Crowdfunding Models: Keep-It-All vs. All-Or-Nothing [*]

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ABSTRACT

Reward-based crowdfunding campaigns are commonly offered in one of two models. The "Keep-It-All" (KIA) model involves the entrepreneurial firm setting a fundraising goal and keeping the entire amount raised, regardless of whether or not they meet their goal, thereby allocating the risk to the crowd when an underfunded project goes ahead. The "All-Or-Nothing" (AON) model involves the entrepreneurial firm setting a fundraising goal and keeping nothing unless the goal is achieved, thereby shifting the risk to the entrepreneur. We show that small, scalable projects are more likely to be funded through the KIA scheme, while large non-scalable projects are more likely to be funded through the AON scheme. Overall, KIA campaigns are less successful in meeting their fundraising goals, consistent with a risk-return tradeoff for entrepreneurs, where opting for the KIA scheme represents less risk and less return for the entrepreneur.

Keywords: Crowdfunding, Internet, Signaling

INTRODUCTION

The rise of crowdfunding has been facilitated by standardized Internet platforms that act as two-sided markets through the participation of a large crowd. They enable clear mechanisms through which individuals can provide money for or even invest in early-stage entrepreneurial firms (Mollick, 2014b; Belleflamme et al., 2013, 2014). There is growing literature on the network effects that may result from the participation of a large crowd. While understanding how crowdfunding platforms work has attracted increasing interest from research scholars, recent research is inconclusive about network benefits arising from the crowd (Bayus, 2013; Boudreau and Jeppesen, 2014), partly because the incentives and motivations among different individuals is heterogeneous (Belenzon and Schankerman, 2015). In this paper, we provide new theory and evidence on how the design of the crowdfunding mechanism itself can influence the networked risks and benefits associated with participation in the crowd.

Kickstarter and Indiegogo are reward-based crowdfunding platforms whereby entrepreneurs state capital raising goals, and, in exchange, individuals are offered a reward for participating.[1] 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 goal is reached. In this paper, we consider whether the differences in these two fundraising 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. From a managerial perspective, these issues are crucial for understanding how networks such

[1] Other forms of crowdfunding platforms exist, such as equity-, loan- and donation-based platforms. These platforms attract different types of crowdfunders, since incentives to participate are not based on receiving a product.

as crowdfunding platforms can contribute to obtaining necessary resources to transform innovative ideas into products.

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. By contrast, KIA projects will be selected by entrepreneurs who can scale their project (i.e., a portion of the planned project is feasible) at a level that individuals still get utility from the reward under a scaled-down format (knowing that they will lose the entire utility if the project is canceled). This may occur if the degree of underfunding is not excessive so that the crowd avoids bearing too much risk of not receiving anything. Similarly, entrepreneurs with projects with few fixed costs of production are more likely to use the KIA model, since the absence of fixed costs makes it easy to undertake the projects on a smaller scale than when fixed costs are important. These predictions are consistent with a risk-return tradeoff at the entrepreneurial level, in which selecting the KIA model represents less risk but also lower returns (lower chances of obtaining the needed funds) for the entrepreneur, while the AON model has more risk taken by the entrepreneur but higher chances of successful funding. Thus, the KIA model, while offering an overall lower chance of success, may be optimal for risk-averse entrepreneurs, particularly if the higher risk involved in AON is not compensated by sufficiently higher success chances.

To test these propositions, we extracted a sample of 22,850 fundraising campaigns from the Indiegogo platform (www.indiegogo.com) from the years 2011–2013. Unlike other major platforms, Indiegogo has offered entrepreneurs the option of picking either the AON or the KIA model since December 2011. Thus, Indiegogo offers a unique setting to investigate our research questions. The data indicate that 94.8% of fundraising campaigns used the KIA model, while only 5.2% used the AON model. Campaigns using the AON model on average sought to raise $31,397 (and median of $16,485), while campaign goals for KIA were on average $20,478 (median of $10,000). AON campaigns had an average completion ratio (i.e., the ratio of total pledges over goal, in a percentage) of 64%, while KIA campaigns had a completion ratio of 42%.

Put differently, 34% of all AON campaigns were successfully completed (i.e., they had a completion ratio of 100% or higher), while only 17% of all KIA campaigns achieved their funding goals. AON campaigns had on average 189 backers (median 43), while KIA campaigns on average attracted 76 backers (median 33).

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 the AON model constitutes a commitment device and thus reduces risk to the crowd, as underfunded projects will not be undertaken under with AON. Consistent with existing studies on crowdfunding success (Mollick, 2014a; 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, despite the fact that their goals are larger on average. Taken together, these results are consistent with the 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 in general, despite their lower goals, when compared to AON campaigns. Under a KIA campaign, the crowd bears the risk that an entrepreneurial firm undertakes a project that is underfunded and, hence, more likely to eventually fail, making the crowd more reluctant to pledge. However, these conclusions do not imply that AON is systemically superior, since AON entails significantly higher risk for the entrepreneur. Thus, our findings support the view that entrepreneurs on Indiegogo are often willing to reduce their own risk by opting for a KIA model at the expense of achieving higher funding amounts. These findings are robust to a number of specification tests, including controls for the endogenous choice of the fundraising goal and propensity score matching.

The remainder of the paper is structured as follows: The next section provides information on the structure of the Indiegogo platform. Our theoretical predictions are thereafter explained and summarized. The subsequent sections introduce the data and provide empirical tests. A discussion and concluding remarks are provided in the last section.

THE STRUCTURE OF THE INDIEGOGO PLATFORM

Launched in 2008, Indiegogo has become the second-largest crowdfunding platform worldwide (59,889 projects listed[2]), after Kickstarter (133,859 launched projects, among which 56,468 successfully funded for a total amount raised of $986 million[3]). Indiegogo offers entrepreneurs the possibility to launch their online reward-based crowdfunding campaign in three categories (Creative, Innovative, or Social). 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). An individual, a group of persons, a registered business, a non-profit institution, a community, or even a religious or political organization can post projects. 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.

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.[4] 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

[2] Source: Indiegogo.com (last viewed on February 20, 2014)

[3] Source: kickstarter.com (last viewed on February 20, 2014)

[4] There are other platforms offering the choice between KIA and AON models, such as Community Funded and Crowdtilt. Indiegogo, however, is by far the larger and more widely known platform, 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. Compared to these others platforms that also offer the choice between KIA and AON models, Indiegogo is also larger in terms of number of projects posted and volume pledged.

the pledges are cancelled, and the 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 an 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.[5] Of course, the costs of a too high goal are even larger for AON projects, since there the entrepreneur needs to abandon his/her project. While all the campaigns were based on the KIA model in the first years of the platform's existence, Indiegogo started offering the option to the entrepreneur to choose between KIA and AON from November 2011 onwards.

To sum up, two important decisions must be considered 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 are, therefore, potentially endogenous, as we discuss and control for in our empirical analyses below.

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 entrepreneur freely defines the reward amounts and steps, and the number of reward levels. 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 only in a limited quantity (limited editions of the product, a special discount for early backers, etc.). The entrepreneur also indicates a provisional date for the reward to be delivered. These rewards offer no legal obligation for the entrepreneur or guarantee for the backers, even in case of project success.

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

Beside this hard information, Indiegogo also permits an entrepreneur to provide 'soft' information about his or her project. Some information is needed for the index pages, where projects are listed as standardized "projects cards" (a small image, the campaign title, and a short description with a maximum of 160 characters, the category, and the origin country and city). Other project descriptions will only appear on the project main page: the full project description with no limit in length or form (and which can include text, pictures, animations, charts, graphics…), an optional video pitch introducing the project and the leading team, an extra pictures gallery, links to relevant 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/her activity on Indiegogo are listed. This personal page shows links to other projects leaded, their own backer activities in other projects, referrals (the number of clicks on shared links from external social networks), and the number of comments he or she has made on an actual or previous campaigns.

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.

THEORY AND HYPOTHESES

Prior empirical and theoretical work on crowdfunding has focused on the factors that affect success on crowdfunding platforms that only offer AON crowdfunding, such as Kickstarter; see Mollick (2014a), Belleflamme et al. (2014), Mollick and Kuppuswamy (2014) and Colombo et al. (2014). Related studies on crowdfunding have examined equity crowdfunding (Ahlers et al., 2015; Cumming and Johan, 2013; Hornuf and Schwienbacher, 2014a, 2014b).

