Secret Benefactors: Crowdfunder Information Hiding and its Implications for Fundraising Outcomes

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Gordon Burtch* Anindya Ghose** Sunil Wattal***

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* University of Minnesota, Carlson School of Management, burtc002@umn.edu
& Temple University, Fox School of Business, gburtch@temple.edu

** New York University, Stern School of Business, aghose@stern.nyu.edu

*** Temple University, Fox School of Business, swattal@temple.edu

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Abstract

The demand for online privacy remains an ongoing source of debate. Sensitive to this fact, many online platforms now offer users greater, more granular control over how and when their information is revealed. However, recent research suggests i) that users often fail to apply privacy controls as they reportedly intend and ii) that the provision and use of information hiding mechanisms is not necessarily of economic benefit to the various parties involved. In this study, we examine users' endogenous application of information hiding mechanisms and the economic consequences, for others, in the context of online crowdfunding. We leverage transaction-level data from one of the world's largest crowdfunding platforms, where campaign contributors are given the option of concealing their identity and contribution amounts from public display. First, we find that individuals are more likely to conceal information when they are i) privacy sensitive, ii) when a campaign has received a greater deal of public exposure and iii) when their contribution amount is relatively "extreme." Second, we find evidence of an anchoring effect, where contributors refer to the amounts supplied by prior others, as a point of reference when deciding upon their own contribution. However, when prior others conceal their contribution amount, the anchoring effect is eliminated. Considering the marginal effects, we find that concealing the prior contribution amount can be beneficial or detrimental for the purveyor or campaign organizer, depending on the contribution size. If prior contributions are small, concealing the amount is likely to be preferred, in order to prevent a downward influence on subsequent contributions. In contrast, when prior contributions are large, it is to the purveyor and campaign organizer's benefit if the amount is revealed, as this can create an upward influence on subsequent contributions. This finding implies that a nuanced approach to the provision of information hiding mechanisms can help promote larger crowdfunder contributions. We discuss the implications for the design and provision of online information hiding mechanisms in this context and elsewhere.

Keywords: crowdfunding, privacy, information hiding, entrepreneurial finance, anonymity.

Introduction

The demand for online privacy controls is now a regular source of public debate. Sensitive to this, many websites have responded by providing users with a greater deal of control over their information. Although it is clear that users desire these features, recent work has noted that such mechanisms are not always employed as one would expect (Acquisti and Grossklags 2005; Das and Kramer 2013; Sleeper et al. 2013) and their use is not necessarily of economic benefit to all parties involved (Conitzer et al. 2012). User decisions to conceal or reveal their information have important implications. A wide body of work has also shown that individuals are frequently influenced by the observed actions of others in online settings. Further, user information revelation has direct implications for many business practices, including targeted marketing, consumer personalization and price discrimination. In this work, we therefore examine users' endogenous decisions to conceal information about themselves and their activities, and we explore the economic consequences for others.

Our study is situated in the context of online crowdfunding, now a $2.7B industry (Massolution 2013). Crowdfunding presents a digital manifestation of charitable contribution and entrepreneurial finance, where campaign contributions are typically made a matter of public record, unless the contributor consciously opts to conceal information. Given the potentially sensitive nature of these activities, many platforms go to great lengths to provide users with control over what information is published about their contributions. In our study context, this is achieved by providing contributors with the option of concealing their identity or the amount of their contribution. We therefore aim to identify when contributors are more likely to employ these features, and the subsequent impact on later contributors. Specifically, we address the

following research questions: ***When do crowdfunders conceal information about themselves and their contributions, and what are the economic consequences?***

Our key findings are as follows. First, we find that individuals are more likely to conceal information i) when they are privacy sensitive, ii) when the campaign they are supporting has received greater public exposure and iii) when the amount of their contribution deviates from prior others'. Second, we find evidence that concealing contribution amounts can be beneficial or detrimental for fundraising, depending on the size of the contribution. Examining the marginal effects, we find that amount hiding is beneficial (detrimental) when prior others contribute in relatively small (large) amounts, because bigger anchors drive larger subsequent contributions.

Literature Review

In our study context, contribution amounts and contributor identities are revealed in a public record of contribution, by default. However, if they wish, contributors can opt to conceal either piece of information. We therefore draw on the well-established literature dealing with information revelation (hiding). We provide only a very brief review here due to space limitations, though we also note the availability of a number of recent literature reviews on the subject (Belanger and Crossler 2011; Pavlou 2011; Smith et al. 2011).

