Crowdfunding Models: Keep-it-All vs. All-or-Nothing

Douglas J. Cumming

York University - Schulich School of Business Professor and Ontario Research Chair York University - Schulich School of Business 4700 Keele Street Toronto, Ontario M3J 1P3 (Canada) E-mail: douglas.cumming@gmail.com

Gael Leboeuf

Université Lille Nord de France – SKEMA Université Lille 2 Faculté de Finance, Banque, Comptabilité Rue de Mulhouse 2 - BP 381 F - 59020 Lille Cédex (France) E-mail: gael.leboeuf@skema.edu

Armin Schwienbacher

Université Lille Nord de France – SKEMA Université Lille 2 Faculté de Finance, Banque, Comptabilité Rue de Mulhouse 2 - BP 381 F - 59020 Lille Cédex (France) E-mail: armin.schwienbacher@skema.edu

This version: June 2, 2014

Crowdfunding Models: Keep-it-All vs. All-or-Nothing

Abstract

Rewards-based crowdfunding campaigns are commonly offered in one of two models: "Keep-it-All" (KIA) where the entrepreneurial firm sets a fundraising goal and keeps the entire amount raised regardless of whether or not they meet their goal, and "All-or-Nothing" (AON) where the entrepreneurial firm sets a fundraising goal and keeps nothing unless the goal is achieved. We provide large sample evidence consistent with the view that the usage of AON is a credible signal to the crowd that the entrepreneur commits not to undertake the project if not enough is raised. This signal reduces the risk to the crowd, thereby enabling the AON entrepreneurial firms to set higher goals, raise more money, and be more likely to reach their stated goals. In contrast, KIA projects tend to be less successful, since the crowd bears the risk that an entrepreneurial firm undertakes a project that is underfunded and hence more likely to fail after the campaign. Entrepreneurs use the KIA model for scalable projects; that is, projects that are still feasible with partial funding. Further, we provide evidence that the crowd is much more sensitive to information provided by AON projects. We show that these findings are robust to a number of robustness checks, including but not limited to use of instrumental variables and propensity score matching.

JEL Classification: G21, G24, G32, L26

Keywords:

Entrepreneurial Finance, Crowdfunding, Internet, Signaling, Indiegogo

1. Introduction

The rise of crowdfunding has been facilitated by standardized Internet platforms which enable clear mechanisms through which investors can invest in early-stage entrepreneurial firms (Mollick, 2014; Belleflamme et al., 2013, 2014). Kickstarter and Indiegogo are rewards-based crowdfunding platforms whereby entrepreneurs state capital raising goals, and in exchange investors are offered a reward for participating. In most cases, the reward is the product that is eventually produced by the entrepreneur with the money raised during the campaign. In practice, two types of platforms have emerged: "All-or-Nothing" (AON), and "Keep-it-All" (KIA). In the AON model, entrepreneurial firms set a capital raising goal below which the entrepreneurial firm does not keep any of the pledged funds, and the crowd does not get any reward. In the KIA model, by contrast, the entrepreneurial firm can keep the entire pledged amount, albeit at higher fees as explained further herein, regardless of whether or not the stated capital raising models give rise to differences in the types of firms that select a particular model, their eventual likelihood of success, and the sensitivity of investors to information released by the entrepreneurial firms.

We conjecture that entrepreneurs that self-select into the AON model do so in order to signal to the crowd that they are committed to only undertake the project if enough capital is raised, which reduces the crowd's risk that undercapitalized projects will be undertaken as under the KIA model. As such, AON projects are expected to be larger and more successful, and investors will be more sensitive to information released by AON entrepreneurial firms. By contrast, KIA projects will be selected by entrepreneurs that can scale their project (i.e., a portion of the planned project is feasible), and selected by investors that still get utility from the reward under a scaled down format (knowing that they will lose the entire utility if the project is canceled).

To test these propositions, we extract a sample of 47,139 fundraising campaigns from the Indiegogo platform (www.indiegogo.com) over the years 2008 – 2013. Unlike other major platforms, Indiegogo offers entrepreneurs since 2011 the option of picking either the AON or the KIA model. Thus, Indiegogo offers a unique setting to investigate our research questions. The data indicate that 95% of fundraising campaigns used the KIA model, while only 5% used the AON model. Campaigns using the AON model on average seek to raise \$31,355 (and median of \$16,300), while campaign goals for KIA are on average \$19,677 (median of \$10,000). AON campaigns have an average completion rate (i.e., the ratio of total pledges over goal, in percent) of 64%, while KIA campaigns have a completion rate of 42%. Put

3

differently, 34% of all AON campaigns are successfully completed, while only 17% of all KIA campaigns achieve their funding goal. AON campaigns have on average 188 backers, while KIA campaigns on average attract 73 backers.

The data further indicate that there is a negative relationship between the funding goal and usage of the KIA model, in line with the prediction that AON constitutes a commitment device and thus reduces risk to the crowd as underfunded projects will not be undertaken under AON. Consistent with existing studies on crowdfunding success (Mollick, 2014; Belleflamme et al., 2013, 2014; Mollick and Kuppuswamy, 2014), campaigns with larger fundraising goals are less successful. Controlling for size differences, our data indicate AON campaigns are more likely to achieve their goal. Further, we provide evidence that the crowd is much more sensitive to information provided by AON projects. Taken together, these results are consistent with view that the usage of AON is a clear signal to the crowd that the entrepreneur commits not to undertake the project if not enough is raised, which represents a potential cost to the entrepreneur who may not be able to undertake the project. The AON model therefore reduces the risk to the crowd, thereby enabling the AON entrepreneurial firms to set higher goals, raise more money, and be more likely to reach their stated goals. Opting for the AON model allows entrepreneurs to alleviate constraints on their fundraising goals induced by the negative impact of funding goals on success. In contrast, KIA projects tend to be less successful, since the crowd bears the risk that an entrepreneurial firm undertakes a project that is underfunded and hence more likely to eventually fail. These findings are robust to a number of specification tests, including controls for the endogenous choice of the KIA versus AON model, the endogenous choice of the fundraising goal, and propensity score matching.

Our paper is related to a small but growing literature on crowdfunding. Prior work on factors that affect success on other crowdfunding platforms (which only offers AON crowdfunding, such as Kickstarter) is available in Mollick (2014), Belleflamme et al. (2013, 2014), Mollick and Kuppuswamy (2014) and Colombo et al. (2014). Related studies on crowdfunding studies have examined equity crowdfunding (Ahlers et al., 2013; Cumming and Johan, 2013). More generally to the entrepreneurial finance literature in both the theory (Schwienbacher, 2007) and evidence (Cosh et al., 2009) on the choice across different forms of finance for capital constrained entrepreneurs. Further, our work is related to a large signaling literature (e.g., Spence, 2002; Stuart et al., 1999). Our paper contributes to the literature by examining different types of rewards-based crowdfunding models, and the role of signals in the crowdfunding market.

The remainder of the paper is structured as follows. Section 2 provides information on the structure of the Indiegogo platform. Our theoretical predictions are explained and summarized in Section 3. Section 4 introduces the data. The empirical tests are presented in Section 5. A discussion and concluding remarks are provided in the last section.

2. The Structure of the Indiegogo Platform

Launched in 2008, Indiegogo has become the second largest crowdfunding platform worldwide (59,889 projects listed¹), after Kickstarter (133,859 launched projects, among which 56,468 successfully funded for a total amount raised of \$986 million²). Indiegogo offers entrepreneurs the possibility to launch their online reward-based crowdfunding campaign in three categories (Innovative, Creative or Social), which are divided in 24 subcategories (see Table I). As shown in Table II, 61% of the projects belong to the creative category, 9.7% to the innovative category and 29.3% to the social category. The website is available in English, French, German and Spanish, but project leaders may be located in any country of the world. Entrepreneurs must have a fundraising goal of at least 500 units in any accepted currency (USD, EUR, GBP, CAD or AUD). Projects can be posted by either an individual, a group of persons, a registered business, a non-profit institution or even a religious organization. Campaigns can last up to 60 days for AON and up to 120 days for KIA. During the campaign, the platform collects pledges from the backers; once the campaign ends, the money is transferred to the entrepreneur via PayPal.

