2018

How Do Nascent Social Entrepreneurs Respond to Rewards? A Field Experiment on Motivations in a Grant Competition

Ina Ganguli
University of Massachusetts Amherst and Stockholm School of Economics (SITE)

Marieke Huysentruyt
HEC Paris and Stockholm School of Economics (SITE)

Chloé Le Coq
Stockholm School of Economics (SITE)

How Do Nascent Social Entrepreneurs Respond to Rewards? A Field Experiment on Motivations in a Grant Competition*

Ina Ganguli[1,3], Marieke Huysentruyt[2,3], and Chloé Le Coq[3]

[1] University of Massachusetts Amherst
[2] HEC Paris
[3] Stockholm School of Economics (SITE)

November 2018

Abstract

We conducted a field experiment to identify the causal effects of extrinsic incentive cues on the sorting and performance of nascent social entrepreneurs. The experiment, carried out with one of the United Kingdom's largest support agencies for social entrepreneurs, encouraged 431 nascent social entrepreneurs to submit a full application for a grant competition that provides cash and in-kind mentorship support through a one-time mailing sent by the agency. The applicants were randomly assigned to one of three groups: one group received a standard mailing that emphasized the intrinsic incentives of the program, or the opportunity to do good (*Social* treatment), and the other two groups received a mailing that instead emphasized the extrinsic incentives - either the financial rewards (*Cash* treatment) or the in-kind rewards (*Support* treatment). Our results show that an emphasis on extrinsic incentives strongly affects who applies for the grant and consequently the type of submissions received. The extrinsic reward cues "crowded out" the more prosocial candidates, leading fewer candidates to apply and fewer applicants targeting disadvantaged groups. Importantly, while the full applications submitted by candidates in the extrinsic incentives groups were more successful in receiving the grant, their social enterprises were less likely to be successful at the end of the one-year grant period. Our results highlight the critical role of intrinsic motives to the selection and performance of social enterprises and suggest that using extrinsic incentives to promote the development of successful social enterprises may backfire in the longer run. (JEL: C93, J24, L31, 035)

Keywords: social entrepreneurship, field experiment, incentives, motivations, grants

*The authors express gratitude to our partner organization for implementing the field experiment and for providing us with the relevant data. We gratefully acknowledge support from the European Union's Seventh Framework Program for research, technological development and demonstration under grant agreement 613500 (SEFORÏS project). We appreciate assistance from Bogdan Prokopovych and Edvard Von Sydow. We thank participants of SEFORÏS Consortium meetings, the SITE network conference, SnO Research Day at HEC Paris, the IGL Research Meeting at Harvard Business School, the policy seminar at OECD, the Stockholm Behavioral workshop, NGO workshop, and seminars of the World Bank, IDB, Riga SSE, CergyParis, Bologna University, Singapore Management Univ. and Mitali Banerjee, Mark Bernard, Marieke Bos, Emma von Essen, Patrick Gaulé, Johanna Mair, John Mawdsley, Topi Miettinen, James Phipps, Tomasz Obloj, William Ocasio, and Ute Stephan for useful comments and feedback.

1. Introduction

Today's major societal challenges – from climate change, migration to inequality - urgently call for new ideas and approaches that can create both economic growth and social value. Recent years have seen a surge of support programs targeted specifically at nascent social entrepreneurs, new actors on the innovation scene, widely thought invaluable to bring forth and inspire such ideas (OECD 2011).[1]

To attract high-quality candidates, these support programs typically not only appeal to candidates' intrinsic motivation to make a real, positive difference in society, but also offer participants extrinsic rewards, mostly cash and in-kind support. They thus seek to tap *multiple* motives - that is, extrinsic (financial or material) and intrinsic (prosocial) motives - for candidates to apply and pursue a social entrepreneurial career, as if these motives are complementary. Yet, it is unclear how these mixed incentives affect *who* applies (the size and composition of the applicant pool) and application performance, and whether selection causally determines social entrepreneurial success.

This paper presents novel experimental evidence showing that extrinsic reward cues strongly affect who applies for support, but also the type of project submitted. A key and novel contribution of our paper is that we are able to characterize the sorting effect of extrinsic reward cues in full: both who opts in and who opts out of the competitive grant-seeking setting. Furthermore, leveraging our experimental design and longitudinal data on the grant program participants, we are also able to assess the causal impacts of selection on subsequent social entrepreneurial outcomes.

To conduct the field experiment, we collaborated with one of the United Kingdom's largest support agencies for nascent social entrepreneurs. The experiment encouraged 431 nascent social entrepreneurs to submit an application for a 12-month grant program that provides cash and in-kind mentorship support to

[1] Social entrepreneurs combine societal goals with entrepreneurial spirit. They focus on achieving wide social, environmental or community objectives, through the provision of goods and services in markets, private and public alike (Mair and Marti 2006; Huysentruyt et al. 2016). They are primarily intent on exploiting opportunities for social change and improvement, rather than traditional profit maximization (Zahra et al. 2009). A nascent social entrepreneur is defined as someone who is involved in the start-up process of a social enterprise but has not paid salaries, wages, or any other payment to the owners for more than three months (Bosma et al. 2016). Nascent social entrepreneurs typically have a plan but have yet to experience three months of positive operating revenues (Reynolds et al. 2004).

social entrepreneurs, through a one-time mailing sent by the support agency via email after they had indicated initial interest in the program. The individuals were randomly assigned to three groups: one group received a standard mailing emphasizing the intrinsic incentives only - the opportunity to do good (*Social* treatment), and the other two groups received a mailing that emphasized the extrinsic reward incentives - either the financial rewards (*Cash* treatment) or the in-kind rewards (*Support* treatment) that the grant program provides. A key feature of our design is that we consider the full pool of potential applicants as we observe all those who had successfully completed an Expression of Interest (EOI) form, a first required screening. Moreover, because the groups only differ in the salience of distinct incentives, while all other factors such as application requirements and the actual rewards received are kept equal, we can isolate the effect not only of distinct incentive cues on sorting and application efforts, but also of selection on the subsequent performance of nascent social enterprises.

In our analysis, we combine several data sources and measurement methods. First, we exploit the text responses contained in the EOI to develop linguistic measures of the candidates' orientations or proclivities (such as, prosocial or money orientation) *before* treatment. Second, using the written application forms in full, we are able to compare, across treatments, how much effort candidates expended, holding constant ex ante applicant quality. Further, we use the detailed application materials and end-of-program survey, both administered by our partner organization, to empirically capture relevant measures of the start-up venture type (such as the target beneficiary) and social entrepreneurial performance outcomes. Combined, these data allow us to determine whether nascent social entrepreneurs' motives impact their venture's early success.

We have three main findings. First, extrinsic reward cues (*Cash* and *Support* treatments*)* raised application performance. Relative to the *Social* treatment, candidates exposed to the extrinsic reward cues were 15 percent more likely to be awarded the grant. Using a simple word count measure as a proxy for effort, we find that candidates in these groups wrote significantly longer responses when filling in the application form. This suggests that the extrinsic reward cues elicited greater effort.

Second, the extrinsic incentives cues impacted the size and composition of the applicant pool. Compared to the *Social* treatment, the *Cash* treatment and, to a smaller extent, the *Support* treatment led to fewer candidates applying. These extrinsic reward cues also altered the type of applicant and as a consequence also the type of social enterprise projects proposed, relative to the *Social* group. We find no difference in the ex ante quality and experience of candidates across groups, but applicants in the *Cash* and *Support* treatments were significantly less prosocial and more money-orientated candidates (as shown by the linguistic measures of prosocial and money orientation using text responses in the EOI prior to the intervention). Indeed, the full applications in the *Cash* treatment group were around 22 percentage points less likely to mention that disadvantaged groups will benefit from the future social enterprise.

Third, the crowding-out effect of the pro-socially motivated applicants led to lower performance of social entrepreneurial start-ups in the extrinsic reward groups. The grantees in the *Cash* and *Support* treatment groups were relatively less likely to be successful at the end of the one-year grant period. In particular, relative to the grantees in the *Social* treatment group, at the end of the one-year grant period, they spent on average 8 hours less working on their venture each week; had created significantly fewer job opportunities in the prior 12 months; and fewer people directly benefited from their venture over the prior 12 months. Taken together, our results highlight the critical role of intrinsic motives for the performance of nascent social entrepreneurial enterprises, and show that using extrinsic incentives to promote the emergence of nascent social entrepreneurship may backfire in the longer run.

By demonstrating that subtle incentive cues may affect who participates to a competitive grant-seeking setting and the effort they put forth, these results have important implications for both the effectiveness of entrepreneurship support programs and entrepreneurship policy. Program frames are often chosen inadvertently, even in a setting where intrinsic motivation is known to play an important role, as if they matter little. If our results generalize to entrepreneurship support program take-up and even more generally to employee program take-up, then the framed message of such programs should always be carefully chosen. Further, given the increasing proliferation of social enterprise support programs and nascent social entrepreneurs, it is important to gain insight into the types of individuals these programs

benefit most. If the goal of these programs is to develop successful new social enterprises, our results suggest that these programs may be effective by investing in individuals that are more intrinsically motivated or less extrinsically motivated.