Our theoretical setting differs from prior work by examining the different types of reward-based crowdfunding models and the role of model choice as a signal in the crowdfunding campaign. While most of these studies focus on crowd and project characteristics, such as gender (Greenberg and Mollick, 2014) or geographical origin (Agrawal et al., 2015, Lin and Viswanathan, 2014), our contribution lies in examining the drivers of the entrepreneurial decision in the design of the crowdfunding campaign and its impact on the crowd's willingness to pledge money and, thus, the ultimate campaign outcome.

We assume entrepreneurs and the crowd are both risk averse. Expected utility is a function of the project, the reward, the cost of participation, the risks of the project not being undertaken, and the risks of the project not succeeding on the condition of being undertaken.

Using a theoretical framework of information aggregation, Hakenes and Schlegel (2014) show that the level of funding goals set in AON crowdfunding campaigns helps to attract a larger crowd. They consider equity- and loan-based crowdfunding where the crowd makes financial decisions. In the context of reward-based crowdfunding, by contrast, the crowd does not make investment decisions but rather consumption-based decisions. However, part of the intuition developed there is useful in our context. In Hakenes and Schlegel, the level of the funding goal serves as a tool to aggregate vague information that each investor has. By imposing an AON model, individual investors are more likely to invest, despite the availability of only vague information, since they know they will become a crowdfunder to the project if many other crowdfunders with similarly vague information also contribute. In the case of reward-based crowdfunding, the level of the funding goal serves a costly mechanism that ensures that the entrepreneur will limit the risk faced by the crowd only by starting the project with sufficient financial resources. This maximizes the chances that the entrepreneur will be able to deliver the promised reward to the crowdfunders.

Furthermore, some crowdfunders may prefer to back an “underdog” since “warm-glow” feelings may be worth more to some people than a reward such as a name listed on a company website, for instance (McGinnis and Gentry, 2009). An underdog on the Indiegogo platform could be perceived by the crowd to involve an entrepreneur that sets a very high goal and

selects an AON model where the entrepreneur has a high chance of getting nothing. An entrepreneur who selects an AON model with a low goal would not engender any special feelings to the crowd.

To sum up, by selecting the AON model, entrepreneurs have the ability to signal quality. If an entrepreneur leads a project with a high capital goal, he or she 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 notion 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. The decision to seek AON financing imposes a larger risk on the entrepreneur of not being able to start the project at all, making the choice of AON a costly and thus credible signal for the entrepreneur (consistent with the Spence-Mirrlees condition that any signal must be costly to be credible; Spence, 2002). Such campaigns may then be considered as less risky for the backers and, hence, may attract more backers and larger amounts.

> **H1 (Funding Goal):** Projects with high capital goals are more likely to opt for All-Or-Nothing crowdfunding campaigns.

Entrepreneurs can affect the compensation of crowdfunders with more reward levels in order to make pledging more worthwhile. More reward levels increase the utility of crowdfunders when they have different preferences on how the final product should look (e.g., in terms of color or design), since each crowdfunder can select the most appropriate reward type for him- or herself. This greater choice, in turn, increases the total amount of pledges, since more backers may want to participate. From the perspective of the entrepreneur, more reward levels reduce the risk of failure. Therefore, selecting the AON funding model becomes less costly, which then enables the entrepreneur to select the AON model more often.

> **H2 (Reward Levels):** All-Or-Nothing crowdfunding campaigns are more likely to have more reward levels.

Generally, entrepreneurs who are in the market for crowdfunding are capital constrained and unable to make up funding shortfalls. At least, given the uncertainty with the possibility of a funding shortfall and the magnitude of the shortfall, there is no way for the entrepreneur to credibly signal to the crowd that he or she will make up the difference with other sources of funding. Entrepreneurs are not likely to be successful crowdfunders at all if they advertise that they have lots of money from other sources and do not need the pledges from the crowd.

The risk to the crowd of starting a project with insufficient resources is mitigated if the project is scalable. 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. A project can be considered as scalable in two ways, either because the output or costs are scalable. The first case is when the entrepreneur is able to reduce the costs by removing some features to the goods. Examples of projects that can be scaled back this way 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'). In the second case, scalable projects are characterized by having little or no fixed, incompressible costs that need to be shared among a larger number of crowdfunders. Projects with absolutely no fixed costs can be started with any number of backers, as long as the required pledge covers the product's marginal cost of production.

Backers contribute capital if the utility associated with the funded project and reward outweighs the pledged contribution (Belleflamme et al., 2014), even in case of a scaled-back product. 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 (Lambrecht et al., 2014). 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 in form of a qualitatively reduced product.

Likewise, KIA models are more attractive if the project has little fixed costs to spread over backers, since such a project can remain profitable even with only a few backers.

> **H3 (Scalable Projects):** Projects that are scalable and/or have lower fixed costs are more likely to use the Keep-It-All (KIA) model.

Given these predictions of the choice of funding models, entrepreneurs will never pursue riskier AON campaign strategies unless the average success level associated with the riskier campaign strategy is higher. If success were, on average, higher under KIA campaigns, then entrepreneurs would never select AON campaigns, because there is no reward for the extra risk taken. In contrast, we expect KIA projects to be less successful, since the crowd bears the risk of an entrepreneurial firm undertaking a project that is underfunded and, hence, more likely to fail. In equilibrium, if entrepreneurs are risk averse, they will use the riskier AON method only for projects where success is much more likely.

> **H4 (Risk-Averse Entrepreneur):** All-Or-Nothing campaigns are, on average, more likely to be successful than Keep-It-All campaigns.

The risks entrepreneurs face in terms of an underfunded AON project are much more pronounced than an underfunded KIA project. As such, we expect entrepreneurs to spend more effort and expense (in terms of money and time) on signals of quality to the crowd. These expenses are primarily in the form of soft information, such as longer catch phrases, photos, having a video pitch, and longer yet easier-to-read project descriptions. Furthermore, we would expect AON entrepreneurs to have invested more time in developing a social network presence in order to lower the probability of and expected cost associated with an underfunded project.

> **H5 (Soft Information):** Entrepreneurs pursuing riskier campaign strategies will make more use of soft information to mitigate the uncertainty faced by the crowd.

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 reward 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 these campaigns are more likely to match preferences of the crowd, due to the broader variation in the amount that can be invested and the reward to be received.

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 of whether they are successful or not, as long as the total amount pledged is at least 500 USD/EUR/CAD/AUD/GBP. Our initial sample consisted of all of 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 were linked to specific project characteristics; therefore, it seems reasonable to assume that these missing projects were 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 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 excluded 5,727 campaigns that took place between 2008 and November 2011, since the choice between the AON and KIA model was only introduced in December 2011 and, thus, our hypotheses could not be tested on these campaigns. Following previous empirical research on crowdfunding (Mollick, 2014a; Qiu, 2013), we excluded projects with a fundraising goal under $5,000 (after conversion of all values into $). Such projects typically rely for the most part 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 excluded projects with a goal higher than $200,000, which corresponds to the 99th percentile of our distribution. Indeed, some projects had very large fundraising goals (12 projects had a goal higher or equal to $10m). Consistent with the approach adopted by Mollick (2014a) for Kickstarter data, we considered these few observations as outliers, distinct from the traditional type of projects proposed on the platform. Our final sample was composed of 22,850 campaigns. A full description of variables available in our dataset is provided in Appendix Table I. Variables are classified in 3 types: project characteristics, soft information provided at the beginning of the campaign, and campaign output.

The recorded project characteristics are mandatory information and prior to the campaign start, all entrepreneurs set them once and for all. 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, possibly 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 limited ourselves to those that could be measured quantitatively. For instance, information such as the number of words/pictures/items and the presence or not of some items allowed us to observe the implication of the entrepreneur in his/her project and its degree of preparedness, as it is associated with success (Mollick, 2014a).

