Crafting a Persuasive Crowdfunding Campaign

ABSTRACT

Crowdfunding platforms allow individuals to pitch an idea for a new product or service to the public in an attempt to obtain funding. Kickstarter is the most well-known example and it has exploded in popularity over the last few years. However, many of the projects pitched on Kickstarter do not successfully obtain funding. Using the five factor model personality model and IBM’s Watson platform, we analyze the text of the project description and statement of risk of campaigns in the technology category of Kickstarter. We explore how the campaign description and video characteristics affect the successful obtainment of funding.

KEYWORDS: Crowdfunding, Innovation, Kickstarter, Analytics

INTRODUCTION

Crowdfunding is a method to raise funds in a collaborative way. In the last decade, this method has been catalyzed by online portals (e.g., Kickstarter, Indiegogo); where people share projects, in a wide spectrum of categories in an attempt to solicit funding. A formal definition of crowdfunding is “a collective effort by people who network and pool their money together, usually via the Internet, in order to invest in and support efforts initiated by other people or organizations” (Fisk et al. 2011 p. 444). Kickstarter is one of the largest examples of a crowdfunding portal, boasting more than 3 billion dollars in project pledges by more than 12.8 million backers (Kickstarter 2017b).

Kickstarter has also seen some of the most publicized project successes and failures. For example, Oculus, a virtual reality headset maker that started through 2.4 million dollars of funding on Kickstarter and was later acquired by Facebook, is touted as one of the biggest successes (Feldman 2016). Zano, a company that obtained over 3.2 million in funding for a drone that was never successfully produced is an example of one of the biggest failures (Slater-Robins 2016). Given the extremes, what motivates or persuades backers to provide funding to Kickstarter campaigns? Fisk et al. (2011) found that backers’ motivation for funding crowdfunding campaigns could be organized in three groups based upon levels of risk/return (high, medium and low), where he described high risk/return fundraising as “close to that of a venture capitalist” and low risk/return fundraising as “close to charitable activities” (Fisk et al. 2011).

Successfully obtaining funding is always a difficult task, and the online context is not the exception. On Kickstarter, 222,285 (63.37%) campaigns failed to reach their funding goal (i.e., were unsuccessful). While there are examples like Oculus of obtaining large sums of money, of the 123,976 successfully funded campaigns, 68.83% of these raised less than $10,000 dollars. Determining factors that help craft a successful Kickstarter campaign is thus of great interest both to project creators that hope to obtain funding for their venture and the crowdfunding sites themselves because the project creators success ultimately drives their own.

When a potential backer navigates to a crowdfunding project webpage, they see several descriptive characteristics such as the funding goal, the location of the company or project creator, the title, the category of the project (e.g., technology), and often pictures. Most of the campaigns provide much more detail in the project description and often in the video (or videos) embedded in webpage. While several studies have explored factors associated with successful crowdfunding projects, some of these undertakings have focused on easily quantifiable
characteristics such as funding goal, project category, or location (e.g., Koch and Siering 2015). A few studies have explored the text of the description or content of the video(s) (Dey et al. 2017; Mitra and Gilbert 2014; Thies et al. 2016). Our study contributes to this latter stream of research. Specifically, we examine semantic elements of both the text description and video to determine how persuasive (i.e., successfully funded) project campaigns are crafted.

LITERATURE REVIEW

In the following sections, we highlight relevant prior research on crowdfunding and introduce the elaboration likelihood model (ELM) and the five factor model (FFM) that provide the frameworks for the current study.

Crowdfunding

Some studies have focused on characteristics of the crowdfunding campaign, such as size of funding goal, project updates, project duration, category, length of the description, number of images and videos, and whether the campaign creators have backed other projects, in determining success (e.g., Koch and Siering 2015). Some work in crowdfunding has focused on how funding patterns emerge over time, finding that backers may refrain from contributing to projects with a lot of support until the project enters the final stages of funding and the creators issue pleas for funding (Kuppuswamy and Bayus 2015). Yet other research has modeled successful crowdfunding campaigns through social attributes and the time-series of pledges (Etter et al. 2013).