This paper contributes to several strands of literature. First, our paper ties into the literature on the crowding out effect of extrinsic rewards. In 1972, Richard Titmuss argued against monetary compensation for blood donors because of the potential crowding out effect of such a reward, which could lower donations. Recent experimental research has studied the effects of extrinsic (monetary) rewards on effort choice, mostly in prosocial settings like blood donations (Lacetera et al. 2014) or charitable donations (e.g., Gneezy and Rustichini 2000; Ariely et al. 2009; for review articles see Gneezy et al. 2011 and Bowles and Polania-Reyes 2012).[2] Most experimental designs, however, do not allow for sorting, and thus largely sideline the selection effect (Lazear et al. 2012). Our data allow us to directly evaluate and contrast *both* those who opted in and those who opted out of the grant competition, and hence advance a more complete characterization of treatment effects compared to closely related work.[3]

In a paper closely related to ours, Ashraf et al. (2016) ask whether job candidates attracted by career incentives have traits that differ from those attracted by 'doing good' and whether this selection affects subsequent performance. Unlike our experimental design, however, their setup only provides data on who applied (selected in) but not on who did not apply (opted out), thus they are unable to address the question of crowding out of potential applicants. Our paper is, to our knowledge, the first to show that extrinsic

[2] The experimental literature has found that extrinsic monetary rewards may reduce intrinsic motivation, leading to a reduction in effort, particularly in settings where intrinsic motivation is very salient (Hossain and Li 2014), when rewards are perceived to be too low (Gneezy and Rustichini 2000), and effort (or contributions) are publicly observable (Ariely et al. 2009), though this effect may well vary across individuals. Lacetera et al. (2014) show using a field experiment that they conducted together with the American Red Cross that experienced, former blood donors increased blood donations following extrinsic rewards possibly because they were less concerned with rewards undermining their self-image or intrinsic motivations. The term 'crowding out effect' has previously also been used to denote the reduction in individual spending on a public good, like private donations to charities, in response to an increase in government spending, like government grants to charities (e.g., Andreoni and Payne 2011; List 2011).

[3] Most RCTs do not collect detailed data on those who do not respond to a particular treatment. A key feature of our design is that the intervention takes place between the two application stages (the "Expression of Interest" and the subsequent "Full Application" stage), allowing us to check that our randomization has really worked: that is, that the incentive cues have effectively crowded in and out different candidates based on their individual orientation or proclivity (measured ex ante).

incentive cues can crowd in the more money-oriented, less socially oriented nascent social entrepreneurs, which may in turn adversely impact the early-stage performance of their mission-driven organizations.[4] In a similar vein, Desserano (2017) finds that financial incentives can crowd out the most prosocially motivated applicants for a job vacancy at an NGO, and lead to lower performance of the new recruits. Together with Dessarano (2017), our findings both extend the boundary of the crowding out effect to settings where extrinsic rewards (concretely, here, £5,000 and in-kind one-to-one business support for one year) are nontrivial (Gneezy and Rustichini 2000) and intrinsic motives are highly salient (Hossain and Li 2014), and emphasize the heterogeneity of this effect in our study population. We demonstrate that monetary incentives had a strong motivating effect at application stage, but only for money-orientated candidates. Finally, and more generally, within the large body of research on incentives, selection and performance (with seminal contributions by Laffont and Maskin (1982); and the classic Roy model (1951))[5], identifying the causal effects of selection on outcomes has been notoriously difficult (e.g. Manski (1993) and the recent literature review on extrinsic and intrinsic motives and work performance by Cassar and Meier (2018)). We address this challenge by exploiting our experimental design to exogenously vary the sorting of candidates, and then by exploiting longitudinal data to isolate the effects of any sorting on subsequent performance measures.

A second contribution is that our paper advances the emerging literature using experiments to better understand how institutional and organizational designs shape innovation outcomes (see for an overview Boudreau and Lakhani 2016 and Brüggeman and Bizer 2016).[6] Prior research has experimentally studied

[4] This result is in line with the labor market literature stressing that "mission-oriented" workers exert more effort (e.g. Besley and Ghatak 2005). Also, Deci et al. (1999) provide an extensive overview of the experimental literature looking at the effects of extrinsic rewards on intrinsic motivation.

[5] In the field of economics, the question of how extrinsic and intrinsic motives interact has received relatively little attention presumably because economists have routinely assumed either that intrinsic motives are absent, or if they recognized motives other than self-interest, assumed (for the most part unwittingly) that the two sets of motives are separable (Bowles 2016).

[6] There also exists a related experimental literature on entrepreneurship that explores the relation between entrepreneurship training programs and entrepreneurial outcomes (e.g., de Mel et al. 2014). To our knowledge, these studies do not look specifically at the sorting effects induced by changes in a program (or its presentation), nor at the potential crowding out effect of explicit monetary transfers tied to program participation.

the effects of subsidies and other public support programs on innovativeness (e.g., Brüggeman and Proeger 2017), and analyzed creativity under different payment regimes (e.g., Ederer and Manso 2013). We shift focus in two important ways: First, we consider measures designed to stimulate *social* or *sustainable business innovations*, innovations that are both economic and social in their means and ends. Given the hybrid nature of the innovations pursued by social entrepreneurs, it is a priori unclear how extrinsic incentives might affect sorting and performance in our setting. To date, there has been very little experimental work on social innovation, despite the recent, rapid surge of policy-making interest.[7] Second, thanks to our unique design, we are able to gauge the relative importance of intrinsic and extrinsic motivation to socially or sustainably innovate.

Third, our paper also contributes to the emerging literature on nascent entrepreneurship. Nascent social entrepreneurs, in particular, have received little scholarly attention so far, in part because they are especially difficult to find.[8] There exist valuable empirical studies on the motives of nascent social entrepreneurs, which are mainly based on small samples (e.g. Germak and Robinson 2014; Renko 2013). However, these prior studies rely on self-reported motives, which relative to our own behavioral measures, are more susceptible to survey bias. Further, we complement (and cross-validate) our behavioral measure of motives with linguistic indicators of self-, other-, social process- and money-orientation (similar to approach in Chandra (2016)), which we derive by applying two linguistic software programs (LIWC and DICTION) on the applicants' rich text responses in their EOI statements.

Finally, our experimental manipulation is motivated by a large and robust literature in the social sciences on the framing effect. That is, the fact that individual choices are remarkably susceptible to the way information is presented. Bless and Schwarz (1998) and Wänke et al. (1997), among others, argue that subtle content cues can affect the ease with which goals (motives) come to mind, even shape what we value,

[7] von Essen et al. (2017) study joint exploration for the public good, and thereby deploy a novel experimental paradigm to analyze individual's sequential exploration decisions, when information and pay-off externalities co-exist.
[8] Nascent social entrepreneurs represent a 'hidden' population (Heckathorn 1997). (i) They are *rare* (seldom occurring and geographically dispersed); (ii) there exists no administrative database that can be used as a sampling frame; and (iii) they are *difficult to identify* (e.g., because they do not always self-identify as a nascent social entrepreneur and public acknowledgment is erratic and subjective).

and alter subsequent behavior. While this earlier literature is mostly based on laboratory experiments, our study considers a real-life setting. Our paper is among the few studies (Dal Bó et al. 2013, Ashraf et al. 2016, and Desaranno 2017) that demonstrate empirically the power of minor content cues in the domain of important career-related decisions. Several other field experiments have similarly evidenced strong effects of seemingly minor content cues on decision-making, in the realms of consumer finance (Choi et al. 2017), charity giving (Kessler and Milkman 2018), academic science (Ganguli et al. 2017) and crowd science (Lyons and Zhang 2018).

The remainder of this paper proceeds as follows. Section 2 outlines our main behavioral hypotheses. Section 3 details the setting and experimental design. Section 4 describes the experiment and the data. Section 5 presents our empirical results, and Section 6 concludes.

2. Behavioral Hypotheses

This section presents several behavioral mechanisms through which the provision of extrinsic incentive cues may affect the sorting and performance of the grant applicants. In particular, we discuss whether extrinsic incentive cues affect the type and the number of individuals who apply for the grant as well as the type of social venture project.

Incentive-Effort Effect. Nascent social entrepreneurs may straightforwardly respond to extrinsic incentives by being more likely to apply and also increase application effort (DellaVigna and Pope 2018). Relative to the intrinsic rewards (making a real societal impact), the extrinsic rewards are more immediate (short term) and tangible. Indeed, processes that stimulate social change or produce a real social impact typically demand time. The delay of intrinsic rewards versus the immediacy of the extrinsic rewards provides an additional argument for why the extrinsic reward cues are likely to have a relatively bigger impact on application submissions (Woolley and Fishbach 2016).[9] If the incentive-effort hypothesis holds,

[9] Interestingly, in our setting, the money value of the one-to-one business support (explicitly mentioned in the *Support* treatment) is similar to the cash reward (explicitly mentioned in the *Cash* treatment). This 'value-equivalence' provides us with an opportunity to explore whether the nature of the reward alone alters the performance response to its cue.

candidates exposed to the extrinsic reward cues should expend greater effort, and as a result be more likely to submit a successful application than candidates exposed to the intrinsic incentive cue only. In our setting, the word count of the full application as well as its success rate are used as proxy measures of application effort.

Quality Selection Effect. As in Dal Bó et al. (2015), emphasizing extrinsic motivations may increase the quality of the applicant pool. More specifically, as higher quality applicants have better outside options, on the margin, they will be more likely to apply in the extrinsic reward treatment group. Further, as in Deserrano (2017), the extrinsic reward cues may also be interpreted as conveying information, signaling that becoming a social entrepreneur is difficult. These effects should lead to a greater share of experienced, skilled applicants following the extrinsic reward cues than following the intrinsic reward cue. To measure the quality of the candidates, we run a readability test of the EOI and use several proxy measures of prior experience and ability that are embedded in the EOI.

Crowding Out and Crowding In Effects. Candidates who are less money-orientated may be more inclined to opt out of the grant competition following a monetary incentive cue. Vice-versa, candidates who are more money-orientated may well be more inclined to opt in. Further, the extrinsic incentive cues may crowd out the more prosocial candidates and crowd in their less prosocial counterparts. To see the underlying mechanism, assume that being a social entrepreneur affects the applicant's utility function in two ways: positively through the effect on her self-image or self-identity (e.g., moral satisfaction of 'doing good') (Exley 2018), but also negatively as a direct consequence of putting time or money into this project. Because (monetary or non-monetary) rewards increase the applicant's utility but may also negatively affect her self-image or -identity,[10] they lead the more socially-motivated individuals to opt out of submitting a full application (the crowding-out effect) and the more money-oriented applicant to opt in (the crowding-in effect). We use the rich text fields of the initial EOI to produce linguistic measures of the candidates' self-, other-, social process- and money-orientation (described in detail in Section 4.1). As these measures

[10] This assumption is very common in all formal analyses looking at how individuals respond to incentives, given existing intrinsic and extrinsic motivation (e.g. Bénabou and Tirole 2003)

capture the candidates' orientation prior to our intervention, they allow us to test both the crowding out and crowding in effects.

