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Earmarking Donations to Charity: Cross-cultural Evidence on Its Appeal to Donors Across 25 Countries

Christoph Fuchs,[a] Martijn G. de Jong,[b] Martin Schreier[c]

[a] TUM School of Management, Technical University of Munich, 80333 Munich, Germany; [b] Erasmus School of Economics, Erasmus University Rotterdam, 3000 DR Rotterdam, Netherlands; [c] Department of Marketing, WU Vienna University of Economics and Business, 1020 Vienna, Austria

Contact: christoph.fuchs@tum.de, http://orcid.org/0000-0002-8457-1294 (CF); mgdejong@ese.eur.nl (MGdJ); martin.schreier@wu.ac.at (MS)

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Abstract. Charity organizations differ in their practice of offering donors the option to earmark their contribution: allowing donors to select the project in which their money should be invested. This paper presents two studies that provide the first empirical evidence on the appeal of such earmarking. The empirical basis of Study 1 is a unique data set consisting of 7,383 potential donors from 25 countries who participated in a randomized survey experiment. First, we find that the willingness to donate is significantly higher when earmarking is allowed. Second, we find that the effect of earmarking substantially differs in magnitude across countries. Third, we identify two cross-cultural interactions. Specifically, earmarking is less effective in countries that score lower on autonomy relative to embeddedness and in those scoring lower on egalitarianism relative to hierarchy. Fourth, we find that the earmarking effect is driven mainly by the activation of more donors and not by increases in the amounts that donors contribute. Study 2 is a follow-up experiment that replicates the basic earmarking effect, addresses limitations of our cross-cultural study, and sheds some preliminary light on the effect's underlying process. We find that earmarking options increase potential donors' perceptions of being able to make specific impact and also that this sense of agency helps us to understand an individual's increased willingness to donate.

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1. Introduction

Suppose that you consider donating to a charity, such as the Red Cross, and that you know of five high-profile projects in which the organization is currently involved. In one scenario, the Red Cross determines which project would receive your donation. In another scenario, you can select the project in which your money is invested: you can "earmark" the donation. Would this earmarking opportunity affect your willingness to donate? Would the answer depend on your cultural background?

Despite their practical significance, these questions about the appeal of earmarking to donors have not been empirically addressed thus far. Most of the extant literature on earmarked donations has studied the phenomenon's operational aspects. Toyasaki and Wakolbinger (2014), for example, developed a quantitative model to assess how fund-raising with or without earmarking options affects charitable efficiency and how certain operating factors affect equilibrium donation amounts and the utility of donors and charities. One of their key findings is that earmarking may result in lower overall charitable efficiency (operationalized as fund-raising cost percentage). Other researchers have also warned that earmarked donations might have a negative effect on such performance metrics as operational cost and service level (Besiou et al. 2014, Aflaki and Pedraza-Martinez 2016). Earmarking could further lead to suboptimal resource allocation among various causes because the project that most donors select might not be the neediest one. Cryder et al. (2017, p. 605), for example, documented a "charity beauty premium" whereby donors sometimes prefer better-looking but less needy charity recipients. Following Owen (2013), they cited a naturalist who once "offered to 'eat the last panda' if doing so would free up funding for less photogenic species" (p. 605). A similar dynamic plays out when severe disasters (e.g., the Asian tsunami, the Haitian earthquake) attract so much public attention that relief efforts might actually be *over*funded (Strom 2008, Tomasini and Van Wassenhove 2009, Hill 2012,

Toyasaki and Wakolbinger 2014). Some charity organizations including Médecins Sans Frontières (Doctors Without Borders) and the United Nations Refugee Agency have therefore started to discourage earmarked donations by explicitly asking donors to contribute *unrestricted* funding.[1]

Notwithstanding the potential downsides, many charities do still offer earmarking. They view earmarked donations as the best way for their fundraising activities to cultivate trust and to strengthen their bonds with donors. Hence, the American Red Cross wants to ensure that all of its "donors understand where their money is going and how it is being spent," so if you want to help families recover from home fires, for example, you can easily dedicate your Red Cross donation to its "Home Fires" project.[2] The underlying assumption is that donors experience some utility from exercising control over the use of their funds and appreciate being able to attach "strings to their gifts" (Barman 2008, p. 40; see also Besiou et al. 2014, Toyasaki and Wakolbinger 2014, Aflaki and Pedraza-Martinez 2016).

That said, there is surprisingly little empirical evidence on the appeal of earmarking to donors. One notable exception is the correlational study of Nunnenkamp and Öhler (2012) that was based on a sample of U.S. charities and reported a positive relation between earmarking and higher donations. Although this finding suggests that earmarking has positive effects, alternative interpretations are possible. In particular, we do not know whether earmarking and nonearmarking charities also differ systematically on other critical dimensions or whether there is, indeed, a *causal* effect between the offer of earmarking and the capacity to raise more funds. Does earmarking affect one's willingness to donate? If so, does the effect manifest similarly across different countries or instead depend on one's cultural background?

Our paper seeks to provide first evidence on these questions by conducting two studies. In Study 1, we draw on a unique data set of 7,383 potential donors from 25 countries. The data were collected with the help of a global market research agency, and the stimuli and questions used were carefully translated into local languages and thoroughly pretested. Each country's study participants were randomly assigned to one of two conditions, and all were provided the same information about five Red Cross projects. Participants in the earmarking (resp., nonearmarking) condition were then offered (resp., not offered) the opportunity to earmark a donation. Our dependent variable is participants' willingness to donate. In particular, participants could donate as much or as little as they liked of an additional amount of money they could gain during the course of the study (in case they were selected to receive those funds, their donation decisions were binding; see Section 3.2 for details).

The first experiment reveals a significant and sizable main effect across the 25 countries studied: participants' willingness to donate is, on average, 14.4% higher when earmarking is allowed. In addition, the effect is found to differ substantially across countries. Whereas earmarking was associated with a 29.6% increase in the willingness of U.S. participants to donate, the effect is considerably smaller in Japan (11.8%) and Singapore (10.9%); in India, we actually observe a negative effect (−2.1%). Yet these differences across countries do not appear to be random. The appeal of earmarking rather seems to systematically vary as a function of two cultural value dimensions: the importance assigned to autonomy versus embeddedness and to egalitarianism versus hierarchy (Schwartz 1994, 1999). Specifically, we find that the earmarking effect is weaker in countries scoring lower on autonomy relative to embeddedness and in those scoring lower on egalitarianism relative to hierarchy. Finally, our evidence indicates that the earmarking effect is driven mainly by the activation of more donors and not by increases in the amounts that donors contribute.

Our second experiment addresses several limitations of the cross-cultural study while replicating the earmarking effect; it also sheds some light on what might underlie that effect. We find in particular that earmarking options increase potential donors' perceptions of being able to make specific impact and that this sense of agency helps to understand an individual's increased willingness to donate. The second experiment also rules out some alternative explanations, including those based on self-expression (Kim and Sherman 2007; e.g., "I can express my individuality") or on the vividness of one's mental depictions of the donation's usage (Cryder et al. 2013; e.g., "I have a vivid picture of how my donation will be used"). Of perhaps even more interest is that we replicate the earmarking effect in a setting where only two-thirds of the donation amount can be earmarked. Earmarking variations of this type are attractive to charities because they can apply a portion of the money collected to wherever it is most needed.[3] Interestingly, we find that potential donors are not averse to this compromise and would still be willing to donate substantially more than if no earmarking were allowed.

In sum, our research sheds new light on the promise of earmarking strategies for a charity's fund-raising activities. Although previous work has highlighted earmarking's possible drawbacks (*viz.*, operational inefficiencies), its potential to increase contribution amounts has not received much empirical attention thus far.

2. Earmarking's Appeal to Donors

We begin our examination of how earmarking affects one's willingness to donate by discussing the notion

of "impure" altruism and the theory of impact philanthropy. This serves as the theoretical basis for developing our *earmarking main effect* hypothesis. We then examine whether (and, if so, how) the earmarking effect varies across countries.

2.1. Impure Altruism and the Theory of Impact Philanthropy

Research on prosocial spending has extensively analyzed the motivations of those who donate to charity. The diversity of motives identified typically incorporates elements of altruism and "warm glow." Altruism refers to the purity of selfless giving: the end goal is to increase the recipient's welfare (Batson and Shaw 1991). The notion of warm glow refers to the good feeling from having "done one's part" and is something of a placeholder in the literature. In particular, it is widely believed that other, more selfish motives may be involved and that the donor himself or herself might derive some utility from the act of giving (Andreoni 1989, Andreoni et al. 2017). In fact, it has been shown conceptually, analytically, and empirically that models based on "pure altruism" cannot explain prosocial spending in a variety of contexts (Andreoni 1989, 1990; Crumpler and Grossman 2008). As a consequence, the literature now promotes a model of "impure altruism" to describe the common situation in which we care not only about doing good for others but also about how such giving engenders positive self-regard and feelings (Andreoni 1989, Ariely et al. 2009, Gneezy et al. 2014).

In accord with the notion of impure altruism, Duncan (2004) developed the theory of *impact philanthropy*. According to this theory, donors are motivated by the opportunity to have an impact on the world and personally make a difference. Donors derive satisfaction from personally increasing the output of the good in question; stated differently, "an impact philanthropist cannot enjoy saving children if other philanthropists save them first" (Duncan 2004, p. 2160). The theory further suggests that donors prefer funding certain aspects of the charity's production process more than other aspects. In an example given by Duncan, donors feel that saving a single child from starvation has more impact than dividing the same amount of rice among a large number of children (see also Jenni and Loewenstein 1997). The theory's essence has been validated repeatedly: perceived impact drives one's willingness to donate (for a recent overview, see Touré-Tillery and Fishbach (2017)). For instance, Cryder et al. (2013) find that greater generosity is afforded to individual, identified victims than to masses of unknown victims. The more tangible the information about a cause, the stronger is one's belief in being able to have an impact and so the greater is one's willingness to donate.

Similarly, Touré-Tillery and Fishbach (2017, p. 860) used the intriguing analogy that "a snowball thrown from 10 feet away will hurt more than one thrown from 50 feet away" to explain why people are more willing to support nearby targets than faraway ones. Here, too, more impact is felt when the philanthropic target is closer. The authors showed that alumni donations to their alma mater are inversely related to the real (or perceived) distance between donor and school. Finally, donors might well perceive that contributions have less impact if a large share of the donation is spent on the charity's overhead expenses. Systematic evidence for an overhead aversion is given by Gneezy et al. (2014), who reported that donations are inversely related to the charity's administrative and fundraising costs. Overall, there is strong evidence for the idea that "making an impact is a powerful motivator of prosocial behavior" (Touré-Tillery and Fishbach 2017, p. 860).

2.2. The Earmarking Main Effect Hypothesis

Our research draws on the theories of impure altruism and impact philanthropy to motivate the prediction that a potential donor's *expected utility* should differ as a function of whether earmarking is allowed. The option to choose the target of one's help should lead to a warm glow for the impact philanthropist because he or she will then experience stronger feelings of agency, which Haggard and Tsakiris (2009, p. 242) defined as "the experience of being in control both of one's own actions and, through them, of events in the external world."[4] This means that the donor's perceived impact also should be more pronounced when it is possible to earmark donations. Hence, we conjecture that (1) earmarking increases potential donors' perceptions of their capacity to have a specific impact and (2) this greater sense of agency also increases the willingness to donate.

Note that because most of the supporting literature is based on data from a classic Western study context (in fact, mostly U.S. data have been used in the cited research), our theorizing in support of the earmarking hypothesis is also implicitly anchored in that type of context (think of the United States, the United Kingdom, or Germany, for example). Central to our prediction in this context is the assumption that having a choice is in itself a good thing and that, in terms of philanthropic contributions, donors derive some positive utility from experiencing agency over how their funds are ultimately used (i.e., being able to decide *where* to make an impact). This assumption is broadly consistent with research suggesting that Westerners value personal freedom and choice above virtually all else (e.g., Markus and Schwartz 2010). Having choice facilitates satisfying one's preferences, defining one's selfhood, and expressing one's

individuality; it also helps individuals achieve autonomy, which is a fundamental aspect of well-being (Deci and Ryan 2000). The reason is that having choice allows people "to experience themselves as active agents who control their destinies and influence their worlds" and is thus "a sign of freedom" (Markus and Schwartz 2010, p. 345). As a result, normatively "good" actions are those that "stem from one's personal preferences, beliefs, and goals" and that "exert influence over the environment" (Savani et al. 2010, p. 391; see also Markus et al. 2006). It is interesting that the individual in question need not actually make a choice: research has shown that the mere anticipation of choosing is intrinsically rewarding (Leotti and Delgado 2011). So of greatest importance, it seems, is to *have a choice* in the first place.

