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Beyond financing: crowdfunding as an informational mechanism

Jordana Viotto da Cruz

Université Paris 13 (CEPN), Labex ICCA, Télécom ParisTech, France

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ABSTRACT

Besides providing financial support for new ventures, crowdfunding can bring additional advantages for entrepreneurs. In this paper, we test the hypothesis that crowdfunding also serves as an informational mechanism. Using a unique dataset built with publicly available data from Internet-based sources, and after controlling for alternative explanations, we empirically show that when not successful on crowdfunding, thus not accessing capital, project owners may decide to release the product in the market if contributions suggest positive valuation from the "crowd".

Executive summary

Crowdfunding has emerged as an alternative to bridge the financing gap of new ventures. Past research on this topic has evoked the idea that, besides this primary role, crowdfunding can also be a valuable source of information on the interest of potential consumers about the project, helping to reduce the entrepreneurs' uncertainty prior to a new product's release in the market. The objective of this paper is to present empirical evidence about this hypothesis using data from Internet-based sources.

The informational value of crowdfunding can be understood as follows: when deciding to contribute to a crowdfunding campaign, investors commit to future consumption, foregoing the amount allocated in relationship to outside options. As their payoffs are conditioned to their decision of how much to allocate, crowdfunding can be compared to incentive-aligned mechanisms used in marketing and in experimental economics to test preferences and motivations.

Following this rationale, the entrepreneur receives several pieces of information coming from the campaign, which can be useful in a number of ways. For example, the number of individuals having decided to participate can be interpreted as "the size of the crowd" that appreciates the project. The amount each supporter allocates can be interpreted as how much each participant values the project. The aggregate amount collected would be how much this 'crowd' appreciates the project. And finally, the total collected in relationship to the original goal can be seen as the project's potential vis-à-vis the original idea.

In order to perform our empirical test, we choose to observe the entrepreneurial decision-making in the "real world" instead of using surveys asking the entrepreneurs about crowdfunding outcomes. More precisely, we collect data on crowdfunding projects in a leading platform (Kickstarter) and connect these projects to the availability of the corresponding product in online marketplaces (Amazon and iTunes). Next, we calculate the probability of the existence of the product given the contributions during the campaign. Our idea is that if crowdfunding serves as an informational mechanism, the probability of releasing a product in the market after crowdfunding increases with the contributions during the campaign.

One issue with this approach is that the releasing decision can also come from the access to capital. In order to disentangle it from

E-mail address: jordanaviotto@gmail.com.

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information, we benefit from the "all or nothing" rule on most crowdfunding platforms – including Kickstarter. This rule conditions access to capital to reaching a given financial threshold. We therefore focus on entrepreneurs who received support during their campaign, but who did not reach their goal, remaining unfinanced.

Our results are in line with our hypothesis, as the likelihood of releasing increases with the contributions to unfinanced entrepreneurs. For example, our main results show that a 10% increase in the number of supporters is associated with 1.4 additional percentage points in the probability of releasing the product in an online marketplace. We perform robustness tests to ensure the validity of our main results.

Our empirical analysis offers managerial insights regarding the use of crowdfunding to obtain feedback to new products and ventures, and opens new avenues for future research on the value of crowdfunding to obtain feedback from potential consumers.

1. Introduction

Crowdfunding is an alternative mode of financing that has provided monetary support for projects whose high-quality was later endorsed by institutions such as the TIME 25 Best Inventions of the Year,[1] the Oscars,[2] the Grammy Awards,[3] and the Museum of Modern Arts in New York (MoMA).[4] Besides monetary resources, entrepreneurs presenting their ideas on crowdfunding platforms may obtain additional benefits from their campaigns. For example, they can collect information about the public's valuation of their projects.

