MAKING MONEY AT THE EXPENSE OF THE POOR?
AN INVESTIGATION OF INDIVIDUALS’ PREFERENCES TO IMPACT INVEST VERSUS DONATE

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Abstract: Bringing together philanthropic objectives and financial decision-making, impact investors explicitly aim to generate impact while also yielding a financial return. Yet, the values, norms, and motives associated with philanthropy may be at odds with those of financial investing. Consequently, the question arises whether individuals deem it inappropriate—or even unethical—to invest in social problem-solving. This article aims to shed light on this question. Using an experimental set-up, we study the effect of funding scale (small or large funding requests) and funding scheme (donation or impact investment) on the funding decision of 872 individuals. Our findings indicate that a substantial share of the general population could embrace impact investing opportunities in real settings. In particular, small-scale, interest-free impact investments may be a promising way to elicit funding for social problem-solving. However, when larger amounts of money are at stake, individuals appear to exhibit self-interested behavior and require a positive financial return.

Keywords: charitable giving, impact investing, philanthropy, social entrepreneurship, social finance, social investment

Introduction

Although substantial progress in realizing the UN Millennium Development Goals has been achieved, major challenges persist (United Nations, 2014; United Nations Statistics Division, 2014). A key question that remains is how to extend the limited funding availability of philanthropic and public capital. In response, so-called impact investing has been discussed lately. Impact investing may be defined as “investments that explicitly aim to solve social or environmental challenges … while generating financial returns” (Louche et al., 2012, p. 307). Popular examples of impact investments are the provision of capital to microfinance institutions or to social enterprises building affordable housing solutions in developing countries (Fritz & v. Schnurbein, 2015). However, for impact investing to mobilize additional financial resources for the greater good, individuals must approve of the concept and be willing to invest in (return-generating) solutions to societal problems.

Yet, impact investing combines two “quite distinct … traditions of capital allocation”—philanthropy and mainstream financial investing—which have historically been deemed incompatible (Nicholls, 2010, p. 74) and may still be perceived to be at odds by many. While charity “is tied to [the] heart and steeped in moral traditions” (Dees, 2012, p. 321), financial decision-making is tied to the head, involving deliberate thinking and reason rather than emotion and passion. Moreover, the dominant culture of charity is generally skeptical towards the use of commercial approaches for social problem-solving, and personal sacrifice is seen as proof that one’s caritas is genuine (Dees, 2012). Profiting from the fact that someone is less
fortunate than oneself may be deemed inappropriate or even unethical. Not surprisingly, “there has been a long-standing debate of whether philanthropic considerations can be blended with financial incentives” (Niggemann and Brägger, 2011, p. 3; Clarkin and Cangioni, 2016), and impact investors are commonly exposed to criticism that they profit at the expense of the poor and vulnerable (Niggemann and Brägger, 2011; O’Donohoe et al., 2010).

This raises the question whether impact investing would find broad appeal among private individuals at all. When facing an investment opportunity in an area traditionally funded with philanthropic or public funds, their behavior could differ from what is expected in the conventional commercial space: The usual logic is that higher financial returns are preferred over lower ones assuming an equal level of risk. In contrast, private impact investors might invert this logic and accept a lower financial yield when making an impact investment. However, if this were the case, what would be considered an appropriate return?

To answer this question, this study utilizes a between-subject experimental set-up with 872 individuals. We investigate the willingness to impact invest hypothetically at different financial return levels and amounts compared with the willingness to make a donation. Our research makes two important contributions. First, our findings illustrate the general attitude of private individuals toward impact investing. Specifically, we show whether charitable giving is generally preferred over impact investing in areas that have traditionally been associated with philanthropy. These insights improve our understanding of the psychology underlying pro-social lending decisions (Galak et al., 2011). Second, our results provide a first indication on how to best design impact investing products to appeal to retail investors. Thus, our research informs social-purpose organizations and financial intermediaries on whether to approach private individuals for impact investment products and how to ideally structure such products.

Theoretical background and hypotheses

Investor rationality is seen as the underlying logic of modern finance (Beal et al., 2005, p. 66; Statman, 2004). Investors are expected to make investment decisions based purely on risk–return considerations; they should “prefer more to less” and, thus, aim to maximize financial returns in due consideration of their individual risk appetite (Beal et al., 2005, p. 66). This assumption is in line with the norm of self-interest, which stipulates that individuals act in accordance with their own material self-interest, and which is argued to have been deeply internalized as a “shared perception … of appropriate behavior” (Miller, 1999, p. 1056).

Behavioral finance calls into question investor models that are based exclusively on the assumption of rationality, however. Research shows that psychological variables may indeed affect investment decision-making (Barreda-Tarrazona et al., 2011). Socially responsible investing (SRI) provides a case in point: While considering environmental, social and governance (ESG) criteria in one’s investment decisions may be a means to “capture important risk and performance elements” (Glac, 2009, p. 53; Hangl, 2014), non-financial considerations may form part of an investor’s utility function even if these are not correlated with an investment’s financial performance (Barreda-Tarrazona et al., 2011; Beal et al., 2005; Glac, 2009; Reeder, 2014). Just as in food consumption choices, SRI is argued to offer expressive benefits besides utilitarian ones, which allow investors to “express their values, social class, and lifestyle choices to themselves and others” (Beal et al., 2005, p. 68). The claim that SRI investors derive utility from investing responsibly is also confirmed empirically; responsibility-oriented investors are shown to be willing to sacrifice financial for ethical performance to a certain degree (e.g., Barreda-Tarrazona et al., 2011; Glac, 2009). Despite this greater tolerance for return differentials, most SRI investors appear to be as interested in their investments’ financial return as conventional investors and SRI can hence not be put on a level
with charitable giving (Glac, 2009; Nilsson, 2008; 2009). Return perception is an important explanatory variable (Nilsson, 2008), and multiplication of one’s funds is the ultimate goal of SRI—although with environmental, social, and governance constraints.

For impact investing, the underlying considerations may differ. The ultimate objective is to help solve a societal or environmental problem via financial investing. Impact investing adopts the tools of the marketplace in the service of social/environmental problem-solving (Bertl, 2016; Brandstetter and Lehner, 2015). However, for private individuals, social problem-solving has traditionally been in the realm of charity, and the values, norms, and motives associated with charitable giving may be at odds with those of financial investing. Consequently, individuals may deem investing in social problem-solving inappropriate, or even unethical.

