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Entrepreneurship and Digital Communities: Harnessing Legitimacy and Resources

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Abstract

The first essay of my dissertation, in the context of online social networks, theorizes about and empirically examines what communication content by entrepreneurial firms directly (rather than through the media) influences the public attention they receive, and therefore their legitimacy. For my second essay, I partnered with an equity crowdfunding site to deploy a randomized field experiment, which allows for a rare examination of the causal effects of prominent affiliates, product certification and social proof. Specifically, I explore the effect of combinations of these three types of external endorsements on early stage financing for entrepreneurial ventures.

Executive Summary

Since new ventures typically lack histories of performance and behavior, entrepreneurs often use communications, including sensegiving communications and those that incorporate signals, to reduce uncertainty and information asymmetry about their ventures. Sensegiving is defined as explicit attempts to "influence the sensemaking and meaning construction of others toward a preferred redefinition of organizational reality" (Gioia and Chittipeddi 1991). Signals are "activities or attributes of individuals in a market which by design or accident, alter the beliefs of, or convey information to, other individuals in the market" (Spence 1974). The important thread across these two types of communications is that they are used to influence how evaluators perceive entrepreneurial ventures.

Broadly, this dissertation examines two aspects of such communications. First, it examines how new ventures can use these communications to influence their legitimacy. Second, it examines the effect of these communications on resource acquisition. More specifically, the first essay of this dissertation draws from sensegiving and symbolic management literature (e.g., Petkova, Rindova and Gupta 2013; Zott and Huy 2007) to theorize about, and empirically examine, the effect of the content of such communications on growth in broad public attention, which is the first step in the legitimation process. The second essay theorizes about, and empirically examines, when communications that incorporate signals are likely to work in concert with each other to effect decisions made by resource providers. I elaborate on each of these studies next.

The legitimation process involves three steps, namely, gaining attention, comprehension and evaluation (Suchman 1995). Research on legitimacy principally focuses on how an organization's behaviors and outcomes are evaluated, and assumes that the organization is already noticed (Rindova, Pollock and Hayward 2006). As a result, research on how organizations attract public attention is relatively sparse. Prior literature that examines attention in the context of new venture legitimacy suggests that the intensity and the diversity of sensegiving actions affects the level of media attention received by new organizations, and thereby affects the extent of public attention the organizations receive (Petkova et al. 2013). This research focuses on the effect of sensegiving communication diversity, for instance: press releases, statements, white papers, research briefs, presentations and website updates, on public attention. Further, this prior research focuses on communications and actions targeted at journalists who are intermediaries or gatekeepers that seek to provide novel, original, and unexpected news to their audiences (McQualil 1995). The first essay of my dissertation addresses two gaps in this literature. Firstly, it examines the content of sensegiving communications by new ventures that can lead to broad public attention. Secondly, it examines the content of sensegiving communications that are targeted directly at a broad audience rather than at a media intermediary.

I propose that the size of a firm's online social community is a measure of the broad public attention that is channeled towards the firm. I draw from prior organizational theory and entrepreneurship research on the use of symbolic actions as a mechanism for sensegiving, to hypothesize about the content of firms' online communications that facilitate subsequent growth in their online communities. Based on Zott and Huy's (2007) categorization of symbolic actions, I propose that there are four types of communications that can lead to growth in the online community. These are communications that convey credibility, convey professional organizing, convey organizational achievements, and seek opinions. In addition, I develop a theoretical model that describes how entrepreneurial firms grow their online social communities through a combination of the use of sensegiving communications and the process of social diffusion.

The study analyzes 9,826 Facebook communications (posts) by fifteen entrepreneurial firms in the 'flash sales' segment of the retail industry. Flash sales businesses operate by purchasing excess or out-of-season inventory at steep discounts from various brands, and subsequently selling these products online at a deep discount for a limited time. Such online businesses tend to rely on email and social media marketing. I use Amazon's Mechanical Turk workers to manually analyze the content of posts including viewing linked videos and reading all linked articles and blog posts, which allowed for an in depth analysis of the content of each post. With respect to the estimation technique I use the Arellano Bond estimator, which is designed for situations where the dependent variable is dynamic, that is, it depends on its own past realizations (Roodman 2013). I address omitted variables, that are both time invariant, or that change over time but stay constant across individual firms, through the use of panel data with fixed effects and time period controls (Hsiao 2003). To address time varying omitted variables that are specific to particular firms, I control for events like securing funding, acquisitions or mergers, winning awards and introducing new product lines. I further address the concern that an unmeasured variable, like existing status of a firm, could drive growth in the online community by employing a sample that consists of brand new ventures that have not yet accumulated the status or history associated with well-established firms.

In my second essay, I theorize about the propensity of communications that incorporate signals to complement one another. Whereas literature has demonstrated unambiguously the relationship between favorable signals and desirable outcomes, it offers a less clear picture of when signals are likely to complement each other. Prior research suggests that the effect of some signals can diminish when superior signals become available (e.g., Podolny and Scott Morton 1999). Furthermore, previous literature suggests that in some situations signals complement each other, while in other situations they act as substitutes (Stern, Dukerich and Zajac 2014). The goal of this essay, in the context of entrepreneurial finance, is to help us understand when signals are likely to act in a complementary fashion to affect the decisions of resource providers.