While this literature is rather vast, perhaps most relevant is that work which has demonstrated the impact of perceived privacy risks (or a lack thereof) on user behavior. Two field experiments, conducted by Tsai et al. (2011) and Hui et al. (2007), provide examples of this. Each of these studies offers evidence of the impact of privacy assurances, which reduce perceived risks. The former study notes that product purchase is more likely in the presence of assurances, while the latter finds that assurances make subjects more likely to reveal personal

information. Notably, both sets of results are generally in keeping with most earlier work, which has repeatedly noted information hiding (or a lack of revelation) as a primary response to perceived privacy risks (Milne et al. 2004; Son and Kim 2008).

However, it is also interesting to note that a number of other studies, though less numerous, have produced seemingly contradictory results. For example, individuals may respond to inappropriate cues about privacy risks (Acquisti and Gross 2006; John et al. 2011). As well, individuals reportedly fail to make use of available privacy mechanisms in some instances if they perceive that those mechanisms are inflexible or offer insufficient functionality (Das and Kramer 2013; Sleeper et al. 2013). These studies suggest that the relationship between privacy concern and user response is somewhat more nuanced than it would appear on the surface.

A lengthy body of work in marketing and economics has also looked at the role of anonymity in consumption. Ratner and Kahn (2002) find that consumers are more variety seeking when they are scrutinized by others, because they wish to appear more interesting. Ariely and Levav (2000) examined restaurant-goers food ordering behavior, noting increases in order variety with party size (i.e., scrutiny), drawing a similar conclusion. Finally, Goldfarb et al. (2012) show that purchasing behavior can also be influenced by the potential for consumer embarrassment.

In the context of charitable contribution, Alpizar et al. (2008) find that donors are more generous in the direct presence of a contribution 'collector'. Further, Soetevent (2005) reports that church donations increase when individuals' identities and contribution amounts are revealed (i.e., open collection tray versus a bag), jointly attributing the result to social comparison and reputation effects. Interestingly, however, Soetevent also argues that contributions should generally be expected to grow less extreme in the presence of scrutiny,

because excessively large contribution could also draw negative reactions from peers, who might feel compelled to contribute at a similar level.

A final, important aspect of anonymity and concealed contribution noted in the literature is the moderating role such behavior has on social influence and social comparison (precluding it). Soetevent's work touches on this fact, as noted above. However, other, empirical examples of this are documented by Chen et al. (2010), and by Croson and Marks (1998). This is notable, given that prior work on crowdfunding has reported evidence of social influence between contributors in the contribution process (Burtch et al. 2013), which would logically fail to manifest if prior contributions were concealed from view.

Study Context

Our study focuses on one of the leading global platforms for reward-based crowdfunding, which is highly trafficked, facilitating millions of dollars in transactions each month for a wide variety of campaign types, and entertaining almost 1 million registered users since it was founded in 2008. Figures 1a and 1b present screenshots from this marketplace, reflecting a campaign description and an associated list of historical contribution records.

-- INSERT FIGURES 1A & 1B HERE --

The platform allows submission of any and all ventures, regardless of subject matter (with the exception of prohibited content). When campaign owners submit their project to the marketplace for posting, they must define a number of campaign characteristics. These characteristics include the rewards the organizer plans to offer contributors, if any, what the organizer intends to do with the money, how much money they are attempting to raise and the planned funding duration. The platform earns revenues by charging fees to campaigns, which

represent a set proportion of the amount raised. Individual contributors receive their claimed rewards following the completion of the fundraising process and project implementation.

Campaigns are presented to website visitors in order of popularity (measured algorithmically by the purveyor, based on organizer effort, contribution activity, media coverage, etc.), though there are a variety of filtering and sorting mechanisms available to support campaign search efforts. The home page also highlights new campaigns and campaigns that are ending soon. After selecting a reward, a contributor is then presented with the option of hiding their name or the amount contributed. However, a contributor is not able to hide both pieces of information simultaneously. Importantly, a contributor's identity and amount will always be viewable to the campaign organizer; the hidden information is masked only from third parties (e.g., site visitors).

Once an individual has decided to contribute to a particular campaign, they must then indicate the amount. A contributor will typically have the option of claiming a reward as compensation for their contribution, though this option is not always offered. Campaigns typically offer different tiers (levels) of rewards, of different monetary values. In order to claim a particular reward, a crowdfunder must contribute at least as much, or more, than the value of said reward. Following reward selection, contributors must provide an e-mail address and (if a reward is to be claimed) a shipping address. Notably, even if a reward is not claimed, the purveyor still logs the visitors' location (zip code) based upon the client IP address.