Against this backdrop, we argue that potential donors should likewise value the earmarking option. With reference to the Red Cross scenario from Section 1, we therefore predict a positive earmarking effect: an individual's willingness to donate should be greater if he or she can choose *which* of the five projects will receive his or her donation. Hence, we make the following general prediction.

Hypothesis 1. *The option to earmark one's donation will increase a potential donor's willingness to contribute to the focal charity.*

2.3. Cultural Value Dimensions as Moderators of the Earmarking Effect

To what extent should our focal prediction change if we alter the study context? Is it possible that the provision of an earmarking option will have a like effect on one's willingness to donate across different countries? At first sight, a universal effect is conceivable given that people worldwide are observed to engage in prosocial behavior and to derive emotional benefits from it. Aknin et al. (2013) presented global survey data to the effect that spending money on others is associated with greater subjective well-being in all major cultural and geographic regions of the world. The authors also used experiments to show that buying items for charity significantly increases the buyer's happiness in countries as diverse as Canada, India, South Africa, and Uganda. This universal phenomenon has been attributed to evolutionary forces: in the past, generosity favored the survival of our species. It follows that engaging in prosocial behavior might consistently yield a warm glow across humans in different parts of the world (Aknin et al. 2013). From this perspective, one might reasonably suppose that earmarking's appeal to donors is similarly positive across countries.

In contrast, we argue that the earmarking effect might differ across countries because the specific psychological benefits associated with it could be related to countries' cultural value orientations: stable, trans-situational goals that serve as guiding principles of life (Schwartz and Bardi 2001; cf. Kluckhohn 1951, Rockeach 1973). Cultural values shape social norms that determine the appropriateness of specific behaviors, inform opinions about right versus wrong, and define what is expected in a variety of situations. One of the most influential and best validated cultural value frameworks has been developed by Schwartz (1994, 1999, 2006). He empirically identified three cultural value dimensions: autonomy versus embeddedness, egalitarianism versus hierarchy, and harmony versus mastery. They represent three independent issues of societies. We posit that the earmarking effect is moderated by two of them—namely, the extent to which a society values (1) autonomy versus embeddedness and (2) egalitarianism versus hierarchy.[5]

2.3.1. Autonomy vs. Embeddedness. The first cultural value dimension concerns the relationships and boundaries between individuals and the collective group, where the orientations of autonomy and embeddedness are polar opposites (Schwartz 1999, 2006). Cultures that are relatively autonomous value the notion of independent individuals whose actions are self-determined; persons in autonomous cultures are viewed as independent entities who cultivate their own uniqueness and who value expressions of personal beliefs and preferences (Schwartz 1999, 2006). Being responsible for and having agency over one's own decisions are therefore highly valued among individuals in such societies (Bellah et al. 1985, Markus and Kitayama 1991, Markus and Schwartz 2010). For these individuals, it follows that earmarking might increase utility because they can exercise agency over how their contributions are applied (they have a choice). Hence, the importance of beliefs about being able to have a specific impact should lead donors from more autonomous societies to more strongly prefer earmarking over contributing funds on which they can place no restrictions.

By the same token, earmarking may be a relatively less attractive option to the extent that the country where donors reside gives less credence to autonomy. That is, embedded cultures place more value on the idea that persons are "nested" within a group, and so the individual is less important than the collective. Those who live in embedded cultures "[a]re expected to find meaning in life largely through social relationships, through identifying with the group, participating in its shared way of life and striving towards its shared goals" (Sagiv and Schwartz 2007, p. 179). Because those who are raised in such cultures have internalized the notion that interdependence

counts more than independence, the behaviors of cultivating one's own uniqueness and expressing one's personal beliefs and preferences are relatively less pronounced (Schwartz 2006). For these individuals, then, earmarking versus nonearmarking options might not produce positive utility because exercising agency over the use of their contributed funds might not be a priority. We therefore expect a potential earmarking effect to be less pronounced among individuals in countries that score lower on autonomy relative to embeddedness. This prediction is expressed formally in our next hypothesis:

Hypothesis 2. *The earmarking effect is moderated by national culture in that the effect is weaker the lower the importance of autonomy relative to embeddedness becomes.*

2.3.2. Egalitarianism vs. Hierarchy. The second cultural value dimension is related to the control mechanisms that a society uses to facilitate responsible behavior and to maintain social cohesion; here the orientations of egalitarianism and hierarchy are polar opposites (Schwartz 1999, 2006). An egalitarian orientation maintains that the social fabric is best preserved by recognizing that each individual in a society is morally equal (Schwartz 2006). Cultures that score high on egalitarianism value the idea that all people count equally—irrespective of their social standing—and that this equality includes an equal distribution of power, resources, social justice, responsibility, cooperation, and assistance (Siegel et al. 2011). Those who are raised in countries that score high on egalitarianism are accordingly socialized and expected to have a voice in decision making or at least to be asked for their opinion. As a consequence, potential donors with this cultural background might value earmarking highly owing to the utility derived from controlling the uses to which their contributions are put.

The less important egalitarianism is in a country, however, the less attractive earmarking may be. In hierarchical societies, the unequal distribution of power and resources is legitimized as a means to regulate interdependencies (Schwartz 2007). Individuals in hierarchical societies take their social roles for granted and comply with the attendant obligations; they have been socialized to accept authority and external social control (Schwartz 2007, Siegel et al. 2011). Hence, these individuals are accustomed to others making decisions on their behalf, from which it follows that they should not necessarily derive more utility from the agency associated with selecting donation targets. In sum, we predict that a potential earmarking effect is less pronounced among individuals in countries that score lower on egalitarianism relative to hierarchy. These considerations lead to our final hypothesis.

Hypothesis 3. *The earmarking effect is moderated by national culture in that the effect is weaker the lower the importance of egalitarianism relative to hierarchy becomes.*

3. Study 1: A Randomized Survey Experiment Across 25 Countries

3.1. Overview and Procedures

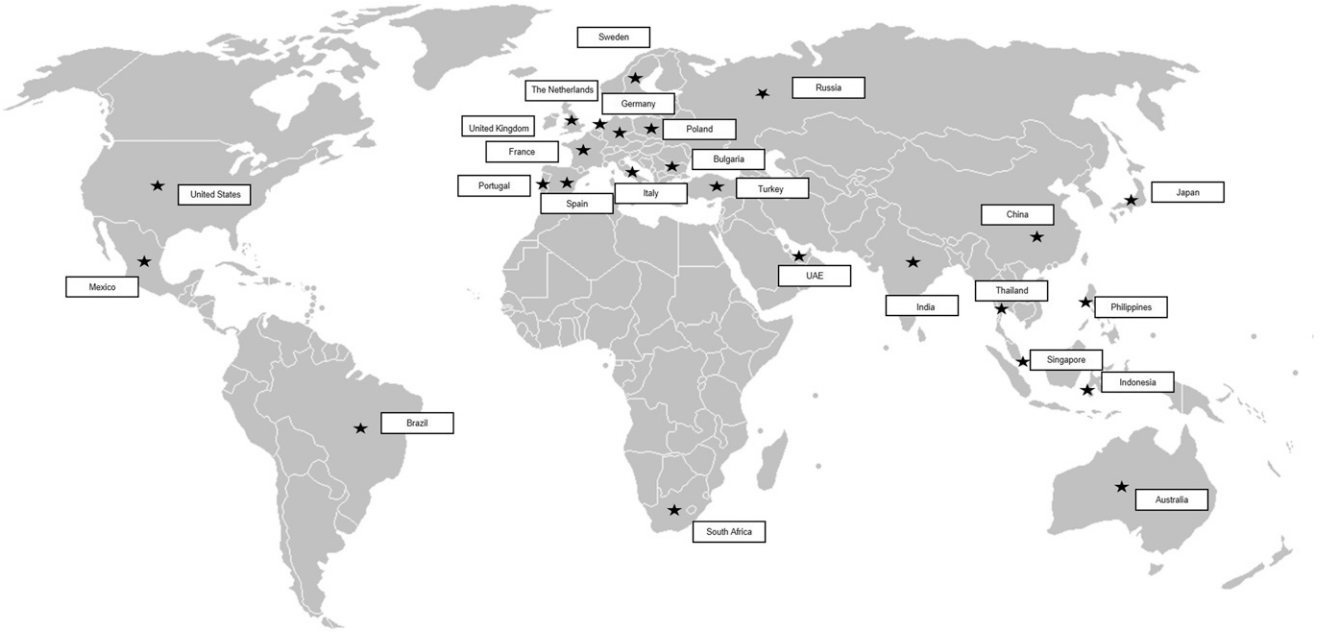
In Study 1, we test our hypotheses based on a unique data set consisting of 7,383 potential donors from 25 countries who participated in a randomized survey experiment. The study was part of a large-scale international survey project, a collaborative effort of multiple behavioral, marketing, and management scientists. The international survey contained several independent projects on cross-cultural consumer behavior. The sample size per country ranged from 250 participants (Bulgaria) to 355 participants (China). The sampled countries span the entire globe and were selected by the project leader to represent a diverse set of cultural value orientations (see Figure 1 for an overview of the sampled countries). Yet, and as with almost any other massive global data-collection efforts, we acknowledge that logistical considerations also played a role in selecting the specific countries (e.g., sample availability, cost of sampling in each country, etc.). The data were collected by Kantar Public, a global market research agency. The stimuli and questions were thoroughly pretested by the authors, after which a professional translation agency supplied translations into all the respondents' respective local languages; then independent, Ph.D.-holding scholars back-translated the text to check that its original meaning had been retained. A Ph.D. candidate supervised the back-translation process to ensure consistency across the various languages. These procedures followed best practices in cross-cultural research (see Matsumoto and van de Vijver 2010).

To test our earmarking main effect hypothesis (Hypothesis 1), we set up a between-participants experimental design with two conditions. We started by introducing all participants to the Red Cross; toward that end, we supplied information of the following type:

> The International Red Cross and Red Crescent Movement is an international humanitarian movement with approximately 97 million volunteers, members, and staff worldwide that was founded to protect human life and health, to ensure respect for all human beings, and to prevent and alleviate human suffering.

This orientation was followed by control measures (detailed in Section 3.2) regarding participants' familiarity with and attitude toward the Red Cross. Next, participants were provided with additional information about the aid organization (e.g., its strategic priorities and activities, which include promoting

Figure 1. Identity and Location of the 25 Countries Studied



respect and willingness to help) and also about five specific projects that the Red Cross was currently working on and for which support was needed (e.g., providing help and support for children in refugee camps).[6]

Participants were then invited to think about making a donation to the Red Cross. In particular, they were offered the opportunity to donate as much or as little as they wanted of *additional* money (see Section 3.2) that might be received as payment for their study participation. All participants were randomly assigned to one of two conditions: earmarking or nonearmarking. In the nonearmarking condition, they were informed that their money would be invested in the projects just described but that the Red Cross would determine for which specific project their donation would be used. In the earmarking condition, participants could select the project in which their money would be invested. Participants could choose one of the five projects; they could also decline to select a specific project, in which case they indicated that their money could be used for all (any of the) projects. Following this decision, participants completed a short survey that included measures regarding their attitudes toward each project.

3.2. Measures

We measured the following variables. Familiarity with and attitude toward the Red Cross (both captured before treatment) were each measured by a single item: *Familiarity Red Cross* (1 = "Unfamiliar," 2 = "Somewhat familiar," 3 = "Familiar") and *Attitude Red Cross* (1 = "Very unfavorable," 5 = "Very favorable"). Right before capturing participants' willingness to donate to the Red Cross, participants were truthfully informed that some of them would be selected to receive the additional monetary gain on completion of the study. Participants were advised that if they were selected to receive those funds, their donation decisions would be binding; hence, they would ultimately receive the *difference* between the additional funds and their donation amount (consistently, we donated the actual donation of the selected participants to the Red Cross on their behalf after the study was completed). They were also told that making a donation was not required.