Table 1 summarizes our behavioral predictions at application stage. Furthermore, if the extrinsic reward cues produce a quality selection effect, then successful candidates in the *Cash* and *Support* treatment groups should outperform their counterparts in the *Social* treatment group over time, such as by the end of the 12-month grant period. However, holding applicant quality constant, how crucial extrinsic motivation is (compared to intrinsic motivation alone) in the performance of the nascent social enterprise is an empirical matter, which our design and data also allow us to shed light on.

3. Setting and Experimental Design

3.1. Setting

Our partner organization is one of the United Kingdom's largest support agencies in the field of social entrepreneurship. To date, it has distributed over 12,000 grants and £40 million to social entrepreneurs across the UK. Grants include not only funding, but also advice through one-to-one support, access to networks and pro-bono mentors during a 12-month grant period. The structure of their program is similar to some of the most visible support programs targeted at social entrepreneurs across the globe.

The agency has a charitable status, and thus must abide to the non-distribution constraint and fulfill a charitable goal, which is to support the start-up of successful social ventures. The agency selects its grantees through a careful, competitive selection process. The *first round* of application consists of a short online application form (the EOI) that enquires about the social enterprise and the individual. Each EOI is reviewed by a committee of several grant managers. Those candidates whose EOI passes the first assessment are then invited to proceed to the *second round* of the application process: that is, fill in a full application form, requiring the applicant to explain in more detail their venture, past experiences and current needs. The committee of grant managers uses a standardized set of criteria to evaluate each candidate's full application (e.g. the social impact and relevance of the candidate's idea and the clarity of goals and outputs)

and decides on the grant winners. Our experiment was implemented between the first and second rounds of the application process (see Figure 1). The typical candidate applying for the grant program is at the start-up stage of her venture development, although much work has likely already gone into structuring and operationalizing her social enterprise idea.[11]

Today, approximately 2.3% of the UK's active population is involved in nascent social entrepreneurial activity or involved in the start-up process of a social enterprise (Bosma et al. 2016). Social enterprise has been high on the UK's national policy agenda for over 15 years now. To illustrate, in 2004, the UK introduced the 'community interest company', one of the first legal forms worldwide specifically for social enterprises. Further, in 2012, Big Society Capital was launched, a £600 million investment fund with monies coming from dormant bank accounts and specifically earmarked for other intermediary bodies (like the organization we collaborated with in the present study) to give financial or other support to third sector organizations. Public and private interest to promote social entrepreneurship is unlikely to fade in the near future, as social enterprises are widely hailed as essential partners to help build a more inclusive economy, especially in the United Kingdom where our partner operates.

While the specific features of our data and setting allow us to advance our understanding of how reward cues can affect sorting and performance of nascent social entrepreneurs (i.e. at the time of applying for the grant, the venture did not yet formally exist), we note that these specific features also raise issues of external validity. First, our sample frame coincides with the nascent social entrepreneurs who had already passed a first hurdle (the first round of the application process), rather than nascent social entrepreneurs at large. By voluntarily submitting an EOI, these nascent social entrepreneurs may have already shown special promise and verve. The influence of our incentive frames on candidates' behavior may well have been greater still had the intervention occurred at an earlier stage in the enterprise, thereby reaching a more

[11] Some examples: one of the candidates wished to start-up a venture that offers school-based, interactive cooking classes for students and their parents or caregivers that addresses the restrictions to cheap, healthy food. She had already run a successful mini-pilot sponsored by a local supermarket store, but at the time of applying for the grant, had not yet set up a legal entity or secured any sales. Another candidate wished to help reduce re-offending by supporting prisoners and ex-prisoners into further/higher education, accredited training, voluntary work and employment.

heterogeneous group of nascent social entrepreneurs more representative of the population at large. Second, despite a very high response rate to the end-of-program survey (close to 70%), caution must be applied when interpreting the longer-term performance effects of selection. Third, our experiment was not designed specifically to compare the effects of different sized rewards on application outcomes and subsequent social entrepreneurial success. Nevertheless, *ex post* exploratory analysis of a much smaller pool of large-grant applicants (with cash awards of up to £20,000 instead of £5,000) who we exposed to the same incentive cues suggests that the incentive cues for this larger award amount group yielded no average effect on effort to apply or selection.

3.2. Experimental design

The experiment was implemented for one year, from January 2015 to January 2016. By July 2017, all grant winners had finished their 12-month program period. Figure 1 illustrates the timing of the application process and our intervention.

As EOI submissions were considered on a rolling basis, we regularly received lists from our partner organization, with the anonymized identification numbers, gender, age and location of applicants who had submitted an EOI. Within each list, we randomly assigned individuals to one of the three treatment groups.[12] Treatments were designed to detect whether a subtle incentive cue can shape subsequent application outcomes. While all EOI applicants received the standard email to invite them to submit a full application (mentioning the requested information to provide as well as the timing of the selection process), these emails additionally embedded a different incentive cue: either emphasizing the extrinsic rewards (*Cash* or *Support*) or repeating the intrinsic rewards (*Social*) that the grant affords, as is standard in all

[12] To assess whether the primes themselves had an effect, as a manipulation check for 6 months, we introduced a fourth group that received the same email but without any prime at all. The sample includes only the individuals submitting an EOI during those 6 months, so the sample is small, and the estimates are noisy. In line with the behavioral literature on "framing effect", the *Prime* groups (i.e. *Cash*, *Support* and *Social* treatments) do differ from the *No Prime* group, suggesting that subtle cues embedded in the emails had an effect.

communication about the grant support program. An example of the full email is provided in Appendix A5. The text of the different treatment cues are as follows:

Social (email) treatment:

> *"If your application is successful, this award will provide you with the opportunity to make a difference by helping transform communities and tackle the many social challenges we face. We aim to bring people together in a common cause to inspire hope for the future and build people's confidence to act."*

Cash (email) treatment:

> *"If your application is successful, this award will provide you with various resources, notably a cash award of up to £5,000. We provide these financial resources that can help you take the next step in your journey."*

Support (email) treatment:

> *"If your application is successful, this award will provide you with 1-to-1 support with an Award Manager to help you take the next step in your journey. We work with you to grow your plans and access the help you need."*

Key to the research design is that while we vary the salience of incentives at the application stage, all individuals who receive the grant receive identical support from the agency, i.e. the same amount of funding and access to support. Furthermore, the committee of grant managers who subsequently reviewed the full applicants were blinded to the experiment.

4. Data and Empirical Strategy

4.1 Data

Our sample is comprised of all 431 candidates who had submitted a successful EOI between January 1, 2015 and January 1, 2016. We gathered detailed information on each candidate making use of four primary data sources: (1) the initial expressions of interest (or EOIs), (2) the actual full applications submitted, (3) various administrative data sources, and (4) survey responses to the end-of-the-grant questionnaire administered by our partner organization.

(1) The Expressions of Interest (EOI)

The EOI is submitted to the agency in the first step of the application process and provides us with *ex ante* (or prior to the intervention) information for each potential applicant. We exploited the demographic and other basic data about each applicant captured in the EOI, such as applicant gender, location, and age,

as well as its textual data, notably rich descriptions of the purpose of the applicant's venture as well as what is unique about it.

Using the field in the EOI asking the applicant to "Explain your venture and what is unique about it", we used various automated text analysis approaches to generate linguistic indicators of the applicants' orientation and measures of effort. First, we used the software program *Linguistic Inquiry and Word Count* (LIWC) to create measures of self- and other-orientation ("I" and "They"), orientation to interact with others (e.g. communicating, connecting, helping) and money-orientation (e.g., cash, bill, revenue) based on this field. LIWC allows us to search for over 4,500 words or word stems that have been categorized by independent judges into over 70 linguistic dimensions, ranging from pronouns, emotions, to social and cognitive processes (Pennebaker et al. 2015).

We additionally used the *DICTION* text analysis software, which includes thematic dictionaries composed of over 10,000 words developed to measure different aspects of political discourse (Hart and Caroll 2014), which has been used in the entrepreneurship literature (e.g. Short and Palmer 2008; Allison et al. 2014). We focus on DICTION's word lists related to prosocial references in text, such as "collectives", "cooperation" and "exclusion". Table A3 in the Appendix provides the definitions of each linguistic measure from the LIWC and DICTION manuals.

Moreover, we created a measure of the readability of this field, as a proxy measure of the candidate's ex ante 'quality'. To do this, we used the *quanteda* program that allows us to calculate a number of readability scores that have been used in recent economics and management literature, such as the Flesch-Kincaid, Dale-Chall, Gunning Fog, and SMOG (Simple Measure of Gobbledegook) measures (see e.g. Hengel 2018 for more information). Finally, we use a word count of this field as a proxy measure of the candidate's ex ante effort expended. The applicants' response to this question was limited to 200 words, compelling applicants to be concise but still informative.

To create additional measures of applicant quality, we assessed prior work experience in the for-profit sector and/or social sector[13] based on the answer given to the question: *"*What skills and experience make you the right person to ensure this venture is successful?*"* This was an open-ended question. Two researchers independently coded the responses to this question, and given the high inter-rater reliability (kappa-statistic measure of interrater agreement for the two measures was above 0.97; see Table A1 for a detailed overview), we randomly selected one set of the ratings to include in the analysis below. Our results are similar when we use the other set of the ratings instead.

Finally, we developed a proxy measure of the applicant's self-confidence based on the response given to a question about the potential social benefit of the applicant's venture, with possible choices being local, regional, national or international benefit. Answering that the venture would have national or international (as opposed to local or regional) was considered to be a proxy for overconfidence.[14]

(2) The Full Application

The full application form is submitted in the second stage of the application process after our email intervention. We used these data not only to measure our main treatment effects, but also to construct detailed measures about the applicant's project or venture.

We constructed a proxy for application effort using the word count of applicants' responses to two open-ended questions related to: (i) the non-financial support received and recognition of candidate's work (ii) the main challenges and how support will benefit the venture.[15]

[13] When the respondent mentioned prior work experience in a social enterprise, we coded this as work experience in both for-profit and social sectors.

[14] The literature often stresses the positive link between overconfidence and innovative activities. However, Herz et al. (2014) have recently shown that whilst overoptimism is often positively associated with innovation, judgmental confidence (i.e. the tendency to overestimate the precision of their information) is negatively linked to innovation. We consider that stating national or international level for their venture benefits is a sign of judgmental confidence.