The relevant literature distinguishes three broad motives for charitable giving (or prosocial behavior more generally): intrinsic, extrinsic, and image—also termed reputational or signaling—motivation (Ariely et al., 2009; Bénabou and Tirole, 2006). Intrinsic motivation refers to “the value of giving per se, represented by private preferences for others’ well-being, such as pure altruism or other forms of prosocial preferences” (Ariely et al., 2009, p. 544). Intrinsic motivation can arise from so-called pure or impure altruism (Bénabou and Tirole, 2006). That is, at one extreme, pure altruists are driven exclusively by the wish to improve the welfare of the beneficiaries independently of the funding mechanism (Crumppler and Grossman, 2008) and “without consideration of personal benefit” (Allison et al., 2013, p. 693); at the other extreme, impure altruists, or “pure egoist[s]” (Crumppler and Grossman, 2008, p. 1011), donate to experience a “joy of giving” (Bénabou and Tirole, 2006, p. 1657), i.e. pleasurable psychological effects, also referred to as “warm glow” (Andreoni, 1989; 1990; Bekkers and Wiepking, 2011). The impure altruist may be happy to conform to the widely held social norm favoring charitable giving and/or a self-image of being prosocial and altruistic (Basil et al., 2006; Bekkers and Wiepking, 2011; Costa-Font et al., 2013). Extrinsic motivation refers to material rewards or benefits resulting from the prosocial act (e.g., thank-you gifts; Ariely et al., 2009). Finally, image motivation describes the desire to give because of the perception this creates with others (e.g., being good or wealthy; Ariely et al., 2009).

Individuals may be critical of impact investing, as it may be at odds with both intrinsic and image motivation. With regard to the former, the pure altruist may be skeptical whether impact investing is as effective as charitable giving in achieving the desired social objective. On the one hand, the requirement to return the invested principal (potentially including a financial return) reduces the financial resources available to achieve the social mission. As Dees and Anderson (2004, p. 13) phrase it: “Even where social impact is clear, many people still have a problem with entrepreneurs and investors in social ventures taking out profits when that money could be used to do more good.” On the other hand, the pure altruist may fear that impact investing will induce so-called mission drift. As the simultaneous pursuit of social and financial objectives—so-called “blended value” (Emerson, 2003)—requires a constant balancing (O’Donohoe et al., 2010), there is a risk that financial considerations will override social objectives (Achleitner et al., 2013): To increase profits to service existing investors or attract new ones, an impact investee might decide to charge higher prices, focus on more solvent customers, and/or not reinvest in the business (O’Donohoe et al., 2010). Concerns regarding mission drift have emerged within the microfinance sector as purely commercial investors have become involved (O’Donohoe et al., 2010). The augmented levels of overindebtedness in some countries and the high interest rates charged by some microfinance institutions may be seen as proof that these investments scale-up and thrive at the expense of the poor (O’Donohoe et al., 2010).
At the other extreme of intrinsic motivation, the impure altruist may be skeptical of impact investing, since its potential for warm glow can be expected to be more limited than for a charitable contribution. The culture of charity deems sacrifice a signal that one's caritas is genuine; it “honors those who make great personal and financial sacrifices, and raises questions about the morals of those who do not” (Dees, 2012, p. 325). “Non-instrumental giving” is a classical philanthropic ideal (Bajde, 2013, p. 14); personal gain from a charitable activity is seen to “dilute its moral value,” calling into question the actor’s motives (Dees, 2012, p. 322). As such, it is not surprising that provision of external incentives is shown to crowd out charitable giving, even in private settings (e.g., Newman and Shen, 2012). Monetary incentives, in particular, appear to conflict with an individual’s altruistic self-image (Costa-Font et al., 2013); the individual may refuse economically beneficial transactions if they are perceived to lower the individual’s dignity (Bénabou and Tirole, 2006).

Similar arguments apply regarding the potential of impact investing to improve one’s image. Positive image effects result from acts that are considered “prosocial, fair-minded, or caring” (Ariely et al., 2009, p. 546). Given that charitable giving is a “widely held moral standard” (Basil et al., 2006, p. 1038) and that personal sacrifice is important in the culture of charity, demanding a financial compensation for a prosocial act—rather than offering one’s help as a gift—eliminates the opportunity to show that one’s caritas is pure (Dees, 2012). Impact investing is likely to create ambiguity about one’s true motives, and it invites an observer to ascribe the prosocial behavior to intrinsic motivation to a lesser extent (Bénabou and Tirole, 2006; Newman and Shen, 2012).

Accordingly, we argue that individuals will generally be more willing to donate than impact invest, since the former can be expected to be more effective in triggering warm glow and positive image effects. Moreover, individuals motivated by pure altruism may question whether impact investing is as effective as charitable giving in achieving the social objective and they may be concerned about mission drift. There is a limitation to this assumption, however. Despite potential tax deductions, donations always involve a financial sacrifice. As the ordinary individual cannot afford to give away great amounts of money to charity, the higher the donation (or request), the higher the associated costs and the fewer the individual is able to donate. In this vein, empirical research shows that requests for larger donations lead to lower response rates (Bekkers and Wiepking, 2011; Desmet, 1999). Moreover, self-interest considerations may play a more important role when larger amounts of money are involved. That is, although individuals may be theoretically able to give a larger amount, they may simply not be willing to do so. Consequently, we adjust our assumption as follows:

**Hypothesis 1a:** For small-scale funding of social problem-solving, individuals are more likely to donate than to impact invest.

**Hypothesis 1b:** For large-scale funding of social problem-solving, individuals are less likely to donate than to impact invest.

There is reason to believe that an individual’s attitude toward—and the individual’s willingness to engage in—impact investing varies depending on the expected financial return. Impact investments that merely recover the invested principal—as is, for example, the case for interest-free loans provided on the microfinance platform Kiva—may be viewed more positively than those promising (high) financial gains. This stands in stark contrast to the assumptions that apply in the traditional world of investing.

The higher the promised financial return, the more skeptical the pure altruist should be that the impact investment will yield the desired social impact, since less money is available for mission achievement, and the risk of mission drift increases. Again, microfinance provides
a case in point: The higher the financial return promised to investors, the higher the interest rates the borrowers are required to pay. Since there is a trade-off between serving the poorest and profitability (Cull et al., 2007), there is a risk that microfinance institutions’ promising (high) financial returns to their investors will shift their focus toward more solvent and, thus, more ‘bankable’ customers. Moreover, there is evidence that microloan borrowers must often forfeit their possessions or take on new loans to repay existing ones (Bajde, 2013). Recently, reports on poor farmers emerged who committed suicide because they were not able to repay their microfinance loans (Tavanti, 2013).

With respect to warm glow (i.e., impure altruism) and image motivation, we argue above that individuals can be expected to derive less warm glow and positive image effects from impact investing compared with charitable giving. We here argue that return-bearing impact investments may even result in negative psychological consequences and image effects. Assuming a loan does not default—and ignoring potential inflation losses—, interest-free impact investments do not involve an actual financial sacrifice, since the invested principal will be recovered. However, in addition to the risk of default and inflation losses, the lender faces the “opportunity cost of lending without interests” (Bajde, 2013, p. 8; also see Galak et al., 2011). As such, an interest-free loan can be construed to involve financial sacrifice or even be seen as charitable giving (Bajde, 2013; Ly and Mason, 2012). Earning a clearly positive financial return from a solution to a social problem, (i.e., profiting personally from the fact that someone is less fortunate than oneself, or even at his/her cost), cannot be expected to create or confirm an image of oneself as being caring or fair-minded.