Given that this information is intended to a wide audience reading, we also include a readability index as a 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). This index uses the full text of project description, as described in Appendix Table 1. The ARI offers an index expressed in US grade levels, which makes it easy to interpret economically. For

instance, grade 1 indicates text for children who are 6/7 years old, and grade 12 for high school students who are 17/18 years old.[6]

Finally, we consider campaign outputs based on observable information at the end of the campaign. These output measures consist of the total amount pledged by backers, the total number of backers, and the completion ratio. These output measures define the success of the campaign. We define the variable *Completion Ratio* as the ratio of the total amount pledged over the goal set by the entrepreneur. Our primary measure of success is a dummy variable called *Success Dummy*, which equals 1, if the *Completion Ratio* is equal or greater than 1, and 0 otherwise. Figure I shows the distribution of the *Completion Ratio* for AON and KIA (up to a value of 2) and highlights that the distribution is highly weighted on 0 and 1. The shape of this distribution lends support to our decision to use a dummy variable as our primary measure of campaign success. In unreported analysis, we considered the *Completion Ratio* as an alternative dependent variable to the *Success Dummy*, and our obtained conclusions are qualitatively similar. Thus, we do not report them below.

[Figure I About Here]

As shown in Table I Panel A, 56.2% of the projects in our final sample belong to the creative category, 13.3% to the innovative category and 30.5% to the social category. The AON model is becoming increasingly popular and now represents more than 5% of new campaigns (Panel A). Especially innovative projects are choosing the AON model more often. Table I Panel B shows that innovative projects are more likely to be AON projects (11.7% are AON versus 88.3% KIA), while social projects are more likely to be KIA projects (2.4% are AON versus 97.6% KIA), with creative projects falling in the middle (5.3% AON versus 94.7 KIA).

[Table I About Here]

[6] In unreported analyses, we also considered an alternative measure of readability called the Coleman-Liau Index, which is based on the notion that the length of words is a better predictor of readability than syllable counts. We obtained qualitatively similar results, since both measures are highly correlated. When both measurements are included in the same regression, the ARI takes all the significance, which led us to prefer this measurement over the Coleman-Liau Index.

Table II 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 II About Here]

In line with our expectations (see Hypothesis H3), 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. Similarly, 78% of the KIA projects include fixed costs (our alternative measurement of scalability based on costs),[7] compared to 89% of the AON projects. Moreover, KIA campaigns offer fewer reward levels, consistent with H2. The 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 (not reported in Table I).

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"). Supporting Hypothesis H1, AON projects show, on average, 53% higher capital goals than KIA (and a 65% higher median). 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, consistent with H5. Indeed, project descriptions are longer (the variable *Full Text Length*) and easier to read and more pictures and video pitches are provided. There is no difference in the

[7] The Fixed Costs Dummy variable is equal to 1, if the project description mentions a term related to fixed costs, and equal to 0 otherwise. The first step to constructing this variable was to create a dictionary with all the words related to fixed costs. We made a random selection of 114 projects (0.5%) weighted by categories and by funding models. We then read the full text of every project in the selection, referencing every term related to any kind of costs mentioned in the text. Each co-author then went through the list and selected words related to fixed costs. We then compared and discussed our list to finally agree on a restricted set of words related to some fixed costs. Finally, we used the full description's text of campaigns to calculate a dummy variable for each project. More details on the list of terms kept for coding fixed costs are provided in Appendix Table I.

number of external social network 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 H4. This difference in success will be confirmed in the multivariate analysis provided in the next section.

Table III 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 pitches, and more pictures in galleries). Of course, successful projects imply, on average, more backers and a higher average of pledges by backers. Here, too, there is no difference in social network presence between the two groups (i.e., presence does not mean popularity). The readability of campaign descriptions does not seem to affect outcomes either. The two groups have approximately the same typology of texts; at best, unsuccessful projects are easier to read. However, readability may as well be driven by differences in project categories. It is worthwhile to note that the values obtained here are quite high, since they correspond to text designed at the undergraduate level. Recall that the ARI score corresponds to the US educational system level, with 12 being the last grade level of secondary education before college and 14 being a second-year undergraduate. Therefore,, an average level of 15 indicates text written (intentionally or not) at an undergraduate level.

[Table III About Here]

Table IV provides further insights into hypothesis H4 on funding outcomes. Panel A of Table IV shows the mean of the *Completion Ratio* and the standard deviation of the *Completion Ratio* for the full sample, the KIA subsample, and the AON subsample, as well as for innovative, creative, and social KIA and AON campaigns. Panel B of Table IV shows the same information for the amount pledged (the variable *Total Pledge*). We present winsorized variables at the

99th percentile to make the different amounts comparable (the same range for each variable) and to avoid excessive outliers at the higher end. The data and figures in Panels A and B in Table IV show a clear, positive relationship between standard deviation and average success. Thus, more risk for the entrepreneur is associated with a higher average success level, consistent with H4.[8]

[Table IV About Here]

Table V provides a comprehensive correlation matrix that includes the most relevant variables. In particular, the reported correlations offer preliminary support for our hypotheses H3 on scalability and H1 on the funding goal. Indeed, the correlation between the *Digital Output Dummy* (for scalable projects, as defined in Appendix Table I) and the *Keep-It-All Dummy* (Hypothesis H3) is 0.0299 and statistically significant at 1%. Similarly, the correlation between the *Fixed Costs Dummy* and the *Keep-It-All Dummy* also has the excepted sign (i.e., it is negative, since it is defined in the opposite way from the *Digital Output Dummy*) and is statistically significant at 1%. The correlation of the *Goal* and the *Keep-It-All Dummy* (Hypothesis 2) is -0.0916 and also significant at 1%. As for our hypothesis H4, we find a correlation of -0.1033 between the *Success Dummy* and the *Keep-It-All Dummy*, which supports the hypothesis that AON projects are more successful on average in achieving their goal. The next section tests and confirms these findings in a multivariate setting.

[Table V About Here]

RESULTS

Choice of AON versus KIA Crowdfunding Models

Table VI addresses the issue of what drives entrepreneurs to opt for KIA. To test our hypotheses H3 and H1, we consider that the decision between KIA and AON will depend on some

[8] Note that we do not present the same pictures in Table IV for the Success Dummy variable, since for that variable a higher mean is mechanically related to a higher standard deviation.

characteristics intrinsic to the project that exist before the campaign launch, including the category of the project and the goal amount of the funding campaign. We also expect some other pre-existing variables to have an impact on this choice such as the number of different rewards the entrepreneur is able to offer, the size of the team leading the project, and the profit purpose of the project. The first method used is a probit regression, since our dependent variable is binary.

Most likely, the goal of the campaign is set at the same time as the one for the funding model and is, therefore, linked. This causes a problem of endogeneity between our goal variable and the Keep-It-All dummy, as these decisions are simultaneous. Indeed, the campaign goal is primarily determined by real needs, though most likely adjusted for strategic purposes that are based on the desire to signal commitment and also based on expectations of the entrepreneur about his/her capability to attract the crowd's interest. To control for the endogeneity of the goal amount, we chose to use two-step (IV-probit) regressions to solve this problem, which is our second method of analysis. We use a two-step estimation methodology, in which the first equation estimates the *ln(Goal)* and the second equation the choice of funding model (*Keep-It-All Dummy*). Since our dependent variable in the second step is binary, we estimate our equations using IV-probit regressions.

Moreover, all our models control for fixed effects due to the country of origin of the project initiator, the project category, and the semester of campaign launch. Table VI shows results for our regressions under various specifications.

[Table VI About Here]

Our explanatory variables of interest are the scalability measures (H3) and the logarithm of goal (H1). As discussed, we use two different measures of scalability: the *Digital Output Dummy* that proxies for output scalability and the *Fixed Costs Dummy* that proxies for costs scalability. Given the definition of these variables, we expect from H3 a positive impact for the first measure but a negative impact for the second one. As shown in Table VI, the digital output variable is positive and statistically significant at the 1% level, indicating that digital projects are 37.9% more likely to use KIA in Model 1, which is strongly consistent with H3. In Model 2, the

presence of fixed costs reduces the probability of KIA by 23.2%, which is again significant at the 1% level and consistent with H3. Further, as expected (H1), the data indicate that the impact of the *ln(Goal)* is negative and statistically significant, such that a 1-standard deviation increase in the *ln(Goal)* gives rise to a 13.5% increase in the probability of the use of AON. Similarly, the coefficient on Reward Levels is negative and statistically significant at the 1% level, whereby a 1-standard deviation increase in Reward Levels gives rise to an 11.3% increase in the probability of the use of AON, consistent with H2. Note that we have carried out several robustness checks that are not reported in the tables for succinctness (but available on request from the authors) but that control for rewards in different, other ways, including the size of the smallest reward. These alternative measures do not alter our conclusions.