[15] The applicant could also be invited to pitch their project in front of an Award panel. Whether or not the applicant was invited could have been another proxy for effort but unfortunately, we were not able to get access to this information.

The full application includes information about the venture's target beneficiaries. Entrepreneurial efforts that address the needs of disadvantaged groups and thus seek to improve social inclusion are widely perceived as pressing, and hugely important in terms of the societal impact that they can make. Today, most policy-making bodies, such as the European Commission and OECD, regularly track whether an enterprise affects the lives of disadvantaged groups as a proxy measure for their societal impact (inclusion). Hence, we created a dummy variable indicating whether the target beneficiaries of the venture belong to a disadvantaged group such as minority groups or persons with disabilities, or belong to more general groups such as adults and/or children.

Finally, we used the textual responses to the question "What are your main challenges in the next 12 months and how will working with us help you to deal with them?" to establish whether their main challenges were money-related, social impact related or business advice and support related. Two researchers independently coded the responses to this question. The consensus and consistency estimates reported in Table A1 suggest high inter-rater reliability.

(3) Administrative data

We used the archival records of our partner organization to ascertain which of the applicants were successful in obtaining a grant, which was 95 in total during the study period. We also matched applicants to administrative data from the UK government from Companies House and Charity Register[16] to establish whether the venture had registered as a Community Interest Company, Limited Company, Charity or other, and whether (or not) it had been dissolved (as of September 2017).

(4) End-of-grant survey responses

Most questions in the end-of-grant survey run 12 months after receiving the initial grant used Likert scale response anchors and enquired about the perceived efficacy of and satisfaction with the grant program.

[16] https://www.gov.uk/government/organisations/companies-house and https://www.gov.uk/find-charity-information

We focus on the handful of questions that asked about the economic performance (such as total income earned) and social impact of their venture over the past 12 months. The overall response rate to the end-of-grant survey was quite high (67%, or 78 of the 95 grantees completing the survey). There were no significant differences across the 3 treatment groups in response rates to the survey.

Out of the 431 EOI applicants, 290 individuals subsequently submitted a full application and 95 individuals ultimately received the grant, that is, 22% of individuals submitting EOIs ultimately received grants (success rate). Table 2 shows our main baseline variables and provides a randomization balance check. The majority of applicants were female. Applicants were on average 40 years old. About 15-17% resided in London. The word count of the initial EOI (specifically of the responses to the main question: "Explain your venture and what is unique about it") was about 168 words (the word limit was 200). Our randomization check indicates that the groups were balanced on 11 out of 12 candidates' observable characteristics. We present both the basic experimental results and results including controls for our baseline characteristics and time controls, particularly given that there is a slightly higher share of females in the *Social* group.

4.2 Empirical Model

The randomization allows us to estimate the pooled incentive effect of receiving an extrinsic *reward* treatment (*Cash* + *Support*) relative to the intrinsic reward treatment (*Social)*:

$$Y_i = \alpha + \beta_1 Extrinsic\_REWARD_i + \gamma X_i + u_i \quad (1)$$

where Y_i is an outcome measure for individual i, *Extrinsic_REWARD* is a dummy variable that equals 1 if an individual was assigned to receive the treatment email emphasizing a reward (*Cash* or *Support*), and X_i is the vector of controls (gender, age, London location, and time controls, including dummies for week of the EOI application and dummies for the date of the final application deadlines). β_1 is the pooled effect of receiving either type of reward incentive cue compared to the *Social* email. The *Social* email group effectively serves as the relevant control group in our setting since the social impact or intrinsic cue coincides with the standard frame conventionally used in publicity made by the support agency.

We also run the following regression to estimate the separate effect of receiving each of the extrinsic reward (*Cash* or *Support*) incentive treatment emails:

$$Y_i = \alpha + \theta_1\ CASH_i + \theta_2\ SUPPORT_i + \gamma X_i + u_i \qquad (2)$$

where θ_1 is the effect of the *Cash* incentive cue and θ_2 is the effect of receiving the *Support* incentive cue. In specifications using endline survey data where we have multiple outcomes of the firm's performance, in order to test the joint significance of the treatments, we follow the approach in Clingingsmith et al. (2009) and calculate the average standardized effect size using the seemingly-unrelated regression framework, which accounts for covariance across estimates across groups of outcome measures (in our case, measures based either on the full application or the end of grant survey) (Robert, 2010).

Next, to examine the sorting effects, we also run regressions of the following form, where the dependent variable is a dummy variable indicating that the individual submitted a full application and we interact our treatment group dummies with various measures of individual characteristics from the EOI (measured ex ante):

$$Y_i = \alpha + \beta_1 Extrinsic\_REWARD_i + \beta_2 Extrinsic\_REWARD_i * CHARACTERISTIC_i +$$
$$\beta_3 CHARACTERISTIC_i + \gamma X_i \quad + u_i \qquad (3)$$

Here, our main characteristics of interest are the *ex ante* linguistic measures of orientation of the candidates from the EOI, so that β_2 will estimate differences between the applicants and non-applicants in these orientations across the treatment groups. We also estimate this regression by not pooling the reward incentive groups, as in (2).

5. Results

Following the behavioral hypotheses summarized in Table 1, this section reports first, whether the extrinsic incentive cues had an impact on effort, and then whether they affected the sorting of individuals into submitting a full application (and proceeding in the grant competition). Finally, we explore whether

the selection of candidates had an impact on the performance of the social entrepreneurs and their ventures assessed at the end of the one-year grant period.

5.1. Incentive-Effort Effects of Extrinsic Rewards

Table 3 presents the regression results regarding the incentive-effort effects of extrinsic rewards. It shows the effects of the treatments on the number of full applications submitted, measures of effort on the full application, and the effects on the number of successful applications (i.e. receiving the grant). First, we look at effects on the *size of applicant pool*. Panel A of Table 3 shows the pooled reward treatment (*Cash* and *Support* combined) relative to the *Social* group, and Panel B shows each treatment separately. Panel A Column 1 shows that fewer candidates submitted a full application (9.4 percentage points) in the pooled reward treatment groups relative to the *Social* group. This effect is mainly driven by *Cash* treatment, with the effects in Panel B showing those in the *Cash* group were 14.5 percentage points less likely to apply than those in the Social group. We see no significant difference in the application rates of the *Support* and *Social* treatment groups. This result is consistent with H2(a).

Second, we look at effects on measures of *effort on the full application*. Table 3, Panel A, Column 2 shows that emphasizing the extrinsic rewards (either *Cash* or *Support*) increased the share of full applications that were successful in obtaining the grant by 14.2 percentage points relative to the share of full applications that were successful in the *Social* group. Panel B shows the estimated effects are similar in both the *Cash* and *Support* groups. Further, the coefficient estimate in Table 3, panel B column 4, suggests that applicants in the *Cash* treatment group used on average 52 more words relative to the *Social* group to describe their prior non-financial support or recognition received (in the full application), while prior to the intervention there were no significant differences in EOI word count (see Table 2).[17]

Taken together, these findings lend empirical support to hypotheses H1(a) and H1(b), as well as H2(a): Extrinsic rewards, especially extrinsic monetary reward cues, will elicit greater effort, raising

[17] We also examined other measures of effort described in Section 4.1, including readability measures of the EOI text, but did not find significant differences between the groups.

applicants' performance. This demonstrates that extrinsic incentives can elicit higher performance at the application stage (measured by number of words used in the full application), but can also crowd-out applications, leading fewer candidates to apply.

5.2 Selection and Crowding out from Extrinsic Incentives

Next, we examine whether the extrinsic reward cues impacted the selection of individuals out of and into the applicant pool, i.e. who opted in and who opted out. Table 3, Columns 5 and 6, show the effects of the treatments on measures of selection based on the full application. While we find no effect on the projected overall expenditure of the venture over the next 12 months reported on the full application (Column 5), we do find that full applications submitted by the applicants in the *Cash* group were 21.8 percentage points less likely to report that a disadvantaged group would benefit from their activity (Column 6, Panel B), which included answering yes to either "Minority groups and other previously excluded groups" or "Persons with Disabilities". This suggests that the extrinsic reward cues crowded in the less prosocial candidates.

We next examine the nature of the selection effects using the orientation measures based on the text responses to the EOI that provide, prior to the intervention, information for each potential applicant (these measures are described in Section 4.1). Figures 2a and 2b provide initial suggestive evidence about these selection effects. Figure 2a shows that applicants in the cash treatment were more likely to use "money words" in the EOI relative to their counterparts in the *Support* and *Social* groups. Meanwhile, individuals who did not submit a full application in the *Cash* treatment group used fewer money-orientated words. So not only did the extrinsic monetary cue "crowd out" the less money-oriented individuals, it also "crowded in" the more money-oriented candidates. These findings reveal that the extrinsic monetary reward cue can crowd out and crowd in application efforts, specifically by candidates who had expressed different *pre-treatment* money-orientation and other-regarding orientations.

In Table 4, we further examine the nature of this sorting in terms of individuals' prosocial versus self orientation in a regression framework by interacting each treatment group with a dummy indicating an

ex ante measure of the individual's orientation from the EOI described in Section 4.1, with the dependent variable being whether the individual submitted a full application or not (equation 3). The interaction terms of the "orientation" measure and the treatment dummies are the coefficients of interest. Column 4, Panel B, shows that the individuals in the Cash treatment group using more money words in their EOI were more likely to submit a full application, or opt-in following the extrinsic monetary reward cue.

Moreover, in Column 5, we see that the more prosocial individuals (using "collectives" as a proxy for social orientation) in the *Cash* treatment group were more likely to opt-out and not submit a full application.[18] This last result is in line with the finding that the full applications submitted by the applicants in the *Cash* treatment groups were 21.8 percentage points less likely to report that disadvantaged groups benefit from their activity (see Column 6, Table 3) compared to the full applications submitted in the *Social* group. It lends additional support to the notion that extrinsic rewards crowded in the less prosocial, and in the case of the monetary reward cue, more money-orientated candidates. This is in line with our hypothesis H2(b).

