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It's never too late: Funding dynamics and self pledges in reward-based crowdfunding☆

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ABSTRACT

Crowdfunding recently emerged as an alternative funding channel for entrepreneurs. We use pledge-level data from Startnext, the biggest German platform, to gain insights on funding dynamics and pledgers' motivations. We find that the majority of projects that eventually succeed are not on a successful track at 75% of their funding period. These late successes are boosted by information cascades during the final 25% of the funding duration. We conclude – in contrast with earlier literature – that project success is only partially path-dependent. While early pledges do anticipate project success, a lack of them does not necessarily mean that projects will fail. Interviews and questionnaire responses indicate that projects' communication efforts play a role in making severely under track projects succeed eventually. Moreover, our dataset uniquely allows us to quantify the extent of self funding. Self pledges account for about 10% of all initial pledges and 9% of all pledges that secure funding. Nonetheless, the late surges at severely under track projects are mostly driven by external funders. Furthermore, we find no evidence of subsequent herding triggered by self pledges.

1. Introduction

One of the biggest challenges an entrepreneur faces is to get funding for her project. Crowdfunding recently emerged as an alternative funding channel for entrepreneurs. In contrast to traditional financiers, such as banks, venture capital firms or angel investors, crowdfunding allows individuals to fund entrepreneurs directly, even with extremely small amounts. Specifically, a mass of disconnected and independent individuals – the *crowd* – provides financial resources to the entrepreneur in return for equity stakes, interest payment, the future product/service, or a non-monetary reward. The connection between the crowd and entrepreneurs is often facilitated by an on-line platform. Entrepreneurs present their projects on the platform, alongside other projects. Users can browse several projects, get information and updates, and are provided with direct channels of communication with the entrepreneurs. Hence, users take individual decisions to invest/lend/purchase/donate, but fund as a crowd.

Crowdfunding experienced exponential growth in the last years and has now reached a substantial funding volume.[1] Given this success, crowdfunding appears to have tapped a new funding channel for entrepreneurs. It can be categorized into crowd pre-selling, crowd donations, crowd equity and crowd lending (see Hemer, 2011; Belleflamme et al., 2014). Crowd pre-selling, essentially an advance order, and crowd donations introduce innovative interactions to the entrepreneurial finance context and are the focus of our study. Several successful on-line platforms offer crowd pre-selling and donations, with Kickstarter (www.kickstarter.com) being the most prominent example. At such platforms, crowdfunding entrepreneurs commonly set a funding target for their project which serves as a threshold. The project gets funded only if the target is reached within a specified amount of time. Individual donors pledge to support the project on the platform; their pledges turn into payments in case the project succeeds in reaching its funding target within the allotted time frame.

Several static aspects of what motivates the crowd to pledge have

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[1] According to the Crowdfunding Industry Report (massolution, 2016) the total funding volume of crowdfunding platforms was $34.4 billion in 2015, up from $16.2 billion in 2014, $6.1 billion in 2013 and $2.7 billion in 2012. Crowdfunding is employed by a variety of actors: artists who look for money for the next creative work, social projects looking for support, as well as innovative business ventures. Hence, we use the term entrepreneur in a broad sense. It encompasses a business venture in the traditional sense, as well as an artist or a non-profit organisation.

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been identified: feelings of identity/community (Gerber et al., 2012), quality of communication (Beaulieu and Sarker, 2013; Mollick, 2014), the entrepreneur's social capital (Mollick, 2014), and altruism towards the entrepreneur (Gleasure and Feller, 2016a). The dynamics of funding behavior are less explored. Are crowdfunders affected by the funding decisions of others and to what extent is project success path-dependent, determined by very early pledges? Given that herding behavior exists, do entrepreneurs try to trigger information cascades themselves and, finally, are they successful in doing so?

Startnext, the biggest crowdfunding platform in Germany, provided us with anonymized data of all existing transactions from October 2010 to February 2014 consisting of 102,405 pledges over 2713 projects. These individual-level data enable us to investigate funding dynamics and explore pledgers' motivations.[2] Moreover, the data uniquely allow us to identify whether a pledge was made by the project creator him-/herself as Startnext does not prohibit nor sanction self-funding (in contrast to Kickstarter or Indiegogo). This allows us to quantify the extent of self funding, identify its role in the dynamics of project success and evaluate its impact.

With respect to funding dynamics, we find that success tends to come at a relatively late stage of the funding duration. The majority of projects (55%) that eventually get funded are not on a successful track when 75% of the funding duration has passed. Only 45% of eventually funded projects look like a success story already early during the funding phase. Further analysis of the funding dynamics provides evidence for information cascades during the first 10% of the funding period. While this is in line with early ‘success breeds success’ path-dependent patterns (van de Rijt et al., 2014; Colombo et al., 2015), we also find information cascades during the last 25% of the funding period. These late boosts seem responsible for the success of projects that did not look like they would get funded. Hence, a qualification of the general notion of path dependence appears warranted: while early pledges do anticipate project success, a lack of them does not necessarily mean that projects will fail. Qualitative insights, from interviews with Startnext staff and questionnaire responses from projects, indicate that projects' communication efforts play a role in making severely under track projects succeed eventually.