[Tables I & II About Here]

One of the main differences between Indiegogo and most other platforms is the possibility for the entrepreneur to choose between a KIA funding model and an AON model.³ Other major platforms such as Kickstarter, FundedByMe or PeopleFund.it, only offer the possibility to run AON campaigns. Other platforms such as RocketHub, GoFundMe or Sponsume, only allow use of the KIA model. In an AON crowdfunding campaign, the entrepreneur sets a fixed fundraising goal. If the total money pledged is smaller than the goal at the end of the campaign period, all the pledges are cancelled and the

¹ Source: Indiegogo.com (last viewed on February 20, 2014)

² Source: kickstarter.com (last viewed on February 20, 2014)

³ There are other platforms offering the choice between KIA and AON models, such as Community Funded and Crowdtilt. Indiegogo is however by far larger and more widely known according to the Google page rank (from 0 up to 10): a value of 7 for Indiegogo, 4 for Community Funded and 6 for Crowdtilt. By comparison, Kickstarter's Google page rank is 7 and Wikipedia 9.

entrepreneur does not receive anything. On Indiegogo, this type of campaign is called "fixed funding" and the platform takes a 4% success fee on the money received by the entrepreneur in case of a successful campaign. In a KIA campaign, the entrepreneur also sets a fixed fundraising goal. However, whatever the outcome at the end of the campaign, the entrepreneur can choose to keep all the money pledged by backers, even if the goal is not reached. On Indiegogo, this type of campaign is called "flexible funding". There, the platform charges a 4% fee for successful campaigns (as in AON campaigns) but a 9% fee in unsuccessful campaign if the entrepreneur chooses to call the pledged money. Thus, there is a cost for the entrepreneur to set the funding goal too high.⁴ While all the campaigns were based on the KIA model in first years of the platform's existence, Indiegogo started offering to the entrepreneur the option to choose between KIA and AON from December 2011 onwards. The AON model is becoming increasingly popular and represents now more than 5% of new campaigns (Table III). Especially innovative projects are more likely to choose the AON model (Table IV).

To sum up, two important decisions are taken by the entrepreneur when setting up his/her campaign: the funding structure (AON versus KIA model) and the fundraising goal. These two variables are set simultaneously at the beginning of the campaign and therefore potentially endogenous, as we discuss and control for in our empirical analyses below.

[Tables III & IV About Here]

Each project also indicates a reward scale. The entrepreneur sets one or more pledge levels (based on amount to pledge) for which he or she will offer different rewards to the backers. The amounts, steps and number of levels are freely defined by the entrepreneur. Rewards offered can be as simple as a "thank you" on the project page or as important as a key decision in the project development. Usually, the main reward offered is the project's main product combined with some extras (dedication, personalization, etc.). Moreover, some rewards can be available in limited quantity (limited editions of the product, etc.). The entrepreneur also indicates a provisional date for the reward to be delivered. These rewards offer no contractual obligation for the entrepreneur or guarantee for the backers, even in case of project success.

Beside this hard information, Indiegogo also permits entrepreneur to provide soft information about his or her project. Some items are needed for the index pages were projects are listed as standardized "projects cards" (a small image, the campaign title and a short description of maximum 160 characters,

⁴ Next to these success fees, Indiegogo also charges for both models 3% third-party fees for credit card processing.

the category and the origin country and city). Others will only appear on the project main page: the full project description with no limit in length or form (text, pictures, animations, charts, graphics...), an optional video pitch introducing the project and the leading team, extra pictures gallery, links to external websites or social networks pages and team description. Each team member also has a personal page where he can introduce himself with pictures and text and where facts about his activity on Indiegogo are listed. It shows links with other projects leaded, own backer activities in other projects, the referrals (number of clicks on shared links from external social networks) and the number of comments he or she made on an actual or on a past campaign.

Some of the information flow accrues only over time. While hard information is provided at the beginning of any campaign, the entrepreneur can update the project page with soft information during and after the campaign, notably by posting comments. However, visitors and backers are also allowed to post comments or questions, which facilitates interaction with the entrepreneur. Complementary data will also be provided all along the crowdfunding process by the platform and backers. The page will also be automatically updated to provide information about enrolled backers with pledges made for the different rewards offered, the campaign's remaining time and the overall progress towards the goal.

3. Hypotheses and Methodology

In this section, we develop several hypotheses on determinants affecting the structure (subsection 3.1) and outcome (subsection 3.2) of crowdfunding campaigns.

3.1 Hypotheses on the setting of crowdfunding campaigns

Our first hypothesis pertains to project risk and choice of AON versus KIA model. We expect that entrepreneurs involved in scalable projects are more likely to seek KIA funding since they are able to produce output even when they obtain only partial funding. Examples of scalable projects include books (one can generate a subset of the chapters, or a comic book without color), music albums with fewer tracks than expected, video games with fewer levels and less options (less items, no digital voices, or less sophisticated graphics), and non-profit ventures (charity, whereby 'any amount is welcome'). Backers contribute capital due to the utility associated with the funded project and associated reward (Belleflamme et al., 2014). Projects based on material goods (like 3D-glasses, a health-monitoring watch, a new restaurant, etc.) without scalable output are less likely to opt for a KIA campaigns. Indeed,

projects that are not scalable may face high risk of failure when pursued without enough funding. Such projects face significant fixed costs, leading to high operational leverage and thus higher risk. The level of risk is then magnified when undertaken without sufficient initial funding. As such, the KIA model is relatively more attractive to backers that can still gain utility in a partially funded project. Likewise, KIA models are more attractive if the backers are expected to lose a pronounced amount of utility or money in the event that a project is not undertaken.

H1 (on Project Scalability): Scalable (and thus less risky) projects are more likely to opt for Keepit-All (KIA) crowdfunding campaigns.

Our second hypothesis is based on a quality signal effect. If an entrepreneur leads a project with a high capital goal, he must attract more backers and/or try to convince each of them to pledge larger amounts. To do this, the entrepreneur must give some guarantees to the backers. Based on the assumption that incompletely funded projects are more risky than projects starting fully financed, setting an AON campaign shows the potential backers that the project will start if and only if the funds are sufficient. Such campaigns may then be considered as less risky for the backers, and hence may attract more backers and/or with larger amounts.

H2 (on Funding Goal): Projects with high capital goals are more likely to opt for All-or-Nothing (AON) crowdfunding campaigns.

3.2 Hypotheses on the outcome of crowdfunding campaigns

Recall that under the KIA model, the entrepreneurial firm sets a fundraising goal and are able to keep the entire amount raised regardless of whether or not they meet their goal, while under the AON model, the entrepreneurial firm sets a fundraising goal and keeps nothing unless the entire amount is raised. On one hand, opting for an AON model can be a credible signal to the crowd that the entrepreneur commits not to undertake the project if not enough is raised. This signal reduces the risk to the crowd, thereby enabling the AON entrepreneurial firms to set higher goals, raise more money, and be more likely to reach their stated goals. In contrast, KIA projects tend to be less successful, since the crowd bears the risk that an entrepreneurial firm undertakes a project that is underfunded and hence more likely to fail.

On the other hand, we could envision a competing prediction relating the crowdfunding model to the probability of success. For a high goal, for example, AON projects may be less likely to succeed raising the required capital if there is a self-fulfilling prophecy insofar as the crowd perceives the probability of a

successful launch as being smaller. These competing ideas give rise to two alternative predictions as follows.

H3A: All-or-Nothing (AON) campaigns are more likely to be successful than Keep-it-All (KIA) campaigns, if AON projects are perceived by the crowd as a security for the project to start with enough funds if undertaken.

H3B: All-or-Nothing (AON) campaigns are less likely to be successful, since they may be perceived by the crowd as less likely to be eventually launched.

In testing these hypotheses, we control for other factors that can affect crowdfunding success, including but not limited to the information provided by the entrepreneur and the level and structure of the rewards. The level of information provided prior to the fundraising campaign may of course likewise affect the probability of success. Where it is difficult or costly for the entrepreneur to provide information that is more than mere cheap talk, campaigns that offer more information (such as having a video and not merely a textual description of the project) are more likely to be successful.

The level of the rewards and the number of reward scales can further affect the probability of success. We expect that campaigns with more reward scales are more likely to succeed, since it is more likely to match preferences of the crowd due to the broader variation in the amount to invest. The size of the first reward amount has an ambiguous effect on the outcome in that larger thresholds make participation less likely, but each contribution is more important (since they are larger). Thus, the overall effect is unclear.