Consistent with these effects, in Table 5 we estimate the effects on the main type of challenge the applicant faces (from a text response on the full application asking them to describe their 'Main challenges and how support will benefit the venture'). This was coded as either a Money, Support or Social challenge. The results in Panel B, Column 3, show that the individuals in the *Cash* treatment group were 11 percentage points more likely to indicate a Social challenge, i.e. needing support to measure or improve their social impact. These 'challenge'-measures are based on self-reported fields in the application, rather than clean ex ante measures, and thus may be influenced by the cue itself; however, this correlation is nevertheless consistent with our main finding that the extrinsic cues elicited a greater response from candidates who were more money-oriented and less socially-oriented, and thus more likely to require help to improve along this dimension.

[18] Table 4 further shows that the coefficients of interest for the other proxy measures of social orientation (specifically, other-orientation, orientation towards interacting, cooperation, and liberation) were consistent with our main result, though not statistically significant.

We also estimate the extent of selection effects in terms of quality and other characteristics of applicants vs. non-applicants. Table A2 displays the means of different characteristics of the three treatment groups among *Applicants only* in the first three columns and tests whether the means are statistically different across groups in the next three columns. While there does seem to be a higher share of females submitting full applications in the Social group, this was also the group for which the share female was slightly higher after randomization. Overall, it seems there is little selection in terms of these characteristics observable on the EOI.

Next, in Table A4, we show these selection results in a regression framework (equation 4) for these characteristics as well as measures of skill and experience and overconfidence, measured by whether the individual views the benefit of their venture as International or National. The results show that there are no significant differences in terms of differential likelihood of applying related to prior for-profit sector or social sector experience and/or social enterprise sector work experience, nor in terms of overconfidence. The hypothesis H1(c) is therefore not supported by our findings.

Taken together, our results demonstrate that subtle extrinsic reward cues can in part motivate greater effort by candidates who are then more successful in receiving the grant. At the same time, these rewards cues also crowd in the more money-orientated candidates, and crowding out their more prosocial counterparts. Whether these effort and selection effects have any impact on the performance of the social enterprise is a question we turn to next.

5.3. End-of-Grant Social Entrepreneurial Outcomes

Table 6 provides the main regression results showing whether the performance of successful applicants measured in the end-of-grant survey differed by treatment group.[19] Since many social ventures work to improve labor market integration or labor market outcomes more generally, one commonly used

[19] We also matched all EOI submitters to administrative data from Companies House and Charity Register as another longer-run outcome by matching on the reported venture names from the EOI, however the results were not informative as we had relatively few matches leading to noisy estimates.

measure of social performance is the venture's ability to help people find a job. We find that compared to the candidates in the *Social* group, the grant winners in the *Cash* group treatment had helped significantly fewer people to find a job over the past 12 months. They also spent on average nearly 8 hours less per week working on their venture and had served approximately 2.6 fewer beneficiaries. The estimates are very similar when including broad controls for the sector (e.g. education or environment) and issue area of the venture (e.g. equality and empowerment, access to education or community development). The average standardized treatment effect over all these outcomes from the end-of-grant survey is -0.881 and significantly different from zero at the 1 percent level.

In sum, these results reveal that grant winners in the extrinsic reward groups, despite their apparent higher effort at the application stage, fared worse one year later than those in the *Social* group who made it to this stage. This suggests that ultimately a strong prosocial orientation may be critical to nascent social entrepreneurial success. Further, our findings also suggest that emphasizing extrinsic reward cues at the full application stage only is unlikely to be sufficient to motivate greater effort throughout a one-year start-up phase. Using such extrinsic reward cues may thus ultimately backfire if the goal is to stimulate successful social entrepreneurial outcomes.

6. Conclusion

Our results provide evidence that extrinsic incentive cues can promote effort and performance in the context of grant competition for social entrepreneurial start-ups, yet they may also carry (unintended) costs. We found that these extrinsic incentive cues, primarily the monetary cues, crowded in the relatively more money-oriented applicants, while crowding out their more prosocial, less money-oriented counterparts. Moreover, the projects proposed by those applicants were over 20% less likely to benefit disadvantaged groups. We also found that grant winners that had selected into the applicant pool following the extrinsic incentive cues were in fact less successful at running a social enterprise, despite having submitted superior proposals. They had helped fewer people find a job in the previous 12 months relative

to grant winners in the *Social* group and reached significantly fewer beneficiaries. Our results highlight the critical role of intrinsic motives to the performance of social entrepreneurial start-ups and provide evidence that typically-used extrinsic incentives to promote the development of successful social enterprises may in fact be counterproductive.

Operational efficiency is a focal concern to our partner organization specifically, and many support programs more generally. Programs with a two-stage application process often systematically monitor: (i) the percentage of candidates that passed the first selection round but failed to submit a full application (costly leakage), and (ii) the overall success of the grant winners at the end of the support period (program effectiveness). Our results reveal that a subtle change in a program's framing (in between selection rounds), in particular one that makes salient a program's extrinsic incentives, can increase "leakage" and alter the composition of the grant winners in ways that are consequential to nascent social entrepreneurial success and the real societal impact they make. Such a program frame may thus inadvertently deteriorate operational efficiency.

We often think of intrinsic motivation as a key input to performance of mission-driven organizations especially (Grant and Sumanth 2009, Perry and Hondeghem 2008, Riggio and Taylor 2000). Yet, a recent literature (e.g. Henderson and Van den Steen 2015; Gartenberg et al. 2016) suggests that purpose may also be an essential ingredient to corporate business success. Our findings underline the importance of intrinsic motivation to the performance of (nascent) social enterprises, hybrid organizations that are both mission-driven and business-like, and thus bridge these two separate strands of literature.

Previous empirical research on extrinsic incentives and prosocial behaviors has yielded mixed results. Our findings suggest that the effect of an extrinsic incentive cue is highly heterogeneous and varies with the prosocial inclination of targeted individuals. The trade-off between incentive-effort effect and crowding out (of effort effect) will critically also depend on whether sorting of individuals is possible. Finally, our findings also suggest that the strength of the behavioral responses to extrinsic incentive cues will vary with the nature of the incentives at hand. In our setting, the extrinsic financial incentive cues

elicited somewhat greater effort and produced stronger crowding-out effects than the value-equivalent extrinsic non-financial incentive cues.

In terms of managerial and policy implications, our results can help organizations and managers working with social entrepreneurs to design programs that increase take-up and participation and more effectively target and support the type of social entrepreneurs that they wish to empower. Further, designers of policies and programs aimed at supporting social start-ups should be cognizant of the surprisingly large sorting and performance effects that their seemingly minor program frames may provoke and consider whether such effects are indeed well aligned with their social goals.

Our study is of course subject to limitations. Our study is limited to the effect of incentive cues on participation to one support program and thus generalizing our results should be done with caution. More systematic research on the efficacy of incentive cues within different support program and country contexts is needed. Further, it is plausible that the success of specific incentive cues may well depend on the organizational culture of the support agency that is using them. A good fit between organizational values and the incentive cue may actually have a key moderating effect on their efficacy (Andersson et al. 2017; Blader et al. 2016).

Provided that our results are externally valid, the most direct out-of-sample implications of our results relate to situations where motivating employee social entrepreneurship are important concerns (Campbell et al. 2017). Business leaders, for instance, who value opportunities for their employees to work on corporate social initiatives or start-up social ventures, are well-advised to emphasize the intrinsic rewards and reduce or at least downplay the extrinsic rewards that they attach to these types of initiatives.

Our study raises intriguing questions for future research. Which program frame (or incentive cue) is most effective at attracting the best successful mainstream nascent entrepreneurs or employee entrepreneurs (Sauermann 2018)? Our experimental framework could be readily adapted to test and contrast the effects of distinct incentive cues on participation (sorting), and subsequent performance in these sorts

of alternative settings.[20] Can such subtle programs frames also alter the self-selection of early stage or more experienced social entrepreneurs as well? These are interesting questions that we hope researchers will pursue going forward.

[20] Relative to ex post evaluations, experimentation provides practitioners with a more proactive method to evaluate a program, in particular deepen understanding of the true motives that targeted groups hold and whether different motives matter to their success. This is welcome given apparently growing frustration and disinterest amongst policy-makers about the use of ex post program evaluations. We thank policy analysts working at OECD for this comment.

References

Allison TH, Davis BC, Short JC, Webb JW (2014) Crowdfunding in a prosocial microlending environment: Examining the role of intrinsic versus extrinsic cues. *Entrepreneurship Theory and Practice.* 39(1):53-73.

Andersson O, Huysentruyt M, Miettinen T, Stephan U (2017) Person-Organization Fit and Incentives: A Causal Test. *Management Science*. 63(1):73-96.

Andreoni J, Payne AA (2011) Is crowding out due entirely to fundraising? Evidence from a panel of charities. *Journal of Public Economics*. 95(5):334-343

Ariely D, Bracha A, Meier S (2009) Doing good or doing well? Image motivation and monetary incentives in behaving prosocially. *American Economic Review.* 99(1):544–555.

Ashraf N, Bandiera O, Lee S (2016) Do-gooders and go-getters: Career incentives, selection, and performance in public service delivery. Working paper, International Growth Centre, London.

Bénabou R, Tirole J (2003) Intrinsic and Extrinsic Motivation. *Review of Economic Studies.* 70:489-520.

Besley T, Ghatak M (2005) Competition and incentives with motivated agents. *American Economic Review*, 93(5):616–636.

Blader S, Gartenberg CM, Prat A (2016) The contingent effect of management practices. Working Paper, CEPR Discussion Papers 11057, C.E.P.R. Discussion Papers..

Bosma N, Schott T, Terjesen S, Kew P (2016) GEM 2015 to 2016: Special topic report on social entrepreneurship. Report, Global Entrepreneurship Monitor, London.

Boudreau KJ, Lakhani KR (2016) Innovation experiments: Researching technical advance, knowledge production, and the design of supporting institutions. *Innovation Policy and the Economy*. 16(1):135-167.

Bowles S (2016) *The moral economy: Why good incentives are no substitute for good citizens* (Yale University Press).