In the United States, participants could gain an additional payment of US$31.50. For the other countries, the amount in local currency could be based on either the official exchange rate or an exchange rate that ensures purchasing power parity. The drawback of the official exchange rate is that it is strongly influenced by factors that have little to do with purchasing power in the local environment, such as currency speculation or government intervention. Therefore, we chose to ensure economic comparability across countries by using the Big Mac Index for early 2016, when we ran the study, to convert the US$31.50 into the applicable local currencies. Note that using the Big Mac Index is a simple but effective way to hold constant the purchasing power of the monetary gain. We can thereby better capture the "true value" of the different currencies used in our study.[7]

Participants indicated their willingness to donate on a sliding scale ranging from 0 to the total of their

additional payment. The scale indicated the contribution's value (in the local currency) as well as its share (0%–100%) of the total amount. Because the scale contained 21 points (enabling changes in 5% increments) in each country studied, we were able to maximize scale comparability across countries and preclude numerosity effects. Importantly, the measure allows us to model participant's willingness to donate as a two-stage decision-making process (see Fajardo et al. 2018; see also Franses and Paap 2001, van Diepen et al. 2009): participants decided, first, whether (or not) they were willing to donate any of their additional compensation and, second, if they were willing, how much.

On a separate page of the survey, participants in both conditions subsequently indicated their attitudes about each of the five projects (1 = "Don't like it at all," 5 = "Like it very much"). Their responses enable our assessment of an alternative explanation according to which between-country differences in the earmarking effect are due not to cultural differences but rather to opinions about the focal projects. For this purpose, we employed two variables: *Average project ratings* is a respondent's average rating of the five projects and captures one's overall impression of the choice set, and *SD project ratings* is the standard deviation of a respondent's ratings that captures variability within the choice set. As further controls, we asked respondents two additional questions before they were debriefed. We first asked how much they donate to charities (on average) per year in their local currency; this corresponds to our *Average annual donation* variable. For the statistical analyses, we converted the amount back to a common dollar scale with the 2016 Big Mac Index, added US$1 to all amounts (to avoid taking the log of zero), and then took the natural logarithm. The second question was about their preferred project's personal relevance; we asked how happy they would be if the Red Cross spent the money on their preferred project(s) (1 = "I would not care at all," 5 = "I would be happy"). Responses to this question constituted our *Personal project relevance* variable.

Apart from this project- and donation-specific information, we also measured participants' *Socioeconomic status* (see Griskevicius et al. 2011) as the average of three items (e.g., "I have enough money to buy the things I want"), their highest level of *Education* (1 = no formal education, 2 = education up to age 12, 3 = education up to age 14, 4 = education up to age 16, 5 = education up to age 18, 6 = higher education, 7 = bachelor's or master's degree, 8 = Ph.D. degree), and their *Age* and *Gender* (0 = male, 1 = female).

We used the cultural value framework of Schwartz (1999, 2006) to operationalize cultural differences across countries. Schwartz's framework features two cultural value dimensions central to our inquiry (autonomy versus embeddedness, egalitarianism versus hierarchy) as well as a third dimension (harmony versus mastery) that our theorizing ignored.[8] The cultural dimensions converge with those featured in other cultural frameworks (see, e.g., Hofstede 2001) but offer several advantages (as enumerated by Siegel et al. 2011): (1) they are theoretically grounded, (2) they have cross-culturally equivalent meanings at the individual level, and (3) they have been validated by extensive and more recent data-collection efforts in many countries. Schwartz (2008) provides country-level scores for the cultural values that we used in our analyses.[9] Note that although countries have undergone considerable changes in terms of economic and political practices since the time the data were collected by Schwartz, empirical research has shown that cultural values, which have developed over thousands of years, tend to be quite stable over time. Furthermore, there is considerable empirical evidence suggesting that the *relative* positions of countries on these cultural dimensions remain relatively stable over time (e.g., de Mooij 2000, Inglehart and Baker 2000, Welzel et al. 2003, Schwartz 2006, Beugelsdijk et al. 2015). Following established studies in cross-cultural research (e.g., Siegel et al. 2011, Giannetti and Yafeh 2012, Anicich et al. 2015), we therefore rely on these country scores in our analyses.

At the country level, our models also include the UN's *Human Development Index*, a composite index that captures key aspects of a country's economic development (i.e., life expectancy, education levels, and per capita gross national income).[10] Incorporating this variable controls for the possibility that our observed outcomes reflect not countries' cultural differences but rather their socioeconomic differences. Table 1 reports summary statistics for the data on our country- and individual-level variables.

3.3. Analytical Procedure

In this section, we describe the procedure employed to analyze the data. Because study participants are nested within countries, we rely on a multilevel model to make proper inferences. Such models are popular in cross-cultural research (Steenkamp et al. 1999, Matsumoto and Yoo 2006, van de Vijver et al. 2015) given that ignoring data's nested structure will lead to biased estimates and to standard errors that are too small (Aitkin et al. 1981, Raudenbush and Bryk 2002). Individuals and countries are indexed by i and j, respectively. We denote our dependent variable for respondent i in country j by Y_{ij}, the binary treatment indicator (1 = earmarking condition, 0 = nonearmarking condition) by T_{ij}, the vector of individual-level control variables by $\boldsymbol{X}_{ij}$, and the vector of cultural variables by $\boldsymbol{W}_j$.

Table 1. Descriptive Statistics

	Mean	Standard deviation	Minimum	Maximum
Country-level variables				
Autonomy-Embeddedness	0.37	0.69	–0.60	1.56
Egalitarianism-Hierarchy	2.26	0.78	0.74	3.67
Harmony-Mastery	0.13	0.39	–0.63	0.81
Human Development Index	0.82	0.10	0.61	0.94
Individual-level variables				
Average project ratings	3.74	0.70	1	5
SD project ratings	0.63	0.46	0	2.19
Age	42.78	14.78	18	93
Gender	0.51	0.50	0	1
Education	6.14	1.16	1	8
Socioeconomic status	2.89	0.95	1	5
Average annual donation (in log US$)	2.97	2.30	–8.76	13.72
Attitude Red Cross	3.88	1.05	1	5
Familiarity Red Cross	2.10	0.66	1	3
Willingness to donate	44.49	34.52	0	100

Notes. Country-level variables are based on cultural country-level scores from Schwartz (2008) and based on country-level scores from the 2016 United Nations Human Development Index (see Endnote 10); individual-level variables are collected from 7,383 participants; country-level variables are based on 24 countries; cultural scores for United Arab Emirates (UAE) were not available. See text for description of units. SD, standard deviation.

Recall that we model a participant's willingness to donate as a two-stage decision-making process (see Fajardo et al. 2018; see also Franses and Paap 2001, van Diepen et al. 2009). Participants decide whether they are willing to donate (stage 1) and, if so, how much (stage 2). Our dependent variable Y_{ij} therefore must be decomposed as follows.

$$Y_{ij} = \begin{cases} 0, & \text{if } \textit{Donation decision}_{ij} = 0, \\ \textit{Donation amount}_{ij}, & \text{if } \textit{Donation decision}_{ij} = 1. \end{cases}$$

$\textit{Donation decision}_{ij}$ captures the "donation" decision (stage 1), whereas $\textit{Donation amount}_{ij}$ captures the "amount" decision *conditional on* having decided to donate (stage 2). Hence, this decision process implies a multilevel two-part model with a multilevel logit model for the first step and a multilevel regression model for the second step. The multilevel logit model has the following structure:

$$\textit{Donation decision}_{ij} \sim \text{Bernoulli}(p_{ij}), \quad (1)$$

$$\text{logit}(p_{ij}) = \beta_{0j} + \beta_{1j} T_{ij} + \beta_2 \mathbf{X}_{ij}, \quad (2)$$

$$\beta_{0j} = \gamma_0 W_{0j} + u_{01j}, \quad (3)$$

$$\beta_{1j} = \gamma_1 W_{1j} + u_{11j}, \quad (4)$$

$$(u_{01j}, u_{11j}) \sim N(0, \boldsymbol{\Sigma}_1). \quad (5)$$

These expressions specify that the intercept and the treatment effect in the logit equation vary across countries as a function of cultural variables and random error. In our empirical application, $\boldsymbol{W}_{0j}$ contains an intercept, Schwartz's three cultural variables, and a country-level control variable, and $\boldsymbol{W}_{1j}$ contains an intercept and one cultural variable, so the second element of $\boldsymbol{\gamma}_1$ quantifies the cross-level interaction between the treatment and either *Autonomy-Embeddedness* or *Egalitarianism-Hierarchy*.

The unexplained variation at the country level (level 2) is captured by u_{01j} and u_{11j}; these two terms have a bivariate normal distribution and are allowed to be correlated. The variance–covariance matrix covariance $\boldsymbol{\Sigma}_1$ thus consists of the level 2 variances of the intercept and earmarking effect on the diagonal and the intercept-by-slope covariance.

We specify a multilevel regression model for the donation amount conditional on making a donation. The level 1 variance equals σ^2. As before, the intercept and the treatment effect in the regression equation for $\textit{Donation amount}_{ij}$ vary across countries as a function of cultural variables and random error.

$$\textit{Donation amount}_{ij} \,|\, (\textit{Donation decision}_{ij} = 1) \sim N(\lambda_{0j} + \lambda_{1j} T_{ij} + \lambda_2 \boldsymbol{X}_{ij}, \sigma^2), \quad (6)$$

$$\lambda_{0j} = \boldsymbol{\delta}_0 \boldsymbol{W}_{0j} + u_{02j}, \quad (7)$$

$$\lambda_{1j} = \boldsymbol{\delta}_1 \boldsymbol{W}_{1j} + u_{12j}, \quad (8)$$

$$(u_{02j}, u_{12j}) \sim N(0, \boldsymbol{\Sigma}_2). \quad (9)$$

The multidimensional integrals involved in the likelihood complicates estimation of the model; we thus rely on Bayesian estimation routines (see, e.g., Gelman et al. 2004, Rossi et al. 2005) that are well suited for estimating

multilevel models. Our estimations are derived using version 1.4.3 of WinBUGS (Spiegelhalter et al. 1996).

4. Findings

4.1. Model-Free Analyses

We first report model-free findings (this section) and then proceed to presenting our modeling results (Section 4.2). To assess Hypothesis 1, the earmarking main effect hypothesis, we compare participants' overall willingness to donate between the two experimental conditions across all 25 countries. As summarized in Table 2, we find that participants in the earmarking condition are willing to donate significantly more than are those in the nonearmarking condition (M_{ear} = \$9.95, standard deviation (SD) = \$8.12 versus M_{nonear} = \$8.61, SD = \$7.79; $t(7{,}381)$ = 7.454, $p < 0.001$).[11] Thus, earmarking leads, on average, to a 14.4% increase in donations. We next examine whether this effect is more reflective of a greater likelihood to make a donation or of a higher donation amount conditional on having decided to donate (see Table 3). With respect to the first-stage *Donation decision*, we find that 79.7% of participants in the nonearmarking condition chose to make a donation, whereas the corresponding share is 87.3% in the earmarking condition; a Pearson chi-square test establishes that this effect is highly significant ($\chi^2(1)$ = 77.054, $p < 0.001$). As regards the second-stage *Donation amount* decision, we find that those who did choose to donate were also willing to donate significantly more in the earmarking than in the nonearmarking condition (M_{ear} = \$11.39, SD = \$7.68 versus M_{nonear} = \$10.80, SD = \$7.24; $t(6{,}166)$ = 2.940, $p = 0.003$). Overall, these results provide initial support for Hypothesis 1: potential donors are more willing to contribute if they can earmark their donations.