The same logic applies to the image effects that can be expected to result from return-bearing impact investments: Actions that are deemed greedy or unfair may result in a negative, or at least dampen a positive image (Ariely et al., 2009). Waiving interest payments for prosocial loans, as is done by Kiva lenders, may lead others to assume that the lender is driven by “charitable preferences” (Ly and Mason, 2012, p. 1041). Return-bearing impact investing, in turn, may be considered greedy and unacceptable. In fact, profiting from the poor is a common criticism with regard to impact investing (Niggemann and Brägger, 2010; O’Donohoe et al., 2010). The potential negative effects of return-bearing impact investments on one’s (self) image are summarized by Grabenwarter and Liechtenstein (2011, p. 14): “Impact investors with a clear social or environmental agenda fear … that the explicit focus on profitability would destroy the noble cause of their investment.”

Accordingly, we argue that the higher the financial return of an impact investment opportunity, the less likely are individuals to invest to the extent that they are concerned about mission drift and achievement, and that such an investment may compromise their (self-) image as good and just persons. This leads to our second hypothesis:

Hypothesis 2: The higher the financial return of an impact investment opportunity, the less likely are individuals to invest.

Methodology

This research employs an experimental set-up to test our hypotheses. Unlike other empirical methods, an experimental approach allows the researcher to control the environment and design experiments such that the effects of unwanted variables can be ruled out (Barreda-Tarrazona et al., 2011). We can observe the participants’ decisions and characteristics while, at the same time, being able to construct the features of the available options (Barreda-Tarrazona et al., 2011). Prior research attests that lab-based results on the psychology
underlying prosocial behavior are valid in the real world “with real money and livelihoods at stake” (Galak et al., 2011, p. 136).

Sample characteristics

The experiment was conducted online in Germany with two different samples. For the pretest, we used a convenience sample of 152 participants. The pretest confirmed the reliability of the applied scales. Based on insights from the pretest, the scenario was slightly adjusted regarding additional information about the presented fictitious organization. For the actual experiment, we worked with an online panel data company to generate a sufficiently large sample that was as representative as possible of the German population in terms of gender, age, and education. The survey was sent to 2,565 recipients, of whom 1,354 did not respond. Quality checks eliminated participants who simply clicked through the experiment (i.e. those with an unreasonably short time to complete the survey). With a response rate of 34%, the final sample comprised 872 participants: 444 men (50.9%) and 428 women (49.1%). Table 1 provides more detail on the socio-demographics of the sample.

Table 1: Descriptive sample characteristics

<table>
<thead>
<tr>
<th>Sample (n=872)</th>
<th>Male 444 (50.9%)</th>
<th>Female 428 (49.1%)</th>
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<tbody>
<tr>
<td>Gender</td>
<td></td>
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<tr>
<td>Male</td>
<td></td>
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<tr>
<td>Female</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td></td>
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<tr>
<td>20-39</td>
<td>255 (29.2%)</td>
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</tr>
<tr>
<td>40-59</td>
<td>375 (43.0%)</td>
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</tr>
<tr>
<td>60-79</td>
<td>242 (27.8%)</td>
<td></td>
</tr>
<tr>
<td>Education level</td>
<td></td>
<td></td>
</tr>
<tr>
<td>University graduate</td>
<td>149 (17.1%)</td>
<td></td>
</tr>
<tr>
<td>No university graduate</td>
<td>723 (82.9%)</td>
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<tr>
<td>Monthly household net income</td>
<td></td>
<td></td>
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<tr>
<td>Less than €2,600</td>
<td>368 (42.2%)</td>
<td></td>
</tr>
<tr>
<td>€2,600-€3,600</td>
<td>226 (25.9%)</td>
<td></td>
</tr>
<tr>
<td>More than €3,600</td>
<td>272 (31.2%)</td>
<td></td>
</tr>
<tr>
<td>Not indicated</td>
<td>6 (0.7%)</td>
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Experimental design

The participants were randomly assigned to one of eight treatment groups (see Table 2) and received a hypothetical request to provide capital to the same social cause. Each group differed in terms of the requested investment amount and the rate of financial return. While participants in treatment groups 1 through 4 received a small-scale funding request of €30, those in treatment groups 5 through 8 received a large-scale funding request of €500. At each amount, participants in one treatment group were asked to make a donation (T1 and T5), while participants in the other three treatment groups were asked to make an impact investment at 0% p.a. (T2 and T6), 2% p.a. (T3 and T7), and 5% p.a. (T4 and T8), respectively.
Adedeji and described the second most popular cause among German donors (Ly and Mason, 2012). Academic research on prosocial behavior also commonly uses organizations promoting children’s education as the object of study (e.g., Buchheit and Parsons, 2006; Newman and Shen, 2012). Moreover, loan requests for education (e.g., to help parents pay for school fees or operate a school) are the most popular cause with shortest funding time on the microfinance platform Kiva (Ly and Mason, 2012). Third, the presented organization has a viable business model, generating income through the school fees it charges. This reassures potential impact.

All participants received the same hypothetical fundraising appeal for an organization operating low-cost private primary schools in Kenya (see Appendix 1 for the English translation). Up front, the scenario was tested with experts regarding its ease of understanding and potential issues. The organization was modeled after a real-world organization. To avoid organization-specific biases, a fictitious name—*Quality Education for All*—was chosen. The scenario presentation materials consisted of four parts: The first section summarized the quantity and quality issues of the sub-Saharan African education system drawing upon a number of sources (Adedeji and Olaniyan, 2011; Bridge International Academies, 2013; Knüppel and Groß, 2011; Rangan and Lee, 2010; UNESCO, 2010; UNESCO Institute for Statistics, 2013; United Nations Statistics Division, 2013). Sections 2 and 3 described the organization and its problem-solution approach. The last section provided basic information on Kenya, i.e. its population (CIA, 2014), gross national income per capita (The World Bank, 2014), and Human Development Index ranking (United Nations, 2013). After having read the scenario the participants were informed that the organization needed financial support to set up additional low-cost quality primary schools in sub-Saharan Africa. They had to indicate their likelihood to financially support the organization on a 7-point scale ranging from “very unlikely” to “very likely.” To rule out potential social desirability issues, an introduction screen had previously reassured participants that their choice would be entirely anonymous.