At this point, the contributor is presented with a question about how they want their contribution record to appear on the website. The contributor is given the option to conceal their

identity or the amount of the contribution[2]. Figure 2 provides a screenshot depicting this question. Lastly, the contributor is then given an option to leave a comment on their contribution record, and to share their contribution via social media (e.g., Twitter, Facebook), before being taken to the payment-processing page where they complete the transaction (e.g., PayPal).

-- INSERT FIGURE 2 HERE --

Methods

In our first model, our outcome of interest is a three-value categorical variable capturing increasing degrees of information hiding: 0 – no hiding, 1 – amount hiding and 2 – identity hiding. These three possibilities are mutually exclusive – that is, it is not possible for contributors to hide both their identity and contribution amount simultaneously.[3] As noted above, we anticipate individuals will opt to conceal actions that constitute more extreme behavior. We therefore include the size of the *Contribution* in question. Subsequently, we also explore alternative operationalizations for extreme contribution, in our robustness checks, operationalized based on the deviation from prior others' contributions.

In order to address the impact of contributors' privacy sensitivity, we include an indicator of their prior willingness to share information. In particular, we use an indicator of whether the user has connected their Facebook profile to their marketplace user account (*Facebook Connected*). This variable acts as a proxy for privacy sensitivity, as individuals who are willing

[2] We should note that information-hiding mechanisms of this sort are relatively common in online crowdfunding. Some other prominent platforms that employ information-hiding features of this ilk include GoFundMe.com, GiveForward.com, and CrowdRise.com.

[3] While it is possible for a contributor to indicate that they are contributing on behalf of someone else, and for them to then provide an alias, effectively making their donation completely anonymous, we exclude such contributions from our sample in order to avoid such issues. Fortunately, "gift-giving" of this sort represents a fairly small fraction of contributions on the platform (~7.5%).

to connect their Facebook profile in this manner are likely less concerned with privacy issues. Because we are working with archival, observational data, we cannot obtain survey responses from contributors. We therefore rely on prior sharing behavior as an objective indicator of privacy concerns. We also control for the degree of exposure a campaign has received (*Exposure*), which is operationalized as the number of prior contributors the campaign has received. Given our expectation that exposure will positively moderate the effect of privacy sensitivity, we interact this exposure variable with the *Facebook Connected* dummy. Lastly, we operationalize self-contribution using a binary indicator, *Is Organizer*.

Beyond the above, we incorporate a series of controls, including fixed effects at the campaign level, δ, to control for unobserved heterogeneity between campaigns, as well as time fixed effects, ϕ, to control for unobservable shocks across time periods (e.g., privacy breaches covered in the mainstream media). Our model of the antecedents of information hiding is presented below in Equation 1, in simple linear form, for the sake of exposition.

$$\begin{aligned} InfoHide_{ijt} = {} & \beta_0 + \beta_1 * Log(Contribution_{ijt}) + \beta_2 * FacebookConnected_i + \\ & \beta_3 * Log(Exposure_{jt}) + \beta_4 * FacebookConnected_i * Log(Exposure_{jt}) + \\ & \beta_5 * IsOrganizer_{ij} + \delta_j + \phi_t + \varepsilon_{ijt} \end{aligned} \quad (1)$$

Next, we consider the consequences of information hiding in terms of its impact on later others' contribution amounts (*Contribution*). Referring back to our literature review, we begin by addressing the issue of social comparison. As noted above, a number of studies have reported evidence that individuals respond to observation of others contributions by increasing their generosity or regressing toward the mean. Such behavior might also be explained by an anchoring effect (Tversky and Kahneman 1974), where contributors might refer to others' recent contributions as a benchmark. To operationalize this anchoring effect, we introduce a variable

entitled *Last Contribution*, which captures the size of the most recent contribution to the campaign by another user. Further, to capture the moderating effect of information hiding by that last contributor, we introduce two dummies, *Last Name Hide* and *Last Amount Hide*, which we interact with the *Last Contribution* term.

Beyond these key variables, we again introduce a series of controls, including an estimate of the contributor's income, based upon their zip code – *Income*, which importantly addresses significant contributor heterogeneity. This value is drawn from zip code level data about average taxable income for the year 2008, published by the IRS. It should be noted that one consequence of including this variable in our estimation is that we limit our consequences analysis to only American contributors. Fortunately, however, American contributors comprise the bulk of our data set. We also control for the possible influence of altruism and warm glow, which has seen extensive consideration in the literature on charity (Andreoni 1989; Andreoni 1990). Recently, these factors have also been shown to impact crowdfunding contributions (Burtch et al. 2013). As per Burtch et al., we operationalize altruism's effects by incorporating a measure of the campaign's outstanding budget as of the time of contribution: *Remaining Budget*.