4. Data and Summary Statistics

Our dataset was extracted directly from the Indiegogo website. Data were collected page by page in October 2013. On Indiegogo, all finished projects stay visible on the website, regardless whether successful or not, as long as the total amount pledged is at least 500 USD/EUR/CAD/AUD/GBP. Our full sample consists of all the 47,139 finished campaigns that took place from the very beginning of Indiegogo in 2008 until October 2013. Computer-automated data collection however led to a loss of less than 5% of data due to missing or erroneous key values or inconsistency in data provided on the Indiegogo website. There is no evidence that these missing data are linked to specific project characteristics; therefore, it seems reasonable to assume that these missing projects are randomly

distributed and that our sample is a good representation of the full population of projects launched on Indiegogo.

Since the database includes projects with five different currencies, we choose to convert all monetary values (goal, pledge, rewards) in USD to make them comparable. The exchange rate is the yearly average exchange rate (for campaigns lasting between 2 years, the ending date was retained). We exclude observations from 2008 until November 2011, since the choice between AON and KIA model was only introduced in December 2011 and thus our hypotheses cannot be tested on these campaigns. This leads to an exclusion of 5,727 observations. Following previous empirical research on crowdfunding (Mollick, 2014; Qiu, 2013), we exclude projects with a fundraising goal under \$5,000 (after conversion of all values into \$). Such projects typically rely for their biggest parts on money from family, friends and relatives, and thus cannot be compared with projects relying on backers (i.e., the crowd) outside the close network of the entrepreneur. We also exclude projects with a goal higher than \$200,000, which corresponds to the 99th percentile of our distribution. Indeed, some projects have very large fundraising goals (12 projects have a goal higher or equal to \$10m). Consistent with the approach adopted by Mollick (2014) for Kickstarter data, we consider these few observations as outliers that are distinct from the traditional type of projects proposed on the platform. Our final sample is composed of 22,875 campaigns.

A full description of variables available in our dataset is provided in Appendix Table I. Variables are classified in 3 types: project characteristics (subcategory, goal, duration, etc.), additional soft information provided either at the beginning of the campaign (a link to a social network page or a video, etc.) or during the campaign (updates or comments, etc.) and campaign output (number of backers or rewards left, etc.).

The recorded project characteristics are mandatory information and all entrepreneurs set them once and for all prior to campaign start. While some variables are intrinsic to the project itself (the category/subcategory, the location), others are set freely by the entrepreneur (the goal, the funding model, the number of rewards and the level of each reward (i.e. the amount a backer should give to choose the defined reward), the duration, etc.). The additional "soft" information is a set of descriptive information provided to inform the crowd about the project. It consists of text, pictures, video pitches, additional comments and updates, as well as any other information that the entrepreneur discloses to potential backers. As these pieces of information are mostly of qualitative nature, we decided to limit ourselves to those that could be measured quantitatively. For instance, information such as number of

10

words/pictures/items and presence or not of some items allow us to observe the implication of the entrepreneur in his project and its degree of preparedness as it is associated with success (Mollick, 2013).

Given that this information is intended to a wide audience reading, we also include a readability index as control variable for evaluating crowd perception. Readability indexes are designed to gauge the understandability of a written text. We use the Automated Readability Index (ARI) and the Coleman–Liau Index (CLI). Both use the full text of project description, as described in Appendix Table 1. The ARI offers an index expressed in US grade level. For instance, grade 1 indicates text for children of 6/7 years old and grade 12 for high school students of 17/18 years old. In contrast, the CLI is based on the notion that characters length of words is a better predictor of readability than syllables counts.

Finally, we consider campaign outputs based on observable information at the end of the campaign. It consists in total amount pledged by backers, total number of backers and the completion ratio. These output measures define the success of the campaign. Our primary measure of success is the completion ratio, which corresponds to the ratio of total amount pledged over the goal set by the entrepreneur (our variable *Completion Ratio*).

Table V presents summary statistics for our final sample and for the two subsamples All-Or-Nothing and Keep-It-All. T-tests of difference of mean and median between both subsamples are provided in the last two columns.

[Table V About Here]

In line with our expectations (see Hypothesis H1), flexible projects account for a larger part in the KIA subsample: 44% of all the projects in the KIA subsample are projects with digital output, while such projects only account for 37% of the projects in the AON subsample. Supporting Hypothesis H2, AON projects show on average 53% higher capital goals than KIA (and a 65% higher median). Moreover, KIA campaigns offer fewer reward levels. First reward level is on average 13% smaller for AON campaigns and is equal to \$1 in 19% of the cases while only 12% of the KIA campaigns have a first reward equal to \$1.

All verified not-for-profit organizations (the variable *Verified Non-profit*) use the KIA model, suggesting that this form of fundraising constitutes a typical way non-profit organizations raise money on a regular basis (under the motto "any money is welcome"). AON campaigns tend to have higher goals on average;

medians however are much closer to each other. With an average of 2 team members, team size is not statistically different between the two subsamples.

As the risk of not collecting any funds is higher for an AON campaign, it seems that entrepreneurs provide more information to increase their chances to attract more backers. Indeed, project descriptions are longer (the variable *Full Text Length*) and easier to read, more pictures and video pitches are provided and activity of the project pages is also higher (with more updates and more comments). There is no difference in the numbers of external social networks pages available for both types of project, suggesting that setting up a page on a social network requires little effort to generate extra information. This can also be explained by the fact that social networks are a base constituent of crowdfunding and thus considered by a majority of entrepreneurs as a must-do before even starting the crowdfunding campaign itself.

Outcomes also differ between subsamples. AON campaigns seem to be more successful (54% versus 32% for KIA campaigns) and attract almost 3 times more backers, providing support for the hypothesis H3A. This difference is success will be confirmed in the multivariate analysis provided in the next section.

Table VI offers summary statistics based on outcome, i.e., whether the campaign was successful or not. As expected, more information is provided in successful campaigns (longer text, more video pitch and more pictures in galleries) and more activity observed during the campaign (more updates and more comments) seem to lead to more success. Of course, successful projects imply, on average, more backers and higher average pledges by backers. Here also, no difference in social network presence between the two groups (presence does not mean popularity!). Readability of campaign description does not seem to affect outcomes. The two groups have approximately the same typology of texts; at best, unsuccessful projects are easier to read. It is worthwhile to note that the values obtained here are quite high since they correspond to text designed for undergraduate level. ARI and CLI scores correspond to the US scholar system level (12 for the last level before college, 14 for a second year undergraduate, etc.). Here, an average level of 15 indicates text written (intentionally or not) at an undergraduate level.

[Table VI About Here]

Table VII provides a comprehensive correlation matrix that includes the most relevant variables. In particular, the reported correlations offer preliminary support for our hypotheses H1 on scalability and

12

H2 on funding goal. Indeed, the correlation between *Digital Output Dummy* (for scalable projects, as defined in Appendix 1) and *Keep-It-All Dummy* (Hypothesis H1) is 0.0298 and statistically significant at 1% level. Similarly, the correlation of *In(Goal)* and *Keep-It-All Dummy* (Hypothesis 2) is -0.0915 and also significant at 1% level. As for our hypotheses H3A/H3B, we find a correlation of -0.0408 between % of *Completion* and *Keep-It-All Dummy*, which supports H3A. The next section tests and confirms these findings in a multivariate setting.

[Table VII About Here]

5. Empirical results

5.1. Choice of AON versus KIA Crowdfunding Models

Table VIII addresses the issue of what drives entrepreneurs to opt for KIA, controlling for the endogeneity of the goal amount. To test our hypotheses H1 and H2, we consider that the decision between KIA and AON will depend on some characteristics intrinsic to the project that exist before the campaign launch: the category of the project, the type of good financed (digital or not) and the amount goal of the funding campaign. We also expect some other pre-existing variables to have an impact in this choice: the number of different rewards that the entrepreneur is able to offer, the size of the team leading the project and the profit purpose of the project. Moreover, our models control for fixed effect due to the country of origin of the project and the year of campaign launch. Table VIII shows results of our regressions under various specifications.

