# The Dynamics of Crowdfunding: Determinants of Success and Failure

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**Feedback Welcome**

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**Abstract**: Crowdfunding allows founders of for-profit, artistic, and cultural ventures to fund their efforts by drawing on relatively small contributions from a relatively large number of individuals using the internet, without standard financial intermediaries. Crowdfunding has been drawing substantial attention from policy makers, managers, and entrepreneurs, but relatively little notice from academics, even though it touches on many topics of importance to scholars of entrepreneurship, including the determinants of venture success and the geography of entrepreneurship. Drawing on a dataset of nearly 47,000 projects with combined funding over $198M, this paper offers an initial description of the underlying dynamics of success and failure among crowdfunded ventures. It suggests that personal networks and underlying project quality help predict the success of crowdfunding efforts, and that geography plays a role in both the type of projects proposed and successful fundraising. Finally, I find that the vast majority of founders make serious efforts to fulfill their obligations to funders, but that over 75% deliver products later than expected, with the degree of delay predicted by the level and amount of funding a project receives.

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Crowdfunding is a novel method for funding a variety of new ventures, allowing individual founders of for-profit, cultural, or social projects to request funding from many individuals, often in return for future products or equity. Crowdfunding projects can range greatly in both goal and magnitude, from small artistic projects to entrepreneurs seeking hundreds of thousands of dollars in seed capital as an alternative to traditional venture capital investment (Schwienbacher & Larralde, 2010). Despite hundreds of millions of dollars invested in this manner, and large-scale action by the US Congress to encourage crowdfunding as a source of capital for new ventures, even basic academic knowledge of the dynamics of crowdfunding is lacking, outside of the still-uncommon analysis of particular crowdfunding efforts (Agrawal, Catalini, & Goldfarb, 2010; Burtch, Ghose, & Wattal, 2011). For example, we know very little about what makes funding efforts successful, as well as the general distribution and use of crowd funding mechanisms. We do not know whether crowdfunding efforts reinforce or contradict existing theories about how ventures raise capital and achieve success. There is also uncertainty about the long-term implications of crowdfunding, such as whether existing projects ultimately deliver the products they promise. In short, this important, and growing, area of entrepreneurial activity and government action is understudied, even as both practice and policy continue to rapidly advance. This paper seeks to make a first few steps towards an analytical understanding of crowdfunding, by using the universe of US-based projects on Kickstarter, the largest

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crowdfunding site, and covering over $198 million in funding pledged to over 46,902 projects.

Specifically, I seek to examine a few issues of importance in understanding the rapid rise of crowdfunding, and present preliminary analyses of some of the underlying dynamics of the phenomenon. First, I will give a brief overview of the crowdfunding phenomenon, and the academic work on the subject to date. I will next describe the nature of the data from Kickstarter, and basic distributions of crowdfunding efforts. After this, the paper will offer a few in-depth analyses of when crowdfunding results in successful product development, the determinants of success in crowdfunding ventures, and the geographic distribution of crowdfunding efforts.

The analyses provide a somewhat clearer picture of the nature of crowdfunding. It suggests that crowdfunding projects mostly succeed by narrow margins, or else fail by large amounts. The chances of success are driven by the networks of founders, but also by signals of the underlying quality of the project. Further, there is a strong geographic component to the nature of projects, with founders proposing projects that reflect the underlying cultural products of their geographic area (such as country music in Nashville, Tennessee). The data also suggests that the nature of the population in which founders operate is a strong predictor of project success. Finally, founders of projects seem to make good faith efforts to fulfill their obligations to funders, though many projects are delayed. Delays are predicted

by the size of the project, with overfunded projects being particularly vulnerable to delay. Together, these findings suggest that there is substantial value in further studying the dynamics of crowdfunding, since it sheds light on a variety of subjects of interest to academics and policymakers, including the nature of funding for new ventures, the role of individual quality and networks in venture success, and the importance of geography in new ventures.

## 1 An Overview of Crowdfunding

Crowdfunding refers to a variety of different efforts by entrepreneurs – cultural, social, and for-profit – to fund their efforts by drawing on relatively small contributions from a relatively large number of individuals using the internet, without standard financial intermediaries. In one of the few published overviews of the topic, Schwienbacher & Larralde (2010) define crowdfunding as "an open call, essentially through the Internet, for the provision of financial resources either in form of donation or in exchange for some form of reward and/or voting rights in order to support initiatives for specific purposes". Crowdfunding draws inspiration from concepts like micro-finance (Morduch, 1999) and crowd sourcing (Poetz & Schreier, 2012), but represents its own unique category of fundraising, facilitated by dozens of internet sites devoted to the topic.

Crowdfunding differs from traditional funding sources for new ventures, such as angel or venture capital investment, in a number of ways. One crucial distinction is that, unlike traditional ventures, projects engaging in "crowdfunding" have a wide variety of goals. Many crowdfunded projects seek to raise small amounts of capital, often under $1,000, to initiate a particular one-time project (an event, for example). In these cases, capital is often provided by friends and family. Increasingly, however, crowdfunding appears to be a viable source for entrepreneurial seed capital (Schwienbacher & Larralde, 2010), allowing entrepreneurs to raise the initial money required to start their new venture (Evans & Leighton, 1989). It is unclear, however, the degree to which crowdfunding will ultimately substitute for other forms of more formal venture funding, especially as the rules around crowdfunding for equity are evolving (see, for example, the JOBS Act, 112th Congress), and early stage investors typically offer much more to new ventures than simply funding – including advice, governance, and prestige (Gorman & Sahlman, 1989; Hsu, 2004).

In addition to encompassing a wide range of potential projects, crowdfunding also differs from other methods of start-up funding because the relationship between funders and founders (as I will refer to all individuals raising crowdfunding for a cultural, social, or for-profit venture) varies by context and the nature of the funding effort (Belleflamme, Lambert, & Schwienbacher, 2012). Some crowdfunding efforts, such as art or humanitarian projects, view their funders as patrons or philanthropists, who expect nothing in return.

Many projects place their funders in the position of early customers, allowing them access to the products produced by funded projects at an earlier date, better price, or with some other special benefit. Finally, as legalized by the *Jumpstart Our Business Startups Act*, passed in April 2012, crowdfunding efforts may also view funders as investors, giving them equity stakes in return for their funding.

