## Web Appendix

Self-Donations and Charitable Contributions in Online Crowdfunding: An Empirical Analysis Zhuping Liu, Qiang Gao, Raghunath Singh Rao<sup>1</sup>

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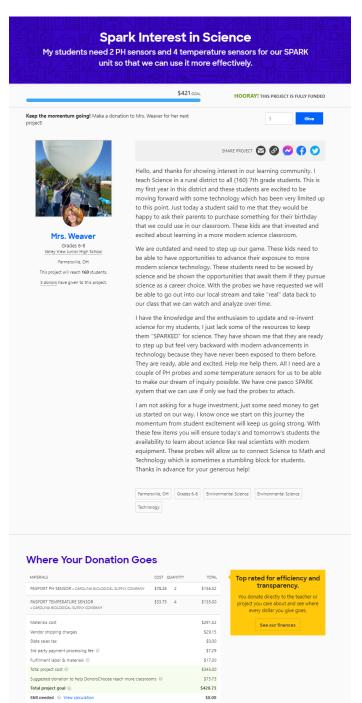
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*Disclosure*: These materials have been supplied by the authors to aid in the understanding of their paper. The AMA is sharing these materials at the request of the authors.

#### Web Appendix A: An Example of DonorsChoose Projects



Our team works hard to negotiate the best pricing and selections available.

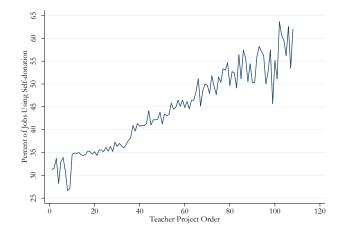
## Web Appendix B: Project, Donations, Self-donation, and Donors' Arrival Characteristics

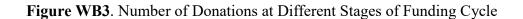
### **B-1:** Projects, Donations, and Self-donation Characteristics

Figure WB1. Percentage of Projects with Self-Donations Over Time



Figure WB2. Percent of Projects Having Self-donation by Teacher Project Order





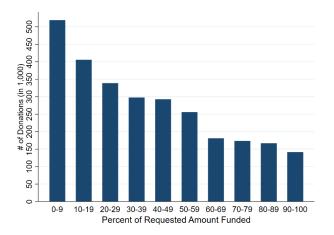


Figure WB4. Number of Self-Donations at Different Stages of Funding Cycle

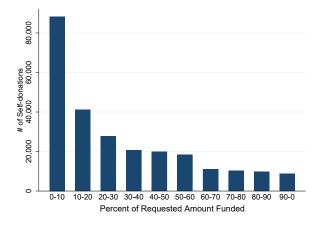
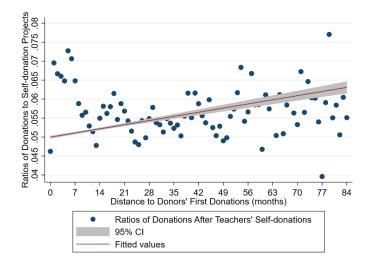


Figure WB5. Ratios of Donors' Donations to Projects with Self-donations Over Time



Item	Proj	Projects Having Self-donation		
		Yes	No	
Projects Funded	Yes	182,626	221,194	
	No	22,406	39,304	
Receiving Impact Letters	Yes	111,800	76,205	
	No	70,826	144,989	
Regions (Highest Poverty)	Yes	114,438	161,049	
	No	90,594	99,449	
Corporate Matching	Yes	67,340	74,633	
	No	137,692	185,865	
Resource (academic materials such as books, supplies, and	Yes	179,677	229,074	
technologies)	No	25,355	31,424	

# Table WB1. Characteristics of Projects with Self-donations

#### **B-2:** Donors' Arrival Characteristics

We use donor random arrivals at the studied platform as our identifying assumption of selfdonation effects. Under this assumption, we approach this as a quasi-experiment, dividing previous donations into two groups: the treatment group comprising self-donations and the control group comprising non-self-donations. Upon a donor's arrival, they are randomly assigned to one of these groups, which alleviates endogeneity concerns related to self-donations. We employed two methods to assess the randomness of donor arrivals to our platform. To support this assumption, we used two approaches to assess the randomness of donor arrivals to our studied platform.

In the first approach, we used daily Google Trend (GT) data and SimilarWeb daily traffic data. GT does not provide actual website visit numbers but instead offers a daily search volume index that tracks consumer interest. Previous studies have shown that these search volume indices from GT are leading indicators of consumer demand in many industries (Du and Hsieh 2023). For example, Hu et al. (2014) demonstrate how search trends can be used to understand advertising's overall impact on sales. Du et al. (2015) found that trends identified using GT data could explain a large portion of dynamics in vehicle sales, beyond what can be accounted for by lagged sales, marketing efforts, and brand search trends. These indicate a strong relationship between search volume and website traffic.

We first verify the relationship between GT search interests and actual web visits. We obtain daily visit data to DonorsChoose.org for 15 months (October 1<sup>st</sup>, 2022 to Dec 31<sup>st</sup>, 2023) from SimilarWeb, a company specializing in tracking web traffic<sup>2</sup>, and daily GT search volume index for our studied platform in the same period. we test the correlation between the daily GT search volume index and SimilarWeb daily traffic value during the 15-month period. The results show a strong correlation between the two pieces of data (r=0.81, p<0.001), which confirms that the GT search volume index is indeed a good proxy of daily traffic to the website DonorsChoose.org.

We next collected similar GT search volume index data between January 2012 and October 2016 (Google Trend data were very sparse and irregular before 2012, likely due to the beginning period of this service) after confirming that Google search interests can be a proxy for

<sup>&</sup>lt;sup>2</sup> Note that SimilarWeb does not have daily visit data for our study period.

web visits. Using this data, we extracted daily search volume indices 30 days before and after each self-donation using date information in our data and plotted the average GT index data in Figure WB6. Figure WB6 allows us to eyeball the difference in search interest (and thus the visits) to DonorsChoose.org before and after a self-donation. We do not find any significant differences in the visits before and after a self-donation from the figure. Therefore, we can tentatively conclude that potential donors arrive at the website randomly.

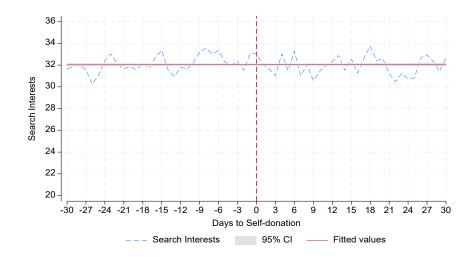


Figure WB6. Google Search Interests Before and After Self-donations

In the second approach, we used data from Semrush.com, a leading vendor providing a competitive research service on online marketing and advertising (Pagiavlas et al. 2022). This platform provides monthly traffic data that partially overlaps with our observation period (between January 2012 and October 2016). We used data from the same period as the previous test and conduct t-tests to find whether there is a significant difference in traffic to DonorsChoose.org before, during, and after each self-donation. Specifically, we perform two t-tests between two groups sequentially (i.e., one month before vs. during self-donation and one month during vs. after self-donation). The results from these two t-tests are reported in Table WB2 below, which shows no significant differences in traffic to the website in the months around each self-donation.

Data Periods	Samples (# of self- donations)	Means (log(worldwide visits))	Difference	T-stat
One Month Before vs.	During Self-Donation			
One month before self-donation	104,299	10.845	002 (0.218)	- 1.232
Self-donation month	104,299	10.847		
One Month During vs	. One Month After Self-L	Donation		-
Self-donation month	104,299	10.847	003 (0.198)	- 1.289
One month after self- donation	104,299	10.850		

Table WB2. Results of T-test for Traffics Before, During, and After Each Self-donation

## <u>Web Appendix C: Addressing Selection and Endogenous Concerns (Matching, Instrument,</u> <u>and Anonymity of Self-donations)</u>

#### **C-1:** Matching to Address Selection Concern

One concern with the analysis presented within the paper is that teacher and other differences could potentially drive self-donation- or project-related factors, which will lead to selection-related endogeneity confounds in the empirical analysis. To address these potential selection biases, we implemented the propensity score matching (PSM) approach (De Haan et al. 2018) by matching donations on all variables listed in project, teacher, and school level information (*Panel D* in Table 1) and project text information (*Panel E* in Table 1). Specifically, we first estimate a logistic regression and regress whether a project received a self-donation on these matching variables, which provides us with the obtained propensity scores. Next, we implemented a one-to-one nearest neighbor matching algorithm to match projects on this propensity score without replacement (Li and Xie 2020). The matched samples include 74,501 pairs of projects. Table WC1 provides matched variables balance sheet. Projects with and without self-donations in a pair have similar project characteristics and come from teachers with similar backgrounds in project experience and gender.

We then used the matched samples to examine the effect of self-donation on the time interval to the following donation (*hours till the next donation*). We included the same independent variables as in Table 2 column M1 and estimated an OLS model with the project, donation year and month, and matched pair fixed-effects. The coefficient of *Self-donation* in M2 in Table 2 is negative and statistically significant, consistent with our main finding.

To ensure that the matching procedure does not influence our results, we created a different matched sample using a one-on-one *Coarsened Exact Matching* (CEM) (Blackwell et al. 2009; Iacus, King, and Porro 2012) employing nearest-neighbor algorithms. In our CEM matching, we perform an exact match on the coarsened data by matching donations on all variables listed in project, teacher, and school-level information, and project text information. The ensuing matched sample includes 67,003 projects with self-donations and 71,374 projects without self-donations. We observe a significant improvement in sample balance using this CEM procedure. The multivariate L1 statistic drops from 0.722 before matching to 0 after matching in Table WC2. We repeated our analysis on these newly matched samples and found our results in Table WC3 robust to this approach.