The data further indicate 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 5.2%. One possible reason could be that team size proxies for firm size and larger firms may be more able to start an underfunded project.

We now turn to the two-step IV-probit regressions (Models 3 to 6 in Table VI). The first-stage regression in Model 3 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 to the campaign launch, and the second is the median completion ratio for projects within the same subcategory for the semester prior to the campaign launch. We present statistics in Table VI that show these are statistically valid instruments. In terms of the intuition, these variables for the median previous period's goal size of the same subcategory and the median previous period's completion ratio of the same subcategory are likely to affect the goal levels selected by current entrepreneurs seeking crowdfunding. It would be unusual for an entrepreneur to have a vastly different goal amount than a similar, successful entrepreneur in a prior period, unless a similar entrepreneur in the prior period was unsuccessful in achieving that goal. We obtain that higher goals set by previously successful projects (*Med. Goal by Subcat. of Succ. Proj. in s-1 (log)*) positively impact current goals,

consistent with recent success stories driving follow-up entrepreneurs to undertake more ambitious projects. In contrast, high completion ratios of previous projects (*Med. Completion Ratio by Subcat. in s-1*) negatively impact current goals, which can be explained by entrepreneurs taking less risk by setting lower goals (consistent with H1, since signaling becomes less important). We use the estimated goal of the first regressions (Models 3 and 5) for the estimation of the second regressions (Models 4 and 6). The results observed in Table VI confirm what we saw in the first probit specification, in terms of the statistical significance, and show similar economic significance. In short, even if we only partly deal with endogeneity in these tests, the findings are very stable under different specifications and, hence, we do not have reason to believe that the results are being significantly affected by endogeneity.

In addition to these regressions, we created some tests to address concerns about the validity of our IV probit methodology. The first test of endogeneity follows the specification of Durbin-Wu-Haussmann testing the difference between the two estimates. The null hypothesis tests if the regressor of interest (the variable *ln(Goal)*) is exogenous. As the null hypothesis is rejected in our tests, the variable *ln(Goal)* is indeed endogenous, and, thus, ordinary probit estimates are inconsistent. The IV-probit estimates are, therefore, appropriate. The second test checks whether or not the instruments are weakly correlated with our endogenous variable. Based on F-statistics 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 over-identifying restrictions. This test performs for over-identification (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.

Outcome of Crowdfunding Campaigns

Tables VII-VIII examine factors that affect the outcome of crowdfunding campaigns in terms of the probability of success for the campaign. The baseline specifications are presented in Table VII. The data indicate that KIA campaigns are significantly less successful on average (17.5% less successful in the full sample in Model 1 and 16.3% in Model 2), and this effect is statistically

significant at the 1% level. But this effect varies in the different subsamples in the data. For the subsample of digital output projects (Model 3), KIA is 20.3% less successful, while for non-digital output projects (Model 4), KIA projects are 13.6% less likely (significant at the 1% level) to be successful, consistent with H4. These findings are consistent with the use of fixed costs as alternative proxy for scalability (Models 5 and 6), as well as subsamples of projects with and without fixed costs (Models 7 and 8), and subsamples of projects with digital and non-digital output (Models 9 and 10).

[Table VII About Here]

The data presented in Table VII indicate a number of other interesting findings. First, the *ln(Goal)* is negative and significant at the 0.1% level, such that a 1-standard deviation increase in the Goal amount is associated with approximately a 43.4% reduction in success likelihood (Model 1). Digital output projects are not more likely to be successful (Models 1 and 2), but projects with fixed costs are 2% more likely to be successful (Model 5), and this effect is significant at the 1% level. *Verified Non-profits* are typically 4.4%-8.1% more often completed (Models 2-4, 6, and 8-10), except for projects that do not involve fixed costs (Model 7). A 1-standard deviation increase in team size gives rise to a 12.9% increase in successful campaigns for the sample of all projects in Model 1, and this effect is similar in the other models in Table VII. In line with previous research (Mollick, 2014a; Kuppuswamy and Bayus, 2014), duration is negatively and significantly associated with success in all models. A 1-standard deviation increase in duration gives rise to a 12.6% reduction in the probability of success.

According to Table II, there is, on average, a significant difference in project size between KIA and AON. Since the goal is a key variable of our hypotheses by impacting the decision for the funding model, and since the goal is also a determinant of the completion ratio--and by extension, the success dummy, which is our dependent variable--we wanted to be sure that the difference in the goals between subsamples was not affecting our results. Using a propensity score matching methodology (Rosenbaum and Rubin, 1983), we are able to weight projects in the AON subsample to match more closely with the average size of projects between both subsamples. This methodology links all the KIA projects one by one with the closest AON

project (we match projects based 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 project. At the end of the matching process, we found a number of observations equivalent in both subsamples (with duplicated AON projects that matched more than one a KIA project).

[Table VIII About Here]

After running the same regression models presented in Table VII on the new matched samples, we were able to confirm that the sign and statistical significance of our results are very robust.[9] The findings with matched samples are reported in Table VIII. In the economic significance of the results between Tables VII and VIII, there are some differences, which are as follows. The marginal effects for the *ln(Goal)*, the *Keep-It-All Dummy*, the *Verified Non-profit*, and the *Reward Levels* are approximately 30% larger, relative to those for Table VII. The marginal effects for the *Team Size*, the *Duration*, and the *Catch Phrase Length* are approximately the same for Tables VII and VIII. The *Fixed Costs Dummy* marginal effect in Model 5 in Table VIII is roughly half the magnitude relative to Table VIII. The marginal effect for the *Video Pitch Dummy* and the *Full Text Length* is approximately two-thirds larger in Table VII, relative to Table VIII, and the statistical significance is more robust in Table VII than in Table VIII. The marginal effects for *Gallery Items* and *Social Networks* are approximately three and four times larger, respectively, in Table VIII relative to Table VII.

[Table IX About Here]

Soft Information Disclosure and Entrepreneurial Risk

In Table IX, we examine the impact of risk taken by the entrepreneur on the amount of soft information provided. We consider that the entrepreneur incurs a 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

[9] To further test for robustness, we performed the analysis on subsamples based on goal levels (instead of the matched sample approach in Table VIII). The findings are similar and available on request.

higher the risk of not receiving any funding (thus, the variable *Risk for the Entrepreneur*, which corresponds to the interaction between AON and Goal, as defined in Appendix Table I). Table IX Models 1-5 show that entrepreneurial risk increases the amount of soft information provided to the crowd: text length becomes longer. In the full sample (Model 1), a 1-standard deviation increase in risk for the entrepreneur increases the amount of text provided by 134 characters. Compared to the average length observed (4,658 characters; Table II), this represents an increase of 2.9%. This effect is significant at the 1% level in Model 1 and in Model 3 for the subsample, where the goal size is larger than the median, but not significant in Model 2, where the goal size is less than the median, hence, there is less risk for the entrepreneur. In Models 4 and 5 for innovative and creative projects, respectively, the effect is likewise significant at the 1% level, and the economic significance is more pronounced relative to that for the average project in Model 1. Overall, the data to text length and the risk for the entrepreneur are strongly consistent with H5.

Table IX Models 6-10 provide analogous regressions to Models 1-5 with the difference in terms of the dependent variable being the ARI score in Models 6-10. A higher ARI score means that the text is more complicated (more characters per word and more words per sentence; see Appendix Table I for the formula). Table IX shows that the higher the risk for the entrepreneur, the lower the readability score (the text is easier to read for a greater number of people), as expected (H5). This effect is significant at the 1% level in Models 6, 7, and 10 for the full sample, the subset of projects where the goal is less than the median, and the creative subsample, respectively. This effect is significant at the 10% level in Models 8 and 9 for the subset of projects where the goal is greater than the median and the subset of innovative projects, respectively. The economic significance is such that a 1-standard deviation increase in the risk for the entrepreneur is associated with a 0.5% reduction in the readability index for the average project in Model 6. This effect is approximately twice as large for the subset of projects, where the goal is less than the median in Model 7 and 25% lower for the subset of projects, where the goal is greater than the median in Model 8. This effect is similar to the average for the subset of innovative projects in Model 9 and 36% more pronounced for the subset of creative projects in Model 10.

