# Examining the association of religious context with giving to non-profit organizations

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**Abstract** (194 words)

Why do citizens in religious groups and more religious countries give money to charitable causes? In this article we aim to theoretically and empirically unravel the influence of religious composition on giving to non-profit organizations across countries. Building on theories and research in sociology, social psychology and economics we formulate hypotheses about individual level and contextual level differences in engagement in religious and secular charitable giving. We test our hypotheses with multi-level analyses using data from the European Social Survey that include twenty-one European countries complemented with matching data from the United States ($N_1$=41,314; $N_2$=22). The results show no relationship between country level devoutness and engagement in religious or secular giving. We do find that citizens in countries with a higher level of religious heterogeneity are more likely to engage in religious giving but not secular giving. We test two explanations for the relationship between giving and religious heterogeneity. We find support for the minority hypothesis that people belonging to a religious minority have a higher likelihood of giving but not for the group size hypothesis that the relative size of the religious denomination to which people belong decreases their engagement in charitable giving.

# Examining the association of religious context with giving to non-profit organizations

## Introduction

Charitable donations are important sources of contributions to non-profit organizations. For example, in the Netherlands in 2012, 85 per cent made charitable donations, amounting to a total of 1.8 billion euro donated to non-profit organizations (Bekkers and De Wit, 2013). Especially in uncertain economic times, when governments increasingly withdraw from the provision of core public goods and services, voluntary contributions to the non-profit sector are of great importance to up keep the level of welfare state provisions.

There is abundant research showing that those who are religiously affiliated contribute more money to non-profit organizations than non-religious individuals (for a review, see Bekkers and Wiepking, 2011). Recent studies suggest that not only individual religious affiliation, but also the religious context in which individuals live may be of great importance for engagement in volunteering (Bennett, 2012; Borgonovi, 2008; Lim and MacGregor, 2012; Ruiter and De Graaf, 2006). Religious context relates to characteristics of religious groups in a geographic area, for example the number, size and distribution of religious groups and the average level of religiosity. While the relationship between religious context and volunteering has been examined in several studies, it is less clear whether the influence of religious context also extends to monetary contributions. Such a relationship can be expected because correlates of volunteering and giving are similar. Also it is unclear whether religious context is correlated with charitable giving outside the United States. Thus far, however, only one study of American counties by Borgonovi (2008) has examined the importance of religious context on individual charitable giving

behaviour. Both the level of religiosity as well as the level of religious diversity in the United States is higher than in Europe, where religion is less important in daily life and several countries have large religious majorities and religious minorities are often smaller. Therefore we sought to extend the body of research on the behavioural correlates of religious context by examining the relationship between religious context and charitable giving to both religious and secular non-profit organizations in a cross-national comparative study of twenty-one European countries and the United States. The question we answer in the current paper is: How can the relationship between individual level and contextual level religiosity and engagement in charitable giving be explained? We answer these questions using data from the 2002 European Social Survey (ESS, 2002), adding matching data from the 2005 United States Citizenship, Involvement, Democracy Survey (CID, 2005) for the United States. We present new theoretical explanations for the relationship between religious context and individual donations to non-profit organizations, based on theories and research on organizational membership and giving and volunteering behaviour originating in sociology, social psychology and economics.

## Theory and hypotheses

### Individual religiosity and charitable giving

Studies on charitable giving at the individual level have consistently shown that religious beliefs and attendance are key predictors of engagement in charitable giving (Bekkers and Wiepking, 2011; Putnam, 2000; Wuthnow, 1991). Individuals affiliated with organized forms of religion and individuals who attend religious services more frequently are more likely to donate to religious as well as secular charitable organizations and donate higher amounts to these organizations (Bekkers and Schuyt, 2008; Berger, 2006; Hoge and Yang, 1994).