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Variable	Variable Mean				est	V(T) /V(c)
	Treated	Control	%bias	t	p>t	
Teacher Gender(female)	0.8773	0.88067	-1	-2.1	0.036	
# of Completed Projects So Far	1.5338	1.1765	4.3	19.77	0	1.08*
Poverty(highest)	0.59099	0.57742	2.8	5.6	0	
Poverty(high)	0.25129	0.25781	-1.5	-3.04	0.002	
Poverty(moderate)	0.13114	0.13783	-1.9	-3.99	0	•
Subject(Applied Sciences)	0.05448	0.05467	-0.1	-0.18	0.861	
Subject(Character Education)	0.01252	0.01362	-1	-1.98	0.047	•
Subject(Civics & Government)	0.00307	0.00288	0.3	0.69	0.49	
Subject(College & Career Prep)	0.00852	0.00869	-0.2	-0.38	0.704	
Subject(Community Service)	0.00149	0.00155	-0.2	-0.36	0.716	
Subject(ESL)	0.01239	0.01301	-0.6	-1.14	0.256	
Subject(Early Development)	0.02065	0.0216	-0.7	-1.33	0.182	
Subject(Economics)	0.0031	0.00279	0.5	1.16	0.245	
Subject(Environmental Science)	0.04268	0.04189	0.4	0.8	0.423	
Subject(Extracurricular)	0.00372	0.00369	0	0.1	0.921	
Subject(Financial Literacy)	0.0036	0.00331	0.5	1.02	0.308	
Subject(Foreign Languages)	0.00501	0.0053	-0.4	-0.82	0.411	
Subject(Gym & Fitness)	0.00975	0.00932	0.4	0.91	0.361	
Subject(Health & Life Science)	0.03066	0.02921	0.8	1.72	0.085	
Subject(Health & Wellness)	0.02393	0.02396	0	-0.04	0.966	
Subject(History & Geography)	0.0197	0.01944	0.2	0.38	0.703	
Subject(Literacy)	0.2897	0.2902	-0.1	-0.22	0.825	
Subject(Literature & Writing)	0.11703	0.11671	0.1	0.2	0.841	
Subject(Mathematics)	0.13886	0.14385	-1.4	-2.91	0.004	
Subject(Music)	0.0336	0.03295	0.4	0.74	0.462	
Subject(Nutrition)	0.00211	0.00166	0.9	2.08	0.037	
Subject(Parent Involvement)	0.01338	0.01306	0.3	0.56	0.575	
Subject(Performing Arts)	0.00102	0.0009	0.3	0.73	0.463	
Subject(Social Sciences)	0.01473	0.0148	-0.1	-0.12	0.904	
Subject(Special Needs)	0.01056	0.00956	1	2.04	0.041	
Subject(Team Sports)	0.06654	0.06576	0.3	0.64	0.525	
Subject(Visual Arts)	0.04884	0.04725	0.7	1.52	0.129	
Reached Students	3.8302	3.8279	0.2	0.46	0.647	1.03*
Corporate Matching	0.26663	0.26367	0.7	1.36	0.174	
Home Double	0.05458	0.05655	-0.9	-1.75	0.08	•
Resources(Books)	0.19199	0.18553	1.6	3.35	0.001	•
Resources(Others)	0.11203	0.11391	-0.6	-1.21	0.227	•

## Table WC1. Balance Sheet after PSM (Outcome variable: Hours to Next Donation)

Resources(Supplies)	0.38391	0.37874	1.1	2.16	0.031	
Resources(Technology)	0.29785	0.30806	-2.2	-4.52	0	•
Resources(Trips)	0.01186	0.01177	0.1	0.16	0.871	•
Resources(Visitors)	0.00234	0.00195	0.8	1.68	0.093	•
Requested Amount (log)	6.0037	6.0198	-2.5	-5.15	0	1
Project Description Length	5.7236	5.7305	-2.4	-4.92	0	0.97*
Average Characters per Word	1.873	1.8735	-0.9	-1.87	0.061	1
Text Familiarity	0.04796	0.04229	0.6	1.17	0.244	1.01*
Text Concreteness	0.04413	0.02931	1.5	3.06	0.002	1.01
Text Flesch-Kincaid Readability	-0.10722	-0.08263	-2.4	-5.04	0	0.98*
Text Valence	-0.04579	-0.02512	-2	-4.15	0	1.02*
Text Extremity	-0.01789	-0.00757	-1	-2.11	0.035	1
Text Emotionality	-0.02347	-0.01223	-1.1	-2.3	0.021	0.99
Equity Focus	0.13022	0.12785	0.7	1.44	0.15	•
Project Description(social)	3.3338	3.3402	-1.6	-3.26	0.001	0.99
Project Description(achieve and reward)	2.4812	2.4969	-2.6	-5.4	0	1.04*
Project Description(punctuation)	2.0461	2.0597	-2.6	-5.38	0	1
Project Description(informal)	0.30999	0.31667	-1.5	-3.03	0.002	0.99
Project Description(risk)	0.28754	0.28707	0.1	0.22	0.826	1
Project Description(spelling)	0.53115	0.53546	-0.9	-1.91	0.056	0.98*
#PlatformProjects	7.3442	7.4096	-6.4	-16.62	0	0.70*
<pre>#PlatformProjects(same zip code)</pre>	0.96266	0.96425	-0.2	-0.35	0.726	0.87*
Grades PreK-2	0.40659	0.40733	-0.2	-0.3	0.762	•
Grades 3-5	0.15673	0.15648	0.1	0.14	0.887	•
Grades 6-8	0.12138	0.12046	0.3	0.57	0.568	
Grades 9-12	0.40365	0.40287	0.2	0.32	0.746	
School Type(charter)	0.0937	0.09357	0	0.09	0.931	
School Type(kipp)	2.2e-05	6.6e-05	-0.7	-1.4	0.162	
School Type(magnet)	0.08716	0.08491	0.8	1.63	0.104	
School Type(public)	0.81911	0.82145	-0.6	-1.24	0.216	

Variables	L1 Statistics			
	Unmatched Samples	Matched Samples		
Teacher Gender(female)	0.00059	0		
# of Completed Projects	0.18046	0		
Poverty(highest)	0.06009	0		
Poverty(high)	0.02496	0		
Poverty(moderate)	0.03311	0		
Resources (academic)	0.00409	0		
Reached Students	0.00947	0		
Corporate Matching	0.02873	0		
Home Double	0.00654	0		
Teaching Materials	0.00303	0		
Requested Amount (log)	0.03898	0		
Project Description Length	0.03425	0		
Average Characters per Word	0.02215	0		
Text Familiarity	0.02481	0		
Text Concreteness	0.03277	0		
Text Flesch-Kincaid Readability	0.03484	0		
Text Valence	0.02501	0		
Text Extremity	0.01043	0		
Text Emotionality	0.00835	0		
Equity Focus	0.01809	0		
Project Description(social)	0.01486	0		
Project Description (punctuation)	0.05114	0		
Project Description (informal)	0.04046	0		
Project Description (achieve and reward)	0.00000	0		
Project Description(risk)	0.00442	0		
Project Description(spelling)	0.00301	0		
Grades PreK-2	0.01093	0		
Grades 3-5	0.00844	0		
Grades 6-8	0.00074	0		
Grades 9-12	0.00175	0		
School Type (public)	0.00478	0		

Table WC2. Balance Sheet Before and after CEM

*Note:* To make matching more efficient, we define the means of continuous values as the cut points. We also change the categorical variables to binary. Specifically, we represent project subjects in Applied Sciences, Economics, Environmental Science, ESL, Financial Literacy, Foreign Languages, Gym & Fitness, History & Geography, Health & Life Science, Literature & Writing, Literacy, Mathematics, Music, Performing Arts, Social Sciences, and Visual Arts as academic projects. In addition, we define resource types in books, supplies, and technology as educational materials. Finally, we categorize schools into either public or not public.

Multivariate imbalance measure for the unmatched sample: L1=0.72239 Multivariate imbalance measure for the matched sample: L1=0

Variables	Coefficient	SE	
Self-donation	-11.403***	0.642	
Donation Information	YES		
Social Network Information	YES		
Platform-level Information	YES		
Observations	1,014,901		
R-squared	0.470		
Log-likelihood	-6441203.9		
Project fixed effects	YES		
Year-month fixed effects	YES		

 Table WC3. Effects of Self-donation on Hours to Next Donation Using Matched Data from CEM

 Matching

*Note:* This table reports coefficients and standard errors from an OLS regression of *Hours to Next Donation* on *Self-donation*, donation information, social network, and platform level information using matched projects (67,003 projects having self-donation and 71,374 projects having no self-donation) obtained from coarsened exact matching (CEM). Table 1 provides variable definitions. \*\*\* indicates statistical significance at the 1% level from two-tailed tests.

#### C-2: An Instrumental Variable Approach to Address Endogeneity Concerns

Another concern is the potential endogeneity of the *Self-donation* variable. Our estimation in the main analysis may pick up the effects of unobservables that happen to be correlated with both hours to next donation and teacher's self-donation. Since we have controlled most information that donors have access to during their decision process, this concern is perhaps not very serious within our context. However, since this is a study using archival data, out of an abundance of caution, we also use an Instrumental Variable (IV) approach to mitigate endogeneity concerns further.