The elaboration likelihood model (ELM) has been applied as an overarching framework to organize variables in some studies (Bi et al. 2017; Dey et al. 2017), although the applications have varied. Dey et al. (2017) examined the videos of crowdfunding campaigns using Mechanical Turk coders, suggesting relevance, complexity, involvement and purchase intent were product related factors that were central cues and the perception of duration, quality of audio/video, and attitude towards the video were peripheral cues. Their findings suggested that for technology campaigns, a lower level of perceived complexity was more likely to lead to success. Prior research has also applied the ELM as a framework to explore the decision to invest on a Chinese crowdfunding platform (Bi et al. 2017), suggesting that the central route includes project quality signals from the creators and the peripheral route includes feedback from other investors through comments and “likes”. This study found that both the quality signals and the investor feedback were almost equally likely to affect the decision to invest. Furthermore, the results of their study suggested that the quality signals were more important for science and technology projects. We extend some of the ideas from these works to explore the semantics of the campaigns’ videos and descriptions in greater detail, arguing the there is both a central and peripheral route available to the investors to gauge the campaign pitch.

A recent study explored how campaign creators signal personality traits through the semantic content of the written description and spoken comments in the videos of campaigns (Thies et al. 2016). They found that certain personality traits signaled in the campaign lead to a higher likelihood of successful funding and the project being shared on social media more frequently. Specifically, openness and agreeableness were associated with projects more likely to successfully obtain funding and have their projects shared on social media. Thies et al. (2016) propose that the rhetorical style of the campaign pitch influences success and diffusion, because it is important to the decision making process of crowdfunding project backers. We extend these findings by integrating the campaign pitch variables into an ELM framework and breaking the campaign pitch into elements that have very different purposes (i.e., project description and statement of risk).
Other studies have also explored the semantic elements of crowdfunding campaigns. For example, Mitra and Gilbert (2014) explored phrases that were characteristic of funded campaigns’ descriptions. Their results indicated that phrases signaling reciprocity, scarcity, social proof, social identity, liking, and authority were often found in funded projects. Another study examining the linguistic features of crowdfunding pitches found that more emotive, thoughtful and colloquial campaigns were more successful (Desai et al. 2015). While the previous two studies used text-mining methods, another study examined participants' perceptions of creativity and entrepreneurial passion on the success of crowdfunding campaigns (Davis et al. 2017). These studies further suggest that the language style and impression conveyed by those crafting the pitch can have substantial impacts on the success of the campaign.

Elaboration-likelihood model (ELM)

The elaboration-likelihood model (ELM) provides a fairly general framework for “organizing, categorizing, and understanding the basic processes underlying the effectiveness of persuasive communication” (Petty and Cacioppo 1986, p. 125). It is defined under the assumption that there are two distinct “routes” to persuasion.

The central route of persuasion is that likely resulting from “a person’s careful and thoughtful consideration of the true merits of the information presented in support of an advocacy” (Petty and Cacioppo 1986, p. 125). The peripheral route of persuasion “was that which more likely occurred as a result of some simple cue in the persuasion context (e.g., an attractive source) that induced change without necessitating scrutiny of the true merits of the information presented” (Petty and Cacioppo 1986, p. 125).

Areni and Sparks (2005) provide justification for semantic features as peripheral cues of persuasion. In their research, they focus on language power, but we argue that the signaling of personality traits in the text of the descriptions and videos of the campaigns provide similar peripheral cues. In our context, variables assisting the central route would relate to more informative information regarding the crowdfunding project that would help a backer judge the merits of the proposal. We leave the central route variables for future study, in order to conduct a granular examination of the peripheral semantic cues of two primary components of the campaign pitch: the description of the project and the statement of risk of the project. We suggest that the language elements of these two sections may impact the success (or failure) of the crowdfunding campaign in distinct ways.