Broadly speaking, there are two conventional types of explanations for the higher level of giving among religious individuals, one focusing on norms and one on networks (Bekkers and Schuyt, 2008; Ruiter and De Graaf, 2006). The first explanation assumes that religious communities endorse social norms and values that encourage caring for others and acts of charity. In all major world religions, kindness towards others is a religious virtue. In the Christian tradition, the parable of the Good Samaritan is often used to illustrate the value of helping strangers (Wuthnow, 1991). However, there is variation between people belonging to different religious groups in the extent to which they follow the norms to help others (Reitsma *et al*., 2006). From Durkheim's integration thesis it follows that people who are more strongly integrated in their religious group are more likely to follow the religious values to help others (Durkheim, [1897] 1952; Reitsma *et al.*, 2006; Ruiter and De Graaf, 2006). It is consistent with this thesis that donations increase with the frequency of church attendance, as previous studies have found (Bekkers and Wiepking, 2011). In addition, members of religious groups with higher levels of church attendance, such as Protestants in North American and Western European countries, typically give more (Bekkers and Wiepking, 2011).

The second explanation assumes that religious communities are social networks of individuals who channel the willingness to contribute to recipient organizations through social influence and solicitations for contributions. When philanthropic behaviour is publicly observable people give more (Reinstein and Riener, 2012; Soetevent, 2005). Religious donations often take place in a religious institution, which makes them publicly observable. A failure to give may damage one's reputation, especially among the religious who have strong shared values for philanthropic behaviour. In addition, religious individuals are more likely to encounter requests for charitable contributions than non-religious individuals because religious individuals

are requested to donate when attending a service at a religious institution (Bekkers and Schuyt, 2008). In addition, religious individuals have larger and more diverse social networks through which they are approached for donations (Wiepking and Maas, 2009).

It is important to distinguish between religious and non-religious organizations receiving donations. Obviously, religious individuals give more to their own church and to charities affiliated with that church. While the positive relationship between religion and donations has not been observed as strongly and consistently in studies of donations to organizations other than the church (Galen, 2012), the available evidence has mostly confirmed a positive relationship between religiosity and secular giving (Bekkers and Wiepking, 2011). In line with this evidence we formulate:

*H1a. People belonging to a religious group have a higher probability of making religious and secular donations.*

*H1b. People attending religious services more frequently have a higher probability of making religious and secular donations.*

Next we will focus on four explanations for the relationship between religious context and charitable giving: devoutness, heterogeneity, group size and minority effects.

## Religious context and charitable giving

### *Devoutness*

The explanations for the higher level of giving among religious individuals presented in previous research focus on the characteristics of religious groups. As Ruiter and De Graaf (2006) have argued in their study on the influence of national religious context on volunteering, one would expect that individuals in more devout countries – i.e., with higher levels of religious activity –

are more likely to contribute resources to non-profit organizations because religious groups maintain positive social norms on contributing. Such norms pervade social group boundaries. The presence of religious groups in a society would then support the preservation of the norm also for non-religious individuals. Indeed experiments show that observing prosocial behaviour leads people to adopt a norm prescribing prosocial behaviour and increasingly so the more others are observed behaving consistently with that norm (Krupka and Weber, 2009). People in more devout countries will thus be more likely to volunteer, because their social networks are more likely to be devout. Ruiter and De Graaf (2006) assume that both religious and secular people will be recruited through these devout networks, in which the norm to volunteer is stronger, as well as the social pressure to comply with requests for volunteer work. While some controversy has arisen about the methodology to test for these types of contextual relationships (Van der Meer *et al*., 2010), the theoretical argument is unchallenged. Positive relationships between aggregate level devoutness and volunteering have been documented in analyses of European and World Values Surveys (Ruiter and De Graaf, 2006) and survey data from the United States (Borgonovi, 2008). Our devoutness hypothesis is:

*H2. People in countries with a higher average level of religious attendance have a higher probability of making religious and secular donations.*