In this paper, projects fit in either the first ("patron") or second ("early customer") views of the nature of crowdfunding. However, all three forms of crowdfunding are based on similar principles, in that funders are investing funds in a project, and thus are expecting a successful outcome. Changes in the way that individuals view the funding of not-for-profit ventures strongly suggest that all crowdfunding funders may be thought of as investors, making decisions about which projects to support based on their expectations for success and the underlying appeal of the project (Agrawal et al., 2010). Further, contributions to crowdfunding projects, even in markets where crowdfunding is driven by altruism, appear to predict the ultimate success of projects (Burtch et al., 2011), suggesting that crowdfunding investment is drawn to quality projects. In the analyses to follow, I find support for the contention that funders respond to signals about the quality of the project, regardless of their role.

Though the crowdfunding model overall has achieved remarkable success, and has emerged as a viable method of funding new ventures, there has been very little work to date

on the topic. Three working papers draw on narrow case studies of crowdfunding, including studies drawn from a French startup (Schwienbacher & Larralde, 2010), the crowdfunding of a music group (Agrawal et al., 2010), and 100 pitches for story ideas (Burtch et al., 2011). An additional working paper offers a theoretical model of when individuals would chose to crowdfund (Belleflamme et al., 2012). While all four papers offer valuable contributions, no work to date has provided a large-scale understanding of the empirical dynamics of crowdfunding across a wide variety of projects. In the next part of this paper, I offer an attempt at such an analysis.

## 2 Data and Methods

In an attempt to capture the widest possible perspective on crowdfunding, I used data extracted from the Kickstarter, the largest crowdfunding site. In coordination with Jeanne Pi, I located 24,503 successful projects, 26,483 failed projects, 4,073 "live" projects, and just over 100 cancelled projects. Kickstarter, which publishes overview statistics, lists 26,017 successful and 33,098 failed projects. While we therefore have 94% of successful projects, the data is limited to 80% of failed projects. While most of the gap in successful projects is likely due to issues of timing – the dataset was obtained prior to the launch of the Kickstarter statistics page – the missing failed projects are, at least in part, due to issues extracting data from the Kickstarter site. My analysis proceeds on the assumption that our

data on projects is substantially complete, as the nature of any gap cannot be precisely determined. If there are measurement errors, they are likely to be descriptive only – I would expect missing projects, if they did exist, to be randomly selected from the population. Therefore, while coefficients may differ from the full population of Kickstarter projects, the significance of the variables should not be affected.

To clean the data further, I eliminated extreme values of goals (225 goals below $100, 25 goals above a million dollars – none of which were successful), I also eliminated live and cancelled funding efforts. Since Kickstarter requires its funders to be US residents, with US addresses and credit cards, I eliminated the 3,931 foreign Kickstarter projects, which, although they were started by US residents, were likely atypical compared to the 95% of projects inside the United States. The result was 46,902 funding efforts representing $198M of pledges, of which 22,462 projects (47.90%) were successful. Summaries of this data by category can be found in Table 1.

### 2.1 Variables

Key variables of interest in the data include:

*Project goal:* The amount founders seek to raise using Kickstarter. Kickstarter follows an "all or nothing" model, so funders' pledge money is only collected if the goal is reached. While other crowdfunding efforts do not always follow this model, it is currently the

dominant approach to crowdfunding, and parallels the way that other funding efforts for new ventures work.

*Funding level:* The percentage of a project's goal actually raised by founders. Projects that raise at least their goal are considered successful or funded projects, and they are paid the total pledged to them by Kickstarter. Projects can raise more than their goal.

*Backers:* The number of funders supporting the project. The dataset also contains information about how many other projects each backer supported. In later analyses, I pay special attention to the role of new backers in crowdfunding efforts.

*Percent First Time Backers:* Some funders back many projects, but founders also typically bring in new backers as well. This variable is the percentage of all backers that are first time backers.

*Pledge/Backer:* The individual pledges of backers are not known, but this variable is the amount of money raised divided by the number of backers, or the mean pledge per backers.

*Facebook friends of founders:* The role of social networks in funding new ventures has long been noted as important (Hsu, 2007; Shane & Cable, 2002). Since many accounts in Kickstarter are linked to Facebook, it is possible to determine how many Facebook connections each founder has. This provides a control for the size of a founder's social network. Non-zero Facebook friends are available for slightly under half of all observations.

*Reward levels:* Most projects offer rewards to funders, depending on the level of funds they pledge. These can range from credits in film or art projects to large-scale rewards, such as the ability to direct or influence projects. A common category of rewards are the products being developed by the founders, in which case Kickstarter acts as a "pre-order" system. Rewards levels are the number of reward tiers offered to funders, typically these would start relatively small, with an acknowledgement or formal thanks, and escalate to larger rewards, including on-site visits or special versions of products.

*Category:* Projects are categorized by Kickstarter into one of a number of categories, including Film, Dance, Art, Design and Technology. Design and Technology projects are treated somewhat differently by Kickstarter, since they usually deliver concrete products as rewards. These projects need to produce a manufacturing plan when starting a Kickstarter project.

*Updates:* Founders are encouraged to post information about their projects during the duration of fundraising drive, called Updates. Updates represent efforts by founders to reach out to current and potential funders. The data allows us to track the content and timing of these updates.

*Comments:* Funders and potential funders can post comments about projects, expressing enthusiasm or displeasure. The data on comments includes details on the number and timing of these postings.

*Duration:* The number of days for which a project accepts funding. Although Kickstarter initially allowed projects to raise funds for as many as 90 days, it now limits this time to 60 days, but encourages 30 day funding windows.

# 3 Funding dynamics

To understand how crowdfunding operates, I next offer both an empirical description of funding through Kickstarter, and an analysis of the determinants of success and failure among Kickstarter projects.

## 3.1 Margins of failure and success

Among Kickstarter projects, failures happen by large amounts, successes by small amounts. Projects that fail tend to fail by large margins. The mean amount funded of failed projects is 10.3% of the goal. Only ten percent of projects that fail raise 30% of their goal, and only three percent raise 50% of their goal. The average failed project received $900 in pledges, compared to $7,825 for successful projects. See Figure 1 for a histogram of failures.

Projects that succeed tend to do so by relatively small margins. Twenty five percent of projects that are funded are 3% or less over their goal, and only fifty percent are about 10% over their goal. Only about 1 project in 9 receives 200% of its goal. Of the 106 projects with goals over $100 that received over 10 times their goal, 33 were very large projects (raising over $100,000). With the exception of a single music project and a single art project[1], all of these 33 overachievers were in hardware, software, games, or product design. See Figure 1 for a histogram of successes, and Figure 2 for a scatterplot of successes, failures, and funding levels.