Five Factor Model (FFM)

The Five Factor Model (FFM) was developed in the early 1960s to further the study of personality, which at the time was argued to be hampered by “inconsistency of factorial techniques and philosophies” (Tupes and Christal 1992, p. 246). The model examined 35 personality traits identified in the field, which after analysis resulted in 5 major personality factors being identified. Researchers were reluctant to use this model during the 1970s; it was not until a decade later that the FFM start gaining traction.

The FFM was born from studies of “natural language trait terms” (McCrae and John 1992), where dictionary terms were groups into rating scales. While there is a good deal of controversy surrounding the FFM, the argument that “some version of these five dimensions is at least necessary for an adequate description of individual differences” (McCrae and John 1992, p. 177).
The FFM, as most people employ it today, includes extraversion, neuroticism, openness to experience, agreeableness, and conscientiousness as the five personality traits. These five factors are often referred to as the Big-5. We provide some detail about the five factors below.

- **Neuroticism** (sometimes referred to as emotional stability): characterized by “recurrent nervous tension, depression, frustration, guilt, and self-consciousness that such individuals feel is often associated with irrational thinking, low self-esteem, poor control of impulses and cravings, somatic complaints and ineffective coping”, whereas individuals low on neuroticism may be “calm, relaxed, even-tempered, unflappable” (McCrae and John 1992, p. 195).

- **Extraversion**: characterized by people who are “cheerful, enthusiastic, optimistic, and energetic”, and these types of people tend to be “dominant, talkative, sociable, and warm”. Other descriptions include: “venturesomeness, affiliation, positive affectivity, energy, ascendance, and ambition” (McCrae and John 1992, p. 196).

- **Agreeableness**: characterized by “altruism, nurturance, caring, and emotional support at one end of the dimension, and hostility, indifference to others, self-centeredness, spitefulness, and jealously at the other” (McCrae and John 1992, p. 196-197).

- **Conscientiousness**: characterized by people who are “neat, well-organized, diligent, and achievement-oriented” (McCrae and John 1992, p. 197).

- **Openness to Experience**: characterized by “creativity and intellectual interests, differentiated emotions, aesthetic sensitivity, need for variety, and unconventional values” (McCrae and John 1992, p. 197).

The Big-5 factors have been associated with entrepreneurial outcomes in prior research. For example, conscientiousness, openness to experiences, emotional stability and extraversion were all found to be positively associated with both intentions to become an entrepreneur and performance of entrepreneurial firms (Zhao et al. 2010). In another study, conscientiousness was positively linked, and openness to experience negatively linked, to longer-term venture survival (Ciavarella et al. 2004). Thus, entrepreneurs’ personality traits do appear to impact success of their ventures.

In this study, we use IBM’s Watson to provide FFM scores for two sections of the textual write-up for a Kickstarter project: the description of the project and the statement of risk associated with the project. We suggest that these two sections are attempting to convey quite different information and the language tone with which they convey risk may result in a different outcome than that they use to convey the details of the project they want to undertake.

**METHODOLOGY**

We have organized the methodology into multiple sections to explain how: we obtained Kickstarter data, sampled the data using the technology subcategories, downloaded and processed videos, generated personality scores on the content (description and statement of risk), and construct models to explore the effect of the variables on the successful funding outcomes of the campaigns.

**Data Collection and Sample**

For our study, we collected 12,047 publicly available Kickstarter campaigns from the technology category. These campaigns were collected after the funding period had expired, and includes both successfully or unsuccessfully funded campaigns from the years 2009 to 2015. There were 18 unique subcategories (e.g., software, hardware, DIY electronics, wearables) in the technology category. After data cleaning, the final data set contained 2416 (20%)
Successfully funded campaigns and 9631 (80%) unsuccessful campaigns. Unsuccessfully campaigns included the following subcategories: canceled, suspended, and unsuccessfully funded. Given the statistics in the introduction, it is not surprising that our dataset had more unsuccessful campaigns than successful ones.