*Heterogeneity*

Rational choice theories of religious competition (Iannacone, 1991) suggest that the quantity of religion demanded (i.e., the level of religiosity) is higher in contexts in which there is more competition for believers (i.e., a higher level of religious heterogeneity). Drawing on this theory, Borgonovi (2008) argues that religious heterogeneity (pluralism) is an important variable that

should be included in research on giving and volunteering, because it increases the level of commitment in religious groups. In this explanation, religious heterogeneity at the macro level increases the level of commitment in religious groups at the individual level, which, in turn increases the level of engagement in non-profit organizations. However, in contrast to this explanation, no significant relationship was found between religious heterogeneity and religious attendance by Bogonovi (2008) in a study on the United States. Neither did a correlation between religious heterogeneity and charitable giving (religious or secular) emerge. Despite the lack of empirical support for effects of religious heterogeneity in the study of Borgonovi focusing on the United States, we do believe that religious heterogeneity deserves attention in research on giving and volunteering in Europe's diverse religious landscape.

Our heterogeneity hypothesis is:

*H3. The stronger the religious heterogeneity of a society, the higher the probability of making religious and secular donations.*

However, one could argue that the arguments about religious competition do not apply in Europe, where religious competition and switching between religious groups is much less common than in the United States (Sherkat, 1991; Shy, 2007). Therefore, our arguments explaining religious heterogeneity focus on two competing mechanisms. The first one ties heterogeneity to group size, and the second one to minority status.

*Group size*

The level of religious heterogeneity is higher in areas with a higher number of small religious groups. Olson (1965) argued that collective action problems are more likely to be overcome in

small groups. Charitable donations help produce collective goods. In the absence of selective incentives, the tendency to 'free ride' on the contributions of others – refraining from making contributions oneself – increases. According to the classical rational choice analysis, free riding increases with group size because the public good has to be shared with a larger number of people. Consistent with this prediction, studies in the sociology of religion have consistently found negative associations between group size and religious contributions (Iannaccone, 1991; Olson and Caddell, 1994; Zaleski and Zech, 1992). Social control is easier and social influence is stronger in smaller groups (Latané and Wolf, 1981). As all religious groups endorse norms proscribing prosocial behaviours such as helping others in need and making charitable donations (Wuthnow, 1991), members of smaller religious groups are expected to be more likely to make charitable donations, both to religious and secular causes. Research on donations shows that social pressure to give is especially higher among the religious, and that social pressure is a partial explanation for the greater generosity of more religious individuals (Bekkers and Schuyt, 2008; Berger, 2006).

Our group size hypothesis is:

*H4. People belonging to a smaller religious group in their country have a higher probability of making religious and secular donations.*

*Minority groups*

Small religious groups are more likely to be religious minority groups. Minority group members tend to overestimate the consensus and homogeneity within their group (Simon and Brown, 1987), leading to stronger pressure to comply with (perceived) group norms. According to social identity theory (Tajfel, 1982), groups that constitute a minority of the population identify more

strongly with other people belonging to their own group (in-group) than members of non-minorities (Simon and Brown, 1987). Studies in social psychology (e.g., Simpson, 2006) show that appeals to social identity help solve collective action problems. Members of a religious minority group identify more strongly with members of their own religious group. As a result of group identification, minority group members are more strongly inclined to act according to group norms than religious majority group members. Given positive social norms on charitable donations, members of religions minority groups are expected to donate more frequently, especially to religious causes.

Our minority group hypothesis is:

*H5. People belonging to a religious group representing a minority in their country have a higher probability of making religious and secular donations.*

**Data**

We use data on twenty-one countries from the European Social Survey (ESS), wave I (ESS, 2002) complemented with matching data from the 2005 United States Citizenship, Involvement, Democracy Survey (CID, 2005) for the United States. We used list-wise deletion on the individual level variables, resulting in the inclusion of 39,976 respondents ($N_1$) in 22 ($N_2$) countries in our analyses.[1]

*Dependent variables*

The dependent variables in our analyses are individual engagement in religious giving (*religious donation*) and engagement in secular giving (*secular donation*). These dichotomous variables indicate whether or not an individual has donated money over the past twelve months to either

religious or secular causes (September-December 2002 to September-December 2003, depending on the fieldwork period), as listed in Table 1.

