limited to professional investors who make decisions based on established heuristics and biases derived from prior experience. Instead, I posit supporter communities play a critical role in disintermediated resource acquisition processes and examine the actions taken by entrepreneurs to facilitate the formation of communities to generate flows of resource capital, intellectual capital, and social capital.

I also contribute to the signaling literature. I find that founder-level attributes previously theorized to serve as valid signals given uncertain conditions have little bearing on a crowdfunding campaign's execution and quality. Second, while founders with prior entrepreneurial experience are more likely to deliver quality products after successfully raising financial capital via crowdfunding, revealing this experience inhibits financial resource acquisition in the first place. This contradicts the classic signaling literature in which attributes that are difficult to attain are viewed positively by external observers (Spence, 1973). Third, backers respond strongly to project-level signals even if they are not predictive of a campaign's

long-term success. These findings call into question whether signals that are valid in more traditional venture financing settings carryover to the crowdfunding setting.

Broadly, in examining the rich phenomenon of rewards-based crowdfunding as an entrepreneurial financing mechanism for early-stage projects, I shed light on how entrepreneurs attain resources from distributed resource providers with minimal intermediation from expert investors. The emergence of crowdfunding platforms parallels a broader societal shift from centralized broadcasting of the twentieth century to the democratized information flows of the twenty-first century (Davis, 2016). This reversion, reflective of the Greco-Roman public forums, enables social dialogue to occur without physical interaction and with little deterrence from institutionalized forces or expert intermediaries (Standage, 2013). In the realm of entrepreneurial finance, this necessitates theory to better understand the factors that facilitate funding when non-expert resource providers are making contributions. Since founders directly infuse elements of themselves into their early-stage projects and continually interact with multiple contributors on crowdfunding platforms, I propose theory on rewards-based crowdfunding to begin to conceptualize the processes by which democratized financing will not only impact the modern-day flow of capital, but also the future trajectory of innovation (Sorenson et al., 2016).

5.2. Future Directions

While our understanding of crowdfunding as an entrepreneurial resourcing mechanism continues to materialize, emergent findings predominantly emphasize the impacts of project-centric perceptions and backer-centric behaviors on the outcome of resource acquisition. While the preceding chapters synthesize the project-centric and backer-centric mechanisms identified in prior studies and expand on this body of research to offer community-based social capital as a mechanism of successful resource acquisition, future research can attend to pre-campaign

founder-level antecedents and post-campaign wealth generating outcomes—both of which are undertheorized in prior research. Both founder-level antecedents and post-campaign wealth generating outcomes are described in greater detail below. Methodologically, further research can unpack the dynamic interactions between founders and supporter communities in greater detail to further understand how entrepreneurs leverage communities during the early stages of their ventures. I therefore propose several extensions to more comprehensively understand crowdfunding as an entrepreneurial funding mechanism.

Founder-level antecedents. While prior entrepreneurship research discusses how entrepreneurs inherently inject elements of themselves into their nascent ventures (Chatterjee & Hambrick, 2007; Wry & York, 2017), this self-infusion may be particularly acute in the crowdfunding context where external parties evaluate entrepreneurial projects at their earliest stages when entrepreneur and venture identities are difficult to separate (Navis & Glynn, 2011). Since external audiences embody different tastes and preferences that influence judgments (Fisher et al., 2017; Lamin & Zaheer, 2012; Pahnke et al., 2015), founders in the crowdfunding setting play a heightened role in identifying and engaging directly with appropriate groups of supporters. These expansive social processes further magnify the role of the entrepreneur in resonating with a relatively large group of supporters rather than relying solely on connections with professional exchange partners. As such, theorizing on the role of the individual entrepreneur in crowdfunding provides a means to respond to the increased call for integrated theoretical work on the mechanisms and antecedents of successful resource acquisition from distributed crowds (McKenny et al., 2017; Powell, 2016). I thereby suggest further inquiry into founder cognitions and motivations, as well as prior learning as discussed below.