We control for information hiding behavior in this model, bearing in mind that relative scrutiny can result in behavioral differences, as outlined in our literature review. Further, we again incorporate fixed effects for the campaign and time period, to address unobservable heterogeneity and temporal trends, such as seasonal effects. Lastly, we also include a campaign-specific time trend variable, *Days Posted*, in order to capture effects such as diminishing contributions due to lost interest, or increasing contributions due to nearing fundraiser deadlines. Equation 2 reflects our main consequences model, again indexed by contributor, campaign and time, or *i, j* and *t,* respectively.

$$
\begin{aligned}
Log(Contribution_{ijt}) = {} & \beta_0 + \beta_1 * Log(LastContribution_{ijt}) + \beta_2 * LastAmountHide_{ijt} + \\
& \beta_3 * LastNameHide_{ijt} + \beta_4 * Log(LastContribution_{ijt}) * LastAmountHide_{ijt} + \\
& \beta_5 * Log(LastContribution_{ijt}) * LastNameHide_{ijt} + \beta_6 * Log(Income_i) + \\
& \beta_7 * InfoHide_{ijt} + \beta_8 * Log(RemainingBudget_{jt}) + \beta_9 * Log(DaysPosted_{jt}) + \delta_i + \phi_t + \varepsilon_{ijt}
\end{aligned} \tag{2}
$$

Our initial estimations employ a two-stage least squares (2SLS) estimator with panel fixed effects and robust standard errors. This choice of estimator is driven by the apparent endogeneity (simultaneity) in our models, because information hiding and contribution amounts are codetermined. We instrument for information hiding using our indicators of privacy sensitivity (i.e., Facebook connectivity, and demographic sharing), and we instrument for contribution amounts using our income estimate and the campaign funding status (budget remaining/funding time). We estimate each question separately, using 2SLS, rather than as a system using 3SLS, for two reasons. First, there are a number of readily available packaged estimators for 2SLS capable of handling different violations of the IID assumption, fixed effects and a panel data structure. Second, Wooldridge (2002, pg 199) notes that 3SLS is inconsistent if even one equation in the system is misspecified in the system. Thus, we face a simple tradeoff between robustness and efficiency. Efficiency is not particularly concerning in our case, given our large sample size.

Data & Descriptive Statistics

We are fortunate to have access to all recorded data that is associated with this marketplace, over an 8-month period. Our dataset includes information associated with site-wide activity, campaign-level activity, users and user behaviors, even when those behaviors are not publicly observable. Table 1 provides a list of variable definitions, and Table 2 provides descriptive statistics for each. In terms of information hiding behavior, we find that it is quite prevalent. In

particular, individuals withhold their name and contribution amount in 19% and 27% of contribution instances, respectively. In terms of which individuals tend to hide their information at the time of contribution, we see a number of interesting correlations. We observe a negative correlation between information hiding and Facebook connectedness (rho = -0.07), as well as a positive correlation between information hiding and i) the same by prior others (rho = 0.12), and ii) the number of prior contributors (rho = 0.15).

-- INSERT TABLES 1 & 2 HERE –

Results

The results of our Antecedent estimation are presented in Table 3. We estimate hierarchical regressions, beginning with column one, which contains only main effects, and escalating to column 2, which incorporates the interaction term between Exposure and Facebook connectivity. Focusing on column 2, we see a number of expected significant effects. First, we see that individuals who are less privacy sensitive (i.e., have opted to connect their Facebook profile to their marketplace user account) are significantly less likely to hide information at the time of contribution, and that this effect is even more pronounced in campaigns that have received greater exposure (many prior contributors). These findings support hypotheses H1 and H2.

We also see that individuals are significantly more likely to hide their information as they contribute in more extreme (larger) amounts, as well as when they are contributing to their own campaign. Further, when we replace *Contribution* with the absolute deviation from prior contribution and apply a standard OLS fixed effects estimator (since simultaneity is much less concerning with this variable), we see that "extreme" contributions are positively associated with hiding. Together, these results support hypotheses H3 and H4.

-- INSERT TABLE 3 HERE --

The results of our Consequences estimation are presented in Table 4. Focusing first on our key variables, prior contribution and prior others' information hiding, we find a significant positive coefficient associated with the prior contribution (i.e., an anchor or social comparison). However, looking at the interaction with amount hiding, we also find that this effect is eliminated when the prior amount is concealed. Instead, we observe a fixed positive effect in this scenario, representing an approximate 5% increase relative to the average contribution. Importantly, this interaction suggests that the positive effect from prior contribution is not due to homophily (Manski 1993), because the observability of prior contribution should have no moderating effect in such a scenario.