There might be two reasons why failure happens by large amounts and success by small. The cynical argument is that, since Kickstarter releases funding on an all-or-nothing basis, it may encourage individuals to make up the difference between the amount desired and the amount raised out of their own pocket. To discourage this, Kickstarter makes self-funding difficult – individuals cannot use the same address, credit card, or name for pledges as they did when setting up their project and there is a $10,000 contribution limit per pledge. The data suggests that these efforts do seem to work, in that the percentage funded of failed projects remains very similar for smaller projects (mean .149, sd .18 for projects under $1000) and relatively larger ones (mean .101, sd .14 for projects over $1,000). We would expect that, if self-funding was the reason that few projects were moderate failures,

[1] The art project, *Tropes versus Women in Video Games*, was the subject of a large-scale campaign in support of the founder of the project, who had been harassed as a result of her activism.

that cheaper projects would be more easily self-funded, and therefore would have a lower, not higher, mean percentage funded for failed projects, since relatively larger funding gaps would still be cheap to self-fund.

An alternative is that the patterns of success are dictated by the nature of projects themselves, where the projects that are of high quality are identifiable to funders. From this perspective, funders act like venture capitalists or other traditional sources of capital, and evaluate the quality of the product, the team, and the likelihood of success (Gorman & Sahlman, 1989; MacMillan, 1986). Since some projects are better than others, they receive funding, and lower-quality projects receive little to no backers. In crowdfunding, quality signals are further magnified through a Matthew Effect (Merton, 1957) that multiplies the impact of project quality. High quality projects attract backers who may promote the project to other potential backers, or external media, thus increasing the draw of the project. Crowdfunding is built around this social concept, which is incorporated into most funding sites (Burtch et al., 2011). If this is the case, than identifiable signals of project quality should predict project success. As I discuss next, this appears to be the case.

### 3.2 Predictors of failure and success

We would expect that some variables naturally predict success or failure in crowdfunding. Projects with higher goals and shorter fundraising durations should probably

have a lower chance of succeeding than more modest projects raising money over a longer time. However, as previously discussed, whether factors that lead to successful fundraising from traditional forms of startup capital still hold true in crowdfunding is less clear. The social networks of founders, for example, have been found to play a very large role in the success of new ventures and their access to venture capital (Shane & Cable, 2002; Shane & Khurana, 2003; Stam & Elfring, 2008), but may operate differently in crowdfunding. Similarly, fears have often been expressed by critics of crowdfunding that project quality may not be as clear or as influential to funders in crowdfunding settings, compared with more traditional investments (Bogost, 2012).

To examine the role of quality and networks, along with other determinants of successful crowdfunding, I conducted an analysis using logistic regression of the odds of successful funding. I controlled for the log of the goal of the project, project category, fundraising duration, and whether the project was featured by Kickstarter on their home page. Since Kickstarter projects cover a wide range of funding levels, the underlying models for $100 projects and $100,000 projects are likely very different. To address this concern, for this analysis I limited the population to only large projects, with goals of $5,000 or higher. Critically, at these funding levels, crowdfunding more properly competes with formal funding through angels or financial institutions, and therefore gives more analytical purchase on the factors that might lead to success for crowdfunded entrepreneurial ventures.

I then tested the role of networks and project quality. To measure network size, I used the log of the number of Facebook friends of founders. Not all founders had Facebook accounts, so these analyses used a restricted number of projects. To measure quality of project, I followed the Chen, Yao, and Kotha (2009) in focusing on the role of preparedness as a signal of quality to investors. Preparedness was determined by the degree to founders took the time and effort to ensure that project pitches were complete and polished. Kickstarter suggests that the key to demonstrating preparation is to include a video: "A video is by far the best way to get a feel for the emotions, motivations, and character of a project. It's a demonstration of effort and a good predictor of success. Projects with videos succeed at a much higher rate than those without." Therefore, I used whether a pitch had a video as an indicator of a higher-quality project.

The results can be found in Table 3. As can be seen, increasing goal size is negatively associated with success. Being featured is strongly associated with success. Surprisingly, duration decreases the chances of success, possibly because longer durations are a sign of lack of confidence. Categories also had varying success rates. For the sake of interpretation, I consider an average project. I hold all other variables at their mean, and consider only projects that have linked Facebook accounts with non-zero numbers of friends (about 1/3 of all projects) in order to include all covariates. For such a project, a 30 day duration project has a 35% chance of success, while a 60 day project has a 29% chance.

Similarly, an unfeatured project has a 30% chance of success, while a featured project has an 89% chance.

Models 2 and 4 suggest that social networks predict success. Returning to the Film category and assuming that all other variables are held constant at their mean, a founder with 10 Facebook friends would have a 9% chance of succeeding, one with 100 friends would have a 20% chance of success, and one with 1000 friends would have a 40% chance of success.

Models 3 and 4 demonstrate that signals of quality also lead to success.. Again, considering an average film project and holding all else constant, having no videos would result in a 15% chance of success, videos make the chance of success 37%. Overall, success is therefore linked to the quality of products, but also to the social networks of founders.

## 4 Geography: Where do Founders Come From?

The success of traditionally-funded entrepreneurial ventures is often highly constrained by geography (Stuart & Sorenson, 2003). However, researchers have noted that crowdfunding has the potential to mitigate many of the distance effects found in traditional fundraising efforts (Agrawal et al., 2010). In order to examine the role of geography in crowdfunding, I used two STATA programs, Nearstat (Jeanty, 2010) and Geocode (Ozmeck & Miles, 2011) to generate geographic information on the locations of individual founders

based on their location description. I mapped individual projects to the closest micro or macro statistical areas, except that, where individuals were mapped to a micro statistical area, and were living within 20 miles of a larger metropolitan statistical area, I assigned them to the greater metropolitan area instead.

Two descriptive findings of interest are immediately apparent. First, the distribution of Kickstarter projects is uneven, as is successful fund raising, as can be seen in Figure 3. Second, the project mix of founders echoes the cultural products of the cities in which they are based. As can be seen in Figure 3, for example, Nashville has an outsized number of projects for its population, the majority of which are music-based. Los Angeles is dominated by film, while San Francisco has many more technology, games and design products.

Further, success among founders seems to be dependent on the city in which they operate, as suspected by theorists who study urban areas (Knudsen, Florida, & Gates, 2007). As can be seen in Table 4, the higher the proportion of creative individuals[2] in a founder's city, the higher the chance of success for that founder, controlling for the size of the city, the network of the founder, and the number of other Kickstarters launched in that city. These effects persist even when considering only small MSAs of population 500,000 or below, when considering only the Eastern or Western halves of the US, or when including

[2] The proportion of individuals placed in the occupational category "Arts, Design, Entertainment, Sports, and Media Occupations" to all employed individuals in a city.

