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Awareness or Persuasion? How Free Sampling Affects Crowdfunding Performance

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Abstract: Free sampling, which has been widely applied and studied in marketing, has recently been adopted by entrepreneurs on crowdfunding platforms. Using a dataset from a unique crowdfunding platform, we study whether opting to provide free samples to potential backers increases the likelihood of a campaign meeting its goal. We also investigate how free sampling influences the fundraising dynamics. Using a matched sample of crowdfunding campaigns, we demonstrate that providing free samples significantly improves crowdfunding performance. And among those projects which opt for free sampling, persuasion effect during the report period contributes to the positive effect. The higher the score from the evaluator, the more successful the campaign will be. We also find that the longer the investors are exposed to the evaluation report, the more money is raised.

Keywords: free samples, Reward-Based crowdfunding, crowdfunding success

1. INTRODUCTION

Crowdfunding is a novel approach to early stage financing that enables entrepreneurs to raise small amounts of capital from a large network of people[1]. However, with increasing competition, entrepreneurs are now seeking out new ways to improve their likelihood of success in meeting their fund-raising goals. For instance, on Kickstarter, which is one of the leading crowdfunding platforms in the US, only 33% of the projects are funded. This is largely due to the fact that backers face a lot of uncertainty when they consider whether to support a project. There is very little information on reward-based crowdfunding platforms about the quality of the product being pitched, the diligence of the project initiators and their commitment to follow through after the project is funded. This means fundraisers may have to provide as much information as possible to convince backers to fund their project.

One way to mitigate this information asymmetry is to provide free samples of the product, whenever possible, to potential backers. Entrepreneurs on crowdfunding platforms go to great lengths to effectively present their product and its features through text, pictures and videos. However, as the adage says, "the proof the pudding is in the eating", and the real value a product has to offer can be judged only from practical experience. It is, therefore, not surprising that offering free samples has become a recent trend on crowdfunding platforms.

A large number of studies have shown that product samples help promote sales, and many scholars have suggested that the effect of free samples on sales depends on the type of product[2] [3][4], the type of consumers[5] [6] and the timing of the launch[7]. However, the effect of free samples in the crowdfunding context is not clear yet, and we attempt to explore this in this study.

There are several reasons that free samples should have a positive impact on the crowdfunding process. First, instead of describing the product which is not produced yet, which is what crowdfunding campaigns typically do, offering a free trial indicates to the potential backers that the product has already been produced, at least in the form of prototype. This is especially attractive to backers who are risk-averse. Secondly, as every

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potter praises his pot, the voice of the consumer is more valuable and trustworthy. After trying the free sample, each consumer submits an evaluation report. The evaluation report can mitigate the inherent information asymmetry in this online market. Third, as the process of selecting and announcing the winner of free samples brings some entertainment to the campaign, the campaign is likely to gain more attention and engagement, which probably leads to more fund. On the other hand, the trial report, which is not controlled by the entrepreneur, may not always be positive. In this case, the negative comments can severely hurt the campaign.

As the effect of the free trial offering in the crowdfunding context is not clear yet, we are motivated to explore some interesting research questions. First, what is the effect of going opting to offer free trials on fund raising outcomes? Does this feature increase the likelihood of a project meeting its goal? How does the free trial process affect the fundraising dynamics? How does the trial report affect the fundraising dynamics?

2. RESEARCH HYPOTHESES

Giving free samples to customers should benefit the fundraising for several reasons. First, enticed by the chance of getting a free product, more users on the crowdfunding platform will pay special attention to the campaign. This increased awareness in the form of higher number of the visitors to the campaign can potentially translate into a higher number of backers. Secondly, some researchers have noted that offering free trial samples signals superior product quality. When entrepreneurs provide samples even to a small number of potential backers, it can reduce the uncertainty around product quality by serving as a direct source of information via experience, personal or vicarious. It has been shown that such learning from experience leads to a greater positive effect on sales than advertising[8] [9]. The persuasion effect of free sampling can also attract higher amounts of contribution because those visitors who decide to back the project are more confident in their decision after knowing the results of sampling. Based on the reasons above, we hypothesize:

H1. Offering product samples increases the likelihood of success of a crowdfunding campaign.