[Table VIII About Here]

The first method used is a probit regression with the keep-it-all dummy as the dependent variable. Our variables of interest are the goal (the logarithm of goal) and the output type. The results are consistent with H1 insofar as the coefficient on Reward's Levels is negative and statistically significant at the 1% level, whereby a 1-standard deviation increase in Reward's Levels give rise to a 11.7% increase in the probability of the use of KIA. Further, as expected (H2), the data indicate that the impact of *ln(Goal)* is negative and statistically significant, such that a 1-standard deviation increase in *ln(Goal)* gives rise to a 14.0% increase in the probability of the use of KIA the use of AON. The digital output variable is positive and statistically significant at the 1% level, indicating that such projects tend to prefer to use the KIA funding model. Also, the data indicates that team size is positively associated with using KIA, such that a 1-

standard deviation increase in team size increases the probability of using KIA by 5.5%. One possible reason could be that team size proxies for firm size and larger firms may be more able to start an underfunded project.

Most likely, the goal of the campaign is set at the same time as the one for the funding model and is linked. This causes a problem of endogeneity between our goal variable and the keep-it-all dummy as these decisions are simultaneous. We chose to use a 2SLS regression to solve this problem. The first-stage regression in Model (2) used to estimate the goal is based on two instrumental variables (IVs) that are linked to the goal of the project but are independent of the decision of the funding model. The first IV is the median goal of successful projects in the same subcategory in the semester prior of the campaign launch and the second is the median completion ratio for project within the same subcategory for the semester prior the campaign launch. In alternative Models (3) and (4) in Table VIII, we then use the estimated goal based on this first regression in our model for the second regression. The results observed confirm what we saw in the first probit specification in terms of the statistical significance, and shows similar economic significance.

In addition to these regressions, we made some tests to address concerns about the validity of our 2SLS methodology. The first test of endogeneity follows the specification of Durbin-Wu-Haussmann testing the difference between OLS and IV estimates. The null hypothesis tests if the regressor of interest (variable *ln(Goal)*) is exogenous. As the null hypothesis is rejected in our tests, the variable *ln(Goal)* is indeed endogenous and thus OLS estimates are inconsistent. The 2SLS estimates are therefore appropriate. The second test checks if the instruments are not weakly correlated with our endogenous variable. Based on F-stat values of our first stage we can assume that our instruments are not weak. We can compare the values with the minimal recommended value of 11.59 for two IVs in Stock et al. (2002). The third test computes the Amemiya-Lee-Newey score test of overidentifying restrictions. This test performs for overidentification (exogeneity of IVs) following the procedure described by Lee (1992). Our results show that the null hypothesis cannot be rejected and thus our instruments are valid.

5.2. Outcome of Crowdfunding Campaigns

Tables IX-XIV examine factors that affect the outcome of crowdfunding campaigns in terms of the completion ratio at the end of the campaign. The data are strongly consistent with H3A in that AON campaigns are significantly more successful (24.3% more successful controlling for other things being

equal in Model 1 and 21.1% more successful in Model 4), and this effect is statistically significant at the 1% level. Also, this effect is robust to including the KIA dummy variable versus the fitted value of this variable from the regressions in Table VIII. Below in the subsequent tables we explore the robustness of this result to alternative model specifications and subsamples of the data.

[Table IX About Here]

The data presented in Table IX indicate a number of other interesting findings. First, *In(Goal)* is negative and significant at the 1% level, such that a 1-standard deviation increase in the Goal amount is associated with a 35.4% reduction in the completion ratio (based on Model 1). Regarding the variables for additional project characteristics, digital output projects (that proxies for scalability of the project) are approximately 4.5%-7.0% less often completed, while *Verified Non-profits* are typically 4.9%-5.7% more often completed (Model 1 versus Models 4 and 5). A 1-standard deviation increase in team size gives rise to a 7.6% increase in the completion ratio for the sample of all projects in Model 1 and a 7.5%-8.4% increase in the completion ratio for the subsample of KIA projects in Models 2 and 5, respectively, but this effect is not significant for the subsample of AON projects in Models 3 and 6. Duration is negatively and significantly associated with success in all models. A 1-standard deviation increase in duration gives rise to a 22.7% reduction in duration for the full sample (Model 1). A 9.5% reduction in the subsample of KIA projects (Model 3). This results remain quite similar for these variables when substituting the variable *In(Goal)* with the dummy *High Goal*.

To show further insights and test for robustness, we next perform the analysis on subsamples based on Goals. Results are shown in Table X for the following subgroups separately: projects with goals less than \$10,000, projects with goals between \$10,000 and \$25,000, projects with goals between \$25,000 and \$50,000 and projects with goals above \$50,000. Given the average size of crowdfunding campaigns done on Indiegogo, most observations are in the first two subgroups. We find that most of the variables that were significant in Table IX continue to be significant in Table X in the different groups matched by size, except the last subgroup which is most likely due to the smaller sample size.

[Table X About Here]

According to Table V, there is on average a significant difference in project size between KIA and AON. Using a propensity score matching methodology (Rosenbaum and Rubin, 1983), we are able to weight projects in the AON subsample to match more closely the average size of projects between both subsamples. This methodology links all the KIA projects one by one with the closest AON project (we matched projects on goal; category and campaign start date). In the process, since there are more KIA projects, all AON projects must have at least one KIA equivalent, but can be matched with more than one KIA projects. At the end of the matching process, we found a number of observations equivalent in both subsample (with duplicated AON projects that matched more than once a KIA project).

[Table XI About Here]

After running the same regression models presented in Table IX on the new matched samples, we are able to confirm our results. These findings are reported in Table XI. Both, the choice for KIA and the goal, negatively impact the probability of success. These results reinforce our findings in line with Hypothesis H3A. Moreover, coefficients for soft information variables indicate that the crowd pays more attention to soft information for AON than for KIA. They have a larger impact on funding and are more significant: for instance, "gallery's items" has a coefficient for AON more than 3 times larger than for KIA; the effect is the same for video-pitches (which is not significant for KIA) and full text length.

[Table XII About Here]

In Table XII, we examine the impact of risk taken by the entrepreneur on the amount of soft information provided. We consider that the entrepreneur incurs higher risk of not getting any funding in the AON model, and that this risk is proportional to the goal: the higher the goal, the higher the risk of not receiving any funding (thus, the variable *Risk for the Entrepreneur*, which corresponds to the interaction between AON and Goal). From Table XII, we can observe that entrepreneurial risk increases the amount of soft information provided to the crowd: text length becomes longer. In subsamples based on project size, we see that the effect is more important for projects with high goal (which seems intuitive, since these projects tend to be less successful) and that the effect is even larger for innovative projects.

6. Concluding remarks

Thanks to the emergence of Internet platforms, crowdfunding has become accessible to a large number of entrepreneurs as alternative form of funding. While the standardization in crowdfunding platforms offers clear benefits in terms of comparability across projects and readability, it also reduces the extent to which entrepreneurs can tailor their offer according to their specific needs. One important dimension of standardization has been the adoption of AON and KIA models by the major reward-based platforms. The choice of model clearly affects fee structure paid by the entrepreneurs (since the platforms charge different fees) and how pledges are transformed into funding for the entrepreneur.

In this paper we compared the AON versus the KIA models in terms of the types of companies that used these methods of raising capital, their disclosures, and their success. An analysis of the Indiegogo platform offers a unique opportunity to examine the choice between the two forms of crowdfunding models, as the platform offers entrepreneurs the option to choose the models along with the fundraising goal of their project. Our findings offer support to the prediction that AON models offer a guarantee to the crowd that the entrepreneur does not start a project with unrealistically low funding. In contrast, the KIA model is a useful model for entrepreneurs that can scale their business. So that it is relatively more attractive to backers that can still gain utility in a partially funded project, and are expected to lose a pronounced amount of utility in the event that a project is stopped. Overall, AON fundraising campaigns involved substantially larger capital goals, and were much more likely to be successful at achieving their goals. Further, we showed that the marginal effects associated with information related by AON fundraisers were much more pronounced than that for KIA fundraisers. These findings are robust to controls for self-selection and endogeneity, and robust to propensity score matching.

Our study offers avenues for future research. One could be to determine success chances of projects themselves, beyond the campaign success. Our analysis examined success during the fundraising campaign but is silent about what happens afterwards. For instance, Mollick (2013) reports that 75% of projects successfully funded on Kickstarter deliver late. However, based on conclusions offered in our study, one might expect that this percentage varies according to the fundraising model (KIA versus AON) used during the campaign, since the latter is related to the amount raised. Indeed, projects that are started with sufficient funds are more likely to produce the promised product and eventually deliver on time, something that is worthwhile investigating in future research.