CONCLUDING REMARKS

Thanks to the emergence of Internet platforms, crowdfunding has become accessible to a large number of entrepreneurs as an 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 the 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 between the two 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 who can scale their business. 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.

In terms of implications for platforms, these findings offer support that providing flexibility to entrepreneurs, in terms of having a choice of funding model, may be an interesting selling point for platforms and a way to differentiate themselves in this rapidly growing market. This may also explain the success of Indiegogo (the major platform that offers this choice), since many entrepreneurs may prefer to raise funds on Indiegogo precisely because of the possibility to opt for the KIA model. The fact that this platform offers this choice magnifies the signaling effect of

AON, compared to other platforms such as Kickstarter, where this choice is not possible (and thus cannot be a 'signal' mechanism).

Our study offers avenues for future research, such as determining the chances for the success 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 and Kuppuswamy (2014) report 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 worth investigating in future research. A related issue in future work might involve an examination of the publicity surrounding crowdfunding under different funding models, and an assessment of different ways to measure project quality.

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, 2014a) 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.

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Figure I: Histogram of Completion Ratio, by funding model

This table shows the frequency (in number of campaigns) of the Completion Ratio for each funding model separately. Statistics are based on the final sample of projects, but the histogram shown is truncated at a completion ratio of 2 to enhance readability.

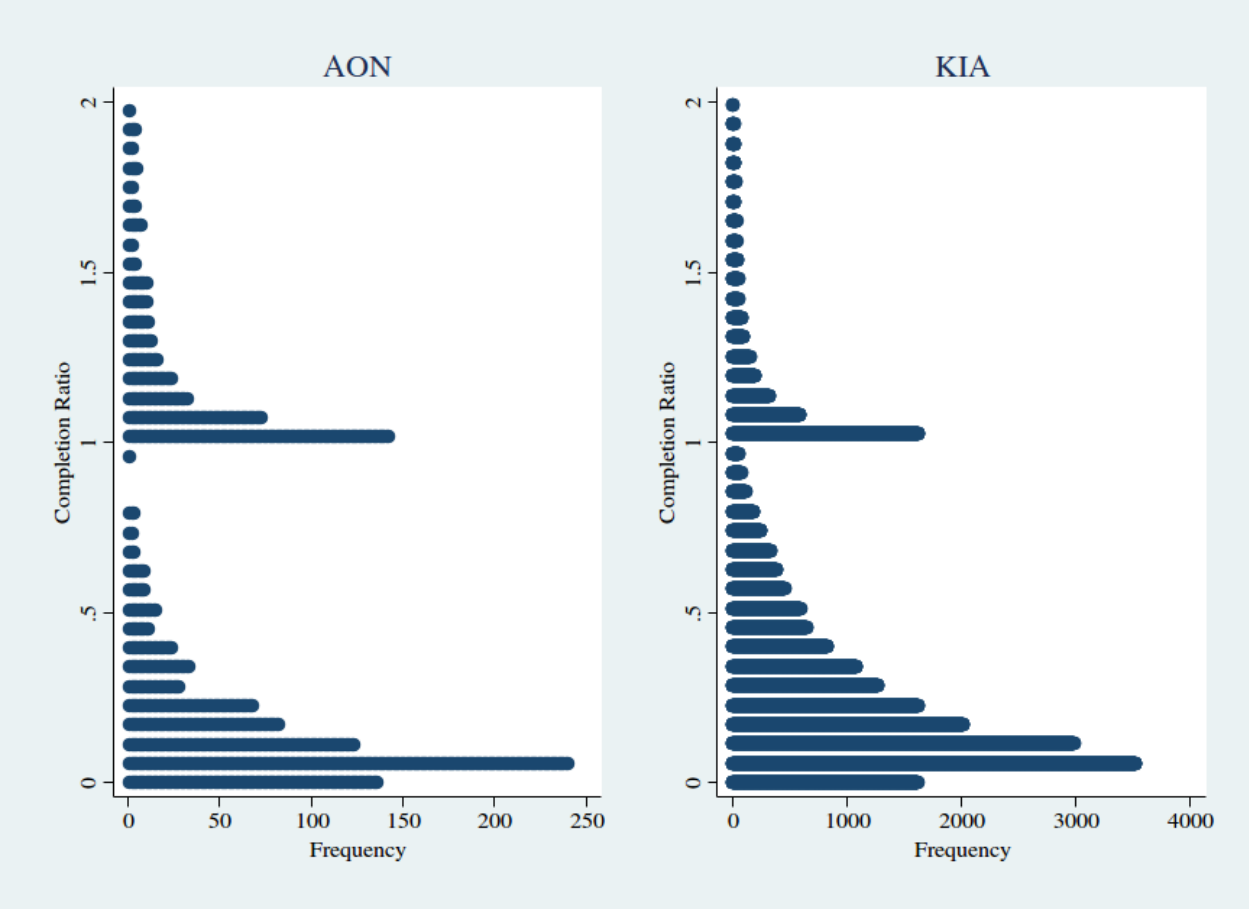


Table I: Sample distribution

Panel A of this table shows the distribution of projects in each category and funding model year by year for our final sample. Values are given in number of projects and in percentage of total projects. Panel V of this table shows the use of funding models (in percent) by category and in total.

Panel A: Number of projects by category and by model

	By Category			By Funding Model	
	Creative	Innovative	Social	All-Or-Nothing	Keep-It-All
2011	496	48	161	5	700
	70.4%	6.8%	22.8%	0.7%	99.3%
2012	5,787	1,156	3,281	503	9,721
	56.6%	9.4%	32.3%	4.9%	95.1%
2013	6,559	1,827	3,535	692	11,229
	55%	15.3%	29.7%	5.8%	94.2%
Total	12,842	3,031	6,977	1,200	21,650
	56.2%	13.3%	30.5%	5.2%	94.8%

Panel B: Financing model by category

	All-Or-Nothing	Keep-It-All
Creative	5.3%	94.7%
Innovative	11.7%	88.3%
Social	2.4%	97.6%
Total	5.2%	94.8%

Table II: Summary statistics by funding model

*This table shows summary statistics for variables included in our database. All the variables are defined in Appendix Table I. We provide means, standard deviations, and median for the full sample of 22,850 campaigns and for the two subsamples based on funding models. The last two columns provide difference-in-mean tests and difference-in-median tests between the two subsamples. Significance levels (p-value): * p < 0.1, ** p < 0.05 and *** p < 0.01.*

	All Projects			All-Or-Nothing			Keep-It-All				
Variables	Mean	Std. Dev.	Median	Mean	Std. Dev.	Median	Mean	Std. Dev.	Median	Mean Diff. Test	Median Diff. Test
Project Characteristics											
Goal	21052	26601	10000	31397	36878	16485	20478	25792	10000	1.1e+04***	6500***
Digital Output Dummy	0.430	0.500	0	0.370	0.480	0	0.440	0.500	0	-0.066***	n.a.
Fixed Costs Dummy	0.790	0.410	1	0.890	0.310	1	0.780	0.410	1	0.109***	n.a.
Verified Non-Profit	0.100	0.300	0	0	0	0	0.110	0.310	0	-0.107***	n.a.
Reward Levels	7.440	3.940	8	8.740	3.720	9	7.370	3.940	8	1.374***	1***
Team Size	2.400	2.030	2	2.400	2.050	2	2.400	2.030	2	0.00300	0
Duration	48.32	22.61	45	40.27	13.22	40	48.77	22.94	45	-8.500***	-5***
Soft Information											
Catch Phrase Length	115.2	38.68	125.5	115.1	35.24	123	115.2	38.86	126	-0.117	-3**
Gallery Items	6.800	10.52	3	7.810	11.29	4	6.750	10.48	3	1.065***	1***
Video Pitch Dummy	0.790	0.410	1	0.850	0.360	1	0.780	0.410	1	0.066***	n.a.
Full Text Length	4658	3439	3809	6098	4474	5068	4579	3354	3763	1519.595***	1306***
Social Networks	3.290	31.53	3	3.280	1.910	3	3.290	32.39	3	-0.00900	0
A.R. Index	15.26	4.620	14.95	14.77	2.880	14.54	15.29	4.690	14.98	-0.518***	-0.431***
Campaign Outcome											
Completion Ratio	0.440	1.200	0.220	0.640	1.160	0.210	0.420	1.200	0.220	0.219***	-0.00951
Success Dummy	0.180	0.380	0	0.340	0.480	0	0.170	0.370	0	0.177***	n.a.
Total Backers	82.36	413.5	33	188.7	803.0	43	76.47	379.6	33	112.218***	10***
Total Pledge	6583	29851	2502	15323	56995	3903	6098	27497	2465	9224.594***	1451***
Observations		22850			1200			21650		22850	