<<Insert Table 1 about here>>

Table 1 presents descriptive statistics of charitable giving behaviour. 26 per cent of the respondents donated to a religious or secular non-profit organization in the course of a calendar year. The most popular secular non-profit organizations people donate to are organizations for humanitarian aid, human rights, minorities, or immigrants (eleven per cent) and organizations for environmental protection, peace or animal rights (seven per cent). Seven per cent of the people indicate having donated to a religious or church organization.

*Individual level predictor variables*

The first set of individual level predictor variables in our analyses relate to religious affiliation: *Roman Catholic*, *Protestant*, *other religious affiliation* (including other Christian, Buddhism, Islam, Eastern Orthodox and Judaism) and no religious affiliation (*not religious*; reference category). *Religious attendance* was originally measured on an ordinal scale ranging from 'never' to 'everyday', which we recoded into an interval variable, measuring the number of times per year a respondent indicates to attend religious services. We included the natural log of religious service attendance in the analyses. At the individual level we also include age, educational level, and generalized trust as control variables because they are associated with religious affiliation and attendance and are consistently positive predictors of charitable giving (Bekkers and Wiepking, 2011; Wiepking and Bekkers, 2012).

*Country level predictor variables*

Following Ruiter and De Graaf (2006) we use the mean level of the natural log of religious service attendance in a country (in times a year) as our measure of *devoutness*.[2] We operationalise country level *religious heterogeneity* with the fractionalization index as documented by Ellingsen (2000) and Alesina *et al*. (2003). By using an external source for religious heterogeneity we avoid reporting biased associations based on aggregated individual level data (Bennett, 2012; Voas *et al.*, 2002). The fractionalization index is based upon the Herfindahl-Hirschman Index (HHI). The HHI is originally a measure of the size of firms in relation to the industry there are active in, and an indicator of the amount of competition among these firms (Borgonovi, 2008). In this study, religious heterogeneity stands for the competition of religious groups in a country, and their relative size. The fractionalization index varies between 0 and 1, where 1 stands for high religious heterogeneity. The analyses also control for country level GDP per capita in 2002 (Heston *et al.*, 2006) and country level generalized trust.

*Cross-level predictor variables*

In order to test the group size hypothesis we devised a new measure: we computed an interaction between an individual's religious category and the proportion of the population belonging to that religious category. For example, in the United States, 31 per cent of the population indicated to belong to a Protestant denomination. If a U.S. respondent belongs to a Protestant denomination, the interaction term for this respondent equals .31. For a U.S. respondent not belonging to a Protestant denomination, this interaction term equals 0. We only test this hypothesis for people reporting Protestant affiliation, Roman Catholic affiliation, and for people who report no

religious affiliation. Due to the small number of countries in the ESS in which a significant proportion of people belong to other religious groups (e.g., Buddhism, Islam, Judaism, Eastern Orthodox), it is not possible to examine the relationship between individual charitable giving and the relative size of the religious group people with these other religious affiliations belong to.

We also use individual and country level information to construct the dichotomous individual variable religious *minority*. People score 1 on religious minority when they belong to a religious group that is not the largest (majority) religious group (as a proportion of the population) in the country they live in. Table 2 provides summary statistics for the variables included in the analyses. Supplementary Table 1 includes a correlation table between the country level variables included in the analyses.

<<Insert Table 2 about here>>

**Analytical strategy**

We predict the probability of religious and secular giving using a random intercept multi-level logistic regression analysis, accounting for country-specific random effects (Rabe-Hesketh and Skrondal, 2008).[3] The results of these analyses are reported in Table 3 (religious giving) and Table 4 (secular giving). In all models we statistically control for individual age, education, generalized trust, and country level GDP per capita and generalized trust. We calculated the predicted probability of engagement in giving for relevant predictor variables discussed in the text, with all other covariates fixed at their sample means. The results reported in Table 3 and Table 4 test all hypotheses except the group size hypothesis.