We used a stratified sampling approach to obtain a balanced sample of successful and unsuccessful campaigns. We sampled the top 9 most popular technology sub-categories: Apps, DIY Electronics, Gadgets, Hardware, Robots, Software, Technology, Wearables, and Web. Then, we randomly sampled from each subcategory and equal number of successful and unsuccessful projects. Our final sample contained 3,325 projects.

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Video downloading, processing and transcription

Not only does Kickstarter recommend the use of videos for campaigns (Kickstarter 2017a), but studies (Areni and Sparks 2005; Dey et al. 2017) have also identified the importance of videos in understating persuasion effects. Thus, we incorporated characteristics of the campaign videos into our study. First, we downloaded the videos for each campaign from our sample (in the cases where the campaign had a video). In our dataset, 468 (14%) projects did not have a video and 2,863 (86%) had a video. For those campaigns that did not have a video, the video variables (Video Duration, Video Speech Density, and Video Quality) will all be 0. Then, we processed the content of the video using an opensource library called ffprobe, to obtain the video bitrate, which provides an indication of video quality, and the duration of the video in seconds. Also, we ran a script that automated the process of extracting the audio from the video. We then used Google Speech Recognition (Version 2) services to transcript the audio into text form. Using this technology, we constructed the following variables for the videos:

- Video Duration: the length of the video in seconds
- Video Speech Density: the number of words spoken in the video divided by the Video Duration
- Video Quality: the bitrate of the video

Content scoring using IBM Watson

In order to analyze the content of the campaigns in terms of the Big-5 personality traits, we chose to use an external service from IBM Watson called Tone Analyzer. This service uses “linguistic analysis to detect communication tones in written text” (IBM 2017), and it is intended
to be used on “short-form text like reviews or short emails, or longer documents like articles and blog posts” (IBM 2017).

For our study, we extracted the textual content from the different text sections present in the campaigns: about (description) and risk sections. We then used the API provided by the tone analyzer service to score the different sections for social tone (Big-5 personality traits). IBM’s social tone service supports the FFM and is built on academic research (IBM 2017). This technology provided us with the following 10 variables used in the analysis: description openness to experience, description conscientiousness, description extraversion, description agreeableness, description emotional range, risk openness to experience, risk conscientiousness, risk extraversion, risk agreeableness, and risk emotional range.

Analyzing Kickstarter campaigns

Using our sample of 3,325 Kickstarter technology projects and the variables constructed using the technologies described above, we ran a logistic regression analysis. Our dependent variable is whether or not the campaign was successfully funded. We also considered several control variables in our model.

- Goal: the funding goal of the campaign (i.e., how much money was asked for).
- Number of Rewards: the number of rewards offered by the campaign to the backers.
- Funding Period Length: the length in days the campaign was open for funding.

RESULTS AND DISCUSSION

Table 2 presents the descriptive statistics for each of the variables used in our model. The number of successful and unsuccessful campaigns sampled from each technology sub-category was shown in Table 1.

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<td>Big-5 Variables (Watson)</td>
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Controls
Our results reveal several interesting findings that have implications for individuals intending to pitch a project on Kickstarter. Projects with a smaller goal (i.e., asked for less money) were more likely to be successfully funded. This finding is in concurrence with the statistics from Kickstarter that show 68.83% of successfully funded project are funded at levels less than $10,000. Obviously, smaller amounts of money are easier to raise, but there may also be some advantage to not making a large ask. Future research may want to investigate if larger asks are perceived to be risker investments that scare backers away.