Cognitions and motivations. Researchers have increasingly adopted a microfoundations perspective to explain how individual-level attributes, predominantly cognitions, motivations, and behaviors influence macro-level structures in organizations and entrepreneurship (Abell, Felin, & Foss, 2008; Felin, Foss, & Ployhart, 2015; Zahra & Wright, 2011). Prior studies underscore several distinct relationships between individual-level variables and entrepreneurial outcomes. Self-efficacy positively impacts the rate of entrepreneurial entry (Hmieleski & Baron, 2008; Zhao, Seibert, & Hills, 2005) and the amount of personal wealth and time entrepreneurs invest in their start-up ventures (Cassar & Friedman, 2009). Emotional stability positively influences the pursuit of entrepreneurial opportunities (Zhao, Seibert, & Lumpkin, 2010). Overconfidence leads to excessive entrepreneurial entry (Camerer & Lovallo, 1999; Moore, Oesch, & Zietsma, 2007), biased judgments of venture feasibility (Busenitz & Barney, 1997; Cassar, 2010), and the pursuit of novel and risky innovations (Galasso & Simcoe, 2011; Simon & Houghton, 2003). Narcissism positively impacts the attention given to disruptive technologies (Gerstner, König, Enders, & Hambrick, 2013) and has been suggested as influential in the pursuit of novel opportunities (Navis & Ozbek, 2016).

Yet such studies emphasize outcomes over which entrepreneurs possess agency (i.e., entrepreneurial entry), rather than the nuanced ways a founder's cognitions and motivations influence outcomes that depend on external perceptions for their actualization (i.e., resource acquisition). Given the wide array of backgrounds and personal experiences individuals bring to bear on their crowdfunding projects, theorizing on individual cognitions and motivations could provide a more interesting lens to understand the macro-level structures of crowdfunding.

An individual's conscientiousness or attention to detail could influence the quality of a campaign's page and video. An individual's self-efficacy may influence projected identity

claims, while narcissism could influence the linguistic cues utilized throughout campaign communications. Even before the campaign begins, cognitive factors will likely influence the role identities adopted by individuals and the associated signals they later emit. These expansive social processes further magnify the role of the entrepreneur in identifying and resonating with a relatively large group of supporters rather than relying solely on connections with high-status exchange partners to realize crowdfunding success.

Entrepreneurs' infusion of self into their nascent ventures (Chatterjee & Hambrick, 2007; Wry & York, 2017) may be particularly acute in the crowdfunding context where external parties evaluate entrepreneurial projects at their earliest stages when entrepreneur and venture identities are most difficult to separate (Navis & Glynn, 2011). As such, theorizing on the individual entrepreneur in crowdfunding provides a means to respond to increased calls for integrated theoretical work on how founders' cognitions and motivations influence the outcome of resource acquisition (Burns, Barney, Angus, & Herrick, 2015; Navis & Ozbek, 2016), as well as the mechanisms and antecedents of successful resource acquisition from distributed crowds (Short et al., 2017; Powell, 2016).

Learning effects. Research on organizational learning addresses direct and indirect learning processes by which firms innovate, adapt to changes in their environment, recognize and pursue opportunities, and develop competitive advantages (Argote, 1999). Direct learning from prior experience takes a variety of forms, most notably trial-and-error learning, experimental learning, and improvisational learning. Trial-and-error learning captures how firms alter future behaviors in response to outcomes from their prior behaviors. (Baum & Dahlin, 2007; Van de Ven & Polley, 1992). Experimental learning describes how firms attain knowledge through measured, often hypothesis-based tests, to better prepare for future decision points

(Brown & Eisenhardt, 1997; Pisano, 1994; Thomke, 2003). Improvisational learning emphasizes the processes by which firms learn from their ongoing actions to solve issues as they arise and recognize real-time opportunities (Bingham, 2009; Miner, Bassof, & Moorman, 2001; Moorman & Miner, 1998). In contrast, indirect learning describes how firms learn from observations and accounts of others' experiences, predominantly through vicarious learning (Ingram, 2002). Vicarious learning describes how firms alter their own behaviors in response to observations and perceived causal relationships between external firms' actions and ensuing outcomes (Haunschild & Miner, 1997; Greve, 1998). The behavioral changes through vicarious learning allow firms to attain knowledge without the costs of experience (Kim & Miner, 2007; Srinivasan, Haunschild, & Grewal, 2007).