The organization/cause was chosen for three reasons. First, the provision of (quality) primary education to poor children in sub-Saharan Africa is an area closely associated with philanthropic giving and development aid. Second, the cause needed to appeal to a broad group of study participants: Achievement of universal primary education is one of the eight United Nation’s Millennium Development Goals (United Nations Development Programme, 2014). Organizations benefitting children were significantly favored over other charitable causes in a study by Buchheit and Parsons (2006), and child and youth aid constituted the second most popular donation cause among German donors in 2011 (Statista, 2014; TNS Infratest, 2011). Academic research on prosocial behavior also commonly uses organizations promoting children’s education as the object of study (e.g., Buchheit and Parsons, 2006; Newman and Shen, 2012). Moreover, loan requests for education (e.g., to help parents pay for school fees or operate a school) are the most popular cause with shortest funding time on the microfinance platform Kiva (Ly and Mason, 2012).

### Table 2: Treatments

<table>
<thead>
<tr>
<th>Donation</th>
<th>Investment at 0% p.a.</th>
<th>Investment at 2% p.a.</th>
<th>Investment at 5% p.a.</th>
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<tbody>
<tr>
<td>€30</td>
<td>T1</td>
<td>T2</td>
<td>T3</td>
</tr>
<tr>
<td>€500</td>
<td>T5</td>
<td>T6</td>
<td>T7</td>
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A between-subject (rather than a within-subject) design was chosen to avoid participants learning of the other funding scheme (i.e. the donation or the impact investment), given that in real life, an organization would most likely approach individuals with either a donation or an investment appeal. Moreover, a participant may decide not to donate due to the presence of (an) investor(s), as the participant may fear that the donated money will be used to compensate investors rather than being directed toward the social mission; although this would present an interesting research question, in our case, this would have distorted our baseline comparison/results and would have distracted from the core question at hand.
investors where the money to repay the loan will come from, which can be expected to be an indispensable requirement to make a loan (Ly and Mason, 2012). At the same time, it is also likely that an individual will choose to make a donation to help minimize school fees, thus, increasing access for children from poor families, or to improve infrastructure and teaching quality while maintaining a constant fee level. Opportunity International, for instance, seeks donations from individuals, which it then passes on as loans to the founders and operators of “budget schools” (Knüppel and Groß, 2011; Opportunity International Deutschland, 2014). Our pretest confirmed our assumptions: Using an established four-item scale (Koschat-Fischer et al., 2012), cause involvement proved to be comparatively high, with a mean of 4.77 (std. dev. 1.45; Cronbach’s Alpha 0.92).

To build trust, and thus increase participants’ likelihood to fund, the scenario stressed that the organization had been in existence since 2008, was currently running more than 300 schools, had received several international awards, and was supported by renowned international organizations. We also mentioned that its founding/management team had extensive experience in the education and international development space. Moreover, we highlighted that the organization did exist in real life as opposed to the described donation and investment opportunities. Our pretest showed that these efforts were successful: Using an established five-item scale (Sargeant et al., 2006), trust in the organization proved to be relatively high, with a mean of 4.41 (std. dev. 1.39; Cronbach’s Alpha 0.96). To ensure an even higher level of trust, we explicitly asked participants to assume that the organization was absolutely trustworthy in the actual experiment.

We selected €30 for the small-scale funding request, as this is approximately in line with the average donation of individual Germans in 2013 (GfK, 2014). For the large-scale funding request, we chose €500; this is significantly more than the average amount donated in a single donation, as well as much greater than the total annual donation made by an average German donor in 2013 (€205\textsuperscript{d}; GfK, 2014). This amount is also large enough such that differences in the financial return rate, which we set at 0% p.a., 2% p.a., and 5% p.a., respectively, for the different treatments, should have a meaningful impact.

The scenario for the impact investing treatment groups (i.e. T2-T4 and T6-T8) included additional information on the repayment term and investment risk. The former was set to three years given that it ranges between two and five years for similar loans (Knüppel and Groß, 2011). To avoid that participants selected a low likelihood to invest simply because of risk–return considerations, we asked them to assume a default risk of 0%. We chose not to refer to a successful track record with regard to the repayment of loans so as not to bias participants toward an investment. We also decided not to indicate that the loan was collateralized by a renowned, international charitable foundation, as this might lower participants’ hesitation to provide an (interest-bearing) loan given that the organization would not be driven into bankruptcy if it were unable to service the loan.

After participants completed the decision portion of the survey, they answered several follow-up questions. Among others, they were asked to indicate their monthly household income along seven categories and whether they had donated money to charity in 2013. Moreover, they expressed their (dis-)agreement with several statements designed to assess their cause involvement, attitude toward helping others, warm glow motive, and the prestige to be derived from funding the described organization. For these assessments, we used established scales (see Appendix 2). Participants who were asked to evaluate an impact investing scenario (i.e., T2-4 and T6-8) were further asked to indicate their investment experience on a four-point semantic differential scale (i.e., no, little, moderate, extensive).
Data analysis

ANOVA and chi-square tests were conducted to investigate differences between the treatment groups. Normal distribution, an assumption of ANOVA, was assessed by visual inspection of normal Q-Q plots. In all but one case (i.e. likelihood to fund ratings for the €500-donation treatment), these showed a clearly normally distributed sample. Given that ANOVAs are robust to deviations from normality if the sample sizes are large (Bortz, 2005), we felt comfortable to proceed with the ANOVAs. Homogeneity of variances, another assumption of ANOVA, was investigated using Levene’s test. The results of the Welch statistic were used instead of ANOVA when Levene’s test revealed heterogeneous variances (Field, 2013). When either the ANOVA or Welch statistic was significant, post hoc tests (Gabriel in case of similar variances, Games-Howell in case of unequal variances; Field, 2013) were used to detect any differences between the pairs of groups.

Results

We first assessed subjects’ preferences for the described cause as well as unplanned differences between the treatment groups, which could have distorted our results. Generally, study participants exhibited empathy for the described cause; with a mean of 4.13 (std. dev. 1.59; Cronbach’s Alpha 0.95) cause involvement proved lower than in the pretest but still slightly above the scale’s mid-point.

We could not attest any significant differences between the €30- and the €500-treatment groups in terms of cause involvement (F(3,433)=1.09, p=0.353; F(3,431)=1.64, p=0.179), attitude toward helping others (F(3,433)=0.37, p=0.779; F(3,431)=0.89, p=0.446), income (χ²(6)=4.46, p=0.615; χ²(6)=5.20, p=0.518), previous donation behavior (χ²(3)=1.09, p=0.779; χ²(3)=2.16, p=0.541), or investment experience (χ²(6)=4.87, p=0.560; χ²(6)=7.46, p=0.280). As such, the observed differences in participants’ likelihood to fund can be ascribed to our experimental manipulation, that is, the different funding opportunities presented to the participants.