Facebook social network connections. These geographic effects require future study, but they suggest that geography plays an important role in the success of crowdfunding efforts. Having a local community of artists and creative individuals seems to increase the quality of projects produced by nearby founders.

## 5 Outcomes: When do projects deliver?

Among the unanswered questions about the crowdfunding model is whether successful crowdfunding leads to the successful development of goods and services. To analyze the success of crowdfunding efforts, I used the 471 successful Kickstarter projects in the categories of Design and Technology that had promised delivery dates for rewards to funders before July, 2012. Using two separate RAs for coding, each project was examined to see when, and if, it had delivered the promised products. In the event of disagreement among the coders, the author made the final determination of the project status. Out of the 471 projects, 381 had clearly identifiable outcomes. A total of 316 projects promised to deliver products and an addition 65 offered giveaways (such as "making-of" documentaries, project t-shirts, or other results that were not finished products). As of the time of the analysis, 3 projects had issued refunds, and 11 had apparently stopped responding to backers. The direct failure rate, therefore was 14 out of 381 products, or .036. Further, the projects that were not responding totaled just $21,324 in pledges, compared to nearly $4.5

million for the remaining projects. Even though Kickstarter has no enforcement mechanism to prevent con artists from using the system to raise funds for fake projects, it is clear that with a direct failure rate well below 5%, founders take their obligations seriously.

However, the majority of products were delayed, some substantially, and may, ultimately, never be delivered. Of the 247 projects that delivered goods, the mean delay was 1.28 months (sd=1.56). Of the 126 projects that were delayed, the mean delay to date was 2.4 months, (sd=1.97). Only 24.9% of projects delivered on time, and 33% had yet to deliver. To determine the rate at which delays occur, and the underlying causes of delayed products, I used a Cox proportional hazard model to predict the degree of delay. Figure 3 shows the Kaplan-Meier curve showing cumulative delay for both products and giveaways. As might be expected, products are at greater risk of delay than simpler giveaways.

There are a number of factors that might drive delays in projects. First, more complex projects typically result in greater delays due to interdependencies (Brown & Eisenhardt, 1995). Secondly, projects that are unexpectedly successful may suffer from problems due to increased success and expectations, especially relative to initial planning for more modest funding outcomes (Cooper, 1994). In the Cox model (see Table 5), I find strong evidence for each of these effects. As can also been seen in Figure 4, larger projects suffer much longer delays than smaller projects. Further, even controlling for project size, the degree to which projects are overfunded also predicts delays. Projects that are funded at 10x their

goal are half as likely to deliver at a given time, compared to projects funded at their goal. Few other factors affect project delivery time. I found no effect from the type of project (graphic design versus technology, for example), the number of backers, or any other effect.

In general, the outcome data supports a positive view of the success of projects raising funding through crowdfunding. Very few projects did not appear to be making a good effort to fulfill their obligations. However, it was also apparent that many projects suffered delays, sometimes long delays. Larger projects, and projects that most exceeded their goals, were at the greatest risk for these delays. Since many projects were still delayed at the time of analysis, the final proportion of projects that deliver are unclear. While there is little, if any, outright fraud, there are clearly many founders who struggle to meet the deadlines they set for themselves.

## 6 Conclusions

Crowdfunding represents a novel way for founders to raise capital for a wide variety of projects. Given its rapid rise, the dynamics of crowdfunding have been largely unstudied. This paper offers some insights into how crowdfunding works. Projects generally succeed by small margins, or fail by large ones. Social capital and project quality increase the chance of project success. Geography also plays a major role in determining the nature and success rates of projects. Finally, the vast majority of founders attempt to deliver products

promised to funders, but relatively few do so in a timely manner, a problem exacerbated in large or overfunded projects.

Further work is needed to test the ways in which crowdfunding supports or undermines traditional views of how ventures succeed and raise capital. Additional research is also required to catch up with practice and policy, both of which are embracing crowdfunding. This paper represents an initial foray into what promises to be an important and interesting phenomenon in the study of new ventures.

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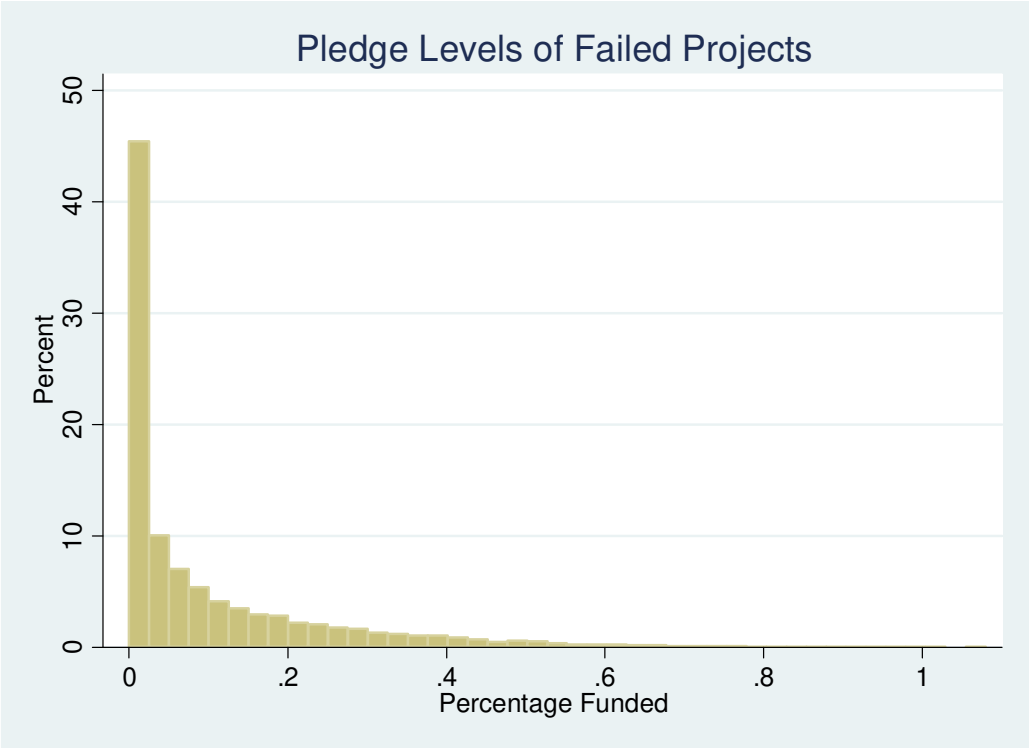
Figure 1: Histograms of funding levels