We also see that the effect of prior contributions is stronger when prior others' have concealed their identity. We surmise that this effect results from contributors erring on the side of caution, perhaps presuming that anonymous others are in fact acquaintances worthy of social comparison.

-- INSERT TABLE 4 HERE --

We also examined the marginal effects and found that amount hiding is beneficial for fundraisers when a small amount is concealed, as this effectively removed a small anchor point. Conversely, it is detrimental when the anchor concealed is large. This implies that fundraisers would benefit from a nuanced approach to mechanism provision. For example, if small contribution amounts were concealed by default, and larger contributions were revealed, we anticipate that overall contribution volumes would increase in the market. Similarly, if contributors were presented with an indication of the most sizeable prior donation, this might help stimulate larger contributions, by providing a larger point of reference for downstream

contributors and boosting reputational gains. A plot of the calculated marginal effects is presented in Figure 3, below. Notably, these marginal effects are articulated on a non-linear scale, given that log-log model specification. As such, the effects of information hiding at the top of the distribution for prior contributions (i.e., large dollar amounts) are much larger in real dollar terms than those at the bottom of the distribution.

-- INSERT FIGURE 3 HERE --

Robustness Checks

Following our main estimations, we conducted a number of robustness checks. After ruling out multicollinearity and outliers, we considered the possibility that differences in behavior might manifest between individuals who claim reward in exchange for their contributions, and those who do not. For example, one concern might be that the amount contributed by a user could be driven by the cost of a reward they wish to claim. We re-estimated both of our models using only those observations where the contributor did not collect a reward. These results, which are quite consistent with those reported above.

We then looked at other estimators, accounting for *Info Hide*'s categorical nature. We employed a Fixed Effects Ordinal Logit estimator (Baetschmann et al. 2011; Dickerson et al. 2012), based on a random subsample of 10,000 observations (to alleviate computational burden), along with a first stage prediction of our endogenous contribution amount, as well as a Multinomial Logit estimator with random intercepts (Hole 2007). The results of each model generally paralleled our main results, with a couple of exceptions. Specifically, our Multinomial Logit estimation indicates that exposure and self-contribution have opposite influences on amount and identity hiding—exposure is negatively associated with identity hiding and

positively associated with amount hiding, while self-contribution was positively associated with identity hiding and negatively associated with amount hiding. We surmise that this result reflects differences in the characteristics of each information-hiding response. For instance, while amount hiding does nothing to hide the fact that a particular individual contributed. As such, this is likely less desirable for self-contributors, but may be more desirable for some contributors, namely those who wish to conceal an extreme contribution, without entirely eliminating reputational gains associated with supporting the cause (which, notably, would increase with campaign exposure).

Lastly, we considered alternative measures of privacy sensitivity and exposure. In particular, we reoperationalized privacy sensitivity using an indicator of whether subjects reveal their year of birth in their account profile, and we reoperationalized *Exposure* based on whether the campaign in question was "featured" by the purveyor. We find that our results are consistent. We report on the application of these alternative estimators and measures below (Tables 5, 6, 7).

-- INSERT TABLES 5, 6 & 7 HERE --

Discussion & Conclusion

Our finding that users are more likely to hide their information when they behave in the extreme is in keeping with prior work on the online disinhibition effect (Suler 2004). However, in reality, our study addresses a converse relationship. Whereas online disinhibition speaks to changes in user behavior subject to relative anonymity online, here, we have documented changes in individuals' information hiding behavior subject to perceived deviation from established norms, following social comparison. Our consequences results highlight the impacts of information hiding for social comparison and influence. They indicate that information revelation will be

more desirable from a campaigner's perspective only when those contributions are relatively small. Again, this suggests that a more nuanced approach to the provision and application of information hiding mechanisms is called for.

One particular concern with instituting policy changes based on these findings, however, is that the identified effects are conditional on contribution (i.e., participation). That is, these analyses do not speak to the possibility that mere participation would decline were policy or design changes imposed in the marketplace. Notably, prior work examining the role of anonymity mechanisms in online communities has found that posting frequency declined by as much as 25% after the removal of such features (Kilner and Hoadley 2005; Leshed 2008). Thus, any actions in response to these results must be taken with care.