Table 3 shows participants’ mean likelihood to fund, standard deviation, and number of participants across all eight treatments. We test Hypothesis 1a (i.e. that for small-scale funding of social problem-solving, individuals are more likely to donate than impact invest) by comparing the mean likelihood to fund of treatment group 1 (i.e. €30-donation) and treatment groups 2, 3 and 4, respectively (i.e. €30-investments at 0% p.a., 2% p.a., and 5% p.a.). There were significant differences in mean likelihood to fund among treatment groups 1 through 4, F(3,433)=9.59, p<0.001. Contrary to our expectations, post-hoc tests (Gabriel) revealed a significantly lower mean likelihood to donate €30 than to impact invest the same amount at 0% p.a. (-1.18, p<0.001), 2% p.a. (-1.37, p<0.001), and 5% p.a. (-0.81, p=0.022), respectively. This finding is supported by a comparison of the number of participants who indicated an above-mid-point likelihood to fund (i.e. >4; subsequently referred to as ‘high likelihood to fund’), across the €30-treatments; while only 16.4% of participants indicated a high likelihood to donate €30, this figure rose to 40.4%, 47.2%, and 30.9%, respectively, for the impact investments at 0% p.a., 2% p.a., and 5% p.a. (see table 4 and figures 1 and 2). Accordingly, we reject Hypothesis 1a.
### Table 3: Mean likelihood to fund, standard deviation, and number of subjects by funding amount and return level

<table>
<thead>
<tr>
<th></th>
<th>Donation</th>
<th>Investment at 0% p.a.</th>
<th>Investment at 2% p.a.</th>
<th>Investment at 5% p.a.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Means</strong></td>
<td>2.75</td>
<td>3.93</td>
<td>4.12</td>
<td>3.55</td>
</tr>
<tr>
<td><strong>€30</strong> Stand. dev.</td>
<td>1.76</td>
<td>2.12</td>
<td>2.20</td>
<td>2.10</td>
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<td><strong># Subjects</strong></td>
<td>110</td>
<td>109</td>
<td>108</td>
<td>110</td>
</tr>
<tr>
<td><strong>Means</strong></td>
<td>1.89</td>
<td>2.75</td>
<td>3.48</td>
<td>3.18</td>
</tr>
<tr>
<td><strong>€500</strong> Stand. dev.</td>
<td>1.40</td>
<td>1.87</td>
<td>2.08</td>
<td>1.95</td>
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<td><strong># Subjects</strong></td>
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</table>

### Table 4: Number of subjects by treatment and likelihood to fund

<table>
<thead>
<tr>
<th></th>
<th>Low likelihood to fund</th>
<th>Average likelihood to fund</th>
<th>High likelihood to fund</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Donation</strong></td>
<td>72 (65.5%)</td>
<td>20 (18.2%)</td>
<td>18 (16.4%)</td>
</tr>
<tr>
<td>€30</td>
<td>45 (41.3%)</td>
<td>20 (18.3%)</td>
<td>44 (40.4%)</td>
</tr>
<tr>
<td><strong>Investment at 0% p.a.</strong></td>
<td>40 (37.0%)</td>
<td>17 (15.7%)</td>
<td>51 (47.2%)</td>
</tr>
<tr>
<td><strong>Investment at 2% p.a.</strong></td>
<td>52 (47.3%)</td>
<td>24 (21.8%)</td>
<td>34 (30.9%)</td>
</tr>
<tr>
<td><strong>Investment at 5% p.a.</strong></td>
<td>95 (87.2%)</td>
<td>5 (4.6%)</td>
<td>9 (8.3%)</td>
</tr>
<tr>
<td><strong>€500</strong></td>
<td>72 (64.9%)</td>
<td>15 (13.5%)</td>
<td>24 (21.6%)</td>
</tr>
<tr>
<td><strong>Investment at 0% p.a.</strong></td>
<td>53 (49.5%)</td>
<td>19 (17.8%)</td>
<td>35 (32.7%)</td>
</tr>
<tr>
<td><strong>Investment at 2% p.a.</strong></td>
<td>56 (51.9%)</td>
<td>20 (18.5%)</td>
<td>32 (29.6%)</td>
</tr>
</tbody>
</table>
Hypothesis 1b proposes that for large-scale funding of social problem-solving, individuals are less likely to donate than to impact invest. We test the hypothesis by comparing the mean likelihood to fund of treatment group 5 (i.e. €500-donation) and treatment groups 6, 7, and 8, respectively (i.e. €500-investments at 0% p.a., 2% p.a., and 5% p.a.). As for the small-scale funding treatments, there were significant differences in the likelihood to fund among treatment groups 5 through 8, Welch’s F (3,236.15)=18.91, p<0.001. In line with our expectations, post-hoc tests (Games-Howell) revealed a significantly lower mean likelihood to donate €500 than impact invest the same amount at 0% p.a. (-0.86, p=0.001), 2% p.a. (-1.59, p<0.001), and 5% p.a. (-1.29, p<0.001), respectively. This finding is supported by a comparison of the number of individuals who indicated a high likelihood to fund, across the €500-treatments; while only 8.3% of participants indicated a high likelihood to donate €500, this figure rose to 21.6%, 32.7%, and 29.6%, respectively, for the impact investments at 0% p.a., 2% p.a. and 5% p.a., respectively (see Table 4). The above findings support Hypothesis 1b.
Finally, Hypothesis 2 proposes that the higher the financial return of an impact investment opportunity the less likely individuals are to invest. This can be tested by comparing the mean likelihood to fund of treatment groups 2 through 4 (i.e. €30-investments at 0% p.a., 2% p.a., and 5% p.a.) and treatment groups 6 through 8 (i.e. €500-investments at 0% p.a., 2% p.a., and 5% p.a.), respectively. There were no significant differences in mean likelihood to fund among treatment groups 2 through 4, $F(2,324)=1.97, p=0.141$. Table 3 shows that the mean likelihood to impact invest €30 was almost identical for the interest-free and the 2%-loans (3.93 and 4.12, respectively) and approximately half a scale unit lower for the 5%-loan (3.55). These differences appear somewhat more material when described differently: While 40.4% and 47.2% of participants exhibited a high likelihood to impact invest €500 at 0% p.a. and 2% p.a., respectively, this number dropped to 30.9% in the 5% return treatment (see Table 4).

As opposed to the €30-level, we observed significant differences in the mean likelihood to impact invest €500, $F(2,323)=3.80, p=0.023$. In line with our expectations, the mean likelihood to impact invest €500 was slightly lower at 5% p.a. than at 2% p.a. (3.18 vs. 3.48, respectively); yet, it was higher at 2% p.a. and 5% p.a., respectively, than at 0% (2.75). Post hoc tests (Gabriel) reveal that only the differences between the 0%- and the 2%-investments were significant (-0.73, $p=0.019$), however. The observed pattern also becomes apparent when comparing the number of participants with a high likelihood to impact invest: 21.6% indicated a high likelihood to provide an interest-free €500-investment, and 32.7% and 29.6% to impact invest €500 at 2% p.a. and 5% p.a., respectively (see Table 4).