An ideal instrument in this context should affect a *teacher's* likelihood of using selfdonation but should not directly affect donors' likelihood of donating to the teacher's focal project (the exogeneity constraint). An ideal IV is a variable that donors cannot easily observe or consider while the teacher can. As researchers, we can also observe this variable.

We follow the spirit of Dranove et al. (2014), who used the number of same-alliance hospitals adopting electronic medical records as an instrument for a focal hospital's electronic medical record adoption. We similarly used the number of successful projects from other teachers in the same school with self-donations in the past three months before a current donation as the instrumental variable (# of Successful Self-donated Projects from Same School Last Three Months)<sup>3</sup>. We posit that this instrument is valid for the following reasons. First, teachers want their projects to succeed, and they are likely to follow the strategy of other successful projects from teachers with whom they may interact. Therefore, if teachers observe greater success in projects with self-donation within the same school, they become more likely to self-donate. Also, it seems unlikely that the behaviors of other teachers in their past projects will affect the current donors' donation propensity to donate to the current project. This intuitive reasoning points towards the validity of our proposed instrument.

We have also empirically verified the validity of this IV in several ways. First, we regressed *Self-donation* on # *of Successful Self-donated Projects from Same School Last Three Months* and the results in Table WC4 indeed show a significantly positive relationship. Second, we show that

<sup>&</sup>lt;sup>3</sup> We chose three months because half a semester is about 12 weeks and teachers who requested donations have likely received the requested materials. Therefore, teachers who are starting focal projects are almost certain to know the funding successes of previous projects from the same school. For robustness, we also used 4, 5, and 6-month time windows and obtained same findings.

the proposed IV is strong in a statistical sense via calculation of the first stage Partial F-statistics, which is 72.133 and higher than 10 - a threshold suggested by Stock and Yogo (2002). Third, we examine the distribution of this variable to show its variability. Table WC5 shows its descriptive statistics. We also provide separate descriptive statistics when focal donation is either self-donation or non-self-donation in this table, respectively. Fig WC1 shows the histograms of all samples and samples with non-zero instrument values. About 50% of instrumental variable values are more than zero. These results confirm that the IV shows significant variation. Therefore, the intuition, as well as formal tests, show that we have a valid instrument.

 Table WC4. Effects of Number of Successful Projects with Self-donations from Same School

 Last 3 Months on Self-donation

Variables	Coefficient	SE
# of Successful Self-donated Projects Last Three Months	0.010***	0.0004
Donation Information	YES	
Social Network Information	YES	
Platform-level Information	YES	
Teacher, Project, School Information	YES	
Observations	2,682,45	55
Log-likelihood	-475708.	37
Resource Type Fixed Effects	YES	
Year-month Fixed Effects	YES	
State Fixed Effects	YES	
Grade Level Fixed Effects	YES	
School Type Fixed Effects	YES	

*Note:* This table reports coefficients and standard errors from a probit model of regressing *Self-donation* on # *of Successful Self-donated Projects Last Three Months*, donation, social network, platform-level, and teacher, project, and school information. Table 1 in the paper provides variable definitions. \*\*\* indicates statistical significance at the 1% level from two-tailed tests. The sample includes 2,682,455 donations from 465,530 projects.

Tuble W C3. Descriptive Statistics of Instrument variable (IV 2,002,755)									
Focal Donations	Mean	Std.	25% Quartile	50% Quartile	75%quartile				
All donations	2.24	4.62	0	1	2				
Self-donations	2.60	4.86	0	1	3				
Non Self-donations	2.20	4.59	0	0	2				

**Table WC5.** Descriptive Statistics of Instrument Variable (N = 2.682.455)

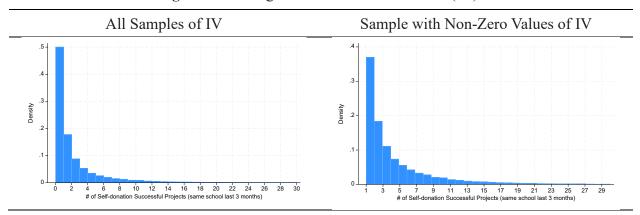


Fig. WC1. Histogram of Instrument Variable (IV)

We use the same dataset for analysis. Although the 2SLS approach is the most common and standard IV estimation method, it requires the endogenous variable to be continuous (Imbens and Wooldridge 2007). Since our measure of *Self-donation*, the endogenous variable, is binary, the 2SLS approach will be biased. Following the recommendation of Wooldridge (2010), we implement a two-step control function (CF) approach for our nonlinear model. We first run a probit model to regress *Self-donation* on the proposed IV and other donation, project, teacher, school, social network (donation level), and platform level variable (Panels C, D, E, F, and G in Table 1). Then, we calculate the generalized residuals<sup>4</sup>. Finally, we insert these generalized residuals into the second stage estimation. Results in M3 in (Table 2 in the paper) show the robustness of our findings.

However, there may still be concerns of homophily among donors. If teachers can learn from each other, can donors also show similar homophily, which may cast doubt on the validity of the instrument? To address this concern, we first examine how frequently donors donate at the focal platform to address this concern. We find that over 80% of donors only had one donation (Fig. WC2). Among donors who donated more than once, on average, the time interval between two consecutive donations was more than 69 days (*mean* = 69.31, *std.* = 208.58). In addition, we examine how frequently a donor donated to the same school. Tabel WC6 provides the descriptive statistics of number of donations from the same donor to the same school only once (Fig. WC3). These findings provide evidence for no significant serial correlation among donations from the same donors over time. However, homophily can still occur among different donors over time,

<sup>&</sup>lt;sup>4</sup> Imbens and Wooldridge (2007) and Wooldridge (2010) provide a more detailed explanation for the calculation.

even when the majority of donors donate only once to the same school. Specifically, homophily can weaken the validity of our instrument if # *of Successful Self-donated Projects Last Three Months* from the same school attracted more donors who may subsequently positively influence donations of donors for the current project in the same school through homophily. For example, it is possible that a donor who saw more donations to a school in the previous three months can become more likely to donate to current projects from the same school.

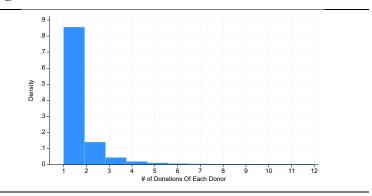
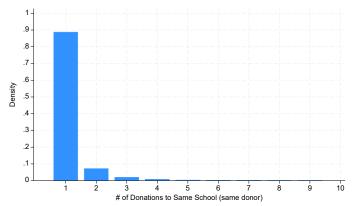


Fig. WC2. Distribution of # of Donations of Each Donor

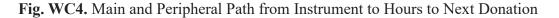
Table WC6. Descriptive Statistics of # of Donations (from Same Donor to Same School)

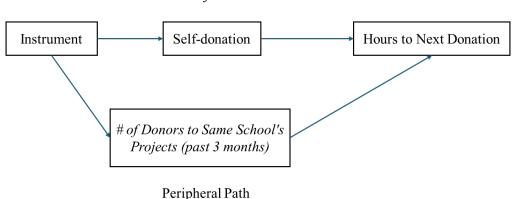
Mean	Std.	25% Quartile	50% Quartile	75%quartile
1.239	1.310	1	1	1

Fig. WC3. Distribution of # of Donations of Same Donor to Same School



To address such a homophily concern, we counted the total number of unique donors who donated to other projects in the same school in the past three months and included it in our analysis (# of Donors to Same School's Projects (past 3 months)).<sup>5</sup> If the homophily of these donors affects the validity of our proposed instrument, their effect path likely starts from instrument via # of Donors to Same School's Projects (past 3 months) to Hours to Next Donation (Fig. WC4). We did two tests to show that the impact of homophily among donors on our results with the proposed instrument is less a concern. In the first test, we included # of Donors to Same School's Projects (past 3 months) as a control variable in the second stage of our instrumental variable analysis, which can help isolate the effect of the instrument on Hours to Next Donation through self-donation (pp. 102-104, Cunningham 2021). In the second approach, we directly regress Hours to Next Donation on this variable and other controls. Columns 2 and 3 in Table WC7 report the results of these two tests. We find that the coefficients of (# of Donors to Same School's Projects (past 3 months)) are positive and significant. This implies that the speed of donations for the same school in the past three months, which shows that our estimates of the self-donation effects are conservative (i.e., the effect size of self-donation in Column 2 is slightly larger than Column 1). Therefore, we feel that homophily among donors is not a significant concern in this study.





Major Path

<sup>&</sup>lt;sup>5</sup> This variable has a mean of 34.69 and a standard deviation of 80.00.

Variables	Using Instrument Table 2 of Main		Using Instrument + Controlling # of Donors to Same School's Project (past 3 months)		# of Donors to Same School's Project (past 3 months) as Main Independent Variable	
	Coefficients	SE	Coefficients	SE	Coefficients	SE
Self-donation # of Donors to Same School's Projects (past 3 months)	-19.695***	1.193	-19.843*** 0.099***	1.193 0.008	0.098***	0.008
Donation Information	YES		YES		YES	
Social Network Information	YES		YES		YES	
Platform-level Information	YES		YES		YES	
Teacher, Project, School Information	YES		YES		YES	
Observations	2,682,455	5	2,682,455		2,682,455	
R-squared	0.463		0.463		0.463	
Project fixed effects	YES		YES		YES	
Donation year-month fixed effects	YES		YES		YES	

#### Table WC7. Controlling Potential Homophily

*Note:* The first column (M1) reports coefficients and standard errors from an OLS regression of *Hours to Next Donation* on *Self-donation*, donation information, social network information, and platform-level information with project-fixed effects using instrument variable approach (M3 in Table 2 of main paper). The second column (M2) estimates the same model as M1 but added # of Donors to Same School's Projects (past 3 months) as a control. The last column (M3) estimates an OLS regression of *Hours to Next Donation* on # of Donors to Same School's Projects (past 3 months), donation information, social network information, and platform-level information on # of Donors to Same School's Projects (past 3 months), donation information, social network information, and platform-level information with project-fixed effects. Table 1 provides variable definitions. \*\*\* indicates statistical significance at the 1% level from two-tailed tests, respectively. The sample includes 2,682,455 donations from 465,530 projects. Because the dependent variables are *Hours to Next Donation*, the first donations (465,530 donations) are excluded.