Although we have identified one economic impact of information hiding, it would seem prudent for future work to assess broader implications, in terms of contributor, campaign and marketplace welfare. For example, the purveyor likely benefits from allowing campaign organizers to contribute anonymously to their own campaigns, but this feature may actually be suboptimal for contributor welfare in terms of the false quality and popularity signals such contributions send to other individuals in the marketplace.

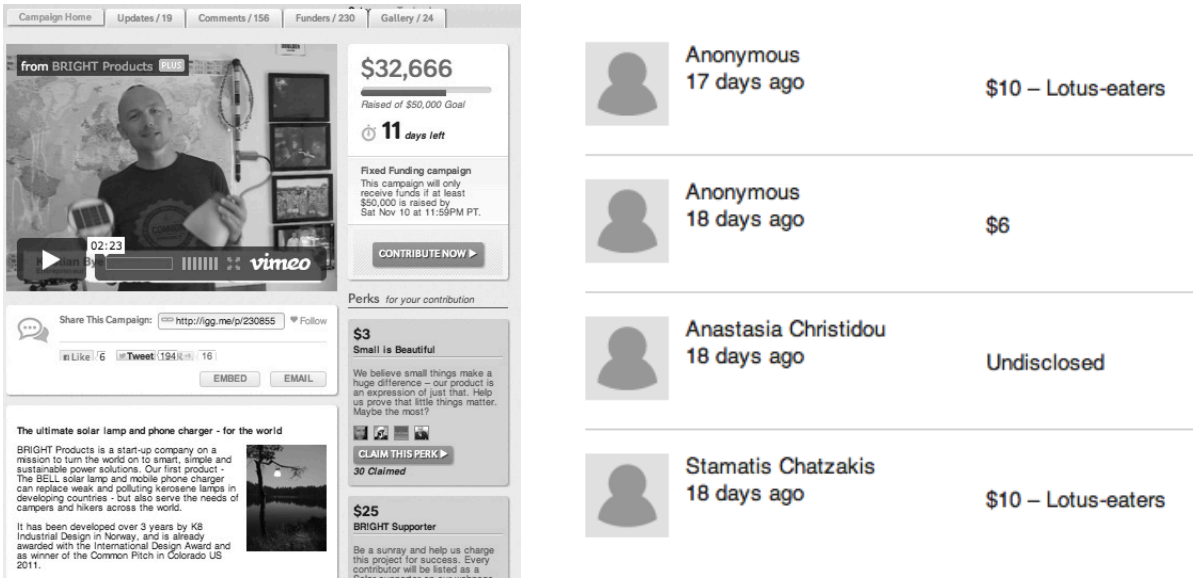
Our findings around the interplay between information hiding and social comparison (or anchoring) also have potential implications for other forms of online transactions. In general, our results would suggest that the implementation and provision of information hiding mechanisms should be undertaken with a parallel consideration for desirable or undesirable social influence. Given the right design, appropriate design might nudge users to behave differently.

Our work presents, what is to our knowledge, a first attempt to evaluate individuals' use of information hiding mechanisms at the transaction level, to conceal discrete behaviors, in a

real-world setting. Whereas past work has explored individuals' behavior in response to exogenously imposed anonymity, here, we consider a user's endogenous decision to conceal information associated with themselves and a specific action they have undertaken. Further, whereas a small volume of prior work has explored endogenous information revelation practices, those scenarios have typically been "all-or-nothing" in nature. That is, those past studies have typically pertained to scenarios in which users were capable only of blanket decisions with respect to hiding or revealing information (i.e., revealing information to all or none of the external population of observers). In this study, we have explored the determinants of individuals' information hiding (revealing) behavior based across discrete activities (i.e., contribution events). As well, there is likely to be significant differences in behavior between scenarios pertaining to information revelation versus information hiding (i.e., a different default state).

Our work has also been undertaken in a relatively novel context—the burgeoning industry of online crowdfunding. With the emergence of crowdfunding as a viable business model, marketplaces of this sort are now providing users with the opportunity to express themselves in new ways, and to examine others' behavior in new ways. Given crowdfunding's significant economic potential and recent growth as an industry, any increases in welfare or marketplace efficiency that can be achieved through modifications to the design of these platforms or their policies should be pursued wholeheartedly. Our work presents a solid first step in that direction. It is our hope that this work will provide insights to scholars and practitioners, informing design, as well as policy and regulation going forward.