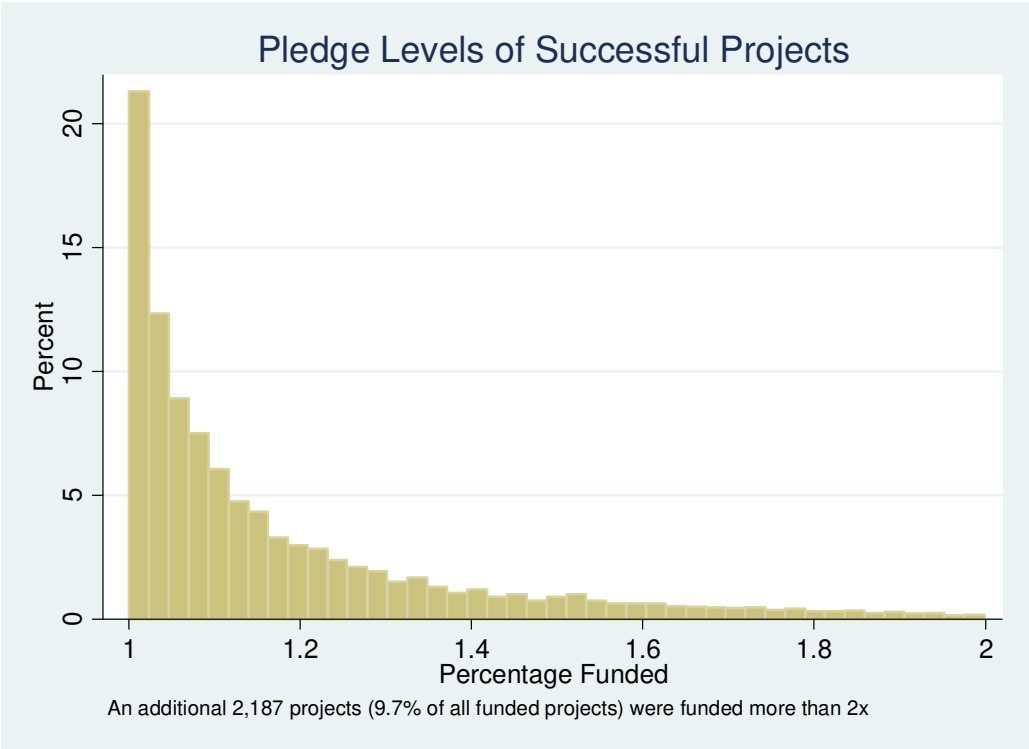



Figure 2: Log-Log Scatterplot of achieved funding versus goal

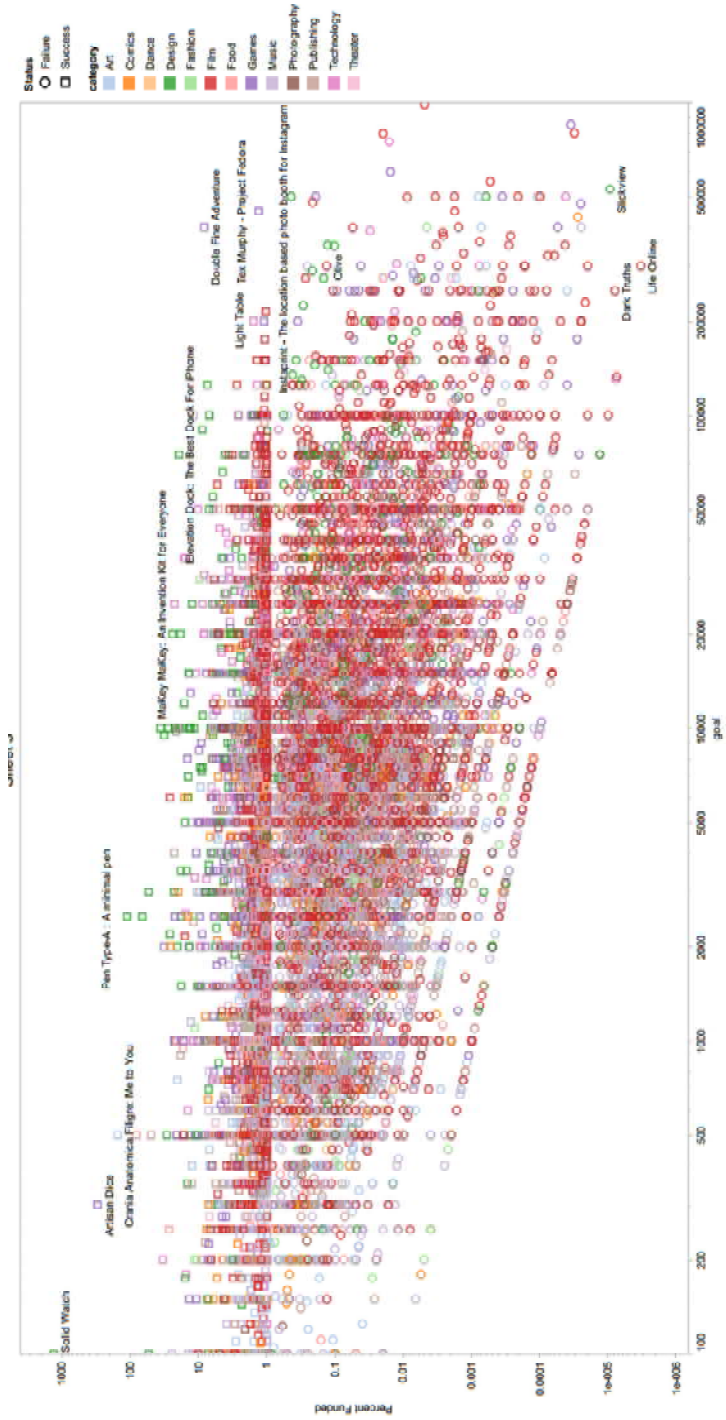