While research on organizational learning in later-stage firms tends to focus on outcomes such as diversification (Bingham & Davis, 2012; Zahra, Ireland, & Hitt, 2000), acquisitions (Haleblian & Finkelstein, 1999; Hayward, 2002), and strategic alliances (Hoang & Rothaermel, 2005), learning in nascent ventures can influence the actions and strategies employed to attain early-stage resources. Crowdfunding allows learning to transpire in a variety of forms. Trial-and-error learning can occur when campaigns fail to reach their funding objectives, but later return to the crowdfunding platform with learnings from their initial experience. Founders can engage in deliberate experimental learning both before and during their respective campaigns to develop a body of knowledge on the macro-level structures that influence successful campaign outcomes. During campaigns, firms can employ improvisational learning to generate feedback from prospective backers that is then incorporated into their in-campaign strategies. In this way, campaign founders can engage in a variety of direct learning processes to enhance the likelihood of crowdfunding success.

Research on indirect, vicarious learning discusses the importance of enlarging the number and variety of observations to allow firms to induct appropriate conclusions by way of replication logic (Anand & Khanna, 2000; Schilling, Vidal, Ployhart, & Marangoni, 2003). Given the public nature of crowdfunding platforms, founders can observe and make inferences on a variety of other campaigns to influence their actions and strategies when seeking resources. However, mere observational learning without deeper inquiry may result in superficial or false inferences. For example, successful campaigns may put forth a professional pitch video, but this may be a necessary but insufficient variable for overall campaign success. Further research can attend to the ways in which entrepreneurs learn from external campaigns, their own campaign, and external resource providers to better understand the role of learning in the formation of macro-level structures on crowdfunding platforms.

Post-campaign value creation. A significant portion of crowdfunding research examines the readily observable outcomes of resource acquisition and backer decision-making. However, minimal research attends to the outcomes that occur after the campaign's conclusion which serve to generate value for various stakeholders (i.e., delivery of a product to a campaign contributor). Some studies on peer-to-peer lending assess long-term loan performance (i.e., default vs. payback), but this dichotomous variable is readily available on such lending platforms. Researchers have yet to systematically collect data on crowdfunding projects post-campaign, particularly those who seek funding via rewards-based platforms. While I begin to collect longer-term data in Chapter 4, several questions can be addressed through these longitudinal datasets. Do unsuccessful projects learn from initial failures to successfully attain resources on their second attempts? Do unsuccessful projects realize success from alternative funding sources (i.e., angels, licensing agreements)? Do successful projects follow-through on their campaign

commitments? While research suggests overfunding and complexity lead to project follow-through delays (Mollick, 2014), do individual-level characteristics influence a founder's ability to assess complexity and potential obstacles pre-campaign? Do supporters serve as a resource for successful campaigns in subsequent endeavors? Finally, research suggests the adverse effects of goal proximity and substitution on crowdfunding campaigns (Bayus & Kuppuswamy, 2017; Burtch et al., 2013), yet some campaigns still realize exorbitant success via crowdfunding. What accounts for such largescale success that seemingly defies the mechanisms in play for "average" campaigns? Significant opportunities exist to better measure and evaluate campaign outcomes for both successful and unsuccessful campaigns outside funding results. I thereby suggest further inquiry into campaign follow-through and venture formation.

Campaign follow-through. While some studies examine loan performance in the peer-to-peer lending setting where such long-term data is readily assessable on the platform, little research has examined long-term venture follow-through—a campaign's ability to develop, manufacture, and deliver on its presales following funding success. Successful follow-through requires less external interface with supporters and more focus on day-to-day operations. While a delayed product delivery may present an irritant to resource providers, failure to deliver at all means a backer will lose resource on the presale, often without safeguards to recoup their financial contributions. Thus, backers must weigh the inherent risks of rewards-based crowdfunding platforms, many of which do not guarantee refunds when ventures fail to deliver on their promised presales. As crowdfunding platforms mature, further research can address the dynamics of follow-through to better understand post-campaign actions.