Our results also indicate that the more rewards that are offered by a campaign, the more likely the campaign is to be successfully funded. Kickstarter is a reward-based crowdfunding platform, and hence, the expectation of rewards is high. Our result suggest that it is important to offer a large portfolio of rewards to backers to increase the likelihood of success. Future research may examine what role the make-up of the reward portfolio has on successfully obtaining funding.

The length of the funding period was our last control variable and was not significant. This indicates the amount of time the campaign is actively seeking backers does not matter to ultimate success or failure at obtaining funding.
Two of the three video variables were significant and positively related to success. The video speech density is the number of words spoken in the video divided by the duration (in seconds) of the video. Hence, the more speech is in the campaign’s video, the more likely the project is to be successfully funded. Video duration (in seconds) is also positively associated with success. The campaigns with longer videos are more likely to successfully obtain funding. These findings illustrate the importance of making a video and carefully narrating it. The video quality (or bitrate) was not significantly associated with success, which indicates that the video may not need to be high quality. This could suggest that what is said in the video may be as important or more important than how the video looks.

The findings for the Big-5 variables for the two sections of text (project description and statement of risk) analyzed provide some interesting insights. Agreeableness in the tone of the text of both the risk and descriptions sections was negatively related to success, whereas conscientiousness and extraversion were both positively related to success for both sections. While not significant for the risk section, neuroticism (emotional range) and openness to experience were both significantly related to success for the description section. Neuroticism was negatively and openness to experience positively associated with success.

When the tone of the description and risk sections is less agreeable in tone, the project was more likely to be successfully funded. One explanation of these findings is that a less agreeable tone may portray more confidence and braggadocio than writing with an agreeable tone. Backers may find confidence and bravado useful qualities in an entrepreneur, both in expressing confidence about the risk and bravado in describing the project. In both describing the project and the risk, a more extraverted tone was associated with a higher likelihood of obtaining funding. This may indicate a preference for cheerful, attention-seekers with positive ways of describing the project and its risks. Similarly, when both the description and the risk sections were written with a more conscientious tone, the projects were more likely to be funded. This result indicates that campaigns written in a style that expresses discipline, organization, and striving for achievement are better for obtaining funding.

When the description was written with a tone low on emotional range (neuroticism), the project was more likely to be funded. Low values for emotional range indicate calmness, whereas high values indicate anger, frustration, stress, impulsiveness, and insecurity. Writing the pitch to avoid expressing volatile emotional states and express calm is advised from this finding. Lastly, a tone expressing openness to experience in the campaign description was also negatively associated with success. This result indicates that straightforward, less complex descriptions may be a better approach to obtain funding than imaginative and intellectual writing.

Our results suggest that the description should be written in a non-complex, confident, calm, cheerful, and organized manner. The risk sections should be written to express confidence, organization, and positivity. Videos are also important components of the pitch, and project creators may be advised to offer a large portfolio of rewards and ask for a smaller and reasonable amount of money.

**LIMITATIONS AND DIRECTIONS FOR FUTURE RESEARCH**

It is important to note that the speech recognition service used in this study is new and still improving. We ran some testing on several videos to spot-check the accuracy of the transcriptions and the service was deemed to perform reasonably well, but could be affected by: background noise, the accent of the presenter, and the speed at which the presenter spoke.

Future research may include the addition of other text mining methods to explore the ELMs central route, as well as applying text methods to the translated video.
CONCLUSIONS

Our study explored two of the primary text sections of a pitch to obtain funding on Kickstarter. The results suggest that it is important to watch the tone of writing for both the project description, as well as the statement of risk. For the statement of risk, writing text that describes the risk with low agreeableness tones, high conscientiousness tones, and high extraversion tones is better for successfully obtaining funding. The description should be written with low agreeableness and low emotional range (neuroticism) tones, but high conscientiousness, extraversion, and openness to experience tones. It is advised to include a video that is well-narrated, ask for a reasonably low amount of money (< $10,000), and offer a large portfolio of rewards to the backers.

REFERENCES