Producers face great uncertainty preceding the release of new goods in the market (see, for example, Asplund and Sandin, 1999). Crowdfunding offers an investment opportunity associated with a consumption experience (Schwienbacher, 2015) where contributors choose the amount they give to a project, as in an incentive-aligned mechanism (Agrawal et al., 2014) that allows individuals to reveal their valuation about a certain idea. From this perspective, the contributions can offer information about the potential of the product in the market, which in turn may help to reduce the entrepreneurs' uncertainty prior to release.

Such hypothesis was evoked on past research (Agrawal et al., 2014; Belleflamme et al., 2014) and has recently motivated theoretical papers (Ellman and Hurkens, 2016; Chemla and Tinn, 2017; Strausz, 2017), but to the best of our knowledge not yet empirically tested in the context of new product release on retail channels, which is the objective of the present paper. We frame our research question as: *how do project owners respond to information from their crowdfunding campaigns*? As "response", we consider the decision to release the corresponding good in the market after a crowdfunding campaign, and we posit that the probability of release increases with the crowd's valuation.

Our strategy to test this hypothesis relies on the 'all or nothing' rule used by most crowdfunding platforms. Such rule conditions access to capital on the achievement of a certain financial threshold during the campaign.[5] In other words, even project owners who receive monetary support remain unfinanced if their initial target is not reached. In this case, their respective contributors are reimbursed at the end of the period.

The "all or nothing" rule creates two subsamples of project owners – those who receive financial support and obtain access to the capital raised through their campaign, and those who receive financial support but remain unfinanced. We expect that if information is important enough to reduce the entrepreneurs' uncertainty, the probability of releasing a new product among the unsuccessful entrepreneurs increases with the crowd's valuation.

In order to test our hypothesis, we focus on projects aiming at producing music albums. Music is one of the main categories in crowdfunding (the second on the platform we study in terms of number of projects), and about 40% of music projects aim at creating an album. More importantly, the music industry confronts the same information asymmetries issues as other markets, particularly concerning uncertainty prior to the release of a new product. Finally, as in Bacache-Beauvallet et al. (2014) and Agrawal et al. (2015), we consider musicians to be artists-entrepreneurs who need access to capital in order to release a new product in the market. Therefore we expect to provide insights into other project categories.

Our analysis uses a unique dataset built with information collected from different Internet-based sources. The main one is Kickstarter, considered one of the prominent crowdfunding platforms worldwide. Kickstarter allows project owners to offer early access to the good or service being developed as well as prizes and "community benefits" (Belleflamme et al., 2014) in exchange for financial support. Other data sources include Facebook, Amazon, and iTunes.

The final sample contains 707 observations, with both successful and unsuccessful projects, and we remark that 25% of unsuccessful projects release the respective product in the market after the crowdfunding campaign. We calculate the probability of releasing the corresponding product in the market for unsuccessful projects given the crowd's valuation. We consider four variables as proxies of the crowd's valuation: the total number of supporters, the average collected, the total amount collected during the campaign, and the amount collected in relationship to the original goal (the *pledged ratio*). Our choice of testing the four variables is

[1] Information from "The 15 Best Inventions" in 2013, 2014, and 2015 (time.com). Last consulted on January 6th, 2016.

[2] Samantha Murphy. "Oscar Win Is a First for Kickstarter-Funded Film". Mashable, February 25, 2013. Available at mashable.com/2013/02/24/inocente-oscar-kickstarter. Last consulted on December 5th, 2015.

[3] Jazz musician Maria Schneider was nominated to four Grammy Awards and won in one category with her album "Concert in the Garden" (2004), financed through ArtistShare. Information from the artist's website (mariaschneider.com) and the Grammy Awards (grammy.com). Last consulted on December 5th, 2015.

[4] Margaret Rhodes. "A CFL Bulb That Is As Practical As It Is Sculptural". FastCoDesign, January 13, 2014. Available at www.fastcodesign.com/3024738/wanted/a-cfl-bulb-that-is-as-practical-as-it-is-sculptural. Last consulted on December 5th, 2015.

[5] The financial goal and the duration of the campaign are two characteristics determined at the beginning of the campaign and that cannot be changed once the project is online.