Bowles S, Polanía-Reyes S (2012) Economic incentives and social preferences: Substitutes or complements? *Journal of Economic Literature.* 50(2):368–425.

Brüggemann J, Bizer K (2016) Laboratory experiments in innovation research : a methodological overview and a review of the current literature. *Journal of Innovation and Entrepreneurship*. 5(24):1–13.

Brüggemann J, Proeger T (2017) The effectiveness of public subsidies for private innovations: An experimental approach. Discussion Papers, Center for European, Governance and Economic Development Research, No. 266.

Campbell BA, Kryscynski D, Olson DM (2017) Bridging strategic human capital and employee entrepreneurship research: A labor market frictions approach. *Strategic Entrepreneurship Journal*. 11(3):344-356.

Cassar L, Meier S (2018) Nonmonetary Incentives and the Implications of Work as a Source of Meaning. *Journal of Economic Perspectives*, 32(3):215-238.

Chandra Y (2016) A rhetoric-orientation view of social entrepreneurship. *Social Enterprise Journal.* 12(2):161–200.

Choi JJ, Haisley E, Kurkoski J, Massey C (2017) Small cues change savings choices. Journal of *Economic Behavior & Organization*. 142:378-395.

Clingingsmith D, Khwaja AI, Kremer M (2009) Estimating the impact of the Hajj: Religion and tolerance in Islam's global gathering. *Quarterly Journal of Economics*, 124(3):1133-1170.

Dal Bó E, Finan F, Rossi M (2013) Strengthening state capabilities: The role of financial incentives in the call to public service. *Quarterly Journal of Economics*. 128(3):1169–1218.

Dal Bó E, Hernández P, Mazzuca S (2015) The paradox of civilization: Pre-institutional sources of security and properity. Working paper, NBER No. 21829, Cambridge.

Deci, EL, Koestner R, Ryan RM (1999). A meta-analytic review of experiments examining the effects of extrinsic rewards on intrinsic motivation. *Psychological bulletin*, 125(6): 627-668.

DellaVigna S, Pope D (2018) What motivates effort? Evidence and expert forecasts. *Review of Economic Studies*. 85(2):1029-1069.

De Mel S, McKenzie D, Woodruff C (2014) Business training and female enterprise start-up, growth, and dynamics: Experimental evidence from Sri Lanka. *Journal of Development Economics*. 106(C):199-210.

Deserranno E (2017) Financial incentives as signals: Experimental evidence from the recruitment of village promoters in Uganda. *American Economic Journal: Applied Economics.* Forthcoming.

Ederer F, Manso G (2013) Is pay-for-performance detrimental to innovation? *Management Science.* 59(7):1496-1513.

European Commission (2016) Social enterprises and their eco-systems in Europe: Developments in Europe. Report, Directorate-General for Employment, Social Affairs and Inclusion, European Commission, Brussels.

Exley CL (2018) Incentives for prosocial behavior: the role of reputations. *Management Science.* 64(5):2460-2471

Ganguli I, Gaulé P, Guinan E, Lakhani K (2017) Do Scientists Care About Kudos? A Field Experiment on Status Rewards in Academia. Working paper, University of Massachusetts, Amherst.

Gartenberg C, Prat A, Serafeim G (2016) Corporate purpose and financial performance. Working paper, Harvard Business School, Boston.

Germak AJ, Robinson JA (2014) Exploring the motivation of nascent social entrepreneurs. *Journal of Social Entrepreneurship.* 5(1):5–21.

Gneezy U, Meier S, Rey-Biel P (2011) When and why incentives (don't) work to modify behaviour. *Journal Econonic Perspectives.* 25(4):191–210.

Gneezy U, Rustichini A (2000) Pay enough or don't pay at all. *Quarterly Journal of Economics.* 115(3):791-810.

Grant AM, Sumanth JJ (2009) Mission possible? The performance of prosocially motivated employees depends on manager trustworthiness. *Journal of Applied Psychology*. 94(4): 927-944.

Hart RP, Caroll CE (2014) DICTION 7 Help Manual. *The text analysis program* (Digitext Inc., Austin, Texas).

Heckathorn DD (1997) Respondent-driven sampling: a new approach to the study of hidden populations. *Social problems*. 44(2):174-199.

Henderson R, Van den Steen E (2015) Why do firms have "purpose"? The firm's role as a carrier of identity and reputation. *American Economic Review: Papers and Proceedings*. 105(5):326-330.

Hengel, E (2018). Publishing while Female. Are women held to higher standards? Evidence from peer review. Mimeo.

Herz H, Schunk D, Zehnder C (2014) How do judgmental overconfidence and overoptimism shape innovative activity ? *Games and Economic Behavior*. 83(C):1-23.

Hossain T, Li KK (2014) Crowding out in the labor market: A prosocial setting is necessary. *Management Science*. 60(5):1148–1160.

Huysentruyt M, Mair M, Stephan U (2016) Market-oriented and mission-focused: Social enterprises around the globe. *Stanford Social Innovation Review (October 19),* *https://ssir.org/articles/entry/market_oriented_and_mission_focused_social_enterprises_around_the_globe*

Kessler JB, Milkman KL (2018) Identity in charitable giving. *Management Science*. 64:845-859

Lacetera N, Macis M, Slonim R (2014) Rewarding volunteers: A field experiment. *Management Science*. 60(5):1107-1129.

Laffont JJ, Maskin E (1982) The Theory of Incentives: An Overview. Hildenbrand W, ed. *Advances in Economic Theory* (Cambridge, Cambridge University Press), 31-94.

Lazear BEP, Malmendier U, Weber RA (2012) Sorting in experiments with application to social preferences. *American Economic Review: Applied Economics*. 4(1):136–163.

List JA (2011) The market for charitable giving. *Journal of Economic Perspectives*. 25(2):157–180.

Lyons E, Zhang L (2018) Who does (not) benefit from entrepreneurship programs? *Strategic Management Journal.* 39(1):85-112.

Mair J, Marti I (2006) Social entrepreneurship research: A source of explanation, prediction, and delight. *Journal of World Business*, 41(1): 36-44.

Manski CF (1993) Identification of endogenous social effects: The reflection problem. *Review of Economic Studies*. 60(3):531-542.

Laffont JJ, Maskin E (1982) The theory of incentives: An overview. Hildenbrand W, eds. *Advances in Economics Theory* (Cambridge Univeristy Press, Cambridge), 31-94.

OECD (2011) Fostering Innovation to Address Social Challenges. Report, Organisation for Economic Co-operation and Development, Paris.

Pennebaker JW, Booth RJ, Boyd RL, Francis ME (2015) *Linguistic Inquiry and Word Count: LIWC2015*. (Pennebaker Conglomerates Inc, Austin, TX).

Perry JL, Hondeghem A (2008) *Motivation in public management. The call of public service.* (Oxford University Press, Oxford).

Renko M (2013) Early challenges of nascent social entrepreneurs. *Entrepreneurship Theory and Practice.* 37(5):1045–1069.

Reynolds PD, Carter NM, Gartner WB, Greene PG (2004) The prevalence of nascent entrepreneurs in the United States: Evidence from the panel study of entrepreneurial dynamics. *Small Business Economics.* 23(4):263-284.

Riggio RE, Taylor SJ (2000) Personality and communication skills as predictors of hospice nurse performance. *Journal of Business and Psychology.* 15(2):351–359.

Robert C (2010) AVG_EFFECT: Stata module to calculate mean (standardized) effect size across multiple outcomes . Retrieved October 29, https://EconPapers.repec.org/RePEc:boc:bocode:s457196

Roy AD (1951) Some thoughts on the distribution of earnings. *Oxford Economic Papers. 3*(2):135-146.

Sauermann H (2018) Fire in the belly? Employee motives and innovative performance in startups versus established firms. *Strategic Entrepreneurship Journal*. 12(4): 423-454.

Bless H, Schwarz N (1998) Context effects in political judgement: Assimilation and contrast as a function of categorization processes. *European Journal of Social Psychology.* 28(2) :159-172.

Short JC, Palmer TB (2008) The application of DICTION to content analysis research in strategic management. *Organizational Research Methods.* 11(4), 727-752.

Titmuss RM (1972) The gift relationship: From human blood to social policy. *Journal of Social Policy.* 1(1):81-84.

Von Essen E, Huysentruyt M, Miettinen T (2017) Exploration in teams and the encouragement effect: Theory and experimental evidence. Working paper, Hanken School of Economics, Helsinki.

Wänke M, Bohner G, Jurkowitsch A (1997) There are many reasons to drive a BMW: Does imagined ease of argument generation influence attitudes? *Journal of Consumer Research.* 24(2):170-177.

Woolley K, Fishbach A (2016) For the fun of it: Harnessing immediate rewards to increase persistence in long-term goals. *Journal of Consumer Research.* 42(6):952–966.

Zahra SA, Gedajlovic E, Neubaum DO, Shulman JM (2009) A typology of social entrepreneurs: Motives, search processes and ethical challenges. *Journal of Business Venturing.* 24(5):519–532.