Table III: Summary statistics by outcome

*This table shows summary statistics for variables included in our database. All the variables are defined in Appendix Table I. We provide means, standard deviations, and median for the subsamples of successful (Success Dummy = 1) and unsuccessful (Success Dummy = 0) campaigns. The last two columns provide difference-in-mean tests and difference-in-median tests between the two subsamples. Significance levels (p-value): * p < 0.1, ** p < 0.05 and *** p < 0.01.*

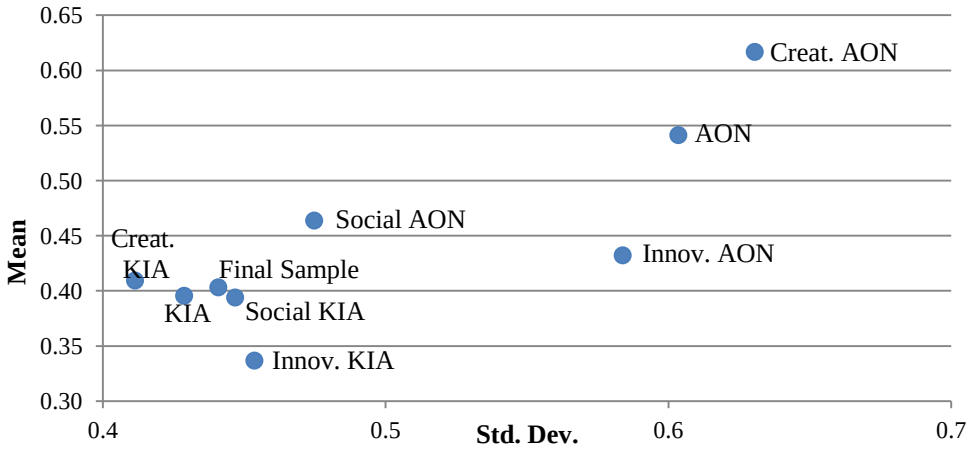
	Successful (Success = 1)			Unsuccessful (Success = 0)				
Variables	Mean	Std. Dev.	Median	Mean	Std. Dev.	Median	Mean Diff. Test	Median Diff. Test
Project Characteristics								
Keep-It-All Dummy	0.900	0.300	1	0.960	0.200	1	0.060***	n.a.
Goal	13477	16702	8500	22678	28012	11667	9200.725***	3167***
Digital Output Dummy	0.450	0.500	0	0.430	0.500	0	-0.019**	n.a.
Fixed Costs Dummy	0.800	0.400	1	0.790	0.410	1	-0.0100	n.a.
Verified Non-profit	0.130	0.330	0	0.100	0.290	0	-0.030***	n.a.
Reward Levels	7.990	4.000	8	7.320	3.920	7	-0.672***	-1***
Team Size	2.740	2.270	2	2.330	1.960	2	-0.408***	0
Duration	44.62	20.71	42	49.12	22.92	45	4.496***	3***
Soft Information								
Catch Phrase Length	114.0	37.96	123	115.5	38.83	126	1.450**	3***
Gallery Items	8.630	12.38	5	6.410	10.04	3	-2.221***	-2***
Video Pitch Dummy	0.820	0.380	1	0.780	0.420	1	-0.047***	n.a.
Full Text Length	4990	3704	4083	4587	3375	3757	-402.697***	-326***
Social Networks	3.330	15.68	3	3.280	33.98	3	-0.0540	0
A.R. Index	15.37	5.010	14.94	15.24	4.530	14.95	-0.127	0.0152
Campaign Outcome								
Completion Ratio	1.400	2.600	1.070	0.230	0.200	0.160	-1.170***	-0.910***
Total Backers	267.2	953.5	107	42.67	59.75	26	-224.559***	-81***
Total Pledge	21787	68243	10103	3318	4728	1885	-1.8e+04***	-8218***
Observations		4039			18811		22850	

Table IV: Risk and return analysis

This table shows additional statistics on risk (standard deviation) and return (mean) of campaign outcomes for various subsamples. Panel A is based on the output variable Completion Ratio and Panel B on Total Pledge. The sample employed here differs from the rest of the analysis, as the full sample used here is winsorized at the 99th percentile to eliminate excessive outliers.

Panel A--Completion Ratio

	Obs	Mean	Std. Dev	Min	Max
Final Sample	22850	0.403	0.441	0.00	2.22
KIA	21650	0.396	0.429	0.00	2.22
AON	1200	0.541	0.603	0.00	2.22
Innov. KIA	2677	0.337	0.454	0.00	2.22
Innov. AON	354	0.432	0.584	0.00	2.22
Creat. KIA	12161	0.409	0.411	0.00	2.22
Creat. AON	681	0.617	0.630	0.00	2.22
Social KIA	6812	0.394	0.447	0.00	2.22
Social AON	165	0.464	0.475	0.00	1.58



Panel B--Total Pledge

	Obs	Mean	Std. Dev	Min	Max
Final Sample	22850	5402	8370	0	56461
KIA	21650	5165	7867	0	56461
AON	1200	9674	14086	500	56461
Innov. KIA	2677	5990	10209	0	56461
Innov. AON	354	10234	15699	500	56461
Creat. KIA	12161	5046	7252	0	56461
Creat. AON	681	9827	13805	503	56461
Social KIA	6812	5055	7846	0	56461
Social AON	165	7845	11218	500	56461

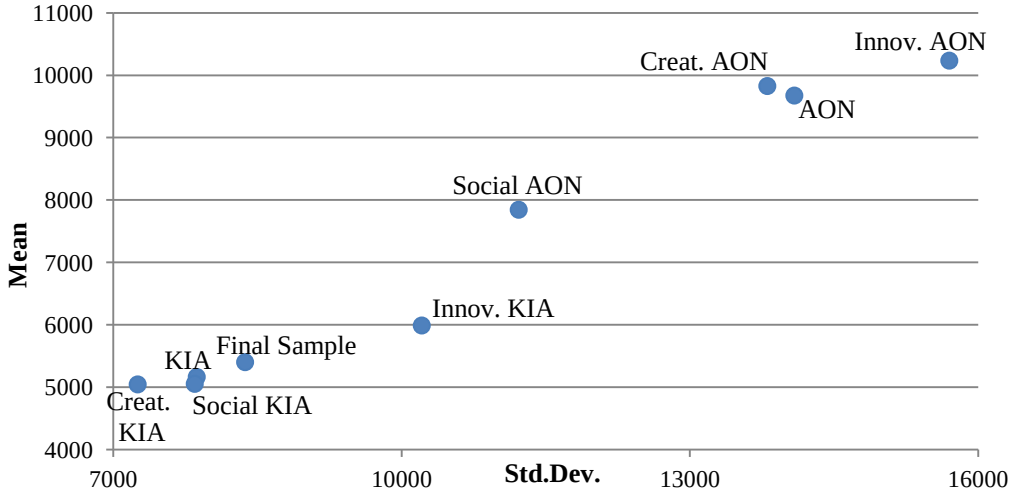


Table V: Correlation matrix of main variables

This table presents pair-wise correlations between the main variables. All the variables are defined in Appendix Table I. A star indicates a significance level of 1%.

