Operational Transparency in Crowdfunding for Disaster Management

Humanitarian needs are growing faster than humanitarian funding. To increase their donor bases and respond to growing needs, individuals and humanitarian organizations are expanding the channels they use to reach out to potential donors for funding. The $30 billion online crowdfunding market is one of such new channels. Crowdfunding campaigns in online platforms to fund disaster relief have the option to use updates to inform donors about the progress of the relief efforts. If updates communicate the work the campaign is doing, they become a tool of operational transparency. In the operational transparency literature, when users are exposed to the revelation of the work behind a service, their perceptions of effort and trust increase boosting their awareness of service value. We argue that the increased operational transparency conveyed in the updates may lead to increased donations for the campaign. We investigate the role of updates as a tool of operational transparency to increase donor trust in crowdfunding campaigns for disaster relief. In particular, we investigate two research questions: (i) How do crowdfunding campaign updates affect donations for disaster relief? (ii) What is the effect of displaying operational transparency in the text of the updates on these donations?

To answer these questions we study one of the world’s largest online platforms for charity crowdfunding. We collect data on all open campaigns, updates, and donations in the platform over a seven-year period (2010-2017). We observe over 1.1 million campaigns, of which 107,739 (approximately 10%) are categorized as emergencies. Approximately 51% emergency campaigns post at least one update in this time period. For each campaign, we are able to identify the organizer, title, description, purpose, financial target, creation date, amount raised, number of donors and updates (until the collection date). Moreover, we are able to identify the timeline of each update and donation and whether the campaign is certified or not. Certification is a time-consuming process that often takes months. However, previous research has shown that organizations that achieve a certification obtain reputational benefits and should expect greater performance than non-certified organizations.
Before executing formal econometric analyses, we explore the relationship between donations and updates in a model-free environment. We examine the donations received by campaigns five days before and after an update is released. Figure 1 shows evidence of a sharp increase in donations following an update. Thus, even without including campaign-level controls, there appears to be a clear temporal relationship between updates and donations with a surge of donations typically occurring the day of the update.

**Figure 1. Average Donations Before and After an Update from 22,820 Campaigns with Daily Information.**

As updates are written descriptions, we argue that words that convey work, action, and transparency should communicate the progress of the relief efforts more effectively to existing and new donors. Moreover, updates that include these kinds of words become operationally transparent. Past research defines operational transparency as the action of revealing the work that is performed behind a service or system, which increases the perceptions of effort and trust from customers. In our setting, to measure operational transparency we use the Harvard General Inquirer (HGI), a well-established dictionary in text mining, to count work-related words in each update. In particular, we use the HGI class related to “socially defined ways of performing tasks or work”. This class includes 261 words representing work actions such as, “build,” “clean,” “equip” and “fix”.

In order to conduct our econometric analysis, we form an unbalanced panel dataset that aggregates the information of the 107,739 campaigns in a given month. This dataset also includes time-
invariant variables, such as the fundraising goal of the campaign. Our dependent variable is the amount of donations in dollars for a given a campaign in a time period (month). Our main independent variables are the number of updates for a given campaign in a time period and a series of variables characterizing the semantic structure of the text present in the updates (e.g., work-related words).

Our results show that updates have a positive effect on donations per month, which is consistently above $185. However, not all the updates have the same effect on donations. Donations for a given campaign increase significantly more when organizers publish operationally transparent updates. As a benchmark for comparison, we find that the size of the positive effect derived from operational transparency is greater than the size of the effect of certification. In particular, each work-related word in updates increase donations on average by $65 per month, while being a certified campaign raises funds on average by only $22 per month. That is to say, operationally transparent updates have a higher positive effect on donations compared to other types of updates and even compared to the reputational effects derived from certification.

Our results are consistent to different model specifications and survive multiple robustness tests. First, results are robust to two different model specifications: autoregressive AR(1) structure of residuals and the inclusion of fixed effects to account for campaign-level differences. Second, our main findings also hold when we change the models: to only include a count of the unique instances of work-related words and to control for endogeneity by performing coarsened exact matching.

Our findings not only enrich the literature on funding and operational transparency, but also have managerial implications both for humanitarian organizations willing to start crowdfunding campaigns to collect funds from private donors, and for crowdfunding platforms. Campaign organizers can increase funding by keeping their donors informed on a regular basis about the progress of the campaign using operationally transparent updates. Crowdfunding platforms can also build on these insights to guide campaign organizers on how to be more transparent in order to access more funding.