Based on the above we cannot support H2 for the small-scale investments. Given the significantly higher likelihood to fund for the 2%-investment than for the 0%-investment, we can reject H2 for the large-scale investments, however.

**Follow-up analyses: Warm glow and prestige associated with the funding opportunities**

Given that participants behaved differently from what we had expected (except for H1b), the following analyses seek to understand whether two of the underlying assumptions that led us to the derived hypotheses also do not hold. These assumptions are: (I) A donation should be deemed more effective in triggering warm glow and positive image effects than an impact investment; (II) the potential for warm glow and positive image effects should decrease consistently with an impact investment’s rate of return.

With a Pearson Correlation coefficient of 0.72, the two-item warm glow scale showed high internal consistency. There were significant differences in mean warm glow perception across the €30-treatments, $F(3,433)=4.55, p=0.004$. Contrary to our expectations, post-hoc tests (Gabriel) revealed a marked and significantly lower warm glow perception for the €30-donation than for the corresponding investment at 2% p.a. (-0.91, $p=0.002$). Although no other significant differences could be discerned at the €30-level, it is worth noting that warm glow perception was consistently lower for donations than for impact investments (3.09 vs. 3.61, 4.00, and 3.46, respectively; see Appendix 3). There were no significant differences in mean warm glow perception across the €500-treatments, $F(3,431)=0.05, p=0.984$, with the means being almost identical (3.40 vs. 3.34, 3.36 and 3.43, respectively; see Appendix 3). This implies that principally participants were not concerned to forego warm glow by engaging in impact investing compared with making a donation to the same cause.

Regarding assessment of a second type of motivation decisive for prosocial behavior, image motivation, the applied three-item prestige scale showed high internal consistency (Cronbach’s Alpha 0.89). There were significant differences in mean prestige perception across the €30-treatments, $F(3,433)=2.75, p=0.042$. Post-hoc tests (Gabriel) revealed no significant differences between the individual treatment groups, however. Contrary to our expectations, the mean prestige perception was quite similar across the treatments, yet consistently lower for
the donation treatment (3.02 vs. 3.15, 3.58, and 3.09, respectively; see Appendix 4). Along the same lines, no significant differences could be found in mean prestige perception across the €500-treatments, $F(3,431)=0.80, p=0.495$. The associated prestige was very similar for donations and impact investments (3.04 vs. 2.88, 3.09, and 3.20, respectively; see Appendix 4). This indicates that principally participants were not concerned to forego prestige by engaging in impact investing compared with making a donation to the same cause.

Discussion

This study analyzes individuals’ willingness to engage in impact investing as compared with their willingness to make a classic donation. Contrary to our expectations, participants were significantly and markedly more likely to impact invest at all financial return levels than to make a charitable donation. This result holds independently of whether participants were asked for a small or a large amount of money. However, this could owe to our reference point, that is, participants’ relatively low overall willingness to donate to the described organization: only 16.4% indicated a high likelihood to donate €30, when asked for €500, this number even dropped to 8.3%. There are several possible explanations for this low generosity: First, an individual’s self-interest may prevent donating (Miller, 1999), as giving to charity always involves a financial loss. Second, individuals may not, or feel that they do not, have the financial resources to donate money. Third, research shows that personal relevance (i.e. cause involvement) is an important predictor for charitable giving behavior (Grau and Folse, 2007; Ujcic et al., 2006). In our case, this argument can offer only a partial explanation for participants’ low likelihood to donate, however, given that 40% and 35%, respectively, indicated a high affinity for the cause. A fourth possible explanation is that the market-based business model of the presented organization does not appeal to donations. Prior academic research assumes (Gras and Mendoza-Abarca, 2014), or provides empirical evidence (Smith et al., 2012), of a crowding-out of private donations if a not-for-profit organization (NPO) engages in (significant) market-based income generation, one of the explanations being that donors would assume that the commercial income would make the organization self-sufficient and donations less needed. An alternative explanation for this crowding-out effect could be that the culture of charity is generally skeptical toward the use of commercial approaches for social problem-solving (Dees, 2012). This implies that organizations with such a business model should have difficulty raising donations and become ever more dependent on impact investments to keep their financing costs low. One last explanation for participants’ low willingness to donate is that we deliberately (so as not to bias participants’ decision-making) did not provide information on the organization’s legal structure. Without the comfort of the non-distribution constraint inherent in the NPO model, participants may be hesitant to donate; they may fear that their donations are being abused to pay excessive compensation and distribute profits among owners rather than lower tuition fees or raise the educational quality at a constant fee level. An interesting question for future research is, then, whether participants’ mean likelihood to donate would still be significantly lower than their likelihood to impact invest if the scenario highlighted that the organization was organized as an NPO. Similarly, future researchers could explore whether an organization’s legal structure has an effect on impact investors’ return expectation. It is, for instance, conceivable that individuals require a lower return from an NPO due its non-distribution constraint, and the resulting belief that any profits will be re-invested in the business rather than distributed to owners.

Despite the low reference point, our results nevertheless allow for the conclusion that impact investing does not appear to encounter broad disapproval among private individuals; 4
out of 10 participants signaled a high likelihood to provide an interest-free loan of €30, and almost every other participant exhibited a high likelihood to impact invest the same amount at 2% p.a., with more than 20% selecting the highest possible score. Unsurprisingly, the mean likelihood to impact invest was consistently lower for the €500- than the €30-treatments, but still not negligible. The fact that there were practically no significant differences in the warm glow and prestige perceptions between the individual €30- and €500-treatments provides further evidence that there does not appear to be a general moral rejection of impact investing as opposed to donations. We believe that the above gives hope that a substantial share of the population could openly embrace impact investing opportunities in real settings. This may be so for a number of reasons. First, impact investing lowers the “relative price” (Ariely et al., 2009, p. 546) of prosocial behavior, i.e., it allows doing good without incurring financial harm. Second, where market-based business models are feasible, individuals may deem impact investing a more effective means to bring about social change: Impact investing frees up philanthropic resources, which can be channeled toward organizations that are not able to (completely) finance themselves from philanthropic revenue sources. Impact investing could further promote efficiency and innovation: Given that invested capital must be returned (potentially including a financial return), investees can be expected to minimize expenses as much as possible and think about cost-effective ways to accomplish their mission. Along the same lines, as impact investing is an ongoing process (as opposed to the one-off donation act), it could enhance governance and monitoring mechanisms leading to a more responsible use of funds. Third, individuals may be attracted by the ‘newness’ of impact investing and its innovative character. Finally, individuals may also deem it the more appropriate thing to do; even very compassionate individuals may be reluctant to display altruistic behavior if this would violate the norm of self-interest and might, thus, induce disapproval by peers and observers (Holmes et al., 2002; Miller, 1999). As a consequence, individuals would feel increasingly uncomfortable making a donation if they were not offered a “tangible quid pro quo” (Miller, 1999, p. 1054) and more likely to exhibit prosocial behavior when it was framed as an economic transaction (Briers et al., 2007; Holmes et al., 2002; Miller, 1999). An impact investment could be argued to provide individuals with such “psychological cover” (Miller, 1999, p. 1058) for their prosocial behavior.