4.1.1. Cross-cultural Analyses.

We now turn to potential cross-cultural differences in the earmarking effect, an analysis for which country-level data are required. From Table 2, it is clear that the overall earmarking effect differs considerably across countries. A series of significance tests based on individual-level data by country reveals that the earmarking treatment has a statistically significant effect in only 12 of the 25 countries studied ($p < 0.10$). For example, earmarking

Table 2. Converted Amounts (in US$) That Participants Are Willing to Donate: Earmarking vs. Nonearmarking Condition

		Earmarking condition			Nonearmarking condition			Earmarking effect	
Country	*N*	Mean (\$)	Standard deviation (\$)	*N*	Mean (\$)	Standard deviation (\$)	*N*	*t*-value	%
Australia	259	9.92	9.20	131	8.85	8.72	128	0.953	12.0
Brazil	349	11.92	9.16	181	10.23	8.37	168	1.803*	16.6
Bulgaria	250	7.96	5.09	115	7.94	4.78	135	0.023	0.2
China	355	9.39	5.55	195	8.07	5.70	160	2.190**	16.3
France	301	12.86	10.26	144	11.58	9.40	157	1.126	11.0
Germany	316	10.86	8.42	175	7.78	8.16	141	3.283***	39.7
India	326	5.73	4.05	173	5.85	3.78	153	–0.288	–2.1
Indonesia	347	8.80	4.54	173	7.19	4.54	174	3.320***	22.5
Italy	307	13.96	8.89	147	11.43	9.12	160	2.463**	22.2
Japan	299	8.13	7.17	137	7.27	7.11	162	1.034	11.8
Mexico	290	7.99	5.35	148	6.92	5.30	142	1.707*	15.4
Netherlands	252	9.60	8.92	131	8.74	9.26	121	0.752	9.9
Philippines	293	9.62	4.98	141	8.41	5.93	152	1.874*	14.3
Poland	305	6.87	4.94	161	6.19	4.63	144	1.235	11.0
Portugal	262	9.50	7.13	146	8.71	7.65	116	0.853	9.0
Russia	301	5.70	3.76	156	5.39	3.93	145	0.712	5.9
Singapore	257	11.46	7.64	134	10.34	7.15	123	1.218	10.9
South Africa	317	6.36	4.26	156	5.22	4.35	161	2.358**	21.9
Spain	293	11.68	8.84	145	11.12	8.97	148	0.533	5.0
Sweden	255	16.73	13.18	136	12.70	12.81	119	2.465**	31.7
Thailand	287	10.66	6.71	136	10.28	6.09	151	0.503	3.7
Turkey	280	7.93	7.55	137	6.28	6.78	143	1.917*	26.1
UAE	265	13.58	9.36	131	12.15	9.25	134	1.248	11.7
United Kingdom	269	10.54	7.61	144	8.05	8.30	125	2.568**	31.0
United States	348	12.37	11.79	163	9.54	10.78	185	2.334**	29.6
Total	7,383	9.95	8.12	3,736	8.61	7.79	3,647	7.454***	14.4

Notes. For expository reasons means and standard deviations (SD) are reported in U.S. dollars. The statistical testing is based on the 21-point scale that was identical across all countries (i.e., 5% increments of what percentage is donated [0, 100%]). "Earmarking effect" refers to the relative increase in participants' willingness to donate under the earmarking condition as compared with the nonearmarking condition.

*$p < 0.10$; **$p < 0.05$; ***$p < 0.01$.

Table 3. Earmarking Effect in Terms of *Donation decision* and *Donation amount*

	Donation decision (stage 1)				*Donation amount* (stage 2)					
	Earmarking condition	Nonearmarking condition	Earmarking effect (stage 1)		Earmarking condition		Nonearmarking condition		Earmarking effect (stage 2)	
Country	Mean (%)	Mean (%)	χ^2	%	Mean ($)	SD ($)	Mean ($)	SD ($)	*t*-Value	%
Australia	71.8	68.8	0.280	4.4	13.82	7.99	12.88	7.65	0.810	7.3
Brazil	87.8	78.6	5.408***	11.8	13.57	8.55	13.02	7.26	0.593	4.3
Bulgaria	93.9	93.3	0.035	0.6	8.47	4.81	8.51	4.43	0.061	–0.4
China	90.3	86.9	1.005	3.9	10.40	4.85	9.29	5.10	1.963*	11.9
France	79.9	77.7	0.208	2.8	16.10	8.90	14.90	8.00	1.088	8.0
Germany	82.9	68.1	9.413***	21.7	13.11	7.48	11.42	7.48	1.713*	14.8
India	87.9	90.8	0.757	–3.3	6.52	3.68	6.44	3.46	0.182	1.2
Indonesia	98.3	95.4	2.317	3.0	8.96	4.43	7.53	4.36	2.979***	18.9
Italy	94.6	81.9	11.626***	15.5	14.77	8.46	13.96	8.13	0.269	5.8
Japan	79.6	72.8	1.835	9.2	10.21	6.58	9.98	6.50	0.834	2.3
Mexico	93.9	86.6	4.426**	8.4	8.50	5.11	7.99	4.89	1.251	6.5
Netherlands	74.0	60.3	5.390**	22.7	12.96	7.99	14.48	7.65	1.116	–10.5
Philippines	97.2	91.4	4.372**	6.3	9.90	4.77	9.20	5.59	0.482	7.6
Poland	95.0	88.9	3.956**	6.9	7.23	4.81	6.96	4.33	1.386	3.8
Portugal	93.2	75.9	15.581***	22.8	10.19	6.89	11.49	6.72	0.149	–11.3
Russia	92.9	86.9	3.068*	7.0	6.14	3.54	6.20	3.56	1.271	–1.0
Singapore	90.3	89.4	0.053	1.0	12.70	7.00	11.56	6.56	0.659	9.8
South Africa	89.7	77.0	9.214***	16.5	7.09	3.88	6.78	3.74	0.045	4.6
Spain	84.1	80.4	0.699	4.6	13.88	7.89	13.83	7.90	0.589	0.3
Sweden	83.1	66.4	9.517***	25.2	20.13	11.84	19.13	11.13	1.0121	5.2
Thailand	91.9	94.7	0.901	–2.9	11.59	6.17	10.85	5.74	0.831	6.8
Turkey	77.4	66.4	4.134**	16.5	10.24	7.07	9.46	6.25	0.713	8.3
UAE	89.3	84.3	1.436	5.9	15.21	8.56	14.41	8.29	0.181	5.5
United Kingdom	86.1	64.8	16.761***	32.9	12.24	6.80	12.42	7.20	0.713	–1.5
United States	73.0	58.9	7.612***	23.9	16.94	10.61	16.20	9.45	0.5507	4.6
Total	87.3	79.7	77.054***	9.5	11.39	7.68	10.80	7.24	3.100***	5.5

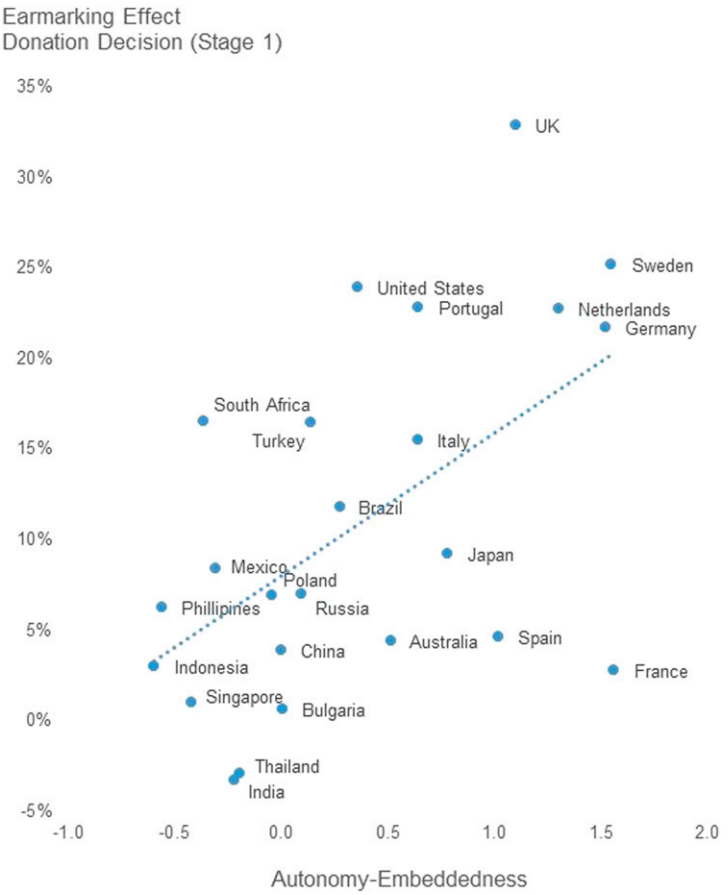
Notes. "Earmarking effect" refers to the relative increase in the likelihood of donating (*Donation decision*) or in the amounts donated (*Donation amount* decision) under the earmarking condition as compared with the nonearmarking condition. The *Donation amount* variable is conditional on a donation having been made. For expository reasons means and standard deviations (SD) are reported in U.S. dollars. The statistical testing is based on the 20-point scale that was identical across all countries (i.e., 5% increments of what percentage is donated [5, 100%]).

*$p < 0.10$; **$p < 0.05$; ***$p < 0.01$.

induced a 29.6% increase in willingness to donate ($p = 0.02$) in the United States, whereas the effect is substantially smaller in Singapore (10.9%, $p = 0.224$) and runs in the opposite direction for India (−2.1%, $p = 0.774$). Furthermore, the relative increase in the likelihood of making any donation (*Donation decision*) varies widely across countries and is both positive and significant in only 14 of them (see Table 3). The decision about *Donation amount* similarly differs from one country to the next; it is interesting that, at this stage, the earmarking effect has a significant effect in only 3 of 25 countries. According to this result, earmarking more strongly affects the first than the second stage of a potential donor's decision-making process.

We next examine whether the two focal cultural variables (*Autonomy-Embeddedness*, *Egalitarianism-Hierarchy*) can shed some light on the earmarking effect's different magnitudes across countries. Toward that end, we conduct an analysis at the country level and separately regress the per-country average increase owing to earmarking for both stages of the decision-making process on the respective country scores for cultural value dimensions. In line with Hypothesis 2, a simple ordinary-least-squares regression (where the number of observations equals the number of countries) shows that participants in countries scoring higher on *Autonomy-Embeddedness* exhibit a significantly stronger earmarking effect in terms of the first-stage *Donation decision* ($b = 0.079$, standard error (SE) = 0.026; $t(23) = 3.091$, $p = 0.005$). The results of this regression are plotted in Figure 2 (for simpler visualization, Figure 3 additionally depicts a median split analysis for which we agglomerated countries into those that score high versus low along the focal cultural value dimension). In contrast, *Autonomy-Embeddedness* is not significantly related to the second-stage *Donation amount* decision ($b = -0.028$, SE = 0.020; $t(23) = -1.388$, $p = 0.179$). We also find, in line with Hypothesis 3, that participants in countries scoring higher on *Egalitarianism-Hierarchy* exhibit a significantly stronger earmarking effect in terms of the first-stage *Donation decision* ($b = 0.073$, SE = 0.022; $t(23) = 3.307$, $p = 0.003$). The results of this regression (and of the respective median split analysis) are plotted in

Figure 2. (Color online) Relationship Between the Stage 1 Earmarking Effect and Countries' Levels of Autonomy vs. Embeddedness



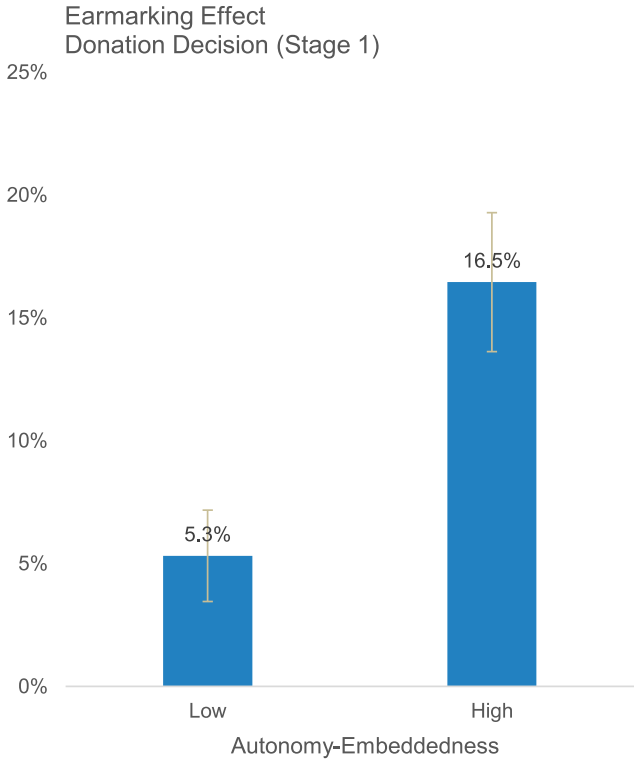
Notes. The horizontal axis represents country-level *Autonomy-Embeddedness* scores where higher scores indicate higher levels of autonomy and lower levels of embeddedness in the sample countries; the range of scores for our sample is [–0.60, 1.56]; the vertical axis represents the earmarking effect pertaining to the likelihood of making a donation (i.e., the stage 1 *Donation decision*). For each country j, the earmarking effect refers to the relative increase in the proportion of participants who donated under the earmarking condition compared with the nonearmarking condition (i.e., it equals $100 \times (P_j(1) - P_j(0))/P_j(0)$, with $P_j(1)$ equal to the proportion of people in country j who donated in the earmarking condition and $P_j(0)$ equal to the proportion of people in country j who donated in the nonearmarking condition). The dotted line plots results of a regression analysis, where the regression coefficient is significant at the 1% level.