Figure 3: Geographic distribution of projects by success and by category

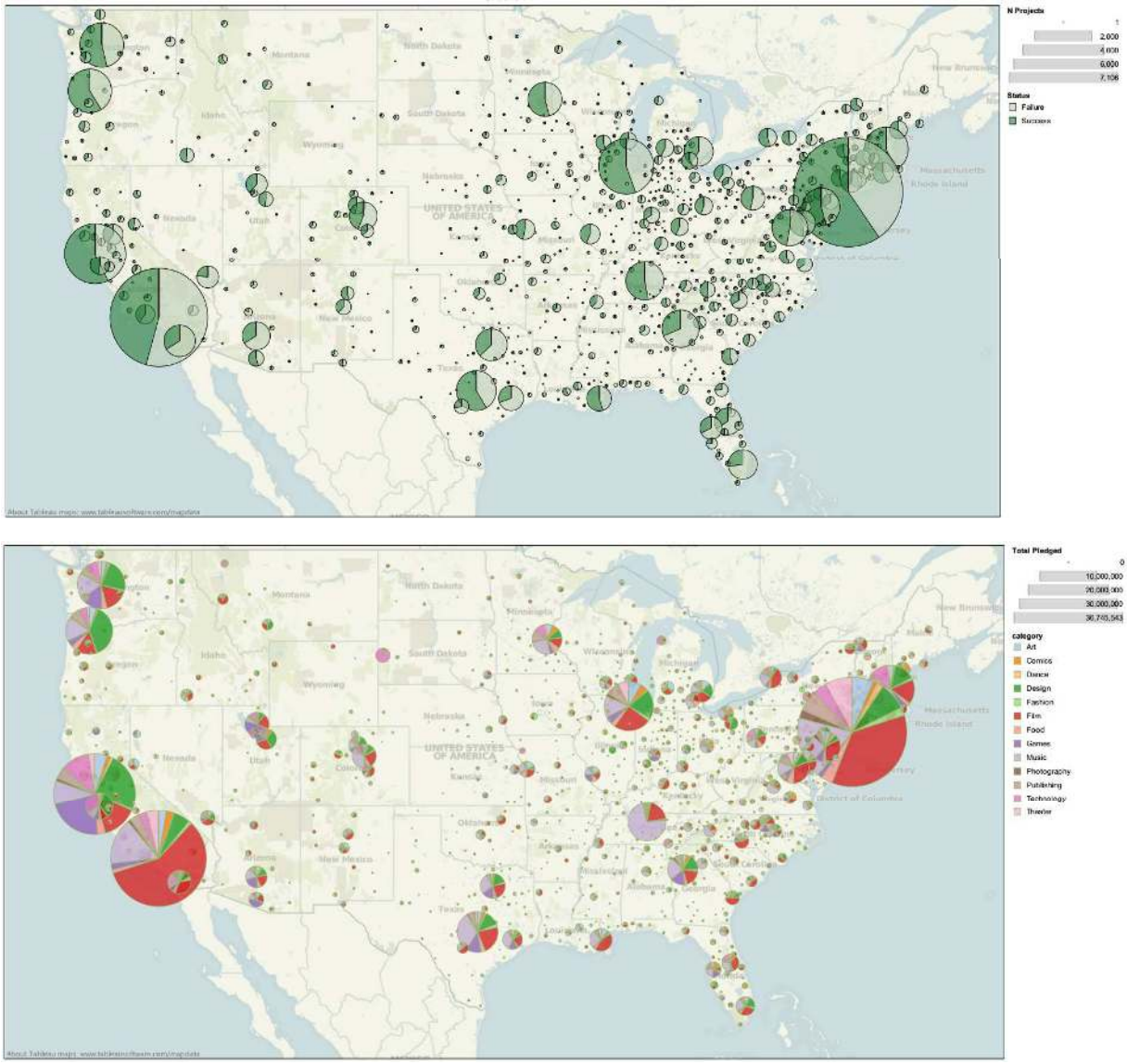
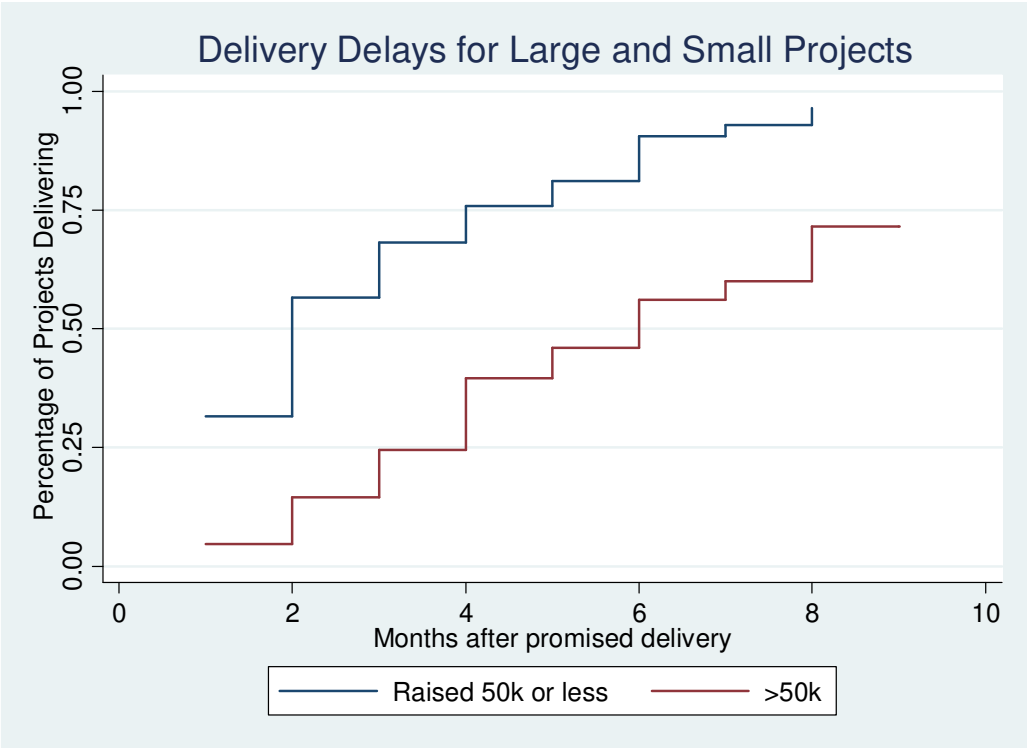