#### C-3: Evidence for the Mechanism: Anonymity of Donations

Variables	Coefficients	SE		
Self-donation	-9.626***	0.415		
Anonymity	7.696***	0.302		
Self-donation × Anonymity	10.924***	1.110		
Donation Information	YES			
Social Network Information	YES			
Platform-level Information	YES			
Observations	2,682,455			
R-squared	0.463			
Log-likelihood	-17019926			
Project fixed effects	YES			
Year-month fixed effects	YES			

 
 Table WC8. Effects of Anonymity on the Relationship Between Self-donation and Hours to Next Donation

*Note:* This table reports coefficients and standard errors from an OLS regression of *Hours to Next Donation* on *Self-donation, Anonymity,* and its interaction term with *Self-donation,* donation information, social network, and platform-level information. Table 1 in the paper provides variable definitions. \*\*\* indicates statistical significance at the 1% level from two-tailed tests. The sample includes 2,682,455 donations from 465,530 projects. Because the dependent variables are *Hours to Next Donation, the* first donations (465,530 donations) are excluded from estimation.

Self-donation	Anonymit	У
Self-dollation	Yes	No
Yes	77.164***	58.544***
No	75.866***	68.170***
Differences	1.298 ( <i>p</i> =0.214)	-9.626***

Table WC9. Effects of Self-donation Interaction with Anonymity on Hours to Next Donation

*Note:* \*\*\* p<0.01

One potential downside of this analysis is that the stewards might be strategically deciding regarding anonymity based on some unobservables, casting doubt on the validity of the results. We have two reasons to believe that endogeneity concerns do not significantly affect our results. First, Figure WC5 below clearly shows the bi-modal nature of teacher decisions, indicating that

most teachers' self-donations are either always visible or anonymous.<sup>6</sup> This suggests that the choice to remain visible vs. anonymous is likely driven by personal characteristics rather than any strategic motive.

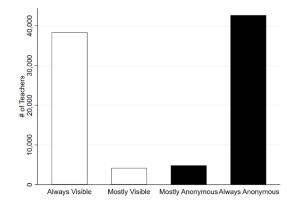


Fig. WC5. Histogram of Teacher Choice to Remain Visible vs. Anonymous for Self-donations

Note: "Mostly Visible (Anonymous)" means that a teacher was visible (anonymous) in the majority of self-donations

Second, we handle the issue of anonymity in a more rigorous manner by implementing a Heckman Selection Correction approach. To be specific, we first regressed whether donors choose anonymity (*Anonymity*) on information that might affect donors' decisions. The information includes donation, project, project description, teacher, and platform level information described in Table 1. As an exclusion restriction, we included the ratio of the number of anonymous donations to all donations a donor made in the previous three months before this donor's current donation (*AnonymityRatio*) as a regressor. This covariate would affect the anonymity decision since the donors who previously donated anonymously are likely to remain so (refer to Figure WC5). However, it is unlikely to affect other donors' donations for focal projects (donors for the same project do not know whether and how frequently a steward self-donated anonymously in their previous projects). The correlation between *AnonymityRatio* and *Anonymity* is 0.3940 (p<0.01). The results of this first stage regression are in Table WC10. Then, we calculated Inverse Mills ratios (IMR) using the residuals and included it in our main model. The results are in Table WC11. Table WC12 shows the marginal effects of interaction

<sup>&</sup>lt;sup>6</sup> At the same time, there is some variation at the teacher-level that allows us to use this in our model despite the project fixed effects.

term between *Anonymity* and *Self-donation*. Our qualitative and quantitative results are fairly similar to those that do not use first-stage correct (Table WC4). We find that anonymity wipes out all the signaling gains from self-donation, as expected.

Table WC10. First stage: Effects of Donors' Previous Anonymous Donation Ratios on
Anonymity

DV: Anonymity	Coefficient	SE			
AnonymityRatio (3 mons)	1.270***	0.003			
Donation Information	YES				
Social Network Information	YES				
Platform-level Information	YES				
Teacher and School Information	YES				
Project and Project Description Information	YES				
Observations	2,682,455				
Log Likelihood	-1048114.5				
Resource Type Fixed Effects	YES				
Year-quarter Fixed Effects	YES				
State-city Fixed Effects	YES				
Grade Level Fixed Effects	YES				
School Type Fixed Effects	YES				

*Note:* This table reports coefficients and standard errors from a probit regression of *Anonymity* on *AnonymityRatio*, donation, teacher, school, project, project description, social network, and platform level information. Table 1 in the paper provides variable definitions. \*\*\*indicate statistical significance at the level from two-tailed tests. The sample includes 2,682,455 donations from 465,530 projects.

Table WC11. Effects of Self-donation Interaction with Anonymity on Hours To Next
Donation

Variables	Coefficients	SE			
Anonymity	7.924***	0.313			
Self-donation	-9.658***	0.416			
Anonymity × Self-donation	11.034***	1.111			
IMR	1.212***	0.434			
Donation Information	YES	YES			
Social Network Information	YES				
Platform-level Information	YES	YES			
Observations	2,682,455				
Log Likelihood	-17019922				
R-squared	0.463				
Project Fixed Effects	YES				
Teacher fixed Effects	YES				
Year-month Fixed Effects	YES				

*Note:* This table reports coefficients and standard errors from an OLS regression of *Hours to Next Donation* on *Self-donation, Anonymity,* and its interaction term with *Self-donation,* donation information, social network, platform-level information, and IMR. Table 1 in the paper provides variable definitions. \*\*\* indicates statistical significance at the 1% level from two-tailed tests, respectively. The sample includes 2,682,455 donations from 465,530 projects. Because the dependent variables are *Hours to Next Donation, the* first donations (465,530 donations) are excluded from estimation.

	Anonymi	ty
Self-donation	Yes	No
Yes	77.435***	58.477***
No	76.059***	68.135***
Differences	1.376 ( <i>p</i> =0.189)	-9.658***

Table WC12. Effects of Self-donation Interaction with Anonymity on Hours to Next Donation

*Note:* \*\*\* p<0.01

#### Web Appendix D: Effects of Self-donation on Hours of Next Donation (Robustness Checks)

#### **D-1:** Alternative Explanations (Ruling Out Effects from Local Donors)

Several potential alternative explanations may affect our findings. The first one is that a selfdonation might appeal to donors who know the teacher personally. Thus, social pressure might explain the donation behavior of others based on a teacher's donation. Since we have access to donors' locations (i.e., zip code, state, and city), we address this concern by examining how the percentage of local donors out of all donors for a project affects our findings. Local donors are donors who share the same zip code as the schools. Specifically, we created five subsamples. The first subsample only includes donations from projects without contributions from local donors. Over 47% of projects did not receive a single donation from local donors. About 2.1 million donations from nearly 240,000 projects were excluded. The analysis using this subsample will address our concern. For the remaining projects that received donations from local donors, we assign each of these projects into one of four subsamples created based on four quartiles of percent of donors from local community distribution. We estimate the same model as M3 in Table 2 using each of these subsamples.

Results in Table WD1 column 1 show that self-donation accelerates fundraising (-8.462, p < 0.01) for projects without local donors, confirming our finding. Results in columns 2 to 5 of the same table confirm our finding and show that self-donation is more effective when the percentage of local donors is moderate rather than too high or too low.

We want to emphasize that these analyses do not rule out the role of social pressure on giving but show that self-donation has an effect over and beyond the well-studied impact of social pressure (DellaVigna, List, and Malmendier 2012).