Figures 4 and 5. However, *Egalitarianism-Hierarchy* is not significantly related to the second-stage *Donation amount* decision ($b = -0.025$, SE = 0.018; $t(23) = -1.450$, $p = 0.161$). By contrast, we find (as expected) no significant relationships with regard to *Harmony-Mastery*, the third dimension of Schwartz's cultural value framework, and *Donation decision* ($p > 0.4$; see Figures 6 and 7; the same holds for *Donation amount*, $p > 0.8$). In the next section, we undertake formal hypothesis testing based on our Bayesian modeling efforts.

4.2. Modeling Results

The models in this section are estimated using Markov chain Monte Carlo (MCMC) methods (Gelman et al. 2004), a simulation-based procedure ideally suited for models that are built up from a sequence of conditional distributions. For all models, we use 25,000 "burn-in" iterations to ensure convergence of the Markov chain; then the next 25,000 iterations are used for inference. We employ vague priors, and the posterior means and standard deviations are based on the last 25,000 iterations—but with 1-in-10 "thinning" to reduce autocorrelation in the MCMC draws. Models 1a and 1b in Table 4 estimate simultaneously the main effects of individual- and country-level predictors on the first-stage *Donation decision* (Model 1a) and the second-stage *Donation amount* decision[12] (Model 1b). Note that in these models the treatment effect is not explained by country-level predictors; hence, Models 1a and 1b serve as a baseline to interpret the main effects of the treatment. The main effects of the treatment

Figure 3. (Color online) Earmarking Effect on Donation Decision (Stage 1) by Countries' Levels of Autonomy vs. Embeddedness



Notes. We used median splits to agglomerate countries into those that score low versus high on *Autonomy-Embeddedness*. The vertical axis represents the earmarking effect. The earmarking effect is calculated on a country-level basis and refers to the relative increase in the proportion of participants who donate under the earmarking condition compared with the nonearmarking condition (the stage 1 *Donation decision*). Error bars represent standard errors.

should not be inferred from models with cross-level interactions (Irwin and McClelland 2001). Models 1a and 1b are multilevel models (i.e., the models allow for random variation across countries in the intercept and treatment effect), and the deviance information criterion (DIC; Spiegelhalter et al. 2002) indicates that a two-level structure improves model fit significantly compared with a model that does not allow for such random variation (logit model for *Donation decision*: DIC = 4,826.9 versus DIC = 4,982.3; regression model for *Donation amount*: DIC = 2,150.3 versus DIC = 2,218.6). Models 2a–3b successively introduce cultural-level variables into our expressions for the random treatment effect.

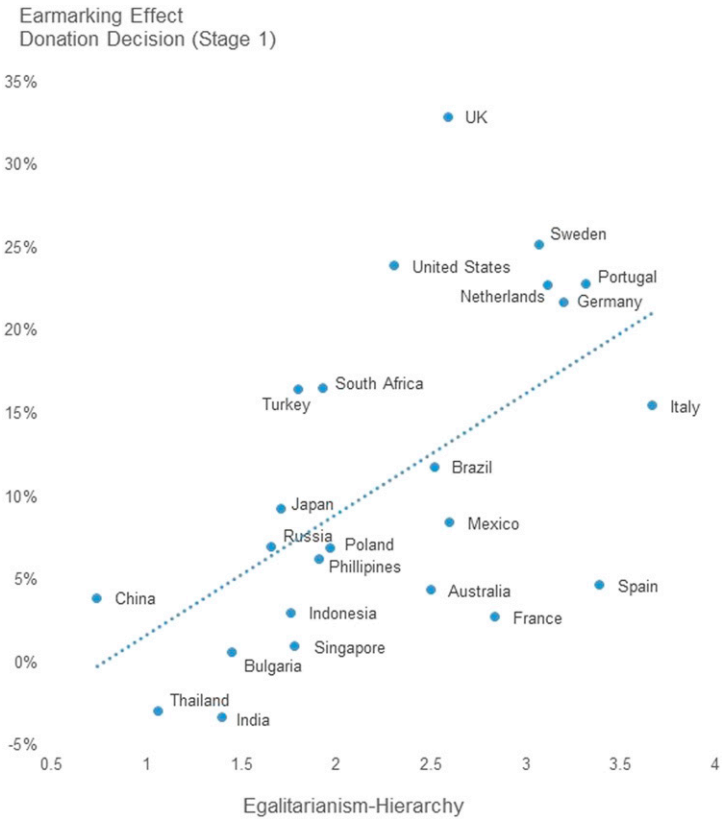
4.2.1. Main Effects. Our presentation of the results begins with Models 1a and 1b in Table 4. For the sake of conciseness and relevance, in the text we report only the coefficients that relate directly to our hypotheses and are statistically significant; for the other variables, we do not report the exact coefficient estimates in the text but instead refer to Table 4. In accord with our findings from the model-free analyses (Section 4.1), we find that the earmarking treatment has a significant and positive effect on the first-stage *Donation decision* of participants across countries (Model 1a: $b = 0.712$, SE = 0.095, 95% credible interval (CI) = [0.526, 0.893]). However, the earmarking treatment only marginally affects the second-stage *Donation amount* decision (Model 1b: $b = 0.033$, SE = 0.018, 90% CI = [0.004, 0.062]). We therefore conclude that earmarking primarily affects the first rather than the second stage of a potential donor's decision-making process. In other words, the increase in amounts raised with earmarking is probably due more to activating more donors than to larger contributions donated by a given pool of supporters. Yet, consistently with the model-free analyses, there is substantial variation across countries, as indicated by the significant level-two variance components of the treatment effect for *Donation decision* and *Donation amount*.

We continue with the individual-level control variables. We find that a higher *Average project rating* of the five projects is positively and significantly related to *Donation decision* and *Donation amount*. In contrast, *SD project ratings* has a significant positive effect on *Donation decision* but a significant negative effect on *Donation amount*. Of the various sociodemographic factors included in the model, only *Age* of participants is significantly related to *Donation decision*. Yet, even though older respondents are less likely to donate, if they *do* donate, then they make larger contributions than their younger counterparts. *Socioeconomic status*, our proxy for income, and *Average annual donation*, the (log) amount of participants' self-reported annual donation, are positively and significantly related to *Donation decision* and *Donation amount*. Finally, participants' attitude toward (but not their familiarity with) the Red Cross and *Personal project relevance* are positively and significantly related to both *Donation decision* and *Donation amount*.

The main effect of culture on willingness to donate is not the focus of this paper. Yet we note that at the country level we find that participants in countries characterized more by harmony than by mastery are significantly more likely to donate. None of Schwartz's three cultural variables significantly affected the *Donation amount*, but a significant level of random variation was observed across countries.

4.2.2. Cross-cultural Interaction Effects. Models 2a–3b in Table 4 introduce the cultural interactions for the treatment effect. In support of Hypothesis 2, and in line with the model-free analyses, we find that the treatment effect on *Donation decision* is significantly stronger in countries scoring higher on autonomy relative to embeddedness (Model 2a: $b = 0.275$, SE = 0.135, $CI_{95\%} = [0.016, 0.546]$). Yet just as in the

Figure 4. (Color online) Relationship between the Stage 1 Earmarking Effect and Countries' Levels of Egalitarianism vs. Hierarchy



Notes. The horizontal axis represents country-level *Egalitarianism-Hierarchy* scores where higher scores indicate higher levels of egalitarianism and lower levels of hierarchy in the sample countries; the range of scores for our sample is [0.74, 3.67]; the vertical axis represents the earmarking effect pertaining to the likelihood of making a donation (i.e., the stage 1 *Donation decision*). For each country j, the earmarking effect refers to the relative increase in the proportion of participants who donated under the earmarking condition, compared with the nonearmarking condition (i.e., it equals $100 \times (P_j(1) - P_j(0))/P_j(0)$, with $P_j(1)$ equal to the proportion of people in country j who donated in the earmarking condition and $P_j(0)$ equal to the proportion of people in country j who donated in the nonearmarking condition). The dotted line plots results of a regression analysis, where the regression coefficient is significant at the 1% level.

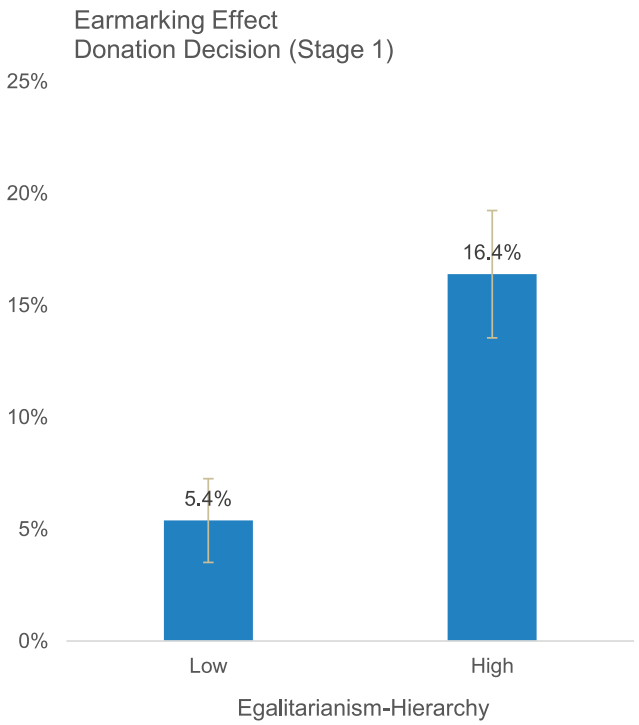
model-free analyses, the treatment × *Autonomy-Embeddedness* interaction (Model 2b) is not significant with respect to *Donation amount*. In support of Hypothesis 3, we find that the treatment effect on *Donation decision* is also significantly stronger in countries scoring higher on egalitarianism relative to hierarchy (Model 3a: $b = 0.386$, SE = 0.126, $CI_{95\%} = [0.139, 0.634]$). However, the treatment effect for *Donation amount* is not moderated by *Egalitarianism-Hierarchy* (Model 3b).[13]

4.3 Robustness Checks

In the models described so far (Table 4), we control (via the *Human Development Index*) for the focal countries' economic development. However, we thought it might be instructive to run other models incorporating additional country-level controls to capture different facets of economic development. More specifically, we test for whether our main findings are robust to controlling for a country's per capita gross domestic product (*GDP/capita*; source: World Bank 2016), income inequality (Gini Index; source: CIA World Factbook 2016), rate of *Labor force participation* (of population aged 15+; source: World Bank 2016), or *Trade freedom* (as a proxy for capitalism; source: Heritage Foundation 2016).[14] Descriptive statistics for these controls are summarized in Table A-1 of Online Appendix A. Preserving adequate levels of statistical power required that we included only one of the country-level controls in each regression. Importantly, our findings are robust to all these controls (see Tables A-2a and A-2b of Online Appendix A).

Second, recall that our models also control for participants' project liking. The cross-cultural effects hence can hardly be attributed to the specific project set employed. However, one could still argue that projects are evaluated differently across countries and that it is thus the projects and not the cultural value dimensions that account for the interaction effects obtained. Put differently, a different set of projects

Figure 5. (Color online) Earmarking Effect on Donation Decision (Stage 1) by Countries' Levels of Egalitarianism vs. Hierarchy



Notes. We used median splits to agglomerate countries into those that score low versus high on *Egalitarianism-Hierarchy*. The vertical axis represents the earmarking effect. The earmarking effect is calculated on a country-level basis and refers to the relative increase in the proportion of participants who donate under the earmarking condition compared with the nonearmarking condition (the stage 1 *Donation decision*). Error bars represent standard errors.