However, success can be achieved either through more backers, or backers who contribute more, or both. We, therefore, test for both possibilities.

H1(a): Offering free samples increases the number of backers a campaign attracts.

H1(b): Offering free samples increases the average amount of backers' contribution.

From the perspective of uncertainty reduction, information, provided by both the fundraiser and the evaluators (backers who sample the product) should contribute to the success of the campaign. The opinion of the evaluators is likely to be unbiased and objective relative to that of the entrepreneur's. Therefore, when the evaluation report is released on the page of campaign, more information is revealed to the potential backers and it aids the investment decision. Prior literature suggests that the post-trial word-of-mouth generated by satisfied consumers spreads to other consumers and thus increases sales[10]. In addition, sampling can accelerate the discussion process and the best time to send free samples is just before the product is launched[7]. Zhou and Duan found that free sampling not only directly leads to more sales but also enhances the online word-of-mouth effect[11]. Therefore, we hypothesize:

H2(a): The higher the evaluation score from the free-samplers, the more successful the project will be.

H2(b): The longer the potential backers are exposed to the evaluation report, the more successful the project will be.

3. RESEARCH CONTEXT AND DATA

We collected data from JD (z.jd.com), the largest crowdfunding platform in China. JD allows fundraisers to go through a stage of free sampling during the campaign. If a fundraiser opts into the free sampling feature, she can post a "call for applicants" for the free samples and pick several applicants to be the recipients of the free sample. The recipients then try the free sample and post an evaluation report of the product on the campaign

page based on their first-hand experience.

We collected data on 3321 campaigns which started after March 31, 2017 and ended before November 11, 2017. Of these, 145 projects adopted free sampling. For each project, we collected project-related variables, fundraiser-related variables, and sampling-related variables.

4. EMPIRICAL ANALYSIS

A challenge in estimating the effect of free samples on campaign performance is that there could be factors that simultaneously affect the decision to provide free samples and the performance of the campaign. In other words, fundraisers who choose to offer the free sample may be more likely to achieve their fundraising goals for some unobserved reasons. To address this endogeneity issue, we construct a matched sample of campaigns that offer free samples and those that do not. We use propensity score matching (PSM) to construct the matched sample[12]. PSM attempts to mimic randomization between sampling projects and non-sampling projects by creating a group of non-sampling projects that is comparable on all observed covariates to a group of sampling projects.

We use sampling as the explanatory variable, and characteristics of project and fundraisers as the covariates, then employ Logit function to calculate the propensity scores for each applicant with these covariates. After the application of the PSM, 3085 unmatched observations were dropped from our observations to avoid potential bias, resulting in improvement in the balance between the two groups along the key variables.

4.1 Model specification

We first investigated whether offering free samples affects crowdfunding performance (e.g. success, ratio, money raised). We log-transformed the non-categorical variables which vary widely to reflect percentage changes. It is more helpful to understand these effects in percentage terms[13] .

In model 1(a), we examined the impact of the sampling on a set of non-categorical outcomes as follows.

$$Y_j = \alpha_0 + \alpha_1 SamplingD_j + \alpha_2 Project_j + \alpha_3 Fundraiser_j + \varepsilon_j \quad 1(a)$$

j indicates the jth project. Y_j is one of the six non-categorical dependent variables, including the log-transformed backer, moneyraised, AverageAmount, Ratio and success. $SamplingD_j$ is a binary variable indicating whether the project has the product sampling (1=yes, 0=no). $Project_j$ is a vector of observable project-level characteristics, such as goal, duration, number of types, whether the project had an introductory video[14], number of pictures, project progress[1] etc. $Fundraiser_j$ is a vector of characteristics of the fundraiser, including the log-transformed startercreate, startersupport and starterfollowed, which represents the fundraiser's experience and internal social capital on the platform[15].