	Goal	Keep-It-All Dummy	Digital Output Dummy	Fixed Costs Dummy	Verified Non-profit	Reward Levels	Team Size	Duration	Catch Phrase Length	Gallery Items
Goal	1									
Keep-It-All Dummy	-0.0916*	1								
Digital Output Dummy	-0.0532*	0.0299*	1							
Fixed Costs Dummy	0.0696*	-0.0593*	0.0803*	1						
Verified Non-profit	0.0021	0.0791*	-0.0865*	0.0480*	1					
Reward Levels	0.1274*	-0.0777*	0.2968*	0.2521*	0.0079	1				
Team Size	0.0927*	-0.0004	0.0277*	0.1277*	0.0973*	0.1944*	1			
Duration	0.1000*	0.0839*	-0.0162	-0.015	-0.009	-0.0965*	0.0102	1		
Catch Phrase Length	0.0430*	0.0007	-0.0642*	0.0636*	0.0511*	0.0548*	0.0234*	-0.0813*	1	
Gallery Items	0.0727*	-0.0226*	0.0475*	0.1043*	-0.0017	0.1874*	0.2217*	0.0477*	0.0444*	1
Video Pitch Dummy	0.0588*	-0.0361*	0.2003*	0.1932*	0.0441*	0.3457*	0.1385*	-0.0542*	0.0512*	0.1214*
Full Text Length	0.1778*	-0.0986*	0.0559*	0.3021*	-0.0116	0.3141*	0.1817*	-0.0007	0.1142*	0.2333*
Social Networks	0.0034	0.0001	0.0044	-0.0071	0.0047	0.0259*	0.007	0.0034	0.0136	0.0190*
A.R. Index	0.0270*	0.0250*	-0.0311*	0.0720*	0.1040*	0.0365*	0.0685*	0.0108	0.0412*	0.0161
Completion Ratio	-0.0829*	-0.0408*	-0.0106	-0.0115	0.0114	0.0119	0.0321*	-0.0491*	-0.008	0.0616*
Success Dummy	-0.1319*	-0.1033*	0.0149	0.0098	0.0375*	0.0650*	0.0768*	-0.0758*	-0.0143	0.0805*
Total Backers	0.0982*	-0.0605*	-0.0058	0.0003	-0.0027	0.0632*	0.0473*	-0.0304*	0.0082	0.0616*
Total Pledge	0.1491*	-0.0689*	-0.0235*	0.0232*	0.0093	0.0728*	0.0669*	-0.015	0.0182*	0.0931*

	Video Pitch Dummy	Full Text Length	Social Networks	A.R. Index	Completion Ratio	Success Dummy	Total Backers	Total Pledge
Video Pitch Dummy	1							
Full Text Length	0.1639*	1						
Social Networks	0.0214*	0.0012	1					
A.R. Index	0.0523*	0.1246*	0.0478*	1				
Completion Ratio	0.0104	0.0397*	-0.0003	-0.0046	1			
Success Dummy	0.0438*	0.0447*	0.0007	0.0105	0.3731*	1		
Total Backers	0.0301*	0.0886*	0.0015	-0.0125	0.7102*	0.2072*	1	
Total Pledge	0.0389*	0.1213*	0.0019	0.0002	0.4880*	0.2360*	0.6922*	1

Table VI: Choice of funding model for crowdfunding campaigns

*This table shows factors influencing the decision on the funding model. The dependent variable in Regressions (1), (2), (4), and (6) is the "Keep-It-All Dummy," a dummy variable equal to 1 if the model used is "Keep-It-All" and 0 if the "All-Or-Nothing" model is used. All the variables are defined in Appendix Table I. Regressions (4) and (6) control for the endogeneity of the variable "Goal" using a 2-stage IV probit regression model. The instrumented variable for the first-step (see Regressions (3) and (5)) is the ln(Goal), and the two instrumental variables used are as follows: the first is the median goal of successful projects in the same subcategory for the semester previous to 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. All regressions include country, subcategory, and semester fixed effects. Standard errors are robust to heteroscedasticity. Significance levels (p-value): * p < 0.1, ** p < 0.05 and *** p < 0.01.*

	(1) Probit	(2) Probit	(3) First stage (Dep.Var.=ln(Goal))	(4) IV Probit (Second stage)	(5) First Stage (Dep.Var.=ln(Goal))	(6) IV Probit (Second stage)
ln(Goal)	-0.157***	-0.150***		-0.483***		-0.346***
Digital Output Dummy	0.379***		-0.0111	0.391***		
Fixed Costs Dummy		-0.232***			0.0837***	-0.209***
Reward Levels	-0.0288***	-0.0226***	0.0429***	-0.0151**	0.0411***	-0.0148**
Team Size	0.0256***	0.0275***	0.0384***	0.0394***	0.0371***	0.0355***
Instrumental Variables						
Med. Goal by Subcat. of Succ. Proj. in s-1 (log)			0.0971***		0.0988***	
Med. Completion Ratio by Subcat. in s-1			-1.128***		-1.100***	
Category F.E.	Yes	Yes	Yes	Yes	Yes	Yes
Semester F.E.	Yes	Yes	Yes	Yes	Yes	Yes
Country F.E.	Yes	Yes	Yes	Yes	Yes	Yes
Observations	22850	22850	22850	22850	22850	22850
R^2 / Pseudo R^2	0.108	0.103	0.111		0.112	
			Tests for weak instruments, over-identification, and exogeneity			
Over Id. test				0.073		0.309
Over Identif. p-val				0.787		0.578
First stage F-stat				38.4		38.95
Wald chi2 test of exog.				9.886		3.348
Wald chi2 p-val				0.002		0.067

Table VII: Outcome of crowdfunding campaigns

*This table shows results on the impact of the success of a crowdfunding campaign. The dependent variable is the Success Dummy. All the variables are defined in Appendix Table I. We use probit regressions. For Regressions (3), (4), (9), and (10), we use subsamples based on project output (i.e., whether Digital Output Dummy equals 1 or 0). For Regressions (7) and (8), we use subsamples based on the presence of fixed costs (i.e., whether the Fixed Costs Dummy equals 1 or 0). For Regressions (5) and (6), we replicate previous models but with the "Fixed Costs Dummy" as an alternative measure of scalability. In Regressions (9) and (10), we use an alternative measure of success, considering Keep-It-All projects as successful above 80% of completion (for All-Or-Nothing, we leave the threshold at 100%). All regressions include country, subcategory, and semester fixed effects. Standard errors are robust to heteroscedasticity. Significance levels (p-value): * p < 0.1, ** p < 0.05 and *** p < 0.01.*

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	All Projects	All Projects	Digital Output	Non-Digital Output	All Projects	All Projects	No Fixed Costs	Fixed Costs	Digital Output	Non-Digital Output
					Robust to Scalability Measure				Robust to Success Measure	
Project Characteristics										
ln(Goal)	-0.091***	-0.112***	-0.113***	-0.112***	-0.092***	-0.112***	-0.100***	-0.115***	-0.121***	-0.119***
Keep-It-All Dummy	-0.175***	-0.163***	-0.203***	-0.136***	-0.173***	-0.163***	-0.167***	-0.165***	-0.201***	-0.129***
Digital Output Dummy	0.006	0.010								
Fixed Costs Dummy					0.020***	-0.009				
Verified Non-profit		0.052***	0.055***	0.044***		0.052***	0.028	0.055***	0.081***	0.051***
Reward Levels		0.007***	0.009***	0.006***		0.007***	0.007***	0.007***	0.009***	0.006***
Team Size		0.014***	0.010***	0.016***		0.014***	0.018***	0.013***	0.010***	0.018***
Duration		-0.001***	-0.001***	-0.001***		-0.001***	-0.001**	-0.001***	-0.001***	-0.001***
Soft Information										
Catch Phrase Length		-0.000254***	-0.000353***	-0.000175*		-0.000253***	-0.000131	-0.000276***	-0.000364***	-0.000135
Gallery Items		0.002***	0.002***	0.003***		0.002***	0.003***	0.002***	0.002***	0.003***
Video Pitch Dummy		0.029***	0.010	0.037***		0.029***	0.015	0.037***	0.013	0.036***
Full Text Length		0.0000059***	0.0000059***	0.0000058***		0.0000060***	0.0000071*	0.0000061***	0.0000059***	0.0000061***
Social Networks		-0.003*	-0.002	-0.004**		-0.002*	-0.003	-0.002*	-0.001	-0.005***
A.R. Index		0.001	0.000	0.002**		0.001	0.001	0.001	0.000	0.002**
Sub-Category F.E.	No	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
Semester F.E.	No	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
Country F.E.	No	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
Observations	22850	22439	9639	12637	22850	22439	4476	17771	9664	12650
Pseudo R^2	0.050	0.098	0.094	0.108	0.050	0.098	0.087	0.106	0.094	0.108