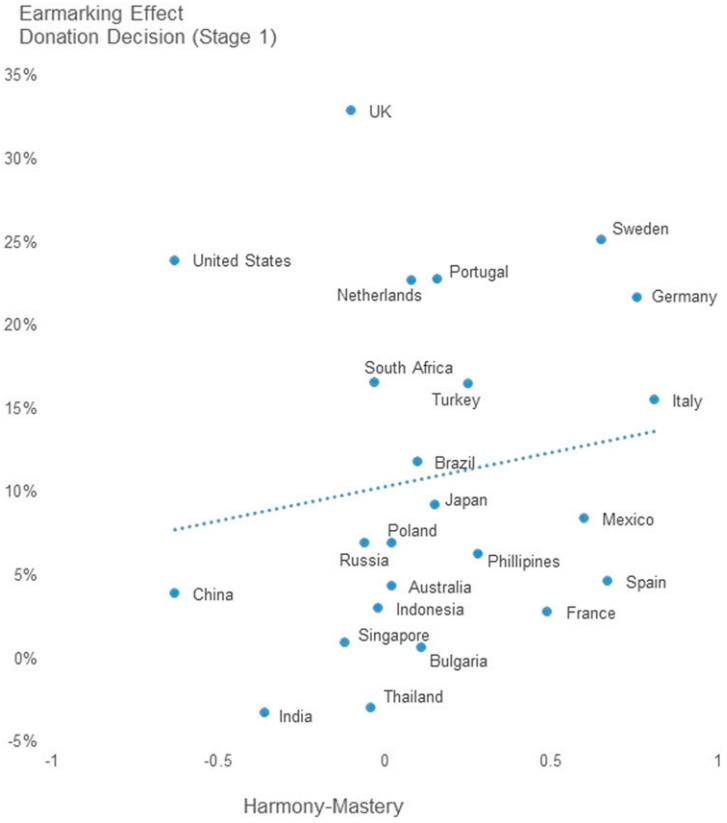
might have produced different results. To assess this possibility, we ran multivariate multilevel regression models with the individual project ratings as the dependent variables and all control variables from Table 4 as predictors (apart from the project-related controls *Average project ratings* and *SD project ratings*). As shown in Table A-3 in Online Appendix A, we find that the two cultural value dimensions are not significantly related to individuals' project ratings.[15] It is therefore rather unlikely that different project evaluations can explain our observed cultural interaction effects.

4.4. Ancillary Analyses

In this section, we report several ancillary analyses. We first wanted to gain further insights on the relationship between our two focal cultural value dimensions. *Autonomy-Embeddedness* and *Egalitarianism-Hierarchy* are conceptually independent dimensions that represent different fundamental issues that confront all societies (Schwartz 2006). In our data set, the two dimensions are positively and significantly correlated ($r = |0.69|$). The magnitude of this specific correlation is not unusual (e.g., Smith et al. 2002) and, importantly, suggests that the two measures captured distinct constructs because they share less than 50% variance (MacKenzie et al. 2005, Ping 2004). These findings are also parallel to the ones reported by Steenkamp (2001), who confirmed that the two dimensions are, despite high correlations, empirically distinct. It is worth noting that if we discretize the countries into three categories on the two cultural value dimensions (low/medium/high), we find that 11 of the 24 countries fall out of the diagonal (they are not categorized as low-low, medium-medium, and high-high on the two dimensions). In this regard, we identified five countries including Japan and the United Kingdom (Italy, Mexico, and Portugal) that score high (resp., low or medium) on *Autonomy-Embeddedness* and low or medium (resp., high) on *Egalitarianism-Hierarchy*. We also compared the magnitude of the earmarking effect of these countries with those that score low on both *Autonomy-Embeddedness* and *Egalitarianism-Hierarchies* (four countries). We find that the earmarking effect (in terms of overall willingness to donate) tends to be stronger in the first (17.9%) compared with the second segment of countries (6.9%). The results are consistent if we compare the first segment of countries with countries that score low on either one of the two cultural dimension (resp., low or medium on the other dimension; ten countries; 17.9% versus 9.6%) or with countries that score low or medium on any of the two cultural dimensions (14 countries; 17.9% versus 12.9%). Taken together, results of our ancillary analyses suggest that the two cultural value dimensions independently moderate the earmarking effect.

A second detail we wanted to further explore within the earmarking condition is participants' decision of whether they actually wanted to make use of the earmarking option or, instead, let the Red Cross decide for which of the projects their money should be used. We hence analyzed the data while focusing on those participants in the earmarking condition who did *not* select a particular project ($n = 1{,}025$; 27.4%). We find a significant earmarking effect also among these participants ($n = 1{,}025$; $M_{\text{ear, no select}} = \$10.12$, SD = \$8.88 versus $n = 3{,}647$; $M_{\text{nonear}} = \$8.61$, SD = \$7.79; $t(4{,}670) = 3.965$, $p < 0.001$). In addition, we find no differences in terms of willingness to donate between participants who assigned their contribution to a specific project and those who did not ($n = 1{,}025$; $M_{\text{ear, select}} = \$9.88$, SD = \$7.81 versus $n = 2{,}711$; $M_{\text{ear, no select}} = \$10.12$, SD = \$8.88; $t(3{,}734) = 1.155$, $p = 0.248$). Results indicate that the earmarking effect is evident even when participants do not actually choose to exercise that option. However, the possibility of self-selection effects dictates that we place some caveats on this interpretation (see Section 6).

Figure 6. (Color online) Relationship between the Stage 1 Earmarking Effect and Countries' Levels of Harmony vs. Mastery



Notes. The horizontal axis represents country-level *Harmony-Mastery* scores where higher scores indicate higher levels of harmony and lower levels of mastery in the sample countries; the range of scores for our sample is [–0.63, 0.81]; the vertical axis represents the earmarking effect pertaining to the likelihood of making a donation (i.e., the stage 1 *Donation decision*). For each country j, the earmarking effect refers to the relative increase in the proportion of participants who donated under the earmarking condition, compared with the nonearmarking condition (i.e., it equals $100 \times (P_j(1) - P_j(0))/P_j(0)$, with $P_j(1)$ equal to the proportion of people in country j who donated in the earmarking condition and $P_j(0)$ equal to the proportion of people in country j who donated in the nonearmarking condition). The dotted line plots results of a regression analysis, where the regression coefficient is not statistically significant.

Third, we also analyzed how the cultural value dimensions affect respondents' decisions to delegate earmarking back to the Red Cross. For this purpose, we ran a multivariate multilevel logit regression in which we relate this binary decision (1 = participant does not make use of earmarking, 0 = participant uses earmarking) to our individual- and country-level variables. Although one might expect that *Autonomy-Embeddedness* and *Egalitarianism-Hierarchy* could be related to this decision, our results show that this is not the case (see Table A-4 in Online Appendix A).

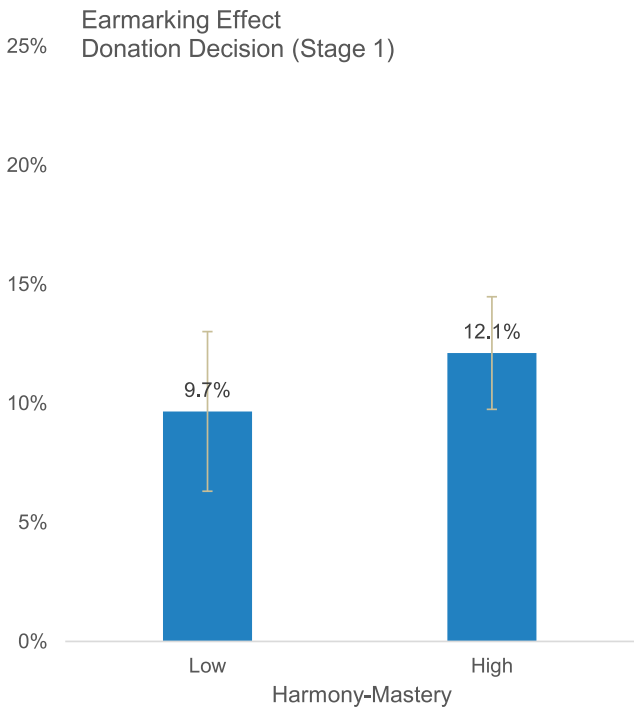
In summary, Study 1 finds across 25 countries that one's willingness to donate is significantly higher when earmarking is allowed. However, the study also reveals that the earmarking effect substantially differs between countries. Finally, two cross-cultural interactions emerge: earmarking appears to be less attractive in countries that score lower on autonomy relative to embeddedness and in those scoring lower on egalitarianism relative to hierarchy. While these latter findings are supportive of our theorizing, we note that the related evidence is merely correlational and that alternative interpretations are possible (we further discuss this in Section 6).

5. Study 2: A Follow-up Experiment

5.1. Methods

5.1.1. Overview and Procedure. In Study 2, we aim to address several limitations of Study 1. In the first place, we have not yet tested our impact account. Recall that our theorizing was based on the ideas that the option to earmark donations increased potential donors' perceptions of being able to have specific impact and that this sense of agency might account for one's increased willingness to donate. We test this notion in Study 2 via mediation analyses while also exploring the viability of several related yet distinct processes. In particular, one could argue that the earmarking effect might also reflect factors related to self-expression (Kim and Sherman 2007). If this is indeed the case, self-expression could help in understanding our cross-cultural interactions.

Figure 7. (Color online) Earmarking Effect on Donation Decision (Stage 1) by Countries' Levels of Harmony vs. Mastery



Notes. We used median splits to agglomerate countries into those that score low versus high on *Harmony-Mastery*. The vertical axis represents the earmarking effect. The earmarking effect is calculated on a country-level basis and refers to the relative increase in the proportion of participants who donate under the earmarking condition compared with the nonearmarking condition (the stage 1 *Donation decision*). Error bars represent standard errors.

For example, Kim and Sherman (2007) find that European Americans value self-expression more than East Asian Americans and are consequently more invested in what they chose. Another alternative explanation we found worthwhile investigating is the vividness of the mental pictures of one's donation's usage. This is because such vividness perceptions have been found to operate similarly to feelings of making an impact (Cryder et al. 2013).[16]

Strictly speaking, another limitation of Study 1 is that we contrasted earmarking with nonearmarking: participants in the treatment (resp., nonearmarking) condition were told that they could (resp., could not) earmark their donation. Although this procedure makes sense from the perspective of internal validity, one could argue that the observed earmarking effect's size might be somewhat inflated because real-world charities need not inform all potential donors that earmarking is (or is not) allowed.[17] We therefore slightly revised the nonearmarking condition in Study 2 so that it would more nearly resemble a classic control condition: participants were told only that the Red Cross would use their potential donation for the five described projects.

We further aim to analyze the effectiveness of "softer" variations of earmarking. Along these lines, operations researchers have discussed offering conditional (or, more accurately, "partial") earmarks as a compromise between full- and nonearmarking strategies (Aflaki and Pedraza-Martinez 2016, p. 1275); in this scenario, donors can earmark their donations, but the charity "keeps a publicly announced fraction of each donation as a flexible resource to be used according to its needs." Although charities would naturally prefer such partial earmarking, we do not know how potential donors would react to this compromise. We address this question by changing the treatment condition so that only two-thirds of the donation amount can be earmarked (with the other third to be used by the Red Cross for projects of its own choosing).

Finally, for Study 2, we made a slight change in the economic consequences of participants' willingness to donate. Recall that Study 1 relied on the classic "windfall" approach, whereby participants were offered the opportunity to donate as much or as little as they wanted of an *additional* amount of money they could gain in return for their study participation. However, the subjects in Study 2 were not paid any fixed participation fee; instead, they were offered *only* the chance to win a certain amount of money. We made this change so that the dependent variable would be more consequential—with the idea being that from an economic perspective, subjects agreed to participate in the study only because of this prospect (i.e., there were no other economic rewards for participation). As in Study 1, we donated the actual donation of the selected participants to the Red Cross on their behalf after the study was completed.