With respect to self funding, our analysis shows that self pledges account for 1.6% of all pledges. Despite this seemingly small role, we show that self pledges are substantial and important for projects' dynamics and eventual success. The distribution of self pledges clearly identifies three main motivations: to kick-start a campaign, to revive interest in a project after a period of slack and to secure funding. About 10% of all initial pledges are self-funded; and self pledges account for about 9% of all *pivotal* pledges (the pledge making a project pass the threshold). However, we find no evidence that self pledges trigger subsequent herding behavior, be it at the campaign's start or later in the funding process. We further show that some projects benefit disproportionally from self pledges: 6% of all projects are self funded by more than a quarter of their funding target.

Finally, our study contributes to an improved understanding of crowdfunding's emergence for innovation. Our results indicate that the discourse between a project and its community tends to increase the project's chances to get funded, while Stanko and Henard (2017) show that this conversation improves the quality of the future product (via ‘open search’) and the diffusion of the product (via activating ‘earliest adopters’). Overall, it seems that the possibility of dialogue between crowd and entrepreneur, a feature that distinguishes crowdfunding from traditional entrepreneurial finance channels, is beneficial for innovation.

2. Related literature

2.1. Entrepreneurial finance and crowdfunding

Generally, in order to finance new or ongoing projects an entrepreneur can rely on own funds or she can turn to external financing (by banks, venture capital firms or angel investors). The relationship between the entrepreneur and external financiers is complicated by information asymmetries regarding the entrepreneurial project's quality (see Jensen and Meckling, 1976). These information asymmetries (combined with cash constraints of potential entrepreneurs) may result in efficiency losses. Worthy projects would go unfunded, because financial intermediaries are unable to evaluate them effectively. As documented by, for instance, Beck and Demirguc-Kunt (2006) or Cosh et al. (2009), entrepreneurs indeed face difficulties to secure funding from the external finance options.

Crowdfunding provides an alternative option for entrepreneurs to raise funds externally. Belleflamme et al. (2014) define it in the following way: “Crowdfunding involves an open call, mostly through the Internet, for the provision of financial resources either in the form of donation or in exchange for the future product or some form of reward to support initiatives for specific purposes.” Crowdfunding originated in the creative industries (music, movies), but it has been adopted by entrepreneurs from a wide range of backgrounds. Hemer (2011) distinguishes between the following forms of crowdfunding: crowd lending, crowd equity, crowd donations, crowd pre-selling.[3] The first two can be regarded as the crowd analogies of the traditional financing instruments bank loan and venture capital. Crowd donations and crowd pre-selling bring interactions known from other environments to the entrepreneurial finance context. Crowd donations are unconditional payment pledges of funders given to the entrepreneur. While there is no obligation for the entrepreneur to give anything in return, often some kind of reward is given to crowdfunders who donated to the project. This reward can be in the form of acknowledgments, for instance, in the credits of the crowdfunded movie or a sticker/postcard of the project. Crowd pre-selling means that the entrepreneur promises to deliver early versions of the product/service for a specified price. Via this advance order the entrepreneur is able to make sure that a critical production mass is reached, before she has to commit to any production fixed costs. This advance ordering can be regarded as a test of the market potential (see, e.g. Moe and Fader, 2002), while it simultaneously funds the project to get off the ground. Crowd pre-selling can also be seen as a way for the entrepreneur to price discriminate between two groups: crowdfunders who purchase the product/service in advance (possibly at a discount) and regular consumers who purchase via the market after the project is successful (see Belleflamme et al., 2014). Furthermore, crowd pre-selling allows entrepreneurs to differentiate their product/service. The entrepreneur could offer different reward levels, say, a basic version and additionally more sophisticated premium or deluxe versions that would cost more.

Commonly, the interaction between entrepreneurs and the crowd is facilitated by a crowdfunding platform. Belleflamme et al. (2015) distinguish between equity-, lending-, reward- and donation-based sites. However, in practice borders between them are blurred. Donation sites sometimes also allow for rewards to be offered to donors and reward-based sites may allow for pledges without a reward in return. According to Hemer (2011) the threshold pledge model is the predominant model for crowdfunding platforms that operate via crowd donations or pre-selling. This model functions in an all-or-nothing style, that is, the platform and the entrepreneur agree on a targeted sum of money that

[2] To the best of our knowledge, no study investigated single transactions data from a major reward-based crowdfunding platform (see Agrawal et al., 2014; Belleflamme et al., 2015; Gleasure and Feller, 2016b; Short et al., 2017, for recent surveys on crowdfunding). See Simons et al. (2017), Regner and Crosetto (2017) for studies that analyze the structure of reward levels and Beaulieu and Sarker (2013), Gleasure and Feller (2016c) for studies that look at funding patterns over time using qualitative methods.

[3] Belleflamme et al. (2014) propose a similar categorization. They distinguish between equity purchase, loan, donation or pre-ordering of the product.