It must be noted, however, that the study participants made their investment decision under the assumption of a zero default risk. Given the high-risk character of many impact investments, this is a somewhat unrealistic expectation—unless, of course, a third party provides a guarantee, as was done, for example, in the case of the Rikers Island Social Impact Bond (Olson and Phillips, 2013). Future research should, thus, replicate our study under the assumption of a material default risk.

Our results give a first indication on how impact investing products should be designed to best appeal to (retail) investors. We could not attest any significant or material differences in participants’ mean likelihood to impact invest €30 at 0% p.a., 2% p.a., or 5% p.a. The mean likelihood to impact invest was almost identical for the interest-free and the 2%-loan and only approximately half a scale unit lower for the 5%-loan. These findings can be interpreted to mean three things for small funding requests: First, participants generally did not appear to have fundamental concerns engaging in profit-seeking impact investing as opposed to providing an interest-free loan. This finding is further supported by the fact that there were no significant differences in the warm glow and prestige perceptions among the individual €30-investments. Second, offering interest-free loans could be an effective way to raise impact investing money. Third, although the observed differences were marginal and insignificant, there could even be a ceiling as to what is deemed an appropriate, justifiable financial return for an impact investment. Future research should investigate whether the mere return of the invested principal is sufficient for raising small amounts of impact investing money when there
is a material default risk, and whether there is indeed a ceiling in terms of what is deemed a legitimate financial return.

At the €500-level, participants’ mean likelihood to impact invest was markedly and significantly higher when they were offered a 2% rather than zero financial return. Again, this supports the inference that participants did not appear to have greater scruples toward engaging in profit-seeking impact investing. In contrast, when larger amounts of money are involved, individuals appear to demand a positive financial return. Given that a large share of our sample can be expected not to be able to easily forego €500 independent of how attractive the investment opportunity is, the study should be replicated with a higher-income sample to gain a better understanding of how individuals behave when larger amounts of money are involved. Further, future research could analyze whether participants differ in their likelihood to impact invest at different financial return levels depending on whether the decision is public or private, as could be assumed based on prior charitable giving research (e.g., Ariely et al., 2009). Also, this could be tested depending on who bears the cost of the return of the invested principal (and potentially the financial return), that is, the beneficiary or a third party, such as a government or external clients.

Finally, our research also indicates that it could be many small investments—rather than a few large ones—that ultimately have a greater impact. Thus far, impact investing has been largely confined to very wealthy individuals and foundations (Ruttmann, 2012). Combined with the success of Kiva and other crowdfunding websites, our results show that opening up impact investing to the general public could be a promising means to raise additional money for social problem-solving and realize impact investing’s full potential. An avenue for future research could thus be to investigate the ideal funding amount for impact investments at different returns and risk levels. Qualitative research could also prove beneficial in the hitherto under-researched impact investing field. Such research could help improve our understanding of the motives, benefits, and concerns associated with impact investing. It could also test whether impact investing is particularly appealing to individuals with a business background, a circumstance prior research on charitable giving hints at.

This paper has several limitations; one key limitation regards the generalizability of its findings to a field setting: We made use of a controlled experiment and a single organization with a single purpose to test our hypotheses. Moreover, participants had to make hypothetical funding decisions that held no material consequences for them. Given the relatively limited knowledge on impact investing and the fact that findings from lab-based studies on the psychology underlying prosocial behavior have been found to carry weight in the real world, we nevertheless deemed a controlled experiment appropriate and critical to limiting the number of alternative explanations. We aimed to make our findings more generalizable by using a representative sample rather than relying on a non-representative (student) sample. We also grounded our work in the experiences of practitioners and open comments elicited from pretest participants. And although primary school education to poor children in Sub-Saharan Africa is traditionally funded by donations with increasing opportunities also for retail investors to impact invest, further research is needed to verify our findings using a different funding opportunity, potentially in a field setting. Further, our results are also limited to a single geography. Given that social norms differ across countries, it could prove beneficial to replicate this study in another geographic region, potentially one with a generally higher willingness to donate and/or a more developed impact investing market, such as the UK.
Conclusion

This paper investigates the attitude of private individuals towards impact investments compared with charitable donations. Using an experimental set-up, we studied the willingness of 872 individuals to impact invest at different financial return levels (0%, 2%, and 5%) and amounts (€30 and €500) compared with their willingness to donate to an organization providing low-cost private primary schools in Kenya.

Our findings indicate that a substantial proportion of the population could openly embrace (income-generating) impact investing opportunities in real settings, and have no concerns over foregoing warm glow or prestige with this kind of behavior. Our results further imply that small-scale, interest-free impact investments may be a promising way to elicit funding for social problem-solving from ordinary retail investors. There could even be a ceiling as to what is deemed an appropriate rate of return for small-scale impact investments. With regard to large-scale fundraising requests, where differences in financial return have (more) material effects, our findings imply that individuals demand a positive return.

On a more general level, our results contribute to an improved understanding of the relationship between social businesses and funding: We show that individuals may be less likely to make a donation if an organization engages in (substantial) commercial, revenue-generating activities.

Moving forward, researchers are confronted with a multitude of relevant issues: They could further investigate appropriate impact investment amounts and according risk-return profiles in order to better understand favorable investment designs. Furthermore, they could distinguish different customer groups (e.g., high net worth individuals, retail customers) and replicate the study in other geographies in order to analyze whether impact investing markets are similar across different country contexts. Another interesting avenue for future research constitutes the analysis of different financial instruments: Impact investments are possible in all asset classes and specific types of investments could prove to be more attractive than others. With regard to a qualitative research approach, the case study method could be useful in order to generate a deeper understanding about motives and objective associated with impact investing.
Appendix 1: Scenario Please read the following text carefully.