In order to test the group size hypothesis (Hypothesis 4: People belonging to a smaller religious group in their country have a higher probability of making religious and secular donations), we need to include several combinations of interactions between individual level religious affiliation and country level proportional size of the different religious groups. In three separate models (based on full models 6 in Table 3 and 4; included as Supplementary Tables 5 and 6) we analyzed the probability of engagement in religious and secular giving for people belonging to a particular religious affiliation living in countries with varying Roman Catholic, Protestant and secular populations. We obtained these results by including an interaction between a particular individual level religious category and the proportion of people belonging to a particular religious category. This enables us to test whether individual charitable giving is related to the relative size of the religious group an individual is affiliated with. Using the results of these analyses we calculated the predicted probability that a Catholic, a Protestant or a non-religious person donates in countries with varying proportions of Catholics, Protestants or non-religious people, with all other covariates fixed at their sample means. These predicted probabilities are graphically displayed in Figures 2a, 2b and 2c for religious giving and in Figures 3a, 3b and 3c for secular giving.

## Results

### Religious donations

Before we discuss the results of the multi-level logistic regression analysis of engagement in religious giving, it is useful to first consider the intercept-only model (model without any predictor variables, model not displayed). In this model, the intra-class correlation coefficient

(ICC) is .22, indicating that 22 per cent of variation in religious giving can be explained by differences at the country level.

<<Insert Table 3 about here>>

In model 1 in Table 3, we include the different individual level religious affiliations. Not surprisingly, we find that people belonging to any type of religious group have an increased probability of making a religious donation compared with people who are not religiously affiliated. This is in line with hypothesis 1a. The results show that people belonging to the Roman Catholic Church have a 7.8 per cent chance of making a religious donation, those belonging to a Protestant denomination have a 8.3 per cent chance, those belonging to 'other religions' have a 10.3 per cent chance and people who do not belong to any religious denomination only have a 0.8 per cent chance of making a religious donation (with all other covariates fixed at their sample means).

The estimates in Model 2 in Table 3 show that people who attend religious services more often have a higher probability to engage in religious giving. People who do not attend religious services have a 3.2 per cent chance of making religious donations. People who attend religious services about once a month have a 5.8 per cent change of making religious donations and those who attend religious services every week have a 9.8 per cent chance of making religious donations. Especially those who attend religious services twice a week or every day have a high chance of making religious donations, respectively 13.1 per cent and 21.5 per cent. These findings are in line with hypothesis 1b. Note that the inclusion of religious attendance in model 2 in Table 3 significantly reduces the differences in the probability of religious giving between

people with a Roman Catholic, Protestant, other religious affiliation and the non-religious. In line with previous studies, we find that the positive relationship between religious affiliation and making religious donations is partly mediated by religious attendance (Bekkers and Schuyt, 2008).

In Model 3 in Table 3 we include the country level measure of devoutness, measured with average religious attendance. In contrast with our devoutness hypothesis (H2), which expected a positive relation between a country's level of devoutness and individual giving behaviour, we find no relationship between average religious attendance and religious giving.

Model 4 in Table 3 shows the results of the test of the religious heterogeneity hypothesis (H3). The results support hypothesis 3 in the case of religious giving, as we find a strong relationship between religious heterogeneity and making religious donations. The larger a countries' religious diversity, the higher the probability that people make a religious donation. People in the United States, the most religious heterogeneous country in our data, have a 10.1 per cent chance of making a religious donation. In contrast, people who live in Luxemburg, the most homogeneous religious country in our data, have a 1.6 per cent chance of making a religious donation. In Figure 1 we display the predicted probability of making a religious donation in countries with increasing levels of religious heterogeneity.