Another worthwhile research question is whether certain models are more prone to fraud. Indeed, concerns have recently been raised by regulators and academics (Griffin, 2012; Hildebrand, Puri and Rocholl, 2013; Hornuf and Schwienbacher, 2014) that crowdfunding simply shifts risk to the crowd and that some entrepreneurs may exploit an unsophisticated crowd. In the context studied here, one can extend the analysis by seeing whether projects funded with a KIA model are more prone to lead to fraud in the event of underfunding.

17

References

- Agrawal, A., Catalini, C., and Goldfarb, A. (2011): The Geography of Crowdfunding, Working Paper, University of Toronto.
- Ahlers, G.K.C., Cumming, D.J., Günther, C., and Schweizer, D. (2013): Equity Crowdfunding, Working Paper, York University and WHU.
- Belleflamme, P., Lambert, T., and Schwienbacher, A. (2013): Individual Crowdfunding Practices, *Venture Capital: An International Journal of Entrepreneurial Finance* 15 (4), 313-333.
- Belleflamme, P., Lambert, T., and Schwienbacher, A. (2014): Crowdfunding: Tapping the Right Crowd, Journal of Business Venturing, Forthcoming.
- Burtch, G., Ghose, A., and Wattal, S. (2014): An Empirical Examination of the Antecedents and Consequences of Contribution Patterns in Crowd-Funded Markets, *Information Systems Research*, Forthcoming.
- Colombo, M.G., Franzoni, C., Rossi-Lamastra, C. (2014): Internal Social Capital and the Attraction of Early Contributions in Crowdfunding Projects, *Entrepreneurship Theory and Practice*, forthcoming.
- Cosh, A., Cumming, D.J., and Hughes, A. (2009): Outside Entrepreneurial Capital, *Economic Journal* 119, 1494-1533.
- Cumming, D.J., and Johan, S.A. (2013): Demand Driven Securities Regulation: Evidence from Crowdfunding, Venture Capital: An International Journal of Entrepreneurial Finance 15, 361-379.
- Griffin, Z.J. (2012): Crowdfunding: Fleecing the American Masses, Working paper, Available at: http://ssrn.com/abstract=2030001.
- Hildebrand, T., Puri, M. and Rocholl, J. (2013): Adverse Incentives in Crowdfunding, Working paper, Available at: http://ssrn.com/abstract=1615483.
- Hornuf, L. and Schwienbacher, A. (2014): Which Securities Regulation Promotes Crowdinvesting?, Working paper, Available at: http://ssrn.com/abstract=2412124.
- Lee, L-F. (1992): Amemiya's Generalized Least Squares and Tests of Overidenfication in Simultaneous Equation Models with Qualitative or Limited Dependent Variables, *Econometric Reviews* 11 (3), 319-328.

- Lehner, O.M. (2014): Crowdfunding Social Ventures: A Model and Research Agenda, *Venture Capital: An* International Journal of Entrepreneurial Finance 15, 289-311.
- Mollick, E.R. (2014): The Dynamics of Crowdfunding: Determinants of Success and Failure, *Journal of Business Venturing* 29, 1-16.
- Mollick, E.R. (2014): Swept Away by the Crowd? Crowdfunding, Venture Capital, and the Selection of Entrepreneurs, Working Paper, Wharton, University of Pennsylvania.
- Mollick, E.R., and Kuppuswamy, V. (2014): After the Campaign: Outcomes of Crowdfunding, Working Paper, Wharton, University of Pennsylvania.
- Nahata, R. (2008): Venture Capital Reputation and Investment Performance, *Journal of Financial Economics* 90, 127-151.
- Rosenbaum, P. and Rubin, D.B. (1983): The Central Role of the Propensity Score in Observational Studies for Causal Effects, *Biometrika* 70 (1), 4155.
- Schwienbacher, A. (2007): A Theoretical Analysis of Optimal Financing Strategies for Different Types of Capital-Constrained Entrepreneurs, *Journal of Business Venturing* 22, 753-781.
- Schwienbacher, A., and B. Larralde (2012): Crowdfunding of Small Entrepreneurial Ventures, The Oxford Handbook of Entrepreneurial Finance: Oxford University Press (Ed. D. Cumming).
- Spence, M. (2002): Signaling in Retrospect and the Informational Structure of Markets, American Economic Review 92, 434-459.
- Stuart, T.E., Hoang, H., and Hybels R. (1999): Interorganizational Endorsements and the Performance of Entrepreneurial Ventures, *Administrative Science Quarterly* 44, 315-349.
- Tomczak, A., and Brem, A. (2013): A Conceptualized Investment Model of Crowdfunding, *Venture Capital: An International Journal of Entrepreneurial Finance* 15, 335-359.

Table I

Projects categories

Creative	Innovative	Social
Art	Small Business	Animals
Dance	Technology	Community
Film	Sports	Education
Gaming	Food	Environment
Music		Health
Photography		Politics
Theater		Religion
Transmedia		
Writing		
Comic		
Design		
Fashion		
Video/Web		

This table shows how Indiegogo sorts projects in categories and subcategories.

Table II

Number of projects by category and by year (Full sample)

This table shows projects repartition in each main category year by year. Values are given in number of projects and in percentage of total projects. Statistics are based on the full sample of projects extracted from indiegogo.com website, prior to applying our filters (see Section 4).

_	Creative	Innovative	Social	Total
2008	17	0	1	18
2008	94.4%	0.0%	5.6%	
2009	61	0	1	62
2009	98.4%	0.0%	1.6%	
2010	968	30	120	1118
2010	86.6%	2.7%	10.7%	
2011	4557	281	993	5831
2011	78.2%	4.8%	17.0%	
2012	10488	1682	5793	17963
2012	58.4%	9.4%	32.3%	
2012	12682	2566	6899	22147
2013	57.3%	11.6%	31.2%	
Total	28773	4559	13807	47139
TOLA	61.0%	9.7%	29.3%	

Table III

Number of projects by financing model and by year (Full sample)

This table shows projects repartition by financing model and by year. Values are given in number of projects and in percentage. While both KIA and AON models were available at time of the platform launch (in 2008), Indiegogo only allowed KIA campaigns during the years 2009 and 2010. The possibility to choice between the two models was again possible from 2011 onwards. Statistics are based on the full sample of projects extracted from indiegogo.com website, prior to applying our filters (see Section 4).

	All-Or-Nothing	Keep-It-All	Total
	¥	·	
2008	0	18	18
2000	0.0%	100.0%	
2009	0	62	62
2009	0.0%	100.0%	
2010	0	1118	1118
2010	0.0%	100.0%	
2011	20	5811	5831
2011	0.3%	99.7%	
2012	887	17076	17963
2012	4.9%	95.1%	
2013	1236	20911	22147
2015	5.6%	94.4%	
Total	2143	44996	47139
TOLA	4.6%	95.5%	

Table IV

Financing model by category (Full sample)

This table shows proportion of funding model used by categories. Statistics are based on the full sample of projects extracted from indiegogo.com website, prior to applying our filters (see Section 4).

	All-Or-Nothing	Keep-It-All
Creative	4.4%	95.6%
Innovative	10.5%	89.5%
Social	2.9%	97.1%
Total	4.6%	95.5%

Table VSummary statistics by funding model

This table shows summary statistics for variables included in our database, after applying our filters (see Section 4). We provide the number of observations, means, standard deviations and median for the final sample and for two subsamples based on funding models. A mean difference t-test and a difference of median test between the two subsamples is also provided.