Venture formation. The formation of ventures constitutes an important outcome for consideration in crowdfunding research since "entrepreneurs are socially important not because

they exist, but because they succeed in creating organizations” (Aldrich & Martinez, 2001, citing Low & MacMillan, 1988: 142). If researchers and practitioners continue to conceptualize crowdfunding as an entrepreneurial financing mechanism, it is important to understand the longer-term effects of crowdfunding and the conditions under which entrepreneurs license their products, found ventures, or discontinue their efforts altogether.

5.3. Methodological Opportunities

Researchers have employed several methodologies in the examination of crowdfunding. I highlight two key issues warranting further attention in future research: configurational research designs and measurement of broader societal impacts.

Fuzzy set QCA analysis. Set-theoretic methodology has been used to shed light on a variety of configurational questions in management and organizations, including firm characteristics on acquisition decisions (Campbell, Sirmon, & Schijven, 2016), country-level institutional differences on CEO compensation (Greckhamer, 2016), corporate governance on perceptions of initial public offerings (Bell, Filatotchev, Aguilera, 2014), corporate governance on firm profitability (Misangyi & Acharya, 2014), and organizational structure on return on assets (Fiss, 2011). However, to the best of my knowledge, set-theoretic approaches have yet to be used in the domain of early-stage entrepreneurial resource acquisition. To address this question, researchers can utilize fuzzy set QCA (fsQCA), a form of qualitative comparative analysis (QCA).

Originating in the broader mathematical field of set theory (Smithson & Verkuilen, 2006), fuzzy set theory is particularly suited to address questions pertaining to how humans simultaneously consider multiple interrelated factors and recognize patterns when processing complex information (Fiss, 2007; Ragin, 2008; Zadeh, 1965). Though an inductive

methodological tool, fsQCA is located at the intersection of qualitative and quantitative research methodologies (Ragin, 2008). Thus, fsQCA will enable us to model the phenomenon of resource acquisition as a complex decision-making process based on perceptions of complex configurations of interdependent projective and interpersonal factors that originate with the entrepreneur.

Societal impacts. Research has begun to assess the broader societal implications of crowdfunding. For example, findings show crowdfunding influences venture capital funding outside traditional start-up ecosystems and thereby impacts the trajectory of innovation (Sorenson et al., 2016). Though crowdfunding impacts the dispersion of venture capital, research can also address the impact of crowdfunding on the emergence of geographic ecosystems by assessing how entrepreneurs who raise distributed resources from the crowd decide whether to integrate with proximal or distal geographic communities. Additionally, most research on crowdfunding takes place in developed contexts. Further research can assess which institutional forces inhibit or enable the emergence of crowdfunding platforms in developing markets. In this vein, research can assess crowdfunding as a tool to address grand challenges, including climate change, income inequality, and poverty alleviation (George, Haas, & Pentland, 2014).

5.4. Final Thoughts

Rewards-based crowdfunding offers an entrepreneurial financing mechanism for early-stage projects to attain resources from distributed resource providers with minimal intermediation from professional investors. The emergence of crowdfunding platforms parallels a broader societal shift from centralized broadcasting of the twentieth century to the democratized information flows of the twenty-first century (Davis, 2016). This reversion, reflective of the Greco-Roman

public forums, enables social dialogue to occur with little deterrence from institutionalized forces or expert intermediaries (Standage, 2013), and in the realm of entrepreneurial finance, necessitates theory to understand factors that facilitate funding when non-professional resource providers are making contributions. By extending empirical findings on distributed resource acquisition, I begin to conceptualize the processes by which democratized financing will not only impact the modern-day flow of capital, but also the future trajectory of innovation (Sorenson et al., 2016).