Apart from these three changes, we employed the same stimuli and procedures as in the main study: participants received the same background information about the Red Cross and were given the same list of five project options. Consistently with current practices of the American Red Cross, we slightly modified the option not to select any project: participants could choose to donate funds to where they were "most needed" (i.e., at the discretion of the Red Cross). Participants were 408 students (216 men and 192 women; $M_{age} = 22$ years) from a Dutch university who were invited via an e-mailed laboratory newsletter to participate in an online survey. The promised compensation for participation was a chance to win one of ten €30 raffles. Once they started the survey, participants were randomly assigned to either the treatment (two-thirds earmarking) or control condition.

5.1.2. Measures. Our dependent variable was participants' willingness to donate. Each participant was offered the opportunity to use the €30 they might gain

Table 4. Effect of Individual and Country Variables on *Donation decision* and *Donation amount*

	Donation decision (stage 1)			*Donation amount* (stage 2)		
	Model 1a	Model 2a	Model 3a	Model 1b	Model 2b	Model 3b
Intercept	–2.291*	–2.635**	–2.411**	0.032	–0.001	–0.001
	(1.261)	(1.162)	(1.212)	(0.212)	(0.235)	(0.236)
Autonomy-Embeddedness	–0.357	–0.527*	–0.426*	0.029	0.024	0.024
	(0.261)	(0.288)	(0.263)	(0.043)	(0.046)	(0.045)
Egalitarianism-Hierarchy	–0.601**	–0.552*	–0.721**	–0.024	–0.028	–0.028
	(0.297)	(0.294)	(0.263)	(0.040)	(0.042)	(0.042)
Harmony-Mastery	1.130***	1.096**	1.120***	0.002	0.008	0.008
	(0.417)	(0.423)	(0.418)	(0.040)	(0.068)	(0.068)
Human Development Index	0.423	0.803	0.940	–0.078	–0.025	–0.025
	(1.457)	(1.398)	(1.531)	(0.279)	(0.304)	(0.305)
Earmarking (experimental treatment)	0.712***	0.566***	–0.201	0.033*	0.033	0.036
	(0.095)	(0.119)	(0.308)	(0.018)	(0.021)	(0.056)
Earmarking × Autonomy-Embeddedness		0.275**			–0.003	
		(0.135)			(0.027)	
Earmarking × Egalitarianism-Hierarchy			0.386***			–0.002
			(0.126)			(0.024)
Average project ratings	0.538***	0.538***	0.540***	0.052***	0.052***	0.052***
	(0.061)	(0.065)	(0.064)	(0.007)	(0.007)	(0.007)
SD project ratings	0.383***	0.388***	0.387***	–0.020**	–0.020**	–0.020**
	(0.080)	(0.081)	(0.080)	(0.009)	(0.009)	(0.009)
Age	–0.007**	–0.007**	–0.007**	0.002***	0.002***	0.002***
	(0.003)	(0.003)	(0.003)	(0.000)	(0.000)	(0.000)
Gender	0.043	0.042	0.041	–0.006	–0.006	–0.006
	(0.074)	(0.076)	(0.076)	(0.008)	(0.008)	(0.008)
Education	–0.039	–0.038	–0.041	–0.005	–0.005	–0.005
	(0.033)	(0.033)	(0.032)	(0.004)	(0.004)	(0.004)
Socioeconomic status	0.087**	0.087**	0.089**	0.016***	0.016***	0.016***
	(0.043)	(0.042)	(0.040)	(0.004)	(0.004)	(0.004)
Average annual donation (in log US$)	0.181***	0.181***	0.181***	0.020***	0.020***	0.020***
	(0.018)	(0.018)	(0.018)	(0.002)	(0.002)	(0.002)
Attitude Red Cross	0.089**	0.088**	0.089**	0.012***	0.012***	0.012***
	(0.039)	(0.039)	(0.040)	(0.004)	(0.004)	(0.004)
Familiarity Red Cross	–0.028	–0.026	–0.026	0.011*	0.011	0.011
	(0.064)	(0.065)	(0.062)	(0.007)	(0.007)	(0.007)
Personal project relevance	0.570***	0.571***	0.570***	0.040***	0.040***	0.040***
	(0.032)	(0.033)	(0.033)	(0.004)	(0.004)	(0.004)
Level 1 variance				0.084***	0.084***	0.084***
				(0.002)	(0.002)	(0.002)
Level 2 variance intercept	0.274***	0.284***	0.276***	0.008***	0.008***	0.008***
	(0.116)	(0.117)	(0.109)	(0.003)	(0.003)	(0.003)
Level 2 variance *Earmarking*	0.063***	0.058***	0.043***	0.006***	0.006***	0.006***
	(0.045)	(0.046)	(0.030)	(0.002)	(0.002)	(0.002)
Level 2 covariance	–0.009	–0.028	–0.018	–0.001	–0.001	–0.001
	(0.069)	(0.068)	(0.054)	(0.002)	(0.002)	(0.002)

Notes. $N = 7{,}118$ participants for stage 1; $N = 5{,}938$ for stage 2; reported values are posterior mean estimates (with posterior standard deviations in parentheses). Models 1a, 2a, and 3a are based on a multilevel logit model for which the dependent variable is *Donation decision*; Models 1b, 2b, and 3b are based on a multilevel regression model for which the dependent variable is *Donation amount* conditional on *Donation decision*.

*90% credible interval (CI) does not include zero; **95% CI does not include zero; ***99% CI does not include zero.

in the course of the study to make a donation to the Red Cross. As in Study 1, participants were explicitly informed that they were not required to make a donation. Participants indicated their willingness to donate on a sliding scale ranging from €0 to €30 (the scale contained seven points, which enabled changes in €5 increments). As before, we could then model participant's willingness to donate as a two-stage decision-making process: a donation decision followed by (if applicable) an amount decision.

On a separate page following the donation page, we captured our proposed mediator (i.e., perceived

impact). For this purpose, we elicited responses to four items (1 = "strongly disagree," 7 = "strongly agree") that followed this preamble: "In the following, we are interested in what you were thinking about before having decided to make a donation." The four items were (1) "I was thinking that I could make a specific impact," (2) "I had the feeling to be free in determining where to help," (3) "I had the feeling I could influence where to make an impact," and (4) "I was thinking that I would have control over what happens with my donation" ($\alpha = 0.80$).[18]

Our two alternative mediators were measured by responses to the following statements (again using a seven-point scale). For *self-expression*: (1) "I was thinking that making a donation would help me to express my individuality," (2) "I thought that through my donation I can show who I am," and (3) "In a way, I was thinking that my donation is a statement about myself" [$\alpha = 0.84$; items were based on Noppers et al. (2015)]. For *vividness*: (1) "It was easy for me to imagine how my donation would be used," (2) "I had a vivid mental picture about how my donation would be used," (3) "It was easy to envision what would happen to my donation," and (4) "I could visualize how my donation would be used" [$\alpha = 0.92$; items were based on Cryder et al. (2013)].[19] Finally, participants reported their age and gender.

5.2. Findings

First of all, we replicate our Study 1 results in finding a significant main effect of earmarking on willingness to donate. Participants in the earmarking condition are significantly more willing to make Red Cross donations than are participants in the control condition (M_{ear} = €10.96, SD = €8.31 versus $M_{control}$ = €8.68, SD = €7.78; $t(406) = 2.859$, $p = 0.004$).[20] It is noteworthy that this effect persisted even under the two-thirds earmarking treatment and the more classic control condition (see Section 5.1). Second, we assess the extent to which the earmarking effect is driven by a greater probability of making a donation as opposed to donating a larger amount conditional on having decided to donate. With regard to the first-stage *Donation decision*, we find that 76.6% of participants in the control condition decided to make a donation; in comparison, 85.7% of those in the earmarking condition decided to donate. A logistic regression analysis where earmarking is the independent variable (with 0 = control condition and 1 = earmarking condition) and where donation likelihood is the dependent variable (with 0 = no donation and 1 = donation) confirms that this effect is statistically significant ($b = 0.607$, SE = 0.260, $p = 0.019$). As for the second-stage *Donation amount* decision, we find only a marginally significant earmarking effect (M_{ear} = €12.79, SD = €7.55 versus $M_{control}$ = €11.34, SD = €6.99; $t(329) = 1.81$, $p = 0.072$). In short, these results replicate and extend the ones of the main study.

5.2.1. Mediation. We next analyze our proposed and alternative mediator variables. First, and in support of our theorizing, we find perceived impact to be significantly higher among participants in the earmarking versus control condition ($M_{ear} = 4.77$, SD = 1.19 versus $M_{control} = 3.89$, SD = 1.38; $t(406) = 6.944$, $p < 0.001$). Second, we find no evidence that self-expression considerations are a significant factor ($M_{ear} = 3.43$, SD = 1.41 versus $M_{control} = 3.58$, SD = 1.41; $t(406) = 1.101$, $p = 0.272$). Third, participants in the earmarking condition do report significantly more vivid mental pictures of how their donations would be used ($M_{ear} = 3.98$, SD = 1.52 versus $M_{control} = 3.57$, SD = 1.46; $t(406) = 2.729$, $p = 0.007$).

We ran a causal mediation effects model for the binary *Donation decision* variable (stage 1) using version 7.4 of MPlus with the bootstrapping procedures recommended by Muthén and Asparouhov (2015). The model tests for whether perceived impact (our mediator) as well as self-expression and vividness (alternative mediator variables) simultaneously mediate the path between *Earmarking* and *Donation decision*. Regression results (based on 10,000 bootstrap samples) show that the indirect effect through perceived impact is highly significant ($b = 0.203$, SE = 0.066; 95% confidence interval ($CI_{95\%}$) = [0.087, 0.349]); however, the indirect effects through self-expression ($b = 0.021$, $SE = 0.023$; $CI_{95\%}$ = [−0.017, 0.076]) and vividness ($b = 0.013$, SE = 0.025; $CI_{95\%}$ = [−0.034, 0.067]) are not significant.[21] In sum, results indicate that the earmarking effect is mediated by the perception of having an impact.

Finally, we obtained additional process insight by reanalyzing the data while focusing on those participants in the earmarking condition who simply assigned their donation to wherever it was "most needed" ($n = 76$, 37.4%; as opposed to those participants who selected a particular project). In line with the results of Study 1, we also find a significant earmarking effect among these participants ($M_{ear,\ no\ select}$ = €11.12, SD = €8.27 versus $M_{control}$ = €8.68, SD = €7.78; $t(279) = 2.291$, $p = 0.023$). More important, these participants also reported greater impact perceptions than did those in the control condition ($M_{ear,\ no\ select}$ = 4.86, SD = 1.19 versus $M_{control} = 3.89$, SD = 1.38; $t(279) = 5.408$, $p < 0.001$). In contrast, neither self-expression ($M_{ear,\ no\ select} = 3.47$, SD = 1.41 versus $M_{control} = 3.43$, SD = 1.41; $t(279) = 0.226$, $p = 0.821$) nor vividness ($M_{ear,\ no\ select} = 3.65$, SD = 1.44 versus

$M_{control}$ = 3.57, SD = 1.46; $t(279) = 0.399$, $p = 0.690$) yielded significant results. A mediation analysis also established that the indirect effect on *Donation decision* through our mediator is marginally significant (b = 0.122, SE = 0.073; $CI_{90\%}$ = [0.009, 0.249]), whereas the indirect effects through self-expression (b = 0.007, SE = 0.033; $CI_{90\%}$ = [−0.050, 0.060]) and vividness (b = 0.005, SE = 0.019; $CI_{90\%}$ = [−0.022, 0.040]) are not significant.[22] Although these latter findings should be interpreted with caution (self-selection might play a role), they suggest that it might be the earmarking option per se that helps the earmarking effect unfold.

6. General Discussion

6.1. Contributions and Practical Implications

Our research offers first evidence on the appeal of earmarking to donors. The empirical basis is a unique data set consisting of 7,383 potential donors from 25 countries who participated in a randomized survey experiment. The study yields several interesting results with practical implications for charities.

First, we demonstrate a significant and sizable main effect across the 25 countries studied. In particular, one's willingness to donate in the earmarking condition is, on average, 14.4% higher than in the non-earmarking condition. Although the earmarking literature has speculated that donors might experience some utility from exercising control over the usage of their funds (e.g., Barman 2008, Besiou et al. 2014, Aflaki and Pedraza-Martinez 2016), the supporting evidence was scarce. Hence, our investigation augments the extant literature by providing empirical evidence characterized by high levels of internal validity. The study suggests that, *ceteris paribus*, charities should be able to raise more funds at a given point in time if they allow donors to earmark their contributions. Of course, whether charities should actually implement earmarking also depends on other relevant factors, such as associated operational costs and resulting service levels (Besiou et al. 2014, Aflaki and Pedraza-Martinez 2016).