		Fina	al Sample			All-0	Or-Nothing			Ke	ep-It-All		Mean Diff.	Median Diff.
	Obs.	Mean	Std. Dev.	Median	Obs.	Mean	Std. Dev.	Median	Obs.	Mean	Std. Dev.	Median	Test	Test (qreg)
Project Characteristics														
Verified Non-profit	22875	0.100	0.300	0	1201	0	0	0	21674	0.110	0.310	0	-0.107***	n.a.
Goal	22875	21045	26590	10000	1201	31377	36869	16470	21674	20473	25782	10000	10904.1***	6470***
ln(Goal)	22875	9.510	0.860	9.210	1201	9.840	0.980	9.710	21674	9.490	0.850	9.210	0.354***	0.499***
Reward's Levels	22875	7.440	3.940	8	1201	8.740	3.720	9	21674	7.360	3.940	8	1.375***	1***
Reward1 (%Goal)	20915	0	0.0100	0	1168	0	0.0100	0	19747	0	0.0100	0	-0.000448	-0.000330***
Reward2 (%Goal)	20548	0.0100	0.140	0	1153	0	0.0100	0	19395	0.0100	0.150	0	-0.00236	-0.000738***
Reward1 (abs)	20915	19.85	369.6	10	1168	17.69	86.93	5.500	19747	19.98	379.8	10	-2.288	-4***
Reward2 (abs)	20548	77.64	3905	25	1153	37.40	106.5	20	19395	80.03	4020	25	-42.64	-5***
Reward1 = 1 Dummy	22875	0.120	0.330	0	1201	0.190	0.390	0	21674	0.120	0.330	0	0.0729***	n.a.
Digital Output Dummy	22875	0.430	0.500	0	1201	0.370	0.480	0	21674	0.440	0.500	0	-0.0663***	n.a.
Team Size	22875	2.400	2.030	2	1201	2.400	2.040	2	21674	2.400	2.030	2	0.00441	0
Duration	22875	48.33	22.62	45	1201	40.25	13.23	40	21674	48.78	22.95	45	-8.529***	-5***
Soft Information														
Catch Phrase Length	22875	115.2	38.70	125	1201	115.1	35.25	123	21674	115.2	38.88	126	-0.0609	-3**
Updates	22875	5.090	8.800	2	1201	6.910	10.08	4	21674	4.990	8.710	2	1.921***	2***
Comments	22875	30.02	221.3	13	1201	63.59	289.6	17	21674	28.16	216.8	13	35.43***	4***
Gallery's items	22875	6.800	10.52	3	1201	7.810	11.28	4	21674	6.750	10.48	3	1.060***	1***
Video Pitch Dummy	22875	0.790	0.410	1	1201	0.850	0.360	1	21674	0.780	0.410	1	0.0666***	n.a.
Full Text Length	22875	4659	3439	3809	1201	6095	4473	5066	21674	4580	3355	3764	1515.7***	1302***
Social Networks	22875	3.290	31.51	3	1201	3.280	1.910	3	21674	3.290	32.37	3	-0.00800	0
A.R. Index	22681	15.26	4.620	14.95	1187	14.77	2.880	14.53	21494	15.29	4.690	14.98	-0.522***	-0.450***
C-L. Index	22756	21.21	4.480	20.87	1191	21.03	3.130	20.76	21565	21.22	4.540	20.87	-0.188	-0.110
Campaign Outcome														
Completion Ratio	22875	0.440	1.200	0.220	1201	0.640	1.160	0.210	21674	0.420	1.200	0.220	0.219***	-0.00969
Success Dummy	22875	0.180	0.380	0	1201	0.340	0.480	0	21674	0.170	0.370	0	0.177***	n.a.
Total Pledge	22875	6584	29836	2502	1201	15317	56972	3916	21674	6100	27484	2465	9216.9***	1451***
Total Backers	22875	82.37	413.3	33	1201	188.6	802.7	43	21674	76.48	379.4	33	112.1***	10***

Table VISummary statistics by outcome

This table shows number of observations, means, standard deviation and median value for two subsamples based on project outcome (successful or not). The sample includes all projects extracted from Indiegogo's website, after applying our filters (see Section 4). Mean difference t-test and median difference test are provided between both subsamples.

		Su	ccessful			Unsu	iccessful			
									Mean Diff.	Median Diff.
	Obs.	Mean	Std. Dev.	Median	Obs.	Mean	Std. Dev.	Median	Test	Test (qreg)
Project Characteristics										
Keep-It-All Dummy	4045	0.900	0.300	1	18830	0.960	0.200	1	0.0606***	n.a.
Verified Non-profit	4045	0.130	0.330	0	18830	0.100	0.290	0	-0.0296***	n.a.
Goal	4045	13478	16693	8500	18830	22671	28003	11664	9192.3***	3167***
In(Goal)	4045	9.190	0.690	9.050	18830	9.570	0.880	9.360	0.389***	0.317***
Reward's Levels	4045	7.990	4	8	18830	7.320	3.920	7	-0.671***	-1***
Reward1 (%Goal)	3722	0	0.0200	0	17193	0	0.0100	0	-0.000405*	-0.000351***
Reward2 (%Goal)	3668	0	0.0100	0	16880	0.0100	0.160	0	0.00124	-0.000670***
Reward1 (abs)	3722	16.54	93.36	10	17193	20.56	405.3	10	4.026	0
Reward2 (abs)	3668	32.85	65.98	25	16880	87.37	4309	25	54.53	0
Reward1 = 1 Dummy	4045	0.120	0.320	0	18830	0.130	0.330	0	0.00541	0
Digital Output Dummy	4045	0.450	0.500	0	18830	0.430	0.490	0	-0.0191**	n.a.
Team Size	4045	2.740	2.270	2	18830	2.330	1.960	2	-0.409***	0
Duration	4045	44.62	20.71	42	18830	49.13	22.93	45	4.504***	3***
Soft Information										
Catch Phrase Length	4045	114.0	37.96	123	18830	115.5	38.85	126	1.406**	3***
Updates	4045	8.290	11.54	5	18830	4.400	7.920	2	-3.887***	-3***
Comments	4045	86.64	520.1	33	18830	17.86	23.67	11	-68.77***	-22***
Gallery's items	4045	8.630	12.37	5	18830	6.410	10.04	3	-2.216***	-2***
Video Pitch Dummy	4045	0.820	0.380	1	18830	0.780	0.420	1	-0.0473***	n.a.
Full Text Length	4045	4990	3706	4082	18830	4588	3375	3758	-402.2***	-324***
Social Networks	4045	3.330	15.67	3	18830	3.280	33.96	3	-0.0542	0
A.R. Index	4020	15.37	5.010	14.94	18661	15.24	4.530	14.96	-0.127	0.0154
C-L. Index	4031	21.45	6.780	20.95	18725	21.15	3.800	20.85	-0.299***	-0.0954**
Campaign Outcome										
Completion Ratio	4045	1.400	2.600	1.070	18830	0.230	0.200	0.160	-1.171***	-0.910***
Total Pledge	4045	21786	68194	10103	18830	3318	4726	1885	-18467.7***	-8218***
Total Backers	4045	267.2	952.9	107	18830	42.66	59.73	26	-224.5***	-81***

Table VII

Correlation matrix for variables

	Verified			Digital		Catch		Video
	Non-	Reward's		Output		Phrase	Gallery's	Pitch
	profit	Levels	Team Size	Dummy	Duration	Length	items	Dummy
Verified Non-profit	1							
Reward's Levels	0.00810	1						
Team Size	0.0972*	0.1943*	1					
Digital Output	-0.0862*	0.2971*	0.0275*	1				
Duration	-0.00910	-0.0968*	0.0104	-0.0165	1			
Catch Phrase L.	0.0512*	0.0555*	0.0242*	-0.0637*	-0.0814*	1		
Gallery's items	-0.00170	0.1876*	0.2215*	0.0474*	0.0480*	0.0446*	1	
Video Pitch Dummy	0.0442*	0.3455*	0.1389*	0.2003*	-0.0541*	0.0517*	0.1215*	1
Full Text Length	-0.0117	0.3140*	0.1814*	0.0557*	-0.000600	0.1143*	0.2334*	0.1635
Social Networks	0.00470	0.0259*	0.00700	0.00440	0.00340	0.0136	0.0191*	0.0215
A.R. Index	0.1039*	0.0366*	0.0688*	-0.0311*	0.0112	0.0413*	0.0160	0.0524
Keep-It-All Dummy	0.0790*	-0.0778*	-0.000500	0.0298*	0.0841*	0.000400	-0.0225*	-0.036
ln(Goal)	0.0251*	0.1850*	0.1287*	-0.0505*	0.1104*	0.0536*	0.1048*	0.0964
Completion Ratio	0.0113	0.0118	0.0320*	-0.0108	-0.0492*	-0.00800	0.0616*	0.010