APPENDICES

APPENDIX A: CROWDFUNDING INTERVIEW GUIDE

Part 1: Background

Do you have prior entrepreneurial experience?

Do you have prior entrepreneurial successes?

What is your professional/educational background?

Do you feel that your background qualified you to create [X venture]?

Do your prior experiences align with the industry of [X venture]?

Part 2: Idea Generation

How did you come up with the idea for your project?

Did you look to other products in the space/category to formulate your idea?

Did you model your product after any other products within the market category?

Did you compare your product to any other products in internal communications?

Did you compare your produce to any other products in external communications?

When did you come up with the idea in relation to the launch of the Kickstarter campaign?

Part 3: Motivations

Why did you choose to use Kickstarter?

Do you believe Kickstarter to be the optimal method to raise funding for an entrepreneurial venture?

How did you first learn of Kickstarter?

Was Kickstarter your first choice method to fund the project?

Have you used Kickstarter for prior campaigns?

Do you have prior Kickstarter successes?

Do you have prior Kickstarter failures?

Had you contributed to projects on Kickstarter prior to launching your campaign?

Did you consider other crowdfunding platforms (i.e., Indiegogo)?

Did you pursue funding from alternative sources prior to Kickstarter?

Did you accept funding from traditional funding options?

How much capital did you raise prior to launching Kickstarter campaign?

How long did you work on the project prior to going to Kickstarter?

How did you assess product demand?

Describe the stage of the prototype.

Did you receive media attention prior to launching campaign on Kickstarter?

How did you determine the length of the Kickstarter campaign?

How did you draw inspiration from other Kickstarter campaigns?

Part 4: The Narrative

How did you make donors feel as if they were part of the project in updates/notifications?

How did you sequence the Kickstarter video?

Did you highlight other campaigns on your Kickstarter page?

Were you featured on other Kickstarter campaign pages?

Did you model your Kickstarter page after other (or particular) Kickstarter pages?

Did you discuss the campaign process with other entrepreneurs that had used Kickstarter?

Did you actively pursue media mentions during the campaign?

Were you contacted directly by media outlets?

Did you have stories prepared to go live with media outlets on the day of the campaign?

Did donations surge after particular media mentions?

What forms of media provided coverage?

At what stage (or stages) of the campaign did media attention peak?

Did you update the Kickstarter page with media mentions as they occurred?

What role do you believe media mentions played in obtaining funding?

Part 5: Interactions

Can you describe the process of the Kickstarter campaign?

Can you describe the day-to-day event of running a Kickstarter campaign?

Can you identify key moments during the campaign that led to the ultimate outcome?

Did you send notifications to close family and friends to inform them about the campaign?

Did you send notifications to your extended social network (Twitter, Facebook, LinkedIn, etc.)?

Did you send personal notifications to potential donors?

Did you experience any reservations in reaching out to your network?

What do you believe to be the most effective way to influence potential donors to contribute capital?

What were the most and least influential techniques to persuade individuals to contribute capital?

What was your largest referring source during the Kickstarter campaign?

Can you describe the funding pattern (i.e., early thrust, plateau then steady finishing kick)?

Part 6: Post-campaign

What did you do once the campaign concluded?

Were you pleased with the outcome of the campaign?

Were you surprised by the outcome?

Would you consider the campaign successful?

What did you learn from the campaign?

Is there anything you would do differently?

Would you use Kickstarter again for another idea?

What would you share with other entrepreneurs?

Do you believe Kickstarter provided exposure for your product?

How do you feel that you differentiated yourself from other Kickstarter projects?

Would you pursue funding from traditional sources before using Kickstarter on future projects?

Are you better positioned as an entrepreneur following the campaign?

Did the campaign result in the formation of a company or only the production of a product?

Did you receive media mentions after the campaign?

Do you believe your Kickstarter success will make you more attractive to traditional funders?

Did you continue to send updates to donors after the project concluded?

Do you believe Kickstarter outcome makes you more or less attractive to traditional funding sources for future projects?

Do you believe Kickstarter success on this project is an indicator of future potential?