	N- I 1 Г		Percent of # Donors are Locals (>0%)							
Variables	No Local E	Jonors	First Qua	artile	Second Qu	artile	Third Quartile		Fourth Qu	artile
	Coeffs SE		Coeffs	SE	Coeffs	SE	Coeffs	SE	Coeffs	SE
Self-donation	-8.462***	0.817	-5.363***	0.632	-11.421***	0.896	-11.167***	0.937	-4.220**	1.75
Donation Order	2.292***	0.066	0.619***	0.041	1.403***	0.083	2.475***	0.093	0.508***	0.189
Donation Amount	-1.905***	0.249	2.265***	0.187	-1.391***	0.292	-3.527***	0.322	-1.548**	0.624
Percent of Requested Amount Funded So Far	-1.873***	0.015	-0.913***	0.012	-1.350***	0.02	-1.565***	0.02	-1.583***	0.038
Avg Donation (Local) So Far			-4.648***	0.265	-6.241***	0.424	-8.047***	0.506	-13.673***	1.23
# Of Accumulated Self-donation	-35.523***	2.916	-29.879***	1.829	-47.054***	2.829	-58.966***	3.154	-38.169***	4.799
Accumulated Self-donation Amount	19.543***	1.752	18.120***	1.118	28.427***	1.672	30.982***	1.829	17.359***	3.043
Days to Expiration	75.638***	1.12	75.078***	0.779	85.031***	1.182	96.618***	1.265	94.228***	2.046
Social Network Information	YES		YES		YES		YES		YES	
Platform-level Information	YES		YES YES		YES		YES		YES	
Observations	744,71	4	808,77	6	465,69	7	483,77	6	179,49	2
R-squared	0.542	2	0.308		0.393		0.516		0.498	
Log-likelihood	-472199	6.7	-5039566.7		-2970784.1		-3092260.7		-1169393.5	
Project fixed effects	YES		YES		YES		YES		YES	
Year-month fixed effects	YES		YES		YES		YES		YES	

#### Table WD1. Effects of Self-donation on Hours to Next Donation (Percent of # of Donations from Locals)

*Note:* This table reports coefficients and standard errors from OLS regressions of *Hours to Next Donation* on *Self-donation*, donation information, social network, and platform-level information using donations to projects with different percentages of donations from local donors. The first column reports results using projects that had no local donors. Columns 2,3, 4, and 5 report results using donations from projects that received donations from local donors and had percentages of local donors in the first, second, third, and fourth quartile of percent of local donors' distribution. Table 1 provides variable definitions. \*\*\* and \*\* indicates statistical significance at the 1% and 5% level from two-tailed tests, respectively

#### **D-2:** Alternative Explanations (Controlling for Donor Herding)

The "herding" behavior of crowdfunding funders is well documented in the crowdfunding context and may be an alternative explanation/confound for our findings. Several studies provide convincing evidence of "herding" among lenders in debt-based crowdfunding (Zhang and Liu 2012) and contributors in reward-based crowdfunding (Dai and Zhang 2019); Lenders (or contributors) tend to lend (or contribute) to funding requests that have already attracted a larger number of lenders (or contributors). Thus, herding is time-related and more likely to occur after the initial stage of a donation-based crowdfunding project. It captures the accumulative effects of the previous donations. Although a time dummy variable is included in all previous model specifications, we did not specifically address the herding concern by controlling this accumulative impact on donors' donating decisions in the main analyses. This missing control may lead to biased estimation.

To address this concern, we follow the spirit of the study from Zhang and Liu (2012) and construct a new dataset that only includes the donation data of the first two donations of all projects. At this stage, projects have not received a large number of donations, and thus donors are more independent at this stage. It is unlikely that accumulative effects that lead to herding exist. Consequently, "herding" is less likely to occur. The unit of analysis is a donation. The dependent variable and main independent variables remain the same as the main analysis. We estimate an OLS model and control information in *Panels C, D, E, F*, and *G* in Table 2. We report the results in Table WD2, column 1. The coefficient of *Self-donation* is negative and significant at a .01 level, confirming our main findings.

#### **D-3:** Alternative Explanations (Controlling for Teacher Learning)

Fundraisers can learn from previous experience in crowdfunding (Freeman and Jin, 2011; Xu and Ni, 2022). We have all the donations information for all teachers' projects during our study period. Over 69.46% of teachers have multiple projects. Hence, teacher learning may be an alternative explanation/confound for our findings. To address this concern, we only include all donations of teachers' first projects since teachers had no prior experience at DonorsChoose when posting their first project. We estimate the same model specification as our primary analysis. The results in Table WD2, column 2 confirm our finding.

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Variables	Herding Eff	fects	Teacher Learning (First Project)		
	Coefficient	SE	Coefficient	SE	
Self-donation	-69.365***	4.757	-12.070***	0.669	
Donation Information	YES		YES		
Social Network Information	YES		YES		
Platform-level Information	YES		YES		
Teacher and School Information	YES		NO		
Project Information	YES		NO		
Project Description Information	YES		NO		
Observations	362,450	)	795,012		
R-squared	0.201		0.387		
Log-likelihood	-2502633	.7	-4961551.5		
Resource type fixed effects	YES		NO		
Project subject fixed effects	YES		NO		
School state fixed effects	YES	YES			
Grade-level fixed effects	YES	YES			
School-type fixed effects	YES		NO		
Project fixed effects	NO		YES		
Year-month fixed effects	YES		YES		

 Table WD2. Effects of Self-donation on Hours to Next Donation (Excluding Herding and Teacher Learning)

*Note:* The first column reports coefficients and standard errors from OLS regressions of *Hours to Next Donation* on *Self-donation*, donation, social network, platform, project, teacher, and school levels of information using the first two donations of each project. This model includes donation year-month, school state, school type, grade level, and resource type fixed effects. The last column reports coefficients and standard errors from OLS regressions of *Hours to Next Donation*, donation information, social network, and platform-level information using donations from teachers' first projects. The estimation includes project and donation year-month fixed effects. Table 1 provides variable definitions. \*\*\* indicates statistical significance at the 1% level from two-tailed tests.

## D-4: Heterogeneity of Self-Donation Order, Amount, Percentage of the Requested Amount Raised

To understand how self-donations accelerate the inflow of donations, we investigate by interacting this variable with donation order, donation amount, and the percentage of requested contributions and present the results in Table WD3. We discover many new insights across the four different model specifications (from M1 to M4). First, we find a significant positive interaction effect between the self-donation and the donation order, indicating that the purported self-donation effect is weaker at the later stages of the donation cycle. Consistent with the signaling theory, a commitment signaled by donating to an own project earlier is more effective than after receiving many other donations. This is because signaling is more effective in an uncertain environment, and this uncertainty is likely to be heightened in the earlier fundraising cycle. Second, the negative interaction between self-donation and the donation amount on time to the following donation reveals that a higher (self-donation) amount reduces the time to the next donation. Again, consistent with signal theory, this implies that contributing a higher donation amount to an own project carries a stronger signal of commitment to potential donors. Third, the interaction between self-donation and the percentage of the requested amount raised is positive. This means that when a higher percentage of the requested amount has been raised, a selfdonation has a weaker effect on the time to the next donation (relative to when a lower percentage is raised). This finding re-confirms that self-donation in the early stage of the project signals a stronger commitment than at a later stage. Overall, this analysis shows that selfdonations made early with a higher amount signal a teacher's stronger commitment to the project and, therefore, are more effective in attracting potential donors.

Variables	M1		M2		M3		M4	
	Coeffs	SE	Coeffs	SE	Coeffs	SE	Coeffs	SE
Self-donation	-11.982***	0.502	-8.397***	0.391	-15.612***	0.567	-17.573***	0.584
Donation Order	1.448***	0.031	1.477***	0.031	1.484***	0.031	1.546***	0.031
Self-donation × Donation Order	0.629***	0.060					0.377***	0.075
Donation Amount	-1.106***	0.132	-0.561***	0.137	-1.216***	0.132	-0.427***	0.137
Self-donation × Donation Amount			-5.480***	0.375			-8.897***	0.415
Percent of Requested Amount Funded So Far	-1.420***	0.008	-1.424***	0.008	-1.432***	0.008	-1.451***	0.008
Self-donation × Percent of Requested Amount					0.229***	0.014	0.375***	0.018
Funded So Far								
Donation Information	YES		YES		YES		YES	
Social Network Information	YES		YES		YES		YES	
Platform-level Information	YES		YES	5	YES		YES	
Observations	2,682,455		2,682,455		2,682,455		2,682,455	
R-square	0.463	5	0.463		0.463		0.463	
Log-likelihood	-170203	<b>9</b> 7	-17020336		-17020294		-17020024	
-	M1 v.s. Ba	seline	M2 v.s. Baseline		M3 v.s. Baseline		M4 v.s. Baseline	
Likelihood ratio $\chi^2$	127.53 (p<	0.001)	249.81 (p<0.001)		332.40 (p<0.001)		873.21 (p<0.001)	
Project fixed effects	YES	*	YES	5	YES		YES	
Year-month fixed effects	YES		YES	YES		YES		

**Table WD3.** Effects of Interactions between Self-Donations and Donation Order, Donation Amount, and Percentage of Requested Donations Funded So Far on Hours to Next Donation

*Note:* The first column reports coefficients and standard errors from OLS regressions of *Hours to Next Donation* on *Self-donation* and its interaction with donation order, donation information, social network, and platform level information. The second column reports results from the same model as M1 but replaces the interaction term with the interaction term between *Self-donation* and *Donation Amount*. The third column reports results from the same model as M1 but replaces the interaction term with the interaction term between *Self-donation* and the *Percent of Requested Amount Funded So Far*. The last column reports model results that include all interactions from models 1 to 3. \*\*\* indicates statistical significance at the 1% level from two-tailed tests.

#### **D-5:** Alternative Dependent Variable (Next Donation Amount)

In the main analysis, we used Hours to Next Donation as the dependent variable. To test the robustness of our finding, we used an alternative dependent variable, Next Donation Amount, to rerun our analysis. We repeated all analyses in Table 2 but replaced the dependent variables with the new one. Results in Table WD4 show Self-donation is positively and significantly related to next donation amount. We find that that self-donations not only expedite the next donation but also increase its amount, further confirming our hypothesis 1(a).