Figures



Figures 1a, 2b. Campaign Description (Left) and Funder Record (Right)

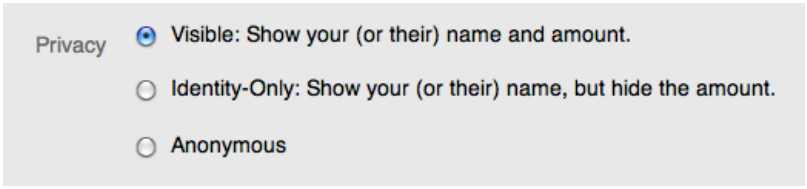


Figure 2. Information Hiding Option

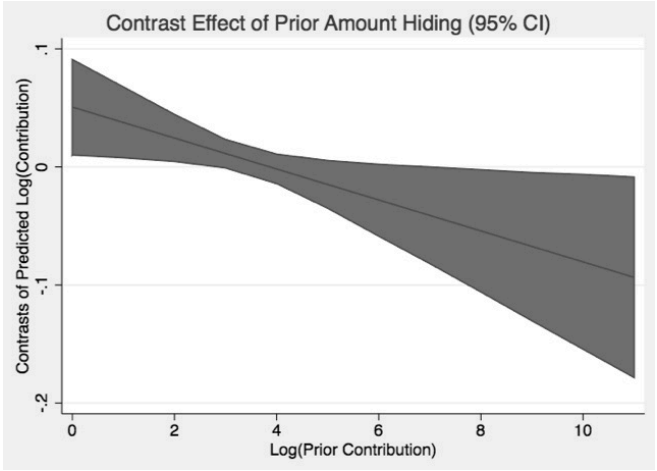


Figure 3. Marginal Effects of Prior Amount Hiding

Tables

Table 1. Variable Definitions

Variable	Definition
Info Hide[O]	A three value ordinal variable capturing the degree of information hiding exhibited by a contributor in a particular contribution instance.
Contribution[O]	The dollar amount supplied by this contributor.
Deviation	The difference between a contribution and the contribution immediately prior, in dollars: contribution(t) – contribution(t-1)
Facebook Connected	A binary indicator of whether the contributor has connected their Facebook profile to their marketplace user account.
Exposure	The count of prior contributors to the campaign in question, as of time *t*.
Last Name Hide	A binary indicator of whether the last contributor hid their identity (i.e., contributor i-1).
Last Amount Hide	A binary indicator of whether the last contributor hid the amount of their contribution (i.e., contributor i-1).
Is Organizer	A binary indicator of whether the contributor is a campaign organizer.
Last Contribution	The dollar amount supplied by the last contributor (i.e., contributor i-1).
Income	The average reported taxable income in the contributor's zip code, in 2008.
Days Posted	The number of days the campaign has been in the funding process.
Remaining Budget	The dollar amount outstanding toward the campaign's fundraising target, as of time *t.*

Notes: O – outcome variable.

Table 2. Descriptive Statistics

Variable	Min	Max	Mean	Median	STDev.
Info Hide	0.00	2.00	0.66	0.00	0.78
Contribution	1.00	60,000.00	64.51	25.00	208.59
Deviation	-59,900.00	59,800.00	0.74	0.00	282.85
Facebook Connected	0.00	1.00	0.15	0.00	0.36
Exposure	0.00	32,323.00	1,875.06	31.00	5,597.76
Last Name Hide	0.00	1.00	0.19	0.00	0.39
Last Amount Hide	0.00	1.00	0.27	0.00	0.44
Is Organizer	0.00	1.00	0.01	0.00	0.12
Last Contribution	0.00	12,084.00	61.15	40.00	105.88
Income[X]	1,575.20	5,176,136.00	58,623.82	43,536.96	53,926.12
Days Posted	0.00	120.00	17.65	10.00	19.52
Remaining Budget	-698,903.00	5,000,000.00	-23,550.00	2,700.00	140,700.70

Notes: x – N = 179,746, all others – N = 352,575

Table 3. Antecedents Regression Results

DV = Info Hide	**2SLS-FE**	**2SLS-FE**	**OLS-FE**
Log(Contribution)	**0.20*** (0.02)**	**0.20*** (0.02)**	--
Log(Absolute Deviation)	--	--	**0.01*** (0.00)**
Facebook Connected	**-0.17*** (0.01)**	**-0.04*** (0.01)**	**-0.08*** (0.01)**
Log(Exposure)	0.01 (0.00)	-0.00 (0.00)	**0.01** (0.00)**
Facebook Connected X Log(Exposure)	--	**-0.03*** (0.00)**	**-0.03*** (0.00)**
Is Organizer	**0.54*** (0.02)**	**0.51*** (0.02)**	**0.50*** (0.02)**
Time Effects	Yes	Yes	Yes
Campaign Effects	Yes	Yes	Yes
Observations	177,574	177,574	339,186
R^2	0.16	0.16	0.13
F-stat	**64.10 (35,169236)**	**65.06 (36, 169325)**	**108.79 (36, 11180)**
Hansen J	**42.17 (2)**	**39.51 (2)**	--

Notes: Robust standard errors in brackets for coefficients, degrees of freedom for test statistics; All Stock-Yogo cutoffs of instrument strength are met. *** $p < 0.001$; ** $p < 0.01$.