<<Insert Figure 1 about here>>

The next hypothesis we test is the minority hypothesis (H5). The minority hypothesis predicts that citizens belonging to a religious minority in their country have a higher probability of making religious donations. The results in model 5 in Table 3 support this hypothesis, although

the difference is rather small. People belonging to a religious minority have a 4.0 per cent chance of making a religious donation, whereas people belonging to the religious majority of a country have a 3.0 per cent chance. It is noteworthy that the inclusion of religious minority in model 5 in Table 3 reduces the differences in the probability of religious giving between people with a Roman Catholic, Protestant, other religious affiliation and the non-religious. This suggests that part of the positive relationship between religious affiliation and engagement in religious giving is mediated by the minority status of these groups.

Finally, model 6 in Table 3 shows that including all predictor variables in one model hardly changes the results. The indicators for religious context, most notably country level religious heterogeneity, account for (((.23-.14)/.23)*100=) 39 per cent of the country level variation in religious giving.

Next, we test the group size hypothesis (H4). Figure 2a, 2b and 2c show the predicted probabilities of making a religious donation for people belonging to a particular religious affiliation living in countries with different proportions of Catholics (Figure 2a), Protestants (Figure 2b) and those not religiously affiliated (Figure 2c).[4]

<<Insert Figures 2a, 2b and 2c about here>>

These figures show whether and to what extent an individual's religious affiliation is related to the relative size of a religious group in their country (H4). Figure 2a shows that especially for Protestants, the predicted probability of making a religious donation increases strongly when a higher proportion of their countries' population is affiliated with Catholicism, although this result is not significant at the five per cent level. Whereas Protestants have a predicted

probability of making a religious donation of 13.8 per cent (95% CI $_{low, high}$: 8.4,19.2) in a country with an average level of Catholics (e.g., the Czech Republic, with 28 per cent Catholics), this probability increases to 42.1 per cent (95% CI $_{low, high}$: 14.6,69.5) for Protestants in a country with a high level of Catholics (e.g., Poland: 91 per cent Catholics).

Figure 2b displays the predicted probability of making a religious donation for Catholics, Protestants and non-religious people for countries with different proportions of Protestants. As can be seen in Figure 2b, the proportion of Protestants in a country does not significantly relate to the probability of making religious donations. The predicted probability of making a religious donation does show a small but non-significant decline for Protestants in countries with a higher percentage of Protestants.

Figure 2c shows that Catholics, Protestants and those not religiously affiliated all experience a significantly higher probability of making religious donations in more secular countries. This increase is strongest for both Protestants and Catholics, who have a predicted probability of making a religious donation of only 2.4 per cent (95% CI $_{low, high}$: -0.1,4.8) and 1.8 per cent (95% CI $_{low, high}$: 0.5,3.1) in Greece (three per cent not religiously affiliated). Protestants and Catholics respectively have a predicted probability of making a religious donation of 24.2 per cent (95% CI $_{low, high}$: 8.5,40.0) and 29.5 per cent (95% CI $_{low, high}$: 5.5,53.4) in a highly secular country, such as for example Sweden (71 per cent not religiously affiliated).

In sum, the results displayed in Figures 2a, 2b and 2c show that there are indeed some relationships between an individual's religious affiliation, the religious group size and the probability of making religious donations. However, most of these relationships are non-significant and do not neatly fit the group size hypothesis.

Secular donations

The results of the intercept-only model for secular giving (not displayed) show that there is also considerable variation between countries in engagement in secular donations, though it is lower than for religious giving. The ICC is .13 for secular giving, indicating that thirteen per cent of variation in secular giving can be explained by differences at the country level. Overall, the results for the models examining the probability of secular giving in Table 4 resemble the results found in the case of religious giving. The results in Table 4 indicate that the hypotheses supported in the case of religious giving are also supported in the case of secular giving, except for the religious heterogeneity hypothesis. We find no significant relationship between the level of religious heterogeneity in a country and the probability of making secular donation. In addition, as expected based on previous research (e.g. Galen, 2012), the size of the coefficients is considerably smaller in the models predicting secular giving than in the models predicting religious giving. The indicators for individual religion and religious context account for (((.13-.08)/.13)*100=) 38 per cent of the country level variation in secular giving. Interestingly enough, the individual level religious indicators appear to account for most of the country variance in secular giving. The intra-class correlation coefficient decreases from .13 in the intercept-only model to .09 in model 1, including only the indicators for individual level religious affiliation.