Variables -	M1		M2		M3		
v ariables	Coeff	SE	Coeff	SE	Coeff	SE	
Self-donation	3.470***	0.086	3.617***	0.132	2.388***	0.261	
Residual					0.678***	0.155	
Donation Information	YES		YES		YES		
Social Network	YES		YES		YES		
Information							
Platform-level Information	YES		YES	5	YES	5	
Observations	2,682,455		1,057,227		2,682,455		
R-squared	0.736	5	0.734		0.736		
Log Likelihood	-12946475		-5106752.5		-12946464		
Year-month fixed effects	YES		YES		YES		
Teacher fixed effects	YES		YES		YES		
Project fixed effects	NO		YES	5	YES		

Table WD4. Effects of Self-donation on Next Donation Amount

*Note:* The first column (M1) reports coefficients and standard errors from an OLS regression of *Next Donation Amount* on *Self-donation*, donation information, social network information, and platform-level information with project-fixed effects. The second column (M2) estimates the same model as M2 using samples matched on teacher, project description, social network, and platform-level information. The last column (M3) estimates the same model as M1 using an instrumental variable approach. Table 1 provides variable definitions. \*\*\* indicates statistical significance at the 1% level from two-tailed tests. The sample includes 2,682,455 donations from 465,530 projects. Because the dependent variables are *Hours to Next Donation, the* first donations (465,530 donations) are excluded

## Web Appendix E: Effects of Self-Donations on Funding Success E-1: Project Description Processing

We first quantify linguistic styles from project descriptions regarding *familiarity*, *concreteness*, *readability*, *valence*, *extremity*, and *emotionality*. Specifically, we used *Evaluative Lexicon* (E.L.) 2.0 (Rocklage, Rucker, and Nordgren 2018) to measure the positivity (valence) of emotion, how positive or negative it is (extremity), and the extent to which it is based on an emotional appeal contained in the description. E.L. is a computational linguistic tool that uses an extensive list of evaluative words such as "loved," "outstanding," and "distressing" that have been rated by a large set of external judges for their implied valence (0 =highly negative, 9=highly positive), valence extremity (the absolute distance from the midpoint (4.50) of the valence scale), and emotionality (0 = not at all emotional, 9 = very emotional). These measures have been used in the past in academic research in marketing (e.g., Herhausen et al., 2019; Melumad, Meyer, and Kim, 2021; Moradi et al. 2023; Song, Li, and Sahoo 2022; Xiang et al. 2019).

We used *MRC psycholinguistic database* to measure words' familiarity and concreteness. Concreteness refers to how much a word refers to an actual, tangible, or "real" entity. More concrete language can make readers believe that the speaker is attending to and understanding their personal needs (e.g., Allison et al. 2018; Packard and Berger 2021; Parhankangas & Renko 2017). Familiarity refers to how often a word is typically seen or heard. Word familiarity affects readers' comprehension of the texts (Packard and Berger 2021). Next, we measure the readability of texts (i.e., *Text Flesch-Kincaid Readability*) (e.g., Gao et al. 2023; Netzer et al. 2019), the project description length, and the average characters per word to control for the text characteristics. Finally, we implemented Pyspellchecker (Barrus 2020) to obtain spelling errors in project descriptions (e.g., Gao et al. 2023; Netzer et al. 2019).

Next, we extract perceived teacher preparedness and project social impact from project descriptions. Contributors are more likely to contribute in crowdfunding when fundraisers are perceived to be more prepared, and projects are perceived to have a social impact (Dorfleitner, Oswald, and Zhang 2021; Tajvarpour, Hossein, and Pujari 2022). A well-prepared project description shows that fundraisers devoted time and effort to ensure that the project is in line with the standards of a successful project (Mollick 2014). Following the study of Tajvarpour, Hossein, and Pujari (2022), we used informal language (e.g., "thnx," "pls," and "gonna"), punctuation, and risk rhetoric (e.g., lose, lack, avoid) to measure preparedness. Formal language

and punctuation use reflect professionalism (Yazdani, Gopinath, and Carson, 2018). A text with good punctuation and formal language reflects that the fundraiser has invested time and effort in preparing the project. In previous marketing studies, informal language is a reverse measure of preparedness (Yazdani, Gopinath, and Carson 2018; Ransbotham, Lurie, and Liu 2019). Also, project descriptions, like other narratives, have risk-related and reward-focused words. Risk-related words make the project appear challenging to achieve and are likely perceived to be indicative of a lack of competency and illy prepared, making it less likely to receive external support from contributors (Chan and Parhankangas 2017).

Thus, in our studied context, projects with teachers' narratives that reveal such rewards and achievement (e.g., accomplish, overcome, and solve) and being empowered social relationships (e.g., parents, friends, and children) will create a positive external perception in the minds of donors and positively affect crowdfunding success.

We use the LIWC dictionary (Pennebaker et al. 2015) to capture words that focus on informal language, punctuation, risks, social, awards, and achievement. LIWC is well-accepted and widely used in marketing (e.g., Yazdani, Gopinath, and Carson 2018; Ransbotham, Lurie, and Liu 2019) to measure psychological states.

#### E-2: Results Using Matching Methods (PSM and CEM)

We conducted a series of analyses to check the robustness of our findings, similar to the tests presented in Table 3. First, we address the selection concerns by implementing PSM and CEM approaches and find that the average funding success rate of the matched projects with self-donations is significantly higher.

Matching Methods	Groups	# of Matched Projects	Funding Rates (ATT)	Difference in Funding Rate (Treatment- Control)	S.E.	T-stat
PSM	Treatment Control	113,057 113,048	0.891 0.843	0.048***	0.001	36.84

Table WE1. Effects of Self-donation on Funding Success Using PSM

*Note:* This table reports ATT effects of *Having Self-donation* on project *Funding* using a one-to-one nearest neighbor PSM technique to match projects receiving self-donation with projects without self-donation on platform, project, teacher, and school levels of information. \*\*\* indicates statistical significance at the 1% level from two-tailed tests.

Variables	Coeffs	SE
Having Self-donation Pseudo R2 LR χ2 Log-likelihood	0.2719*** 0.033 234.12 -43092.90	

#### Table WE2. Effects of Self-donation on Funding Success Using CEM

*Note:* This table reports coefficients and standard errors from a logit regression of *Finding* on *Having Self-donation* using matched projects (80,291projects having self-donation and 97,132projects having no self-donation) obtained from coarsened exact matching (CEM). \*\*\* indicates statistical significance at the 1% level from two-tailed tests.

#### E-3: Alternative Explanations (Role of Local Donors and Teachers Learning)

Second, we rule out the role of social pressure by using only the projects that received no donations from local donors. Results in Table WE3 column 1 show that self-donation increases funding success probability (0.042, p<0.01) for this subset of observations as well. Third, we address the concern that teacher learning might somehow be confounding the self-donation effects by estimating our model using only teachers' first projects. Results in Web Appendix Table WE3 column 3 confirm that teacher's donations positively affect project success.

#### E-4: Alternative Dependent Variables

Finally, we test the robustness of our findings using three alternative dependent variables: the ratio of donations raised to the amount requested (*i.e.*, donations raised  $\times$  100/amount requested), the difference between the amount requested and donations raised (*i.e.*, amount requested minus donations raised), and the average time interval between consecutive donations for a project. Results in Table WE4 again support our findings.

#### E-5: Role of Self-Donation Frequency, Recency, and Amount

In our context, a teacher could self-donate to the project multiple times during a funding cycle. How do self-donation patterns, including *frequency* (the number of self-donations in a project), *recency* (hours elapsed from the project starting time to the first self-donation), and *amount* (the log-transformed total amount self-donated in a project), influence funding success? To answer this question, we regress the funding success indicator on these variables: teacher characteristics, school characteristics, project description information, and platform level information, and report the results as M1 in Table WE5. Consistent with predictions 2(a) and 2(b), we find that less-frequent, higher-amount donations made in the early stage of the project fundraising have more pronounced positive effects on funding success. This result indicates that project stewards, given a fixed donation budget, can send the strongest signal and maximize the self-donation impact on the funding success of their projects by making a single large self-donation right after posting the project. These findings are robust to the different versions of the dependent variable, as shown in Table WE5.

	Local Donors					Addressing Teacher Learning				
Variables	No Local Donors			Percent of Donors are Local Donors			(First Job)			
	Coeffs	SE	Coeffs	SE	Coeffs	SE	Coeffs	SE		
Having Self-donation	0.042***	0.015	0.057***	0.016	0.085***	0.015	0.606***	0.023		
Local Donors Percent (Q1)					0.983***	0.030				
Local Donors Percent $(Q2)$					0.612***	0.027				
Local Donors Percent $(Q3)$					0.171***	0.018				
Local Donors Percent $(Q4)$					-0.709***	0.017				
Having Self-donation $\times$ Local					0.281***	0.041				
Donors Percent (Q1) Having Self-donation× Local					0.395***	0.038				
Donors Percent (Q2)					0.375	0.050				
Having Self-donation × Local					0.310***	0.027				
Donors Percent (Q3)										
Having Self-donation $\times$ Local					0.627***	0.028				
Donors Percent (Q4)	0.030***	0.002	0.040***	0.002	0.023***	0.001				
# of Completed Projects	0.030	0.002	-0.015***	0.003 0.004	0.023	0.001				
Having Self-donation×# of Completed Projects			-0.013	0.004						
Teacher and School Information	YES		YES		YES		YES			
Project Information	YES		YES		YES		YES			
Project Description Information	YES		YES		YES		YES			
Social Network Information	YES		YES		YES		YES			
Platform-level Information	YES		YES		YES		YES			
Observations	219,510		219,510		465,530		98,583			
Log-likelihood	-78037.346		-78029.566		-148930.16		-30225.103			
Resource type fixed effects	YES		YES		YES		YES			
Project subject fixed effects	YES		YES		YES		YES			
5 5										

# Table WE3: Effects of Self-Donations on Funding Success (Percent of # of Donations from Locals and Addressing Teaching Learning)

Year-quarter fixed effects	YES	YES	YES	YES
School state fixed effects	YES	YES	YES	YES
Grade-level fixed effects	YES	YES	YES	YES
School-type fixed effects	YES	YES	YES	YES

*Note:* The first column reports coefficients and standard errors from a logistic regression of *Funding* on *Having Self-donation*, social network, platform, project, teacher, and school levels of information using projects that did not receive donations from local donors. The second column is built on the first model by adding an interaction term between *Having Self-donation* and # of *Completed Projects*. The third column reports coefficients and standard errors from a logistic regression of *Funding* on *Having Self-donation, Local Donors Percent*, and its interaction terms with *Having Self-donation*, social network, platform, project, teacher, and school levels of information. Local Donor Percent has five different values (1-no local donor, 2- percent in the first quartile of percent of local donors (>0%), 3-percent in the second quartile, 4- percent in the third quartile, and 5- percent in the fourth quartile). The last column reports coefficients and standard errors from a logistic regression of *Funding* on *Having Self-donation*, social network, platform, project, teacher, and school levels of information using teachers' first projects. Table 1 provides variable definitions. \*\*\*, \*\*, and \* indicate statistical significance at the 1%, 5%, and 10% levels from two-tailed tests, respectively.