Stars indicate significance lev	el of 1%
---------------------------------	----------

	Full Text Length	Social Networks	A.R. Index	Keep-It-All Dummy	ln(Goal)
Full Text Length	1				
Social Networks	0.00120	1			
A.R. Index	0.1247*	0.0476*	1		
Keep-It-All Dummy	-0.0983*	0.000100	0.0252*	1	
ln(Goal)	0.2176*	0.00610	0.0374*	-0.0915*	1
Completion Ratio	0.0395*	-0.000300	-0.00480	-0.0408*	-0.1088*

Table VIII

Choice of funding model for crowdfunding campaigns

This table shows variables influencing decision by the entrepreneur for the "Keep-It-All funding" model (dependent variable is a dummy variable equal to 1 if the model used is "Keep-It-All" and equal to 0 if the "All-Or-Nothing" model is used). The model includes all projects available in our database without missing data in the used variables. As we consider that the goal sets by the entrepreneur is endogenous with the funding model decision, a 2 stages least square regression model is used. The instrumented variable is ln(Goal) and 2 instrumental variables are used : the first is the median goal of successful projects in the same subcategory for the semester prior of the campaign launch and the second is the median completion ratio for projects in the same subcategory during the semester prior of the campaign launch. (* p < 0.05, ** p < 0.01)

	(1)	(2)	(3)	(4)
	Probit	First stage	IVprobit	IVprobit
_		Dep.Var.=In(Goal)	(twostep)	(twostep)
In(Goal)	-0.163****		-0.609***	-0.496***
Digital Output Dummy	0.393	-0.0127	0.355***	0.405 ^{***}
Reward's Levels	-0.0297***	0.0440****	-0.0105***	-0.0154
Team Size	0.0269***	0.0381***	0.0404***	0.0408***
Instrumental Variables				
Med. Goal by Subcat. of Success Proj. in s-1 (log)		0.0820****		
Med. % of Completion by Subcat in s-1		-1.120****		
Constant	2.162***	9.309***	7.763***	5.288***
Category Dummies included	Yes	Yes	Yes	Yes
Year Dummies included	Yes	Yes	No	Yes
Country Dummies included	Yes	Yes	No	Yes
Observations	22239	22850	22850	22239
R^2		0.114		
Pseudo R ²	0.102			
				instruments,
				n and exogeneity
Over Id. test (Amemiya-Lee-Newey)			0.038	n.a.
Over Identif. p-val			0.8454	n.a.
First stage F-stat			373.04	37.40
Wald chi2 test of exog.			19.593	10.318
Wald chi2 p-val			0.000	0.001

Table IX

Outcome of crowdfunding campaigns

These regressions show impact of the goal level and of the choice of funding model on success of a crowdfunding campaign. Dependent variable is the completion ratio at the end of the campaign and the regression model used is ordinary least square. For the regressions 4, 5 & 6, projects are classified as "high goal" if the goal is above the median goal of all projects in the same subcategory for the same year. We also added controls variables on project characteristics and soft information provided by the entrepreneur. All regressions are controlled for country, subcategory and year fixed effect and are robust to heteroscedasticity. Stars indicate p-value as * p < 0.05, ** p < 0.01 and *** p < 0.001.

	(1)	(2)	(3)	(4)	(5)	(6)
	All projects	Keep-It-All	All-Or-Nothing	All projects	Keep-It-All	All-Or-Nothing
n(Goal)	-0.181***	-0.176***	-0.226***			
High Goal				-0.256****	-0.247***	-0.377***
Keep-It-All Dummy	-0.243***			-0.211***	0.2.1	0.077
Project Characteristics						
Digital Output Dummy	-0.0447*	-0.0414 [*]	-0.0673	-0.0702***	-0.0702***	-0.0274
Verified Non-profit	0.0504***	0.0440**		0.0567***	0.0494***	
Reward's Levels	0.00173	0.00119	0.0134	0.000628	-0.0000271	0.0150
Team Size	0.0165	0.0173	0.00415	0.0147***	0.0155	0.000514
Duration	-0.00181***	-0.00174***	-0.00693 [*]	-0.00210***	-0.00201***	-0.00827**
Soft Information						
Catch Phrase Length	-0.000511	-0.000516	-0.0000560	-0.000516	-0.000515	-0.000188
Gallery's items	0.00715***	0.00586***	0.0279 [*]	0.00709****	0.00583***	0.0276 [*]
Video Pitch Dummy	0.0226	0.0372	-0.178	0.0171	0.0320	-0.182
Full Text Length	0.0000179***	0.0000150***	0.0000432**	0.0000152***	0.0000122***	0.0000420**
Social Networks	-0.00563*	-0.00460	-0.00978	-0.00684*	-0.00590*	-0.00916
A.R. Index	-0.00194 [*]	-0.00169	0.00181	-0.00204 [*]	-0.00180	0.00211
Constant	2.399****	2.032***	3.040***	0.825***	0.506***	1.225****
Year	Yes	Yes	Yes	Yes	Yes	Yes
Category	Yes	Yes	Yes	Yes	Yes	Yes
Country	Yes	Yes	Yes	Yes	Yes	Yes
Observations	22681	21494	1187	22681	21494	1187
R ²	0.027	0.022	0.183	0.023	0.019	0.176

Table X

Outcome of crowdfunding campaigns - Completion Ratio by Goal Bins

These regressions show impact of projects characteristics and soft information on success of a crowdfunding campaign by funding model for various goal levels. Dependent variable is the completion ratio at the end of the campaign and the regression model used is ordinary least square. All regressions are controlled for country, subcategory and year fixed effect and are robust to heteroscedasticity. Stars indicate p-value as * p < 0.05, ** p < 0.01 and *** p < 0.001.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	All projects	Less t	han 10k	Between	10k and 25k	Between	25k and 50k	More	than 50k
	_	Keep-It-All	All-Or-Nothing	Keep-It-All	All-Or-Nothing	Keep-It-All	All-Or-Nothing	Keep-It-All	All-Or-Nothing
Project Characteristics									
Verified Non-profit	0.0449**	0.0488		0.0818***		0.0794**		0.0289	
Digital Output Dummy	0.0541	0.0995	-0.670	-0.138	0.601	0.0346	-0.525*	-0.102	-0.514
Reward's Levels	-0.00287	-0.00667	0.0204	0.00457	0.00902	0.0120****	0.00543	0.00649	0.0170
Team Size	0.0135***	0.0182***	-0.0505	0.0201**	0.0512	0.0186 ^{***}	0.0353	0.0148	-0.0325
Duration	-0.00295***	-0.00267**	-0.0119 [*]	-0.00129***	-0.00988*	-0.00141***	-0.000865	-0.000510	-0.00492
Soft Information									
Catch Phrase Length	-0.000572	-0.00101	0.000548	-0.000281	-0.000204	-0.0000412	-0.000788	0.000173	0.00276
Gallery's items	0.00698***	0.00832***	0.0512 [*]	0.00604**	0.00689	0.00263 [*]	0.00534	0.00555***	0.0418 [*]
Video Pitch Dummy	0.0178	0.0593	-0.225	0.0388 [*]	-0.212	0.00349	-0.0822	0.0310	-0.0801
Full Text Length	0.0000119 ^{**}	0.0000154	0.0000529	0.0000124 [*]	0.0000305	0.00000262	0.0000358 [*]	0.0000174	0.0000669 [*]
Social Networks	-0.0128***	-0.00955	-0.0715	-0.00718	-0.0302	-0.00380	0.0487 [*]	-0.00455	0.0185
A.R. Index	-0.00133	0.00159	0.00842	-0.000596	0.00584	-0.00174	-0.00498	-0.00678	0.00715
Constant	0.562***	0.419 [*]	1.001	0.497 [*]	0.714	0.107	0.893 [*]	0.0348	-0.631
		.,				.,		.,	
Year	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Subcategory	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	22681	8506	347	7804	365	2811	223	2373	252
R^2	0.015	0.010	0.410	0.039	0.177	0.082	0.417	0.065	0.372

Table XI

Outcome of crowdfunding campaigns for matched samples on goal, start date and subcategory

These regressions show impact of the goal level and of the choice of funding model on success of a crowdfunding campaign. Dependent variable is the completion ratio at the end of the campaign and the regression model used is ordinary least square. For the regressions 5, 6, 7 & 8, projects are classified as "high goal" if the goal is above the median goal of all projects in the same subcategory for the same year. This table uses propensity score matching methodology to match Keep-It-All and All-Or-Nothing subsample on size, goal, subcategory and dates. We also added controls variables on project characteristics and soft information provided by the entrepreneur. All regressions are controlled for country, subcategory and year fixed effect and are robust to heteroscedasticity.