<<Insert Table 4 about here>>

Again, we find no support for the group size hypothesis. Figures 3a, 3b and 3c display the predicted probabilities of making a secular donation for people belonging to a particular religious

affiliation living in countries with different proportions of Catholics (Figure 3a), Protestants (Figure 3b) and those not religiously affiliated (Figure 3c). The predicted probability of making secular donations appears to be not strongly related to religious group size. We do see the same negative relationship for belonging to a Protestant denomination and the proportion of Protestants in a country: Protestants are less inclined to make a religious or secular donation in a country with more Protestants (but this difference is not significant). In Figure 3c we also see that Catholics, Protestants and those not belonging to a religious denomination all have a higher probability of making secular donations in more secular countries.

<<Insert Figures 3a, 3b and 3c about here>>

**Conclusion and discussion**

This article is a first attempt to examine the relationship between individual religion, religious context and monetary donations to non-profit organizations in Europe and the United States. We find that citizens in religious groups more often give money to charitable causes, both religious and secular, primarily because of their individual religiosity. We find no relationship between average religious participation in a country and individual donation behaviour in Europe and the US. However, religious context does matter in other respects: religious heterogeneity is associated with a higher likelihood of religious giving, and the likelihood of both religious and secular charitable giving is higher for citizens belonging to religious minorities.

Our results shed new light on the importance of religious context on individual engagement in non-profit organizations. Previous research found a positive relationship between the level of devoutness of a country and individual volunteering (Ruiter and De Graaf, 2006) and

between the devoutness of United States counties and primarily religious volunteering and giving (Borgonovi, 2008). Our findings show that such a relationship does not exist for the engagement in charitable giving in Europe. This result is partly in line with the recent finding of Lim and MacGregor (2012) in a study of the influence of religious context on volunteering behaviour.

Furthermore our results show that, for Europe and the United States, religious heterogeneity is associated with higher engagement in religious giving, but not secular giving. People in religiously more diverse countries more often report religious donations, controlling for their own religious affiliation and attendance. This result differs from Borgonovi's (2008) results for the United States, where religious heterogeneity is not related to religious (or secular) giving, but only to religious volunteering. The divergence in findings does not necessarily reflect a substantial difference between the United States and Europe, as the analysis of the American data by Borgonovi include many other potentially confounding variables.

We argued that in countries with stronger religious heterogeneity, people either belong to a religious minority or to a religious category that composes a smaller part of the countries' religious landscape. Although the minority effect cannot account for the positive relationship between a countries' religious heterogeneity and religious donations, we do find a small significant positive relationship between belonging to a religious minority and individual donation behaviour, both in the case of religious and secular giving. This relationship can be explained by social identity theory (Tajfel, 1982).

Although we find no support for the group size hypothesis, we found that Protestants and Roman Catholics are more likely to make both religious and secular donations in more secular countries, and the non-religious are more likely to make secular donations in more secular countries. This is in line with previous research showing that religious people do make secular

donations, but non-religious people are not inclined to make religious donations (Bekkers & Schuyt, 2008).

*Limitations*

Despite the contributions this article makes to the literature on engagement in non-profit organizations, there are also some limitations to this study. First of all, the proportion of respondents reporting religious donations is low compared to other, more specialized surveys using more extensive questionnaire modules to measure engagement in philanthropy.[5] As religious giving is likely to be underreported by respondents giving lower amounts, we are likely overestimating the relationships between religion, religious context and engagement in religious giving. Future research using more extensive questions on giving should be conducted to test whether the relationships we find here can be replicated.