Variables	DV: To		ation/Reque unt %	sted	DV: Dista		Requested A \$)	mount	DV: A	verage	Donation T	ime
	Coeffs	SE	Coeffs	SE	Coeffs	SE	Coeffs	SE	Coeffs	SE	Coeffs	SE
Having Self-donation	3.868***	0.085	3.999***	0.088	- 34.96***	0.766	- 35.76***	0.786	- 7.053***	0.558	- 5.577***	0.573
# of Completed Projects	0.091***	0.005	0.139***	0.009	- 0.427***	0.049	- 0.724***	0.081	0.344***	0.035	0.891***	0.059
Having Self-donation×# of Completed Projects			-0.072***	0.011			0.442***	0.097			- 0.814***	0.071
Teacher and School Information	YES	5	YES	5	YES	5	YES	5	YES	5	YES	S
Project Information	YES	S	YES	5	YES	5	YES	5	YES	5	YES	S
Project Description Information	YES	5	YES	5	YES	5	YES	5	YES	5	YES	5
Social Network Information	YES	5	YES	5	YES	5	YES	5	YES	5	YES	5
Platform-level Information	YES	5	YES	5	YES	5	YES	5	YES	5	YES	5
Observations	465,5		465,5		465,5		465,5		465,5		465,5	
R-squared	0.12		0.12		0.19		0.19		0.07		0.07	
Log-likelihood	-21909		-21908		-32128		-32128		-30658		-30657	
Resource type fixed effects	YES		YES		YES		YES		YES		YES	
Project subject fixed effects	YES		YES		YES		YES		YES		YES	
Year-quarter fixed effects	YES		YES		YES		YES		YES		YES	
School state fixed effects	YES		YES		YES		YES		YES		YES	
Grade-level fixed effects	YES		YES		YES		YES		YES		YES	
School-type fixed effects	YES	5	YES	>	YES	>	YES	5	YES	5	YES	5

Table WE4. Effects of Self-Donations on Funding Success (Alternative D.V.s)

*Note:* The first column reports coefficients and standard errors from an OLS regression of *Total Donation/Requested Amount %* on *Having Self-donation*, social network, platform, project, teacher, and school levels of information. The second model builds on the first model by adding an interaction term between *Having Self-donation* and # of *Completed Projects*. The third column reports results from replacing the dependent variable in the first model with *Distance to the Requested Amount (\$*). The fourth column reports results from replacing the dependent variable in the second model with *Distance to Requested Amount (\$*). The fifth and last columns repeat the analyses in columns 3 and 4 but replace the dependent variable to *Average Donation Time*, respectively. Table 1 provides variable definitions. \*\*\* indicates statistical significance at the 1% level from two-tailed tests.

Variables	Funding S	buccess	Total Donation/Requested Amount %		Distance to R Amount	•	Average Donation Time		
	Coeffs	SE	Coeffs	SE	Coeffs	SE	Coeffs	SE	
Frequency	-0.0831***	0.00507	-0.661***	0.0320	5.262***	0.300	0.806***	0.200	
Recency	-0.160***	0.00560	-1.043***	0.0369	3.535***	0.345	17.43***	0.230	
Money Value	0.731***	0.00737	5.672***	0.0466	-49.90***	0.437	-12.38***	0.291	
Teacher and School Information	YES	5	YES	5	YES		YES		
Project Information	YES	5	YES		YES		YES		
Project Description Information	YES		YES		YES		YES		
Social Network Information	YES		YES		YES		YES		
Platform-level Information	YES		YES		YES		YES		
Observations	205,020		205,032		205,032		205,032		
R-squared			0.189		0.213		0.130		
Pseudo R2	0.25	5							
Log-likelihood	-52671	.522	-934284	4.01	-13931(	)1.9	-130946	54.9	
Resource type fixed effects	YES	5	YES		YES		YES		
Project subject fixed effects	YES	5	YES		YES		YES		
Year-quarter fixed effects	YES		YES		YES		YES		
School state fixed effects	YES	5	YES		YES		YES		
Grade-level fixed effects	YES	5	YES		YES		YES		
School-type fixed effects	YES	5	YES	YES		YES		5	

 Table WE5. Effects of Self-Donation Frequency, Recency and Amount on Funding Success, Total Donation/Requested Amount %, Distance to Requested Amount (\$), and Average Donation Time

*Note:* The first column reports coefficients and standard errors from a logistic regression of *Funding* on *Frequency, Recency, Money Value,* social network, platform, project, teacher, and school levels of information. The second column reports results by replacing DV with *Total Donation/Requested Amount %*. The third column reports results by replacing DV with *Distance to Requested amount (\$)*. The last column reports results by replacing DV with *Average Donation Time*. Table 1 provides variable definitions. \*\*\*, \*\*, and \* indicate statistical significance at 1%, 5%, and 10% levels from two-tailed tests, respectively. The sample includes 205,032 projects from 96,044 teachers.

## Web Appendix F: An Example of Impact Letters

I want to express my wholehearted gratitude for your generous donation to my classroom library. It fills my heart with joy when I remember the look on my students' faces when the books arrived.

Your donation has helped my students tremendously. First, they are extremely eager to read. Knowing that there are so many books in the classroom, they read a lot, take the books home, and they frequently ask to exchange their books after they have finished reading them. Second, they now have reading books to take home and thus do not have to go out to the streets to look for distractions or walk to the neighborhood library. Third, their fluency scores have improved tremendously. Two months ago, my fifth graders were reading an average of 131.5 words per minute. After they have been reading the new books, their fluency has gone up 13 words to an average of 144.4 words per minute! That's an almost 10% increase! The fourth graders improved from and average of 123 words per minute to an average of 129.6 words minute for an increase of about 5% or 6.6 words per minute!

As you can see, your donation has had a great impact on the achievement and morale of my students.

With gratitude, Mr. Rivas

Variables	M1		M2		M3		
	Coeffs	SE	Coeffs	SE	Coeffs	SE	
Self-donation	-8.687***	0.391	-5.962***	0.613	-19.695***	1.193	
Donation Order	1.452***	0.031	1.291***	0.052	1.385***	0.031	
Donation Amount	-1.091***	0.132	-1.157***	0.214	-1.058***	0.132	
Percent of Requested Amount Funded So Far	-1.417***	0.008	-1.378***	0.013	-1.421***	0.008	
Avg Donation (Local) So Far	-5.112***	0.203	-4.588***	0.326	-5.254***	0.203	
# Of Accumulated Self-donation	-39.657***	1.231	-38.574***	1.988	-39.156***	1.232	
Accumulated Self-donation Amount	23.173***	0.740	19.220***	1.185	23.871***	0.744	
Days to Expiration	82.129***	0.507	85.345***	0.805	82.138***	0.507	
Previously Co-donated	23.855***	0.758	24.518***	1.170	23.784***	0.758	
Having Donation Relationship	4.240***	0.483	5.472***	0.805	4.191***	0.483	
Network Density (donation)	18.956***	0.797	20.594***	1.302	17.866***	0.805	
#PlatformProjects	7.537***	0.305	9.869***	0.496	7.553***	0.305	
#PlatformProjects(same zip code)	-47.124***	0.171	-47.728***	0.277	-47.177***	0.171	
Residual					6.890***	0.705	
Constant	3,927.289***	11.482	3,911.460***	17.874	3,926.835***	11.484	
Observations	2,682,4	55	1,057,227		2,682,455		
R-squared	0.463	3	0.456	5	0.40	53	
Log-likelihood	-170204	461	-672801	8.5	-17020	0405	
Year-month fixed effects	YES		YES		YE	S	
Teacher fixed effects	YES		YES		YE	S	
Project fixed effects	YES		YES		YES		

## Web Appendix G: Full Results of Main Paper

Table WG1. Effects of Self-donation on Hours to Next Donation (Corresponding to Table 2 in Main Paper)

*Note:* The first column (M1) reports coefficients and standard errors from an OLS regression of *Hours to Next Donation* on *Self-donation*, donation information, social network information, and platform-level information with project-fixed effects. The second column (M2) estimates the same model as M2 using samples matched on teacher, project description, network, and platform-level information. The last column (M3) estimates the same model as M1 using an instrumental variable approach. Table 1 provides variable definitions. \*\*\* and \* indicate statistical significance at the 1% and 10% levels from two-tailed tests, respectively. The sample includes 2,682,455 donations from 465,530 projects. Because the dependent variables are *Hours to Next Donation, the* first donations (465,530 donations) are excluded.