	(1) All projects	(2) All projects	(3) Keep-It-All	(4) All-Or-Nothing	(5) All projects	(6) All projects	(7) Keep-It-All	(8) All-Or-Nothing
		after psmatch	after psmatch	after psmatch		after psmatch	after psmatch	after psmatch
In(Goal)	-0.189 ^{***}	-0.207***	-0.184***	-0.225***				
High Goal Keep-It-All Dummy	-0.196***	-0.189***			-0.264 ^{***} -0.179 ^{***}	-0.243 ^{****} -0.181 ^{****}	-0.255****	-0.236***
Project Characteristics								
Digital Output Dummy	-0.0244	-0.0559	-0.0203	-0.188 ^{***}	0.0160	0.0225	0.0161	-0.0464
Verified Non-profit	0.0662	0.0881	0.0608		0.0660	0.0854	0.0600	
Reward's Levels	0.00235	0.00526	0.00206	0.00802****	0.000788	0.00244	0.000412	0.00446
Team Size	0.0171***	0.0167***	0.0177***	0.0128	0.0158	0.0171****	0.0166***	0.0156
Duration	-0.00175***	-0.00183***	-0.00167***	-0.00240***	-0.00211***	-0.00246***	-0.00200***	-0.00339***
Soft Information								
Catch Phrase Length	-0.000463	-0.000550**	-0.000469	-0.000419**	-0.000478	-0.000645**	-0.000478	-0.000583***
Gallery's items	0.00699***	0.0102***	0.00578***	0.0201***	0.00707***	0.0102***	0.00587***	0.0203***
Video Pitch Dummy	0.0243	0.0271	0.0379	0.112***	0 0218	0.0279	0.0353	0.120****
Full Text Length	0.0000164***	0.0000204***	0.0000135***	0.0000312***	0.0000148***	0.0000198***	0.0000118***	0.0000316***
Social Networks	-0.0000279	-0.000223	-0.0000254	-0.0621***	-0.00000399	-0.000211	-0.00000276	-0.0667***
Constant	2.389***	2.761***	2.081***	3.016***	0.720***	0.936***	0.441***	0.974***
Year	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Subcategory	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	22875	43346	21673	21673	22875	43346	21673	21673
R^2	0.031	0.082	0.026	0.252	0.026	0.071	0.022	0.227

Table XII

Soft information disclosure in crowdfunding campaigns

These regressions show impact of the risk for the entrepreneur not to receive any money on the quantity of information provided in the crowdfunding campaign. The risk for the entrepreneur is 0 if he or she opts for a Keep-It-All funding model and is proportional to the goal sets if he or she opt for an All-Or-Nothing funding model. This variable is computed as "all-or-nothing dummy x goal". We also added controls variables on project characteristics. All regressions are controlled for country, subcategory and year fixed effect and are robust to heteroscedasticity.

Stars indicate *p*-value as * *p* < 0.05, ** *p* < 0.01 and *** *p* < 0.001.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Text length	Gallery items	Videopitch	Text length (OLS)	Text length (OLS)	Text length (OLS)	Text length (OLS)
	(OLS)	(OLS)	(probit)	goal < median	goal ≥ median	innovative projects	creative projects
Risk for the entrepreneur	64.50***	-0.0472	0.00600	43.36 [*]	65.01***	91.77***	69.93***
Project Characteristics							
Digital Output Dummy	1007.2***	-2.969 ^{***}	0.182	1072.2***	1309.0***		-942.2***
Verified Non-profit	-153.4 [*]	-0.146	0.0829 [*]	-65.01	-268.7**	-282.7	119.9
Reward's Levels	231.7	0.315	0.0832***	169.8	249.6***	271.4 ^{***}	224.2
Team Size	156.3	0.837	0.0479***	88.36	171.0***	200.4***	147.7***
Duration	4.210****	0.0240***	-0.000556	3.059 [*]	2.848 [*]	5.873 [*]	2.894 [*]
Soft Information							
Social Networks	152.0***	0.772***	0.122***	138.9***	145.0***	170.2***	164.3
A.R. Index	67.61***	-0.0207*	0.00731 [*]	103.3***	54.76**	101.7***	64.63 [*]
Constant	2169.5**	8.858**	-0.127	5924.4***	1753.4 [*]	3825.6***	4261.2***
Year	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Subcategory	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	22681	22681	22474	8853	13828	2996	12726
R^2	0.205	0.122		0.191	0.202	0.282	0.179
Adjusted R^2	0.198	0.115		0.176	0.191	0.257	0.169
Pseudo R^2	0.200	0.220	0.186	0.2.0	0.202	0.207	0.200

Appendix Table I

Description of Variables

Project characteristics variables	Definition			
Keep-It-All Dummy	Dummy variable equal to one if the entrepreneur chooses a "keep-it-all" funding model and zero for the "all-or-nothing" funding model.			
Verified Non-profit	Dummy variable indicating if the entrepreneur is a US registered non-profit organization.			
Goal	The crowdfunding campaign goal in USD set by the entrepreneur. For campaigns based on a currency other than USD, we converted the amount into USD at annual average exchange rate.			
High Goal	Dummy variable equal to one if the project has a goal above median size, calculated by subcategory and by year; and zero otherwise.			
Reward's Levels	Number of reward levels offered by the entrepreneur for his campaign.			
Digital Output Dummy	Dummy variable indicating if the project output is a good with nearly zero marginal costs beyond the first product. Digital outputs typically follow this cost structure. It includes the following subcategories: comic, film, gaming, music, photo, trans-media, video/web and writing.			
Team Size	Number of members in the team leading the project			
Duration	Duration of the funding campaign, in days			
Innovative Dummy	Dummy variable indicating if the project belongs to the "Innovative" category (see Table 1)			
Creative Dummy	Dummy variable indicating if the project belongs to the "Creative" category (see Table 1)			
Reward# (%Goal)	Ratio between the level of the reward number # and the total goal.			
Reward# (abs)	Minimal amount to pledge for a backer to claim reward number #.			
Reward1 = 1 Dummy	Dummy variable indicating if first reward level is \$1. This level offers usually no special reward, but backers are kept informed about project updates. It indicates interest in the project but does not represent a real pledge.			
Additional soft information variables	P.0000			
Catch Phrase Length	Length (in number of characters) of the project catch phrase. Indiegogo allows a maximum of 120			
	characters. This sentence is in the index description of the project and in the heading of the project page.			
Updates	Number of updates made by the entrepreneur to his/her project of the webpage. More updates means a more active entrepreneur.			
Comments	Number of comments made by the entrepreneur, backers and visitors about the project. More comments means more involvement and/or more interest by the crowd.			
Gallery's items	Number of pictures or videos presented in the media gallery.			
Video Pitch Dummy	Dummy variable indicating if a video pitch of the project is provided.			
Full Text Length	Length (in characters) of the full text of the project description on the project main page.			
Social Networks	Number of external links of the project to social networks (like Facebook, Twitter or any other community website).			
A.R. Index	The "Automated Readability Index" score, based on the full text of project description. This value is expressed in US grade level. For instance, grade 1 indicates text for children of 6/7 years old and grade 2 for high school students of 17/18 years old. This index is based on the following formula: [4.71*(characters/words)+ 0.5*(words/sentences)-21.43].			

C-L. Index	The "Coleman-Liau Index" score, based on the full text of project description. This value is expressed in the same grading system as the ARI but the computation is different. This index is based on the following formula: [0.0588*L-0.296*S-15.8], with L being the average number of letters by 100 words and S the average number of sentences by 100 words.		
Campaign output variables			
Completion Ratio	Ratio between total pledge and campaign goal.		
Success Dummy	Dummy variable equal to one if the completion ratio is at least equal to 1, and zero otherwise. The project		
	is thus considered as fully financed and the crowdfunding campaign successful.		
Total Pledge	Sum of all pledges made by backers.		
Total Backers	Number of backers having pledged money to the project.		