Figure 4: Kaplan-Meier failure curve for project delivery



## Table 1: Summary Statistics

| VARIABLES | (1) All | (2) Funded | (3) Art | (4) Comics | (5) Dance | (6) Design | (7) Fashion | (8) Film | (9) Music | (10) Publish | (11) Tech | (12) Theater |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Funded | 0.484 | | 0.514 | 0.493 | 0.739 | 0.381 | 0.303 | 0.444 | 0.589 | 0.344 | 0.343 | 0.675 |
| | (0.500) | | (0.500) | (0.500) | (0.440) | (0.486) | (0.460) | (0.497) | (0.492) | (0.475) | (0.475) | (0.469) |
| Goal | 9,755 | 5,313 | 6,832 | 6,056 | 4,957 | 17,698 | 7,871 | 14,179 | 5,537 | 7,348 | 21,413 | 5,813 |
| | (26,642) | (8,629) | (26,755) | (15,100) | (34,149) | (35,824) | (18,030) | (34,944) | (11,238) | (11,591) | (45,409) | (13,749) |
| Funded % | 0.781 | 1.503 | 0.778 | 0.988 | 0.928 | 2.295 | 0.538 | 0.602 | 0.804 | 0.573 | 0.993 | 0.859 |
| | (6.570) | (9.389) | (2.530) | (1.656) | (0.595) | (34.72) | (1.123) | (0.723) | (0.777) | (1.240) | (2.431) | (0.624) |
| Backers | 57.90 | 106.3 | 40.49 | 81.31 | 40.52 | 195.1 | 34.98 | 49.26 | 51.35 | 39.46 | 165.4 | 42.00 |
| | (238.3) | (334.6) | (89.23) | (207.5) | (42.74) | (672.9) | (176.3) | (156.4) | (248.9) | (113.1) | (654.7) | (50.78) |
| %1st backr | 0.462 | 0.515 | 0.420 | 0.305 | 0.513 | 0.355 | 0.444 | 0.477 | 0.544 | 0.423 | 0.277 | 0.483 |
| | (0.321) | (0.252) | (0.301) | (0.270) | (0.271) | (0.273) | (0.353) | (0.324) | (0.313) | (0.348) | (0.250) | (0.281) |
| Pledge/backr | 64.04 | 80.40 | 55.43 | 42.97 | 66.51 | 74.65 | 57.94 | 76.41 | 61.38 | 49.21 | 71.57 | 65.01 |
| | (94.90) | (71.73) | (62.41) | (36.11) | (49.80) | (98.15) | (73.54) | (118.0) | (84.52) | (111.1) | (94.25) | (60.40) |
| FB Friends | 331.0 | 378.0 | 305.2 | 342.1 | 384.8 | 201.6 | 345.2 | 300.4 | 445.0 | 284.3 | 220.7 | 318.6 |
| | (701.0) | (735.0) | (644.2) | (703.4) | (680.4) | (401.7) | (675.9) | (654.0) | (878.2) | (628.1) | (514.9) | (643.1) |
| Reward lvls | 7.914 | 8.587 | 7.287 | 9.177 | 6.576 | 7.536 | 7.444 | 7.968 | 8.624 | 7.100 | 7.473 | 6.910 |
| | (4.191) | (4.484) | (4.252) | (5.896) | (3.147) | (3.580) | (3.361) | (4.038) | (4.525) | (4.110) | (4.109) | (3.035) |
| Updates | 3.948 | 6.641 | 3.729 | 6.676 | 3.179 | 5.413 | 2.733 | 3.893 | 3.616 | 3.558 | 5.273 | 3.075 |
| | (6.308) | (7.609) | (5.845) | (8.676) | (4.272) | (7.897) | (4.525) | (6.579) | (5.156) | (6.340) | (8.386) | (4.672) |
| Comments | 5.139 | 9.615 | 2.655 | 7.889 | 1.390 | 26.29 | 2.925 | 3.202 | 3.732 | 2.213 | 21.31 | 1.474 |
| | (33.67) | (47.76) | (9.553) | (24.62) | (2.720) | (98.20) | (14.39) | (19.37) | (15.16) | (8.126) | (92.66) | (3.505) |
| Duration | 39.92 | 37.44 | 37.38 | 42.58 | 37.69 | 38.88 | 37.30 | 40.94 | 40.59 | 39.58 | 40.53 | 37.88 |
| | (17.45) | (16.16) | (17.42) | (17.78) | (16.24) | (14.97) | (15.62) | (18.28) | (17.32) | (17.06) | (16.77) | (17.66) |
| Observations | 46,412 | 22,460 | 4,188 | 1,131 | 708 | 1,519 | 1,171 | 13,338 | 11,806 | 4,654 | 816 | 2,599 |

## Table 2: Correlations

| | Success | Goal | Funded | Backers | %1st backers | Pledge/ backer | FB | Rewards | Updates | Comments |
|---|---|---|---|---|---|---|---|---|---|---|
| Success | 1.0000 | | | | | | | | | |
| Goal | -0.1615 | 1.0000 | | | | | | | | |
| Funded | 0.1065 | -0.0198 | 1.0000 | | | | | | | |
| Backers | 0.1968 | 0.0904 | 0.1041 | 1.0000 | | | | | | |
| % 1st bckers | 0.1628 | -0.0200 | 0.0004 | -0.0169 | 1.0000 | | | | | |
| Pledge/Bkr | 0.1670 | 0.1043 | 0.0272 | 0.0198 | 0.1828 | 1.0000 | | | | |
| Facebook | 0.0650 | 0.0014 | 0.0055 | 0.0532 | 0.0198 | 0.0032 | 1.0000 | | | |
| Rewards | 0.1555 | 0.1016 | 0.0434 | 0.1566 | 0.0893 | 0.1150 | 0.1031 | 1.0000 | | |
| Updates | 0.4133 | 0.0046 | 0.0773 | 0.2564 | 0.0213 | 0.0932 | 0.0623 | 0.2635 | 1.0000 | |
| Comments | 0.1287 | 0.0808 | 0.1570 | 0.6392 | -0.0376 | 0.0203 | 0.0156 | 0.1127 | 0.2612 | 1.0000 |
| Duration | -0.1379 | 0.0784 | -0.0050 | -0.0091 | 0.0083 | 0.0259 | -0.0334 | 0.0268 | 0.0415 | 0.0004 |