		i ili iviuli	r uper)					
March 1	M1	M2	M2		13	M4		
Variables	Coeffs	SE	Coeffs	SE	Coeffs	SE	Coeffs	SE
Having Self-donation					0.448***	0.010	0.473***	0.011
# of Completed Projects	0.030***	0.001	0.029***	0.001	0.027***	0.001	0.047***	0.003
Having Self-donation ×# of Completed Projects							-0.027***	0.003
Teacher Gender(female)	-0.210***	0.016	-0.217***	0.016	-0.214***	0.016	-0.211***	0.016
Poverty(highest)	0.080***	0.029	0.075***	0.029	0.096***	0.029	0.094***	0.029
Poverty(high)	-0.071**	0.029	-0.075**	0.029	-0.074**	0.029	-0.076**	0.029
Poverty(moderate)	0.003	0.030	-0.001	0.030	-0.016	0.030	-0.017	0.030
Equity Focus	0.035*	0.018	0.038**	0.018	0.037**	0.019	0.038**	0.019
Reached Students	-0.026***	0.005	-0.031***	0.005	-0.029***	0.005	-0.029***	0.005
Requested Amount (log)	-1.163***	0.008	-1.201***	0.008	-1.210***	0.008	-1.209***	0.008
Corporate Matching	0.312***	0.012	0.309***	0.012	0.316***	0.012	0.314***	0.012
Home Double	1.092***	0.029	1.099***	0.029	1.112***	0.029	1.111***	0.029
# of Co-donations	0.411***	0.006	0.410***	0.006	0.399***	0.006	0.393***	0.006
# of Donation Relationships	-0.268***	0.006	-0.263***	0.006	-0.306***	0.006	-0.298***	0.006
Network Density (project)	0.130***	0.038	0.126***	0.038	0.129***	0.037	0.125***	0.037
#PlatformProjects	-0.225***	0.008	-0.220***	0.008	-0.201***	0.008	-0.200***	0.008
<pre>#PlatformProjects(same zip code)</pre>	0.551***	0.006	0.550***	0.006	0.530***	0.006	0.529***	0.006
Project Description Length			-1.709***	0.361	-1.185***	0.366	-1.196***	0.366
Average Characters per Word			0.472***	0.150	0.464***	0.152	0.464***	0.152
Text Familiarity			-0.066***	0.012	-0.070***	0.012	-0.070***	0.012
Text Concreteness			0.033***	0.012	0.032***	0.012	0.032***	0.012
Text Flesch-Kincaid Readability			0.559***	0.102	0.416***	0.103	0.419***	0.103
Text Valence			-0.028***	0.006	-0.026***	0.006	-0.026***	0.006
Text Extremity			-0.006	0.005	-0.006	0.005	-0.006	0.005
Text Emotionality			0.003	0.005	0.003	0.005	0.003	0.005
Project Description(social)			0.012	0.017	0.023	0.017	0.022	0.017
Project Description(achieve and reward)			0.228***	0.012	0.197***	0.012	0.197***	0.012
Project Description(punctuation)			0.001	0.011	-0.002	0.011	-0.002	0.011

**Table WG2.** Effects of Self-Donations and Moderating Effects of Teacher Experience on Funding Success (Corresponding to Table4 in Main Paper)

Project Description(informal) Project Description(risk) Project Description(spelling) Constant	11.442***	1.564	0.005 -0.043*** -0.156*** 20.113***	0.011 0.011 0.012 2.757	0.003 -0.044*** -0.179*** 17.143***	0.011 0.011 0.012 2.787	0.003 -0.044*** -0.179*** 17.204***	0.012
Observations	465,53	30	465,53	0	465	,530	465,5	30
Pseudo R2	0.152	2	0.1556	5	0.1	609	0.161	12
Log-likelihood	-154399.51		-153784.23		-152815.1		-152763.8	
-			M2 v.s. 1	M1	M3 v.	s. M2	M4 v.s.	M3
LR x2			1230.56 (p<	<0.01)	1938.27	(P<0.01)	102.60 (p	< 0.01)
Resource type fixed effects	YES		YES		Y	ËS	YES	
Project subject fixed effects	YES		YES		Y	ES	YES	5
Year-quarter fixed effects	YES		YES		Y	ES	YES	5
School state fixed effects	YES		YES		YES		YES	5
Grade-level fixed effects	YES		YES		Y	ES	YES	5
School Type Fixed Effects	YES	5	YES		Y	ES	YES	5

*Note*: The first column (M1) reports coefficients and standard errors from a logit regression of *Funding* on the teacher, school, project, social network, and platform level information. The second column (M2) estimates the same model but adds project description information. The third column (M3) estimates the same model as M2 but adds *Having Self-donation*. The fourth column (M4) estimates the same model as M3 but adds an interaction term between *Having Self-donation* and ×# *of Completed Projects*. Table 1 provides variable definitions. \*\*\*, \*\*, and \* indicate statistical significance at the 1%, 5%, and 10% levels from two-tailed tests, respectively. The sample includes 465,530 projects.

	Na Salaatian Ca	Selection Correction with Heckprobit Model				
Variables	No Selection Co	Outcome Equation		Selection Equation		
	Coeffs	SE	Coeffs	SE	Coeffs	SE
Having Self-donation	0.972***	0.008	0.563***	0.005	0.202***	0.006
Teacher Gender(female)	0.105***	0.013	0.044***	0.007	-0.113***	0.009
# of Completed Projects So Far	2.204***	0.009	1.100***	0.004	0.0139***	0.001
Poverty(highest)	-0.090***	0.025	-0.042***	0.014	0.031*	0.016
Poverty(high)	-0.044*	0.026	-0.030**	0.015	-0.055***	0.016
Poverty(moderate)	0.034	0.026	0.022	0.015	-0.006	0.017
Reached Students	-0.005	0.005	-0.004	0.003	-0.015***	0.003
Corporate Matching	0.390***	0.009	0.260***	0.005	0.416***	0.006
Home Double	-0.096***	0.018	0.007	0.010	0.589***	0.014
Requested Amount (log)	0.263***	0.007	0.054***	0.005	-0.642***	0.005
Project Description Length	-4.178***	0.334	-2.443***	0.188	-1.137***	0.201
Average Characters per Word	-0.314**	0.135	-0.117	0.076	0.162**	0.082
Text Familiarity	0.058***	0.010	0.030***	0.006	-0.031***	0.006
Text Concreteness	-0.019**	0.010	-0.011**	0.006	0.012**	0.006
Text Flesch-Kincaid Readability	1.291***	0.094	0.758***	0.053	0.368***	0.056
Text Valence	-0.022***	0.005	-0.014***	0.003	-0.016***	0.003
Text Extremity	-0.001	0.004	-0.000	0.002	-0.004	0.003
Text Emotionality	-0.005	0.004	-0.002	0.003	0.002	0.003
Project Description(achieve and reward)	0.010***	0.001	0.007***	0.001	0.010***	0.001
Project Description(social)	0.037***	0.014	0.021***	0.008	0.018*	0.009
Project Description(punctuation)	-0.031***	0.009	-0.019***	0.005	-0.008	0.006
Project Description(informal)	0.006	0.009	0.002	0.005	0.002	0.006
Project Description(risk)	0.027***	0.009	0.013**	0.005	-0.023***	0.006
Text Description(spelling errors)	-0.049***	0.011	-0.043***	0.006	-0.109***	0.007
Equity Focus	-0.031**	0.016	-0.013	0.009	0.027***	0.010
# of Co-donations					0.222***	0.003

## Table WG3. Effects of Self-Donations on Having Impact Letter (Corresponding to Table 5 in Main Paper)

# of Donation Relationships Network Density (project) #PlatformProjects #PlatformProjects(same zip code) Rho Constant	19.653*** 2.438	11.890*** 1.353	-0.166***         0.003           0.019         0.020           -0.115***         0.004           0.270***         0.003           0.579***         0.018           11.776***         1.511
Observations	403,820	403,820	465,530
Pseudo R2	0.306	t	n/a
Log-likelihood	-193634.39	-348	345.31
Resource type fixed effects	YES	YES	YES
Project subject fixed effects	YES	YES	YES
Year-quarter fixed effects	YES	YES	YES
School state fixed effects	YES	YES	YES
Grade-level fixed effects	YES	YES	YES
School-type fixed effects	YES	YES	YES

*Note:* The first column reports coefficients and standard errors from a logistic regression of *Impact Letter* on *Having Self-donation*, platform, project, teacher, and school levels of information. The sample includes 403.802 projects. The last two columns report coefficients and standard errors from a Heckprobit regression. Outcome equation refers to the analyzed sample of 403,820 successfully funded projects. Selection equation refers to the sample of 465,530 projects which were either successful or failed to raise requested amount. The exclusion restriction used in the selection equation is # of *Co-donations, # of Donation Relationships, Network Density (project), #PlatformProjects* and *#PlatformProjects(same zip code)*. Value of *Rho* is statistically significant (*p*<0.01) and shows the existence of selection, justifying the use of Heckman selection correction technique. Table 1 provides variable definitions. \*\*\* indicates statistical significance at the 1% level from two-tailed tests. All estimations include resource type, project subject, school state, school grade and type, and project year-quarter fixed effects.

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