What would you do differently if you had the opportunity to launch another Kickstarter campaign?

APPENDIX B: BACKER INTERVIEW GUIDE

INTERVIEW GUIDE FOR [PERSON] WHO CONTRIBUTED TO [CAMPAIGN]

Overview

Interview with: [Name], [Title], [Campaign contributed to]

Date: [Date of interview]

Guide developed on: [Date]

Location and Time: [Location], [Time]

Address:

[Address of the interview]

Phone: [Contact phone #]

Email: [Contact email #]

Informant's Bio

[Put any notes from the person's bio here]

Interaction chronology

[List dates and mediums of interactions leading up to interview here]

Key objectives of interview:

- Overview of involvement with crowdfunding
- General motivations for contributing
- Experience with [CAMPAIGN NAME]

Interview Details

Date:

Time: Begin:

End:

Interviewers:

Introduction (5 minutes)

1. Background of researcher
2. Research purpose: To understand the motivations of individuals who contribute to crowdfunding campaigns. I am interested in learning about your actions and experiences with contributing to campaigns on crowdfunding platforms.
3. This research program consist of:
 - a. Interview
 - b. Follow-up questions via email (if necessary)
4. Present and explain consent form and privacy protection procedures. I will be interviewing a number of people involved with crowdfunding. However, information from one interview will not be shared with other interviewees.
5. Question readiness: This interview will have two sections
 - a. First, I would like to hear about your general experience and involvement with crowdfunding. To let you know, I've gone through the Kickstarter platform to see some of the campaigns to which you contributed.
 - b. Then I want to ask you some specific questions about a particular campaign. These will be used to understand specific motivations and decisions.
6. Depending on the stage at which your experiences with crowdfunding, you may be able to answer some questions but not others. Similarly, you may not feel comfortable answering some of the questions. This is fine.

INVOLVEMENT WITH CROWDFUNDING

Can you briefly tell me about your experiences with crowdfunding?

[Points of interest: history as a backer, history as a founder, timeline of involvement with crowdfunding, positive experiences, negative experiences, etc.]

MOTIVATIONS TO CONTRIBUTE TO CROWDFUNDING CAMPAIGNS

I think I have a good feel for your general involvement with crowdfunding. Now I want to ask some more specific questions to better understand your motivations and decision-making on the crowdfunding platform.

What motivates you to contribute to crowdfunding campaigns?

How do you select campaigns to fund?

As a crowdfunding backer, what role do you serve for a campaign?

Do you prefer to contribute before or after a campaign reaches its goal? Why?

Do you expect to receive a reward when you contribute to a campaign?

Can you describe your level of interaction with project founders and other backers on crowdfunding platforms?

Do you feel as if you're part of a community on the crowdfunding platform?

Have you ever commented on a crowdfunding campaign? Why?

Can you describe an instance when you directly interacted with a crowdfunding campaign founder?

Can you describe an instance where you directly interacted with another backer on a crowdfunding platform?

EXPERIENCE WITH [CAMPAIGN]

This is great information. To better understand your specific motivations and involvement with crowdfunding, I'd like to address your contribution to [CAMPAIGN].

How did you first hear about [CAMPAIGN]?

Why did you contribute to [CAMPAIGN]?

How did you determine how much to contribute to [CAMPAIGN]?

How would you describe your involvement with the founder(s) of [CAMPAIGN]? Before the campaign? During the campaign? After the campaign?

How would you describe your interactions with other backers to [CAMPAIGN]? During the campaign? After the campaign?

How would you describe your role in bringing [CAMPAIGN] to life?

How would you improve upon the product offered by [CAMPAIGN]?

Are you aware of what the founder of [CAMPAIGN] is doing now?

Have you followed the subsequent pursuits of the founder of [CAMPAIGN]?

Have you been involved with the subsequent pursuits of the founder of [CAMPAIGN]?

Is there anyone else you would suggest I speak with about [CAMPAIGN]?

WRAP UP

This has been incredibly helpful. Based on our conversation, is there anything else you would like to share about your experience with crowdfunding as a founder or backer?

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