Table 4. Consequences Regression Results

DV = Log(Contribution)	**2SLS-FE**	**2SLS-FE**
Log(Last Contribution)	**0.01** (0.00)**	**0.01* (0.00)**
Last Name Hide	0.01 (0.01)	-0.05 (0.02)
Last Amount Hide	0.01 (0.01)	**0.05* (0.02)**
Log(Last Contribution) X Last Name Hide	--	**0.02* (0.01)**
Log(Last Contribution) X Last Amount Hide	--	**-0.01* (0.00)**
Log(Remaining Budget)	**0.01*** (0.00)**	**0.01*** (0.00)**
Log(Days Posted)	**0.01** (0.00)**	**0.01* (0.00)**
Log(Income)	**0.14*** (0.00)**	**0.14*** (0.00)**
Info Hide	**0.57*** (0.04)**	**0.57*** (0.04)**
Time Effects	Yes	Yes
Campaign Effects	Yes	Yes
Observations	170,950	170,950
R^2	0.29	0.29
F-stat	**46.02 (38, 163319)**	**43.96 (40, 163317)**
Hansen J	**150.90 (2)**	**151.11 (2)**

Notes: Robust standard errors in brackets for coefficients, degrees of freedom for test statistics; All Stock-Yogo cutoffs of instrument strength are met.

*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$.

Table 5. Antecedents Robustness (OLOGIT-FE)

DV = Info Hide	**IV-OLOGIT-FE**	**IV-OLOGIT-FE**
Log(Contribution)	**0.87** (0.33)**	**0.87** (0.33)**
Facebook Connected	**-0.93*** (0.11)**	**-0.65* (0.28)**
Log(Exposure)	0.01*** (0.05)	0.02 (0.05)
Facebook Connected X Log(Exposure)	**--**	**-0.04[x] (0.03)**
Is Organizer	**1.38*** (0.42)**	**1.32** (0.41)**
Time Effects	Yes	Yes
Campaign Effects	Yes	Yes
Observations	4,325	4,325
-2LL	2,018.13	-2,017.53
Wald Chi^2	**146.59 (34)**	**443.61 (35)**

Notes: Robust standard errors in brackets for coefficients, degrees of freedom for test statistics.

*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, x – p = 0.17

Table 6. Antecedents Robustness (Random Intercept MLOGIT)

IV-MLOGIT	**DV =** Amount Hide	**DV =** Name Hide
Log(Contribution)	**0.13* (0.05)**	0.04 (0.07)
Facebook Connected	**-0.34*** (0.04)**	**-0.46*** (0.06)**
Log(Exposure)	**0.013* (0.006)**	**-0.05** (0.01)**
Facebook Connected X Log(Exposure)	0.02 (0.01)	**-0.16*** (0.02)**
Is Organizer	**-0.37*** (0.07)**	**1.98*** (0.06)**
Time Effects	No	No
Campaign Effects	No	No
Observations	179,742	
-2LL	-139,336.94	
Wald Chi^2	**13,970.68 (12)**	

Notes: Standard errors in brackets for coefficients, degrees of freedom for test statistics; Baseline: fully revealed contribution; Model incorporates alternative specific random intercepts.

*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$.

Table 7. Antecedents Robustness (Privacy Concerns/Exposure)

DV = Info Hide	**2SLS-FE**	**2SLS-FE**
Log(Contribution)	**0.21*** (0.02)**	**0.22*** (0.02)**
Revealed YoB	**-0.09*** (0.01)**	**-0.02+ (0.01)**
Revealed YoB X Featured Campaign	--	**-0.22*** (0.02)**
Is Organizer	**0.54*** (0.02)**	**0.51*** (0.02)**
Time Dummies	Yes	Yes
Campaign Effects	Yes	Yes
Observations	177,574	177,574
R^2	0.15	0.15
F-stat	**26.17 (35, 169237)**	**27.99 (36, 169235)**
Hansen J	**47.29 (2)**	**41.88 (2)**

Notes: Robust standard errors in brackets for coefficients, degrees of freedom for test statistics; All Stock-Yogo cutoffs of instrument strength are met.

*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, + $p < 0.10$.

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