I draw on prior entrepreneurship literature that suggests that there are four broad factors that constitute venture uncertainty from the perspective of a prospective investor (Petty and Gruber 2011). These include uncertainty about the entrepreneurial team, the venture's product or service, the venture's investment prospects, and the characteristics of the market in which the venture operates (Tyebjee and Bruno 1984; MacMillan, Siegel and Narasimha 1985). I propose that two signals are likely to complement each other when the two signals together contribute to resolving uncertainty about the decision problem in such a way that one does not make the other redundant. A signal ($Signal_2$) would make another ($Signal_1$) redundant by being superior or equal to the other ($Signal_1$) on all dimensions of venture uncertainty that the other signal ($Signal_1$) addresses. In other words, I suggest that a signal ($Signal_2$) is likely to complement another ($Signal_1$) when it augments it ($Signal_1$) with information about one or more *additional* dimensions of uncertainty (of the decision problem) that it ($Signal_1$) does not address entirely, or addresses to a lower degree (than $Signal_2$).

I investigate this proposition by examining the effect of three canonical signals employed by entrepreneurial ventures in the context of securing equity investments. The signals that I analyze are product certification, social proof and prominent affiliates. The context of the study is particularly appropriate because the equity investment decision problem involves multiple aspects of uncertainty. In addition, the signals that I examine are appropriate because they help resolve different aspects of venture uncertainty to varying degrees.

To measure the causal effects of the signals on investor decisions, the study employs a randomized field experiment in the context of equity crowdfunding. The study assesses the causal independent and combined effects of product certification, social proof, and prominent affiliates during the screening phase of an investment decision, by randomly assigning which potential investors are able to view these signals and their combinations (via emails that announce the fundraising campaign) while holding all else constant. I measure interest in investing as a function of receiving these different signals and their combinations. Also, I separately establish that such interest is positively correlated with actual equity investments.

This dissertation offers several contributions to research. The first essay contributes to organizational theory research on influencing public attention, which is the initial step in the legitimation process. Past research has focused on what types of communications influence media attention and thereby public attention (Petkova et al. 2013). Media organizations are intermediaries that seek to provide novel, original, and unexpected news (McQualil 1995), thus the actions that influence media attention may be different from those that influence public attention directly. Moreover, past research that examines public attention garnered through media attention has focused on the diversity of communication types (e.g., white papers, website updates, press releases etc.) rather than communication content. The essay contributes by theorizing about what communication content (rather than type) can affect public attention directly (rather than through the media); empirically examining the effect of the theorized communications on growth in public attention; and suggesting a theoretical model through which such communications lead to growth in public attention. The empirical analysis indicates that posts that portray the firm as having product and industry knowledge, or that convey firm achievements such as awards, milestones and partnerships are significantly associated with online community growth, and therefore public attention. The proposed theoretical model depicts how sensegiving posts that may contain symbolic language or convey symbolic meaning stimulates engagement among community members, and how, in turn, this facilitates online community growth through the social diffusion of new information and stories about the firm.

The second essay contributes to the signaling and the entrepreneurial finance literatures. First, the essay helps bridge the gap in our understanding of how multiple signals work in concert with one another in the context of capital acquisition for new ventures. I do so by identifying which specific aspects of the four widely documented categories of venture uncertainty (namely: market, product or service, team and investment) are resolved by each signal in my study. I then empirically identify the effects of the signal combinations on investors’ decisions during the venture screening process. The results suggest that in the context of technology ventures, a strong signal of product characteristics helps unlock the value of a market signal or an investment signal. Second, while previous research has primarily focused on the impact of signals on IPO performance (Certo, Holcomb and Holmes 2009) and on the venture capitalists' evaluation process, my study examines the influence of signals on a relatively unexplored but critical phase of the equity investment process, namely the screening stage. Screening is the initial and arguably the most important critical of the investment funnel. This is because getting past the initial screening phase and being selected for evaluation is a necessary precursor to a potential equity investment. Third, the essay provides causal evidence through the use of a randomized field experiment. This empirical design overcomes endogeneity related problems as well as alternative explanations that could confound results of studies based on observational data. Finally, the essay augments our understanding of the newly emerging and rapidly evolving forms of entrepreneurial financing. Specifically, the essay contributes to the literature on equity crowdfunding by investigating signals that have not been studied in the limited prior research in this area.

The context of this dissertation is relevant to the current business environment because of the widespread adoption of online social networks and crowdfunding. Eighteen million businesses had Facebook profile pages in 2013, with one million new pages being added every month (Ling 2013). Crowdfunding initiatives collectively raised sixteen billion dollars in 2014, and in 2016 the crowdfunding industry is expected to account for more funding than venture capital (Massolution 2015; Barnett 2015). These phenomena provide opportunities for theory building as well as rich data sources that can be leveraged to robustly test theories. The relevance of the context of this dissertation to the current business environment also suggests that the dissertation has implications for managers. While several social networking analytics sites provide entrepreneurs with up- to-the-minute statistics such as community size and engagement level, the analytics sites leave it to the firm to determine what content leads to better or worse performance on these metrics. By associating sensegiving actions with online community growth, the first essay provides a theory based understanding of one possible path to growing online communities. Understanding how to nurture online communities is valuable because both research (e.g., Kumar, Bhaskaran, Mirchandani and Shah 2013) as well as industry evidence (e.g., Jaffe and Albarda 2013) indicates that online communities are associated with benefits such as product innovation ideas, new customers, brand building, and increased ROI. The second essay provides entrepreneurs with causal evidence about what types of signal combinations lead to greater interest from potential investors in the context of equity crowdfunding. Since entrepreneurs typically have limited resources it is valuable for them to be able to recognize which start up characteristics or signals they should focus on developing, and later leveraging, in their efforts to raise capital.