The problem: Schools in sub-Saharan Africa* are oftentimes expensive and of inferior quality

- In sub-Saharan Africa every fifth (22%) primary school-age child has never attended school or left before completion
- The quality of schools is oftentimes low: Teachers are inadequately trained and frequently absent from class. Therefore, it is not surprising that many children cannot even read simple sentences upon completion of primary school
- Even for “free” public schools costs incur (e.g., for school uniforms, books, long ways to school, informal fees, etc.); these can amount to $2 to $12 per month
- Africa’s public spending on education is insufficient; development aid meant to improve the state of education are sometimes used for other purposes or never reach the needy

* Sub-Saharan Africa comprises all African countries except for Algeria, Egypt, Libya, Morocco, Tunisia, and Western Sahara

Quality Education for All’s problem solution: Quality Education for All provides children from poor families access to high quality primary school education at a small fee

- Average fees of only $6 a month
- 90% of the families in the catchment area can afford to send their children to a Quality Education for All school; moreover, there is a sponsorship scheme for particularly gifted students
- Quality Education for All students have much better reading and math skills than students from neighboring schools; on average, they scored 35% and 19% higher in an independent evaluation

About Quality Education for All:

- Founded in Kenya in 2008; first school opened in a slum in Nairobi (Kenya) in 2009
- Today, there are more than 300 schools in Kenya with more than 95,000 students
- Quality Education for All has received several international awards and is being supported by renowned international organizations
- Quality Education for All’s founding/management team has extensive experience in the education and international development space

About Kenya:

- 45 million inhabitants
- $860 average annual income per person (‘gross national income per capita’ 2012)
- No. 145 of 187 countries in the Human Development Index of the UN Development Programme
### Appendix 2 Scale items for construct measures

<table>
<thead>
<tr>
<th>Construct</th>
<th>Item</th>
<th>Cronbach’s Alpha</th>
<th>Selected sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Warm glow&lt;sup&gt;a&lt;/sup&gt;</td>
<td>I would feel good if I donated / provided a loan to <em>Quality Education for All.</em></td>
<td>0.72&lt;sup&gt;c&lt;/sup&gt;</td>
<td>Koschate-Fischer et al., 2012</td>
</tr>
<tr>
<td></td>
<td>I would “spread it around” if I donated / provided a loan to <em>Quality Education for All.</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prestige&lt;sup&gt;a&lt;/sup&gt;</td>
<td>By donating / providing a loan to <em>Quality Education for All</em> I make a good impression.</td>
<td>0.89</td>
<td>Koschate-Fischer et al., 2012</td>
</tr>
<tr>
<td></td>
<td>By donating / providing a loan to <em>Quality Education for All</em> I satisfy the expectations of others.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>By donating / providing a loan to <em>Quality Education for All</em> I am valued by others.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cause involve-ment&lt;sup&gt;b&lt;/sup&gt;</td>
<td>Is an unimportant cause to me vs. Is an important cause to me</td>
<td>0.95</td>
<td>Koschate-Fischer et al., 2012</td>
</tr>
<tr>
<td></td>
<td>Means nothing to me vs. Means a lot to me</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Is personally irrelevant to me vs. Is personally relevant to me</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Doesn’t matter a great deal to me vs. Does matter a great deal to me</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attitude toward helping others&lt;sup&gt;a&lt;/sup&gt;</td>
<td>People should be willing to help others who are less fortunate.</td>
<td>0.93</td>
<td>Koschate-Fischer et al., 2012</td>
</tr>
<tr>
<td></td>
<td>Helping troubled people with their problems is very important to me.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>People should be more charitable toward others in society.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>People in need should receive support from others.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<sup>a</sup> Seven-point rating scale with “strongly disagree” and “strongly agree” as anchors.

<sup>b</sup> Seven-point semantic differential scales.

<sup>c</sup> Bivariate correlation is reported for scales with two items.
Appendix 3: Mean warm glow perception, standard deviation, and number of subjects by funding amount and return level

<table>
<thead>
<tr>
<th></th>
<th>Donation</th>
<th>Investment at 0% p.a.</th>
<th>Investment at 2% p.a.</th>
<th>Investment at 5% p.a.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Means</strong></td>
<td>3.09</td>
<td>3.61</td>
<td>4.00</td>
<td>3.46</td>
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<tr>
<td><strong>€30 Stand. dev.</strong></td>
<td>1.71</td>
<td>1.74</td>
<td>1.91</td>
<td>1.99</td>
</tr>
<tr>
<td><strong># Subjects</strong></td>
<td>110</td>
<td>109</td>
<td>108</td>
<td>110</td>
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<tr>
<td><strong>Means</strong></td>
<td>3.40</td>
<td>3.34</td>
<td>3.36</td>
<td>3.43</td>
</tr>
<tr>
<td><strong>€500 Stand. dev.</strong></td>
<td>1.66</td>
<td>1.93</td>
<td>1.75</td>
<td>1.72</td>
</tr>
<tr>
<td><strong># Subjects</strong></td>
<td>109</td>
<td>111</td>
<td>107</td>
<td>108</td>
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</tbody>
</table>
Appendix 4: Mean prestige perception, standard deviation, and number of subjects by funding amount and return level

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<th>Investment at 2% p.a.</th>
<th>Investment at 5% p.a.</th>
</tr>
</thead>
<tbody>
<tr>
<td>€30 Means</td>
<td>3.02</td>
<td>3.15</td>
<td>3.58</td>
<td>3.09</td>
</tr>
<tr>
<td>€30 Stand. dev.</td>
<td>1.58</td>
<td>1.44</td>
<td>1.55</td>
<td>1.75</td>
</tr>
<tr>
<td>€30 # Subjects</td>
<td>110</td>
<td>109</td>
<td>108</td>
<td>110</td>
</tr>
<tr>
<td>€500 Means</td>
<td>3.04</td>
<td>2.88</td>
<td>3.09</td>
<td>3.20</td>
</tr>
<tr>
<td>€500 Stand. dev.</td>
<td>1.56</td>
<td>1.57</td>
<td>1.58</td>
<td>1.65</td>
</tr>
<tr>
<td>€500 # Subjects</td>
<td>109</td>
<td>111</td>
<td>107</td>
<td>108</td>
</tr>
</tbody>
</table>

Notes

a Due to this so-called eviction effect, participants in charitable giving experiments are usually assured that their rewards—if there are any—are paid out from a separate research budget and do not lower the donated amount (Bénabou and Tirole, 2006).
b Similar crowding-out effects have been discussed in related fields, such as blood donations (e.g., Titmuss, 1970).
c Note that we limited the experiment to 20- to 79-year-olds.
d The average German donor donated 6.2 times in 2013, with an average donation of €33 per donation act (GfK, 2014).
e Given that a prerequisite of the chi-square test is that all expected cell frequencies are greater than 5, we grouped participants into three groups—i.e., low, medium, and high income—depending on whether the indicated income level was below, at, or above the German average monthly household net income of €3,069 in 2012 (Statistisches Bundesamt, 2014).
References


MAKING MONEY AT THE EXPENSE OF THE POOR? AN INVESTIGATION OF INDIVIDUALS’ PREFERENCES TO IMPACT INVEST VERSUS DONATE