TABLES & FIGURES

Figure 1. Experimental design

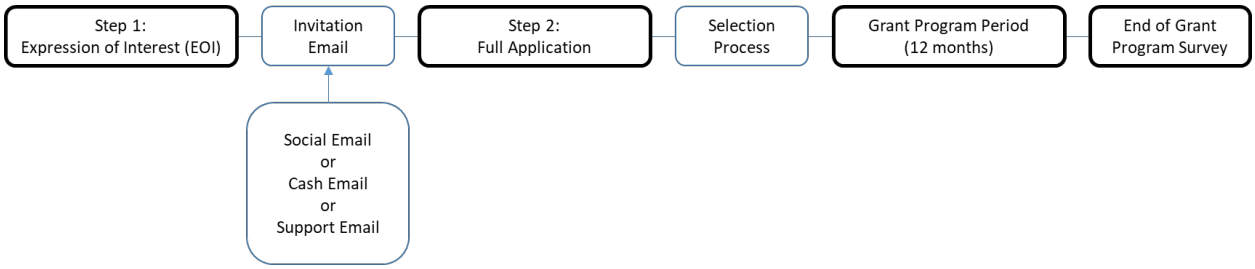
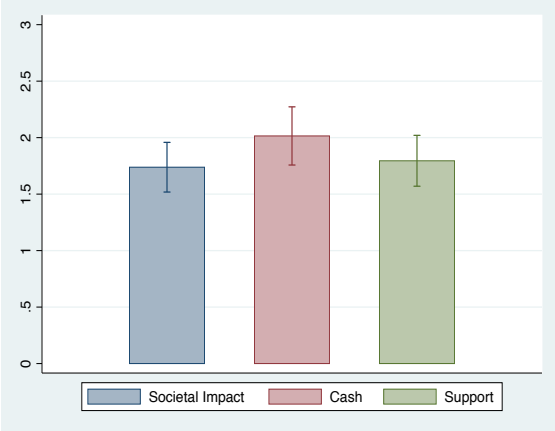
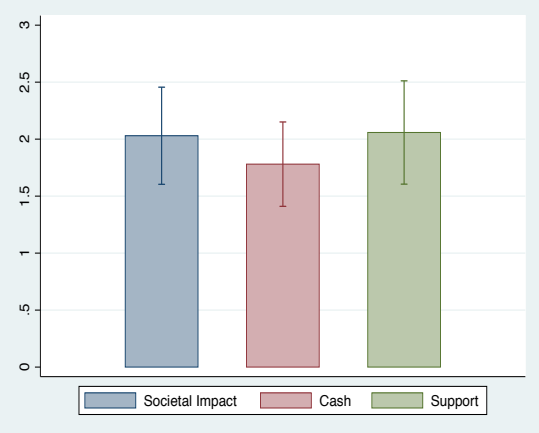


Figure 2. Money-orientation of applicants and non-applicants based on EOI data

(a) Applicants



(b) Non-applicants



Notes. Raw means of applicants' and non-applicants' money orientation for each treatment group with 90% confidence intervals. Figures are based on analysis of the text fields for the EOI question "Explain your venture and what is unique about it" using the software program Linguistic Inquiry and Word Count (LIWC) (Pennebaker et al. 2015)

Table 1. Behavioral Hypotheses: Emphasizing Explicit Rewards, relative to Intrinsic Rewards Only*

Mechanisms	**Number of applicants**	**Applicant's type**	**Application's type**
Incentive-effort effect	H1(a): Higher number of successful applicants		H1(b): Greater application effort
Quality selection effect		H1(c): Greater share of talented, experienced applicants	
Crowding in (out) effect	H2(a): Lower number of applicants	H2(b): More monetary-oriented, less socially-oriented applicants	H2(c): Less pro-socially oriented projects

Notes. *We consider the *Social* treatment group, where the intrinsic rewards only were made salient, as our control or comparison group. It is important to note that the expected overall effect depends on the distribution of types within our study population, that is, the relative share of those who value intrinsic motivation more than extrinsic motivation, and vice-versa. If we assume that our sample predominantly consists of individuals who value intrinsic rewards more than extrinsic rewards, then the applicant pool is expected to shrink following the explicit reward cue.

Table 2. Balance Check: Baseline Characteristics by Treatment Group based on EOI Data (N=431)

	Treatment Group			Differences		
	Social	Cash	Support	(1) - (2)	(1) - (3)	(2) - (3)
	(1)	(2)	(3)	(4)	(5)	(6)
Female	0.634	0.517	0.617	0.117*	0.017	-0.100
	(0.483)	(0.501)	(0.488)			
Age	39.124	38.917	41.199	0.207	-2.074	-2.281
	(11.191)	(12.508)	(11.744)			
London	0.214	0.172	0.184	0.041	0.029	-0.012
	(0.411)	(0.379)	(0.389)			
EOI Nb. of Words*	168.524	167.966	166.872	0.559	1.652	1.093
	(60.652)	(64.510)	(67.941)			
*Orientation**						
Self	1.871	1.799	1.389	0.072	0.482*	0.410
	(1.984)	(2.080)	(1.691)			
Other	1.141	1.211	1.156	-0.070	-0.015	0.055
	(1.396)	(1.240)	(1.403)			
Interaction Process	9.948	9.719	9.433	0.229	0.514	0.286
	(4.433)	(4.036)	(4.028)			
Money	1.726	1.813	1.832	-0.086	-0.105	-0.019
	(1.917)	(1.948)	(1.907)			
Collectives	3.289	2.879	2.875	0.410	0.413	0.003
	(5.248)	(4.490)	(6.005)			
Cooperation	1.671	1.834	2.159	-0.162	-0.487	-0.325
	(2.895)	(2.995)	(2.862)			
Exclusion	24.342	24.170	24.457	0.171	-0.115	-0.287
	(9.233)	(9.956)	(10.968)			
Liberation	0.826	0.681	0.876	0.145	-0.050	-0.195
	(1.926)	(0.000)	(2.139)			
Nb. of Observations	145	145	141			

Notes. Columns (1) – (3) present means for each group and standard deviations in parentheses. Stars indicate the results of tests of proportions and t-tests for the equality of means. *Measures of the Number of words and Orientation based are based on the text field "Explain your venture and what is unique about it" in the Expression of Interests (EOI), which were submitted before our intervention. See Section 4.1 for details. $^{+}$ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$

Table 3. Regression results: Treatment Effects on Application Outcomes based on Full Application Data

	Submitted Full Appl. (1)	Rec'd Grant (2)	App Nb. of Words (3)	Applied after 30 days (4)	12-month Expend. (5)	Disadvantaged Beneficiaries (6)
A. Pooled Treatment Groups						
Cash + Support	-0.094^{+}	0.142*	31.880^{+}	-0.027	0.070	-0.120
	(0.053)	(0.062)	(19.123)	(0.063)	(0.184)	(0.076)
B. Treatment Groups Separated						
Cash	-0.145*	0.150^{+}	51.780*	0.023	0.085	-0.218*
	(0.061)	(0.077)	(24.421)	(0.078)	(0.224)	(0.089)
Support	-0.038	0.135^{+}	14.859	-0.070	0.057	-0.036
	(0.062)	(0.075)	(22.013)	(0.071)	(0.203)	(0.092)
Nb. of Observations	431	290	290	290	12-month Expend.	290

Notes. Social Impact group omitted. Estimation is by OLS with robust standard errors in parentheses. All specifications include controls for female, age, London location, list, and time controls (dummies for week of the EOI application and dummies for the "30-day deadline to apply"). The dependent variables are: (1) whether the applicant submitted a full application; (2) whether the applicant was subsequently successful in receiving a grant; (3) number of words in the text response to the question about 'Non-financial support received and recognition of work' ("Who is currently providing you with support (non-financial) and in what ways? Has your work been recognised (for example by winning a prize)?") and 'Main challenges and how support will benefit the venture' ("What are your main challenges in the next 12 months and how will working with us help you to deal with them?") on the full application; (4) if the applicant submitted their full application after the 30-day deadline to apply; (5) the projected overall expenditure of the venture over the next 12 months (from the full application); and (6) whether the applicant indicated on the full application that a 'disadvantaged' group would benefit as a result of the venture's activities, including answering yes to either "Minority groups and other previously excluded groups" or "Persons with Disabilities". $^{+}$ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$

Table 4. Regression Results: Treatment Effects on Ex Ante (EOI) Text Measures of Orientation

Dep Var: Submitted Full Application	***LIWC***				***DICTION***			
	Self (I)	Other (they)	Interaction Process	Money	Collectives	Cooperation	Exclusion	Liberation
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
A. Pooled Treatment Groups								
Orientation x [Cash + Support]	-0.001	-0.051	-0.013	0.035	-0.017^{+}	0.002	0.005	-0.029
	(0.030)	(0.075)	(0.012)	(0.029)	(0.010)	(0.020)	(0.007)	(0.029)
Orientation	-0.002	-0.040	0.008	-0.030	0.004	0.003	-0.004	0.016
	(0.023)	(0.041)	(0.009)	(0.022)	(0.008)	(0.014)	(0.005)	(0.023)
Cash + Support	-0.093	0.043	0.037	-0.152*	-0.040	-0.099	-0.209	-0.070
	(0.070)	(0.029)	(0.137)	(0.075)	(0.063)	(0.062)	(0.165)	(0.059)
B. Treatment Groups Separated								
Orientation x Cash	0.009	-0.030	-0.017	0.059^{+}	-0.041**	-0.010	0.007	-0.011
	(0.033)	(0.046)	(0.015)	(0.032)	(0.012)	(0.023)	(0.008)	(0.035)
Orientation x Support	-0.011	-0.051	-0.009	0.003	-0.005	0.019	0.004	-0.044
	(0.041)	(0.049)	(0.016)	(0.036)	(0.012)	(0.024)	(0.007)	(0.031)
Orientation	-0.000	0.045	0.009	-0.029	0.005	0.001	-0.005	0.015
	(0.023)	(0.030)	(0.009)	(0.022)	(0.008)	(0.014)	(0.005)	(0.023)
Cash	-0.161*	-0.116	0.023	-0.247**	-0.032	-0.128^{+}	-0.311	-0.135*
	(0.081)	(0.086)	(0.163)	(0.086)	(0.072)	(0.072)	(0.200)	(0.068)
Support	-0.023	0.018	0.054	-0.038	-0.025	-0.082	-0.132	0.000
	(0.087)	(0.086)	(0.165)	(0.091)	(0.073)	(0.076)	(0.179)	(0.067)
Nb. of Observations	431	431	431	431	431	431	431	431

Notes. Social treatment group omitted. Estimation is by OLS with robust standard errors in parentheses. All specifications include controls for female, age, London location, list and time controls (dummies for week of the EOI application and dummies for the "30-day deadline to apply"). Orientation is an ex ante measure of the individual's Orientation from the EOI as follows: Columns 1-4 are based on analysis of the text fields for the EOI question "Explain your venture and what is unique about it" using the software program Linguistic Inquiry and Word Count (LIWC) and Columns 5-8 are using the software program DICTION. See Section 4.1 for more details. $^{+}$ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$