Table 3: Predictors of Project Success for Projects 5k and Over

| VARIABLES | (1)<br>Model 1 | (2)<br>Model 2 | (3)<br>Model 3 | (4)<br>Model 4 |
|---|---|---|---|---|
| Log(Goal) | 193.19*** | 47.49** | 50.35*** | 18.43* |
| | (218.417) | (81.052) | (57.144) | (31.689) |
| Log(Goal)$^2$ | 0.44*** | 0.52*** | 0.51*** | 0.58*** |
| | (0.060) | (0.107) | (0.070) | (0.119) |
| Duration | 0.99*** | 0.99*** | 0.99*** | 0.99*** |
| | (0.001) | (0.002) | (0.001) | (0.002) |
| Featured | 21.14*** | 22.62*** | 19.56*** | 20.81*** |
| | (2.526) | (4.697) | (2.346) | (4.333) |
| Log(FBfriends) | | 2.82*** | | 2.79*** |
| | | (0.159) | | (0.160) |
| Video | | | 4.36*** | 4.18*** |
| | | | (0.250) | (0.382) |
| Comics | 0.95 | 1.55** | 1.00 | 1.56** |
| | (0.115) | (0.279) | (0.124) | (0.287) |
| Dance | 2.81*** | 3.19*** | 2.77*** | 2.96*** |
| | (0.499) | (0.959) | (0.505) | (0.911) |
| Design | 1.09 | 1.79*** | 1.01 | 1.69*** |
| | (0.102) | (0.253) | (0.096) | (0.242) |
| Fashion | 0.57*** | 0.67** | 0.59*** | 0.73* |
| | (0.066) | (0.113) | (0.071) | (0.127) |
| Film &Video | 1.30*** | 1.48*** | 1.21*** | 1.41*** |
| | (0.084) | (0.148) | (0.080) | (0.144) |
| Food | 1.25** | 1.74*** | 1.30*** | 1.84*** |
| | (0.113) | (0.235) | (0.121) | (0.255) |
| Games | 0.86 | 1.37** | 0.84* | 1.35** |
| | (0.082) | (0.194) | (0.082) | (0.194) |
| Music | 1.99*** | 1.53*** | 1.91*** | 1.48*** |
| | (0.133) | (0.160) | (0.130) | (0.158) |
| Photography | 0.70*** | 0.78 | 0.75** | 0.85 |
| | (0.080) | (0.141) | (0.088) | (0.158) |
| Publishing | 0.52*** | 0.73** | 0.55*** | 0.78** |
| | (0.042) | (0.089) | (0.046) | (0.096) |
| Technology | 0.88 | 1.27 | 0.90 | 1.32 |
| | (0.104) | (0.229) | (0.108) | (0.240) |
| Theater | 2.17*** | 2.12*** | 2.24*** | 2.29*** |
| | (0.201) | (0.320) | (0.214) | (0.356) |
| Observations | 21,864 | 9,103 | 21,864 | 9,103 |
| chi2 | 3042.54 | 1571.85 | 3877.95 | 1874.90 |
| p | 0.00 | 0.00 | 0.00 | 0.00 |
| Pseudo $R^2$ | 0.11 | 0.13 | 0.14 | 0.16 |

SE in parentheses

Exponentiated Form

*** p<0.01, ** p<0.05, * p<0.1

Table 4: The Effects of Geography on Success

| VARIABLES | (1) All | (2) <1M | (3) <500k | (4) East | (5) West | (6) Facebook |
|---|---|---|---|---|---|---|
| Log(Goal) | 110.88*** | 2,740.69*** | 486.39** | 934.91*** | 18.64** | 64.24** |
| | (119.817) | (5,730.551) | (1,218.682) | (1,544.334) | (26.713) | (104.457) |
| $\text{Log(Goal)}^2$ | 0.48*** | 0.32*** | 0.40*** | 0.37*** | 0.60*** | 0.51*** |
| | (0.062) | (0.082) | (0.120) | (0.073) | (0.102) | (0.099) |
| Duration | 0.99*** | 0.99*** | 0.99*** | 0.99*** | 0.99*** | 0.99*** |
| | (0.001) | (0.002) | (0.002) | (0.001) | (0.001) | (0.002) |
| Distance | 0.75*** | 1.20** | 1.09 | 0.90 | 0.71*** | 0.79** |
| | (0.052) | (0.104) | (0.106) | (0.100) | (0.064) | (0.082) |
| Proportion | 1.24*** | 1.31*** | 1.37*** | 1.49*** | 1.61*** | 1.24*** |
| Artists | (0.037) | (0.059) | (0.065) | (0.084) | (0.079) | (0.057) |
| Log(pop) | 0.96 | 0.97 | 0.98 | 0.91** | 1.08 | 0.94 |
| | (0.033) | (0.065) | (0.088) | (0.044) | (0.057) | (0.049) |
| Other | 1.00*** | 1.00*** | 1.00 | 1.00*** | 1.00*** | 1.00*** |
| Kickstarters | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| FB Friends | | | | | | 2.76*** |
| | | | | | | (0.153) |
| Category | YES | YES | YES | YES | YES | YES |
| Controls | | | | | | |
| Constant | 0.00*** | 0.00*** | 0.00** | 0.00*** | 0.01* | 0.00*** |
| | (0.001) | (0.000) | (0.000) | (0.000) | (0.021) | (0.000) |
| Observations | 21,862 | 7,800 | 5,327 | 11,324 | 10,538 | 9,102 |
| chi2 | 2370.43 | 839.27 | 526.19 | 1432.34 | 1065.85 | 1289.58 |
| p | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Pseudo $R^2$ | 0.08 | 0.09 | 0.08 | 0.10 | 0.08 | 0.11 |

SE in parentheses
Exponentiated Form
*** p<0.01, ** p<0.05, * p<0.1

Table 5: Cox model for delivery of promised product

| VARIABLES | (1)<br>Model 1 | (2)<br>Model 2 | (3)<br>Model 3 |
|---|---|---|---|
| Log(Goal) | 0.68*** | 0.49*** | 0.48*** |
| | (0.069) | (0.059) | (0.067) |
| Log(Percent Funded) | | 0.45*** | 0.44*** |
| | | (0.074) | (0.083) |
| Total Backers | | | 1.00 |
| | | | (0.000) |
| subcategory==Graphic Design | 0.87 | 1.17 | 1.18 |
| | (0.277) | (0.366) | (0.367) |
| subcategory==Open Hardware | 1.05 | 1.44 | 1.45 |
| | (0.325) | (0.457) | (0.465) |
| subcategory==Open Software | 0.82 | 0.66 | 0.66 |
| | (0.441) | (0.357) | (0.357) |
| subcategory==Product Design | 0.81 | 1.04 | 1.04 |
| | (0.186) | (0.246) | (0.248) |
| subcategory==Technology | 0.89 | 1.30 | 1.30 |
| | (0.278) | (0.417) | (0.418) |
| Observations | 314 | 314 | 314 |
| chi2 | 20.30 | 47.78 | 47.83 |
| p | 0.00 | 0.00 | 0.00 |

SE in parentheses
*** p<0.01, ** p<0.05, * p<0.1