Second, and perhaps even more important, our work demonstrates that the promise of earmarking from a fund-raising perspective differs substantially among countries. For instance, earmarking in the United States and Germany induced a marked increase in participants' willingness to donate, whereas the effect is considerably smaller in other countries (e.g., Singapore and China). The practical implication is straightforward: earmarking can be expected to benefit charities more in some countries than in others, and in still other countries it may yield even no benefit at all.

Third, these differences between countries are unlikely to be random. Instead—and consistently with our theorizing—the appeal of earmarking is systematically associated with established cultural value dimensions. More specifically, we find that the earmarking effect is weaker in countries scoring lower on autonomy relative to embeddedness and also in countries scoring lower on egalitarianism relative to hierarchy. Yet, in contrast to what we observe for those two spectra, harmony versus mastery (the third dimension of Schwartz's cultural value framework) is not significantly related to the earmarking effect. Our study hence suggests that the two cultural value dimensions autonomy-embeddedness and egalitarianism-hierarchy could help charities predict the extent to which earmarking strategies will be effective at increasing donations in a given country. More generally, these results dictate caution when generalizing from the data collected in a single country: strategies that succeed in one part of the world may be less successful elsewhere. It is crucial to bear this caveat in mind, especially because journals are now read by an increasingly international audience.

Fourth, we also find a significant earmarking effect among participants who simply opted for their donation to be used "where it is most needed" (i.e., participants in the earmarking condition who did not use the earmarking option). In comparison with participants in the control condition, these participants also reported elevated perceptions of agency and impact. These findings are of particular interest because they suggest that the earmarking option in itself is valuable to potential donors. Given the possibility of self-selection, however, further research is needed to identify more precisely the mechanism(s) underlying this effect. An appreciable share of our participants in the earmarking condition declined to select from among the five projects described: 27.4% in Study 1 and 37.4% in Study 2. The money donated by these participants gives the charity more flexibility in allocating contributions to projects even as it benefits, through increased donations, from the earmarking effect.

Fifth, we document the promise of conditional (i.e., partial) earmarking. Conditional earmarking implies that donors can earmark their donations, but the charity "keeps a publicly announced fraction of each donation as a flexible resource to be used according to its needs" (Aflaki and Pedraza-Martinez 2016, p. 1275). In our experiment (Study 2), only two-thirds of the donation amount could be earmarked. Yet this earmarking variation produced a strong earmarking effect. At the same time, this compromise ameliorates the full-earmarking issues highlighted in the literature related to operational costs and service levels. Contrary to those results, charities could well find such "softer" variations of earmarking to be a viable alternative.

Finally, our modeling results (Study 1) revealed that the earmarking treatment has a strong effect on the first stage of a participant's decision-making process (the *Donation decision*) but not so much on its second stage (the *Donation amount*). Thus, the evidence suggests that the earmarking effect might be driven primarily by activating more donors and not by increasing the average amount contributed by donors. These separate components of one's willingness to donate thus seem to be differentially affected by earmarking, which underscores the theoretical need for a two-part model that distinguishes between the decision of *whether* to donate and that of *how much* to donate. The practical implication here is that charities might best use earmarking as a strategy to increase their active donor base—that is, by finding new donors or by encouraging past donors to contribute again. These are important goals for many charities in light of their relatively low retention rates: according to Ryzhov et al. (2015), fewer than 30% of first-time donors return to donate a second time.

6.2. Limitations and Future Research

Here we discuss the limitations of our study as well as promising avenues for scholars to pursue. Because our aim was to test for a causal effect of earmarking, one important limitation is that we isolated the earmarking effect from other common drivers of one's willingness to donate. Hence, it would be informative for both theory and practice to develop a better understanding of the strength of the earmarking effect as compared with other attributes of fund-raising campaigns (see Ryzhov et al. 2015). In addition, it would be interesting to explore how the earmarking treatment interacts with "best practice" fund-raising strategies (cf. Falk 2007, Ryzhov et al. 2015). In this context, it is worth noting that our research has uncovered significant cross-cultural differences in the earmarking effect; future work should therefore examine the generalizability of strategies intended to increase donations whose development has been based mainly on U.S. data.

With regard to the cultural interactions identified, we believe that this paper's empirical scope (i.e., its inclusion of 25 different countries) is notable in both absolute and relative terms. Yet, in contrast to the earmarking main effect, we acknowledge that the focal interactions are correlational and thus fall short of establishing causality. While we can claim with certainty that the earmarking effect varies between countries, we only have suggestive evidence that this variance is attributable to the respective cultural value dimensions. Although one could hardly assign countries randomly to different levels of a given cultural value dimension, future research could try to manipulate—*within* a given study population—the theoretical construct underlying a specific cultural value dimension. Our study also reveals that more than one in four donors do not actually exercise the earmarking option when offered, which works to the charities' advantage because they benefit from higher donations while simultaneously preserving their flexibility to apply the funds where they are most needed. Future studies could examine both when and why individuals decline to exercise the earmarking option, and research could also try to identify strategies to increase the proportion of donors who forgo that option.

A final limitation of this investigation is that we do not yet know whether the earmarking effect would be similarly strong in a real-life fund-raising campaign. Although we tried to make the study setting as ecologically and externally valid as possible, we had to make a few compromises along the way (e.g., we could not use glossy campaign materials, we were not allowed to solicit donations from all study participants using their own money they earned outside the study context, etc.). Yet, a randomized cross-cultural study like the one presented here would have been hardly feasible for the Red Cross within the necessary scientific constraints. The quest for internal validity demands a presentation of identical projects and a simultaneous implementation across countries, to name just two examples. While this seems impossible for almost any charity organization, it appears particularly difficult for the Red Cross, which is organized in fairly independent geographic chapters.

In conclusion, this study uses a global data set spanning 25 countries to provide the first empirical evidence of a causal relation between earmarking and donating. We find that, in general, one's willingness to donate is significantly higher when earmarking is allowed. However, we also find that the earmarking effect differs in magnitude across countries and that a country's cultural value orientation might be used as a proxy to help anticipate the extent to which earmarking strategies will be effective at increasing donations in that country.

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Endnotes

[1] See https://web.archive.org/web/20190111130836/https://www.doctorswithoutborders.org/support-us/faq-donating (accessed January 11, 2019) and https://web.archive.org/web/20190111130626/https://www.unhcr.org/neu/wp-content/uploads/sites/15/2017/08/UNHCR-Use-of-Unearmarked-Funding-in-2016-Report.pdf (accessed September 13, 2017).

[2] See https://web.archive.org/web/20190111131120/https://www.redcross-cmd.org/direct.html (accessed January 11, 2019) and https://web.archive.org/web/20190111130441/https://www.redcross.org/donate/home-fire-campaign.html/ (accessed January 11, 2019).

[3] We borrowed this idea from operations research scholars who have discussed (but not empirically tested) "conditional" earmarking as a compromise between total- and nonearmarking strategies (Aflaki and Pedraza-Martinez 2016, p. 1275); see Section 5.

[4] Bandura (2009, p. 8) similarly defined agency as "the human capability to exert influence over one's functioning and [over] the course of events by one's actions."

[5] Although we do not expect "harmony versus mastery" to moderate earmarking effects, our *empirical* analysis does account for this third dimension.

[6] We chose the projects from the various national websites of the Red Cross. Our aim was to include a wide range of different projects that are presumably of similar appeal across countries (we validate this assumption in Section 4.3).

[7] The Big Mac Index was created as a relatively simple tool to adjust for under- and overvaluations of currencies against the U.S. dollar. The index factors in nontradable and tradable cost factors such as electricity, labor costs, rental costs, as well as beef, bread, and cheese (e.g., Parsley and Wei 2007). While imperfect, the Big Mac Index has been shown to be fairly effective (relative to other methods) in capturing the "true value" of currencies (e.g., Ong 2003, Clements et al. 2012).

[8] As indicated in Section 2.3, our *empirical* analysis will also account for this third dimension.

[9] The data can be accessed at https://www.researchgate.net/publication/304715744_The_7_Schwartz_cultural_value_orientation_scores_for_80_countries (accessed January 12, 2019).

[10] The data can be accessed at http://hdr.undp.org/en/content/human-development-index-hdi.

[11] For expository reasons, we report values in U.S. dollars. The statistical testing is based on a 21-point scale that was identical across all countries (i.e., 5% increments of what percentage is donated [0, 100%]). To simplify the notation we use subscripts "ear" and "nonear" to signify "earmarking" and "nonearmarking" as well as subscripts "select" and "no select" to signify "project selected" and "no project selected," respectively.

[12] In these statistical models, donation amount (conditional on donation) is operationalized on a scale from 0.05 (= 5%) to 1 (= 100%) (i.e., how much, percentage-wise, participants across countries are willing to donate of the additional amount of money they could gain in the course of the study).

[13] We also tested for whether *Harmony-Mastery* interacts with the treatment on either *Donation decision* or *Donation amount*. As in our model-free analyses, we found that this was not the case.

[14] The data can be accessed at the following websites: World Bank 2016, https://data.worldbank.org/; CIA World Factbook, https://www.cia.gov/library/publications/the-world-factbook/; Heritage Foundation 2016, https://www.heritage.org/index/.

[15] The same pattern of results is obtained if we used *Average project ratings* or *SD project ratings* as dependent variables (instead of the separate project ratings).

[16] It is noteworthy that we do not claim that our impact account is the one and only process underlying the earmarking effect. Instead, we aim to show in this study that impact is one plausible factor and that feelings of impact are related with one's increased willingness to donate. Further mechanisms not considered here might include, for example, self- and social signaling, feelings of self-efficacy, and perceptions regarding the charity's effectiveness.

[17] Recall from Section 1, however, that some charities do explicitly discourage earmarking (i.e., stress that earmarking is not possible).

[18] Note also that other scales have been used to measure perceived impact (e.g., Cryder et al. 2013 Touré-Tillery and Fishbach 2017). In contrast to these scales, which focus on making impact per se (being able to make a difference), our scale focuses on the ability to make *specific* impact (being able to decide *where* to make a difference) and thus better reflect our theorizing.

[19] To assess discriminant validity among the three potential mediators, we performed a varimax rotation–based factor analysis. The analysis yielded the predicted three-factor solution, with each item loading on its intended factor (all factor loadings were greater than 0.6 and all cross-loadings were less than 0.3).

[20] For simplicity and brevity, results of Study 2 are not tabulated.

[21] For the *Donation amount* decision (stage 2), we selected participants who made a donation and then estimated whether perceived impact and the alternative process variables mediate the path from *Earmarking* to *Donation amount* (again using 10,000 bootstrap samples). The amount (conditional on donation) ranged from €5 to €30. Results reveal that the indirect effect of earmarking on donation amount through perceived impact is significant ($b = 0.744$, SE = 0.323; $CI_{95\%} = [0.124, 1.397]$) but that the indirect effects through self-expression ($b = -0.051$, SE = 0.088; $CI_{95\%} = [-0.281, 0.075]$) and vividness ($b = -0.041$, SE = 0.080; $CI_{95\%} = [-0.225, 0.108]$) are not significant.

[22] We also draw comparisons between responses from participants in the earmarking condition who opted to donate to where funds were most needed and responses from those who selected a specific project. In line with the results of Study 1, we find that these two groups do not differ in terms of willingness to donate ($M_{select} = 10.87$, SD = 8.36 versus $M_{no\ select} = 11.12$, SD = 8.27; $t(201) = 0.209$, $p = 0.835$). They further do not differ in terms of impact perceptions ($M = 4.72$, SD = 1.19 versus $M = 4.86$, SD = 1.19; $t(201) = 0.760$, $p = 0.448$). Neither is there a significant difference between these groups with respect to self-expression ($M = 3.65$, SD = 1.41 versus $M = 3.47$, SD = 1.41; $t(201) = 0.866$, $p = 0.387$), although we do find significant differences in their vividness perceptions ($M_{select} = 4.17$, SD = 1.53 versus $M_{no\ select} = 3.65$, SD = 1.44; $t(201) = 2.384$, $p = 0.018$). We believe that this last finding is plausible and view it as further evidence *against* vividness being the key process underlying the observed earmarking effect.

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