Table 5. Regression Results: Treatment Effects on Type of Challenge

	Challenges		
	Money Challenge	Support Challenge	Social Impact Challenge
	(1)	(2)	(3)
A. Pooled Treatment Groups			
Cash + Support	-0.009	0.019	0.063
	(0.067)	(0.054)	(0.053)
B. Treatment Groups Separated			
Cash	0.019	0.017	0.111^{+}
	(0.081)	(0.066)	(0.066)
Support	-0.037	0.021	0.010
	(0.077)	(0.059)	(0.063)
Nb. of Observations	290	290	290

Notes. Social treatment group omitted. Sample includes all individuals submitting a full application. Estimation is by OLS with robust standard errors in parentheses. All specifications include controls for female, age, London location, list and time controls (dummies for week of the EOI application and dummies for the "30-day deadline to apply"). Dependent variables are dummy variables indicating whether the applicant faced a 'money', 'support' or 'social' challenge, based on coding of the text response to the full application question about 'Main challenges and how support will benefit the venture' ("What are your main challenges in the next 12 months and how will working with us help you to deal with them?") $^{+}$ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$

Table 6. Regression Results: End of Grant Survey (12-months Post-Grant)

	Log Paid FT	Log Jobs	Log Trainees	Personal Income	Weekly Hours	Log Total Income	Log Total Clients/ Benef	Average Effect Size
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
A. Pooled Treatment Groups								
Cash + Support	-1.104	-2.642*	-0.780	-0.115	-7.717^{+}	-0.189	-2.605^{+}	-0.881**
	(0.946)	(1.218)	(1.350)	(0.160)	(4.202)	(0.387)	(1.361)	(0.248)
B. Treatment Groups Separated								
Cash	-1.404	-3.613**	-1.210	-0.152	-6.407	-0.315	-3.085^{+}	-0.691**
	(0.963)	(1.280)	(1.722)	(0.173)	(4.984)	(0.355)	(1.635)	(0.230)
Support	-0.887	-1.938	-0.468	-0.086	-8.527^{+}	-0.108	-2.256	-0.577**
	(1.088)	(1.396)	(1.411)	(0.186)	(4.406)	(0.489)	(1.503)	(0.218)
Nb. of Observations	64	64	64	52	54	50	64	

Notes. Social treatment group omitted. Estimation is by OLS with robust standard errors in parentheses. All specifications include controls for female, age, London location, sector, and year dummies. See Section 4.1 for more details. $^{+}$ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$

APPENDIX

Table A1. Interrater Reliability Scores of Measures of Prior Experience and Perceived Challenges

		(1)	(2)	(3)	(4)	(5)	(6)
Variable name	Variable description	Agreement	Expected agreement	Kappa	Std. Error	Z	Prob>Z
Prior Work Experience							
Social Sector	Dummy indicating whether the applicant has previous work experience in the social sector	99.15%	60.65%	0.9783	0.0462	21.17	0.0000
For-profit Sector	Dummy indicating whether the applicant has previous work experience in the for-profit sector	99.36%	50.12%	0.9871	0.0462	21.36	0.0000
Main Challenges							
Money Challenge	Dummy indicating whether the applicant expressed a money-related challenge	96.44%	51.45%	0.9266	0.0457	20.26	0.0000
Support Challenge	Dummy indicating whether the applicant expressed a support/advice-related challenge	97.90%	51.11%	0.9571	0.0458	20.90	0.0000
Social Impact Challenge	Dummy indicating whether the applicant expressed a social impact related challenge	98.52%	76.10%	0.9380	0.0460	20.38	0.0000

Table A2. Treatment Effects on Characteristics of Applicants (N=290)

	Treatment Group			Differences		
	Social	*Cash*	*Support*	(1) - (2)	(1) - (3)	(2) - (3)
	(1)	(2)	(3)	(4)	(5)	(6)
Female	0.689	0.506	0.653	**0.184****	-0.036	**0.147***
	(0.465)	(0.503)	(0.478)			
Age	39.466	38.629	41.633	0.837	2.167	3.003
	(11.268)	(12.885)	(11.520)			
London	0.233	0.236	0.224	-0.003	-0.009	-0.011
	(0.425)	(0.394)	(0.419)			
Nb. of Words in EOI	173.000	175.494	177.796	-2.494	4.796	2.302
	(60.179)	(61.185)	(63.708)			
Nb. of Observations	103	89	98			

Table A3. Definitions of Text Measures from the dictionary-based text analysis of LIWC and DICTION

Variables	Definition	Example of words
LIWC (Pennebaker et al., 2015)		
Self (orientation)	'first-person singular pronoun'	*I, me, my, mine, myself*
Other (orientation)	'third-person plural pronouns singular and plural human words '	*they, their, theirs* *adult, baby, boy, girl, women, men, people*
Interaction process	'engagement and social process words'	*communicating, connecting, helping, sharing, relations, giving, telling, listening*
Money	'words related to money'	*cash, bill, revenue, sell, trade*
DICTION (*Hart and Caroll , 2014****)***		
Collectives	'singular nouns connoting plurality that function to decrease specificity (…) included are social groupings, task groups, and geographical entities'	*crowd, choir, team, humanity, army, congress, legislature, staff, county, world, kingdom, republic*
Cooperation	'terms designating behavioral interactions among people that often result in a group product'. In particular, it includes personal involvement, self-denial, as well as work and social interactions	*teamwork, sharing, contribute public-spirited, care-taking, self-sacrifice unions, schoolmates, partner, comrade*
Exclusion	'describing the sources and effects of social isolation'	*displaced, sequestered, outlaws small-mindedness, loneliness*
Liberation	'describing the maximizing of individual choice and the rejection of social conventions'	*autonomous, open-minded, options unencumbered, radical, released*

Table A4. Regression Results: Treatment Effects on Ex Ante (EOI) Characteristics and Skills/Experience

Dep Var: Submitted A Full		***Characteristic***			***Skills/Experience***			***Level of Benefit***
Application	Female	Age	London	EOI Words	Social	Business	Social+ Business	International/ National
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
A. Pooled Treatment Groups								
Characteristic x	-0.083	-0.002	0.153	0.035	-0.015	0.018	0.314	-0.134
[Cash + Support]	(0.117)	(0.005)	(0.122)	(0.029)	(0.132)	(0.115)	(0.228)	(0.108)
Characteristic	0.089	-0.010	0.055	-0.030	0.037	0.092	-0.083	0.100
	(0.096)	(0.010)	(0.095)	(0.022)	(0.105)	(0.090)	(0.194)	(0.088)
Cash + Support	-0.043	-0.012	0.037	-0.184	-0.081	-0.105	-0.384^{+}	-0.042
	(0.094)	(0.194)	(0.137)	(0.161)	(0.112)	(0.089)	(0.218)	(0.068)
B. Treatment Groups Separated								
Characteristic x Cash	-0.171	-0.005	0.219	0.000	0.047	0.078	0.236	-0.056
	(0.135)	(0.006)	(0.147)	(0.001)	(0.157)	(0.133)	(0.251)	(0.128)
Characteristic x Support	-0.006	-0.001	0.076	0.001	-0.092	-0.070	0.396	-0.210
	(0.134)	(0.006)	(0.135)	(0.001)	(0.145)	(0.136)	(0.274)	(0.129)
Characteristic	0.086	-0.012	0.056	0.001	0.036	0.094	-0.078	0.098
	(0.097)	(0.010)	(0.095)	(0.001)	(0.105)	(0.090)	(0.194)	(0.088)
Cash	-0.046	0.035	-0.183**	-0.221	-0.175	-0.179^{+}	-0.355	-0.124
	(0.105)	(0.224)	(0.071)	(0.194)	(0.133)	(0.100)	(0.239)	(0.080)
Support	-0.032	-0.018	-0.055	-0.133	0.030	-0.004	-0.415	0.039
	(0.108)	(0.228)	(0.072)	(0.180)	(0.125)	(0.107)	(0.264)	(0.076)
Nb. of Observations	431	431	431	431	406	406	406	431

Notes. Social treatment group omitted. Estimation is by OLS with robust standard errors in parentheses. All specifications include controls for female, age, London location, list and time controls (dummies for week of the EOI application and dummies for the "30-day deadline to apply"). Characteristic is an ex ante measure of the individual's demographics or skills/experience from the EOI as follows: Columns 1-4 are based on self-reported measures, Columns 5-7 are coded from an EOI question asking the individual "What skills and experience make you the right person to ensure this venture is successful?", and Column 8 is coded as International or National from the following EOI question: "Is your venture for local, regional, national or international benefit?" See Section 4.1 for more details. $^{+}$ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$

A5. Example of an email sent to an applicant who had submitted one EOI (*Cash* treatment version)

From: XXX
Sent: XXX
To: 'X@hotmail.co.uk'
Subject: XXX Funding Application #
Importance: High

Dear X ,

Following a review of your expression of interest by an Award Manager I am pleased to confirm that you have been invited to apply for a grant.
Please find attached the full application form for completion and guidance notes to assist you. The initial information you provided in your expression of interest can form part of your application, which must be fully completed before you return it to us.

[Additional text for the *Cash* treatment]
{If your application is successful, this award will provide you with various resources, notably a cash award of up to £5,000.
We provide these financial resources that can help you take the next step in your journey}

Due to the exceptionally high volume of interest in our Awards, we have three application windows per year. If your application is accepted, we will invite you to pitch to the next Award panel which is in September 20XX. You will need to take into consideration the following key dates:

You can submit your application up until noon:	You will be notified if you have been invited to pitch by:	If your application is accepted, you will be invited to pitch at an Award panel between:	You will be notified of our decision during week commencing:	If you are Awarded, your first meeting will be on:
1st September 20XX	12th September 20XX	22nd September – 3rd October 20XX	27th October 20XX	6th November 20XX

Upon receipt, we will review your application and an Award Manager may contact you to discuss your venture in more detail. Please bear in mind that this is a competitive process and if at any stage of the process we decide you are not eligible for an XXX Award you will be informed. If you do not submit your application within the specified timeframe you will need to restart the process by submitting a new expression of interest.

To submit your application:

If you would like any pre-application support, please ensure you submit your application by noon 1st September 20XX.
Please email us your completed application to xxx
Please do not submit your application form in PDF format.
Don't forget to check your Junk Email inbox, in case any responses are diverted into there.
If you have any questions please do not hesitate to contact me.