In model 1(b), we explore the impact of sampling on project success.

$$Logit(Success_j) = \alpha_0 + \alpha_1 SamplingD_j + \alpha_2 Project_j + \alpha_3 Fundraiser_j \quad 1(b)$$

$Success_j$ is a binary variable indicating whether project j reached its goal, we used the same set of control variables as in Model 1(a) above.

Next, In Model 2(a) and Model 2(b), we focus on which variables of the product sampling will affect the performance of the crowdfunding projects.

$$Y_j = \alpha_0 + \alpha_1 Sample_j + \alpha_2 Project_j + \alpha_3 Fundraiser_j + \varepsilon_j \quad 2(a)$$

$$Logit(Success_j) = \alpha_0 + \alpha_1 Sample_j + \alpha_2 Project_j + \alpha_3 Fundraiser_j \quad 2(b)$$

The projects in Model 2 are the 127 projects which has offered the free samples (we removed 18 projects

without evaluation report). The dependent variables are the same as that in Model 1. $Sample_j$ is a vector of characteristics of the sampling, including number of applicants, number of evaluation reports, evaluation score of the product, etc. The project vector variables and fundraiser vector variables are similar to Model 1's.

4.2 Result

The initial results of Model 1 show that the impact of sampling is significantly positive on raised, ratio and success (supporting H1), suggesting that free sampling does increase the amount of fundraising thus increase the chance of succeeding in crowdfunding. It shows that free sampling didn't bring more backers to the campaign (rejecting H1a), but it increases the average investment amount of each backer (supporting H1b). To rule out the alternative explanation like the projects which adopt free sampling are better projects in terms of quality, we employed the variables "number of followers" and "number of likes" to measure the quality of the projects. The result shows that there is no significant effect of the sampling on either the number of likes or the number of followers. Therefore, it is unlikely that unobserved quality of the project will be a confounding factor when estimating the effect of the sampling on crowdfunding outcomes.

The results of Model 2 show that the impact of the "length of application period" is not significant on all crowdfunding outcomes, which means that the length of the free sample application period does not affect the performance of crowdfunding. While the impact of "the length of reporting period" is significantly positive on Raised and Ratio (supporting H2b), which means that the number of days the reports posted on the website before crowdfunding ends positively affects the amount of funding and the ratio of fundraising goal. We also find that the average score from the evaluators has positive impact on the crowdfunding success (supporting H2a). Similar to model 1, we also estimate the effect of the sampling on "number of likes" and "number of followers" to exclude the alternative explanation of project quality.

5. CONCLUSION

Using data from JD, a leading crowdfunding platform, we empirically examine the underlying mechanisms of the effects of free sampling in the context of crowdfunding. Our analysis reveals that offering free samples to potential backers does help increase the likelihood of success of a crowdfunding campaign. Interestingly, it does not increase the number of backers but does increase the average contribution amount per backer. We also find the role of evaluation report to be similar to that of online work-of-mouth in the e-commerce context, i.e., the higher the average score on the product, the more successful the project will be. It appears that the length of the report and the number of pictures in the report has no significant impact on crowdfunding performance. Meanwhile, as the report from the evaluator reduces the uncertainty, the longer the potential investors are exposed to the evaluation report, the more money the campaign raises.

The findings from this study broaden our understanding of the effects of free samples. These insights also provide important managerial implications to entrepreneurs and crowdfunding platform managers. Providing the option of free sampling can help crowdfunding projects succeed in meeting their goals. For those who opt to provide free samples, it is crucial to achieve the satisfaction of the evaluator so that they submit a strong evaluation report. In addition, it is just as important to make the evaluation report available to the crowd as early as possible to maximize the benefit from the exposure of the report.

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