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

*This table shows results on the impact of the success of a crowdfunding campaign. This table is similar to Table VII, but with the KIA and AON subgroups matched with propensity score based on goal, subcategory, and starting date (i.e., every KIA project is matched with one AON project; AON projects can be matched with more than one KIA project). All the variables are defined in Appendix Table I. All regressions include country, subcategory, and semester fixed effects. Standard errors are robust to heteroscedasticity. Significance levels (p-value): * p < 0.1, ** p < 0.05 and *** p < 0.01.*

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	All Projects	Digital Output	No Digital Output	All Projects	No Fixed Costs	Fixed Costs	All Projects	Digital Output	No Digital Output
				Robust to Scalability Measure			Robust to Success Measure		
Project Characteristics									
ln(Goal)	-0.153***	-0.137***	-0.162***	-0.153***	-0.122***	-0.160***	-0.157***	-0.141***	-0.165***
Keep-It-All Dummy	-0.246***	-0.301***	-0.201***	-0.245***	-0.200***	-0.258***	-0.233***	-0.290***	-0.187***
Digital Output Dummy	0.008						0.006		
Fixed Costs Dummy				0.012*					
Verified Non-profit	0.067***	0.067***	0.049***	0.065***	0.055*	0.068***	0.081***	0.096***	0.057***
Reward Levels	0.010***	0.009***	0.011***	0.010***	0.007***	0.012***	0.010***	0.009***	0.011***
Team Size	0.015***	0.007***	0.023***	0.015***	0.004	0.015***	0.015***	0.007***	0.024***
Duration	-0.001***	-0.000**	-0.001***	-0.001***	-0.000	-0.001***	-0.001***	-0.001**	-0.001***
Soft Information									
Catch Phrase Length	-0.000476***	-0.001015***	-0.000028	-0.000478***	-0.000323**	-0.000522***	-0.000468***	-0.001026***	-0.000004
Gallery Items	0.006***	0.006***	0.006***	0.006***	0.004***	0.006***	0.006***	0.006***	0.006***
Video Pitch Dummy	0.001	-0.018	0.022***	0.000	0.019	0.002	0.000	-0.017	0.021**
Full Text Length	-0.0000005	-0.0000003	-0.0000007	-0.0000007	0.0000223***	-0.0000030***	-0.0000004	-0.0000003	-0.0000006
Social Networks	-0.011***	0.002	-0.024***	-0.011***	-0.020***	-0.007***	-0.011***	0.002	-0.025***
A.R. Index	0.003**	0.002	0.004***	0.003**	0.000	0.008***	0.003**	0.003	0.004***
Country/Cat/Year F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	42776	18839	23937	42776	7214	35562	42776	18839	23937

Table IX: Soft information disclosure in crowdfunding campaigns

*This table shows results on the impact of the quantity of information provided by the entrepreneur in the crowdfunding campaign. The main variable of interest is the "Risk for the entrepreneur," which is computed as "(1 - Keep-It-All Dummy) x Goal." Thus, the risk for the entrepreneur is 0 if he/she opts for a Keep-It-All funding model and is proportional to the goal set if he/she opts for an All-Or-Nothing funding model. All the variables are defined in Appendix Table I. All regressions include country, subcategory, and semester fixed effects. Standard errors are robust to heteroscedasticity. Significance levels (p-value): * p < 0.1, ** p < 0.05 and *** p < 0.01.*

	(1) Full Text Length (OLS)	(2) Full Text Length goal<median	(3) Full Text Length goal>=median	(4) Full Text Length Innovative	(5) Full Text Length Creative	(6) ARI (OLS)	(7) ARI goal<median	(8) ARI goal>=median	(9) ARI Innovative	(10) ARI Creative
Risk for the Entrepreneur	60.94***	30.76	58.60***	87.44***	65.41***	-0.0368***	-0.0635***	-0.0274*	-0.0354*	-0.0502***
Project Characteristics										
Digital Output Dummy	1092.9***	985.7***	1459.7***		1688.8***	0.676**	0.936**	0.538		-0.874***
Verified Non-profit	-7.773	41.13	-121.6	-167.2	245.2**	1.315***	1.459***	1.209***	1.068***	1.333***
Reward Levels	255.0***	205.8***	263.8***	296.1***	244.4***	0.0371***	0.0288	0.0336**	0.00688	-0.00995
Team Size	184.8***	139.6***	188.0***	226.0***	177.0***	0.0871***	0.0496	0.102***	0.109***	0.0763***
Duration	4.957***	3.702**	2.829*	7.293*	3.814**	0.00285*	0.00290	0.00164	0.00693*	0.00230
Constant	3286.4***	4136.5**	3052.1***	1941.1	2740.1***	13.94***	13.14***	14.56***	7.799***	16.82***
Semester F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Subcategory F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	22850	10711	12139	3031	12842	22656	10640	12016	2996	12725
R^2	0.188	0.182	0.195	0.268	0.161	0.050	0.045	0.070	0.075	0.039
Adjusted R^2	0.180	0.168	0.182	0.242	0.151	0.041	0.029	0.055	0.042	0.027

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 the annual average exchange rate.
Reward Levels	Number of reward levels offered by the entrepreneur for his campaign.
Risk for the Entrepreneur	Interaction term of (1-"Keep-It-All Dummy") and "Goal."
Digital Output Dummy	Dummy variable indicating if the project output is a digital good. Digital outputs typically follow a cost structure with significant fixed costs but scalable output, due to nearly zero marginal costs. It includes the following subcategories: comic, film, gaming, music, photo, trans-media, video/web, and writing.
Fixed Costs Dummy	Dummy variable indicating if the text on the crowdfunding campaign's webpage mentions one or more words related to fixed costs. Words included in the list are: build-, legal fees, production, produced, prototype, manufactur-, buy-, purchas-, building, acquire, develop-, equipment, construct-, permit, tool. Words finishing with a dash are truncated to include all words using the same base but with different endings as for manufactur**e**, manufactur**ed,** manufactur**ing**.
Team Size	Number of members in the team leading the project
Duration	Duration of the funding campaign in days and set by the entrepreneur prior to starting the campaign.
Innovative Dummy	Dummy variable indicating if the project belongs to the "Innovative" category (as defined by Indiegogo), which includes the following sub-categories: Technology, Small Business, Food, and Sports
Creative Dummy	Dummy variable indicating if the project belongs to the "Creative" category (as defined by Indiegogo), which includes the following sub-categories: Art, Dance, Film, Gaming, Music, Photography, Theatre, Transmedia, Writing, Comic, Design, Fashion, and Video/Web.
Social Dummy	Dummy variable indicating if the project belongs to the "Social" category (as defined by Indiegogo), which includes the following sub-categories: Animals, Community, Education, Environment, Health, Politics, and Religion.
Soft Information Variables	
Catch Phrase Length	Length (in number of characters) of the project catch phrase. Indiegogo allows a maximum of 120 characters. This sentence is found in the index description of the project and in the heading of the project page.
Gallery 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's main page.
Social Networks	Number of external links 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 levels. 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. This index is based on the following formula: [4.71*(characters/words)+ 0.5*(words/sentences)-21.43].

Campaign Outcome Variables

Total Pledge	Sum of all pledges made by backers.
Completion Ratio	Ratio between total pledge and campaign goal; i.e., the ratio of the variables Total Pledge over 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. This variable exists also in an "extended" version ("Success ext."), including all KIA projects with a completion ratio at least equal to 0.8.
Total Backers	Number of backers having pledged money to the project.
Success Ratio	Ratio between the number of successful projects and the total number of projects. This ratio can be computed for the full sample or on various subsamples.

Instrumental Variables

Med. Goal by Subcat. of Succ. Proj. in s-1	For each project, this is the median goal of successful projects in the same subcategory during the semester previous to the campaign start date.
Med. Completion Ratio by Subcat. in s-1	For each project, this is the median completion ratio of projects in the same subcategory during the semester previous to the campaign start date.