A second limitation is that our context data are measured at the level of countries, while the theoretical mechanisms that we have offered as explanations for associations with religious context are likely to operate at a lower level of aggregation – i.e., the personal networks of individual citizens. Lim and MacGregor (2012) argue that it is important to measure religious context at the level at which it is assumed to operate. We have not been able to measure the degree of religiosity of people's networks. Instead, we have used a country-level measure of religiosity, which could lead us to commit an ecological fallacy. Using this level of measurement, we ignore the local dispersion of religious groups. Therefore, our findings should be interpreted with this caution in mind.[6]

In conclusion, our evidence suggests that religious context matters substantially for engagement in philanthropy, especially for donations to religious organizations. 39 per cent of the country level variance in engagement in religious giving in Europe and the US can be

attributed to the religious context characteristics that we have measured. The results are generally consistent with the hypothesis that religious heterogeneity is positively associated with religious giving and suggest that this relationship is at least in part driven by a religious minority effect: respondents belonging to a religious minority are more likely to engage in philanthropy both towards religious as well as secular organizations.

**Endnotes**

[1] Respondents from Switzerland were excluded from the analyses because only a small subset of the questions on donations and volunteering were available. The first wave of the ESS includes some item non-response, ranging from a few missing values (<0.01 percent) for most variables to twenty percent missing values for the measure of household income. We conducted several robustness checks, including the analyses of multiple imputed data to replace the missing values. These robustness checks are displayed and explained in Supplementary Tables 2 and 3.

[2] Borgonovi (2008) used the percentage of a population reporting a religious affiliation as a measure of devoutness in her study on US counties. We argue that when comparing religiosity over countries, average religious attendance is a better measure of devoutness because religious affiliation does not necessarily entail religious activity. In some countries most of the population will report a religious affiliation while the level of religious attendance is low. In addition, the theoretical arguments about effects of devoutness are not about membership but about religious activity. As a robustness check we also conducted analyses using the proportion of the population reporting religious affiliation instead of the country level attendance variable (for results and interpretation, see Supplementary Table 4).

[3] We performed these analyses using Stata 12. Stata 12 uses maximum likelihood estimating using adaptive quadrature, standard with twelve integration points. We tested the adequacy of this assumption by estimating the models also with twenty integration points. We found no differences between the estimation with twelve or twenty integration points (results available from the authors; Steele, 2010; Lesaffre and Spiessens, 2001).

[4] The predicted probabilities displayed in figure 2a, 2b and 2c and 3a, 3b, and 3c are calculated based on the full models (Model 6) as displayed in Table 3 (religious giving) and Table 4

(secular giving) including main effects for country level religious group size and interactions between individual level religious affiliation and country level religious group size. (Results presented in Supplementary Tables 5 and 6).

[5] For example, in the Giving in the Netherlands Panel Survey, 39 per cent of the Dutch population indicated have made a religious donation in 2001 (GINPS01, 2003). Research on survey methodology shows that especially people for who giving is incidental and irregular behaviour are more likely to underreport their giving when asked for their giving using the type of short survey prompts like those used in the ESS (Bekkers and Wiepking, 2006; Rooney *et al.*, 2001).

[6] A third limitation is that our results cannot demonstrate a causal link between religion (and religious heterogeneity and minority status) and charitable giving. The cross-sectional nature of the ESS data cannot rule out reverse causation. Religious switching in Europe is not common, and government treatment of charitable giving is fairly homogenous across the EU, limiting the possibility of using natural experiments or changes in individual religiosity over the life cycle to tease out causes and effects. Our results may reflect inherent differences in preferences and policies across countries and across religions. One could also argue that citizens who decide to join a minority religion, or to remain loyal to a minority religion, or to be religious in a largely secular country have chosen to be different. Two motivations behind this might be a strong individual preference for religiosity and a social connection to the community. Large sample longitudinal panel studies would be required to explore these motivations as alternative explanations.

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# Examining the association of religious context with giving to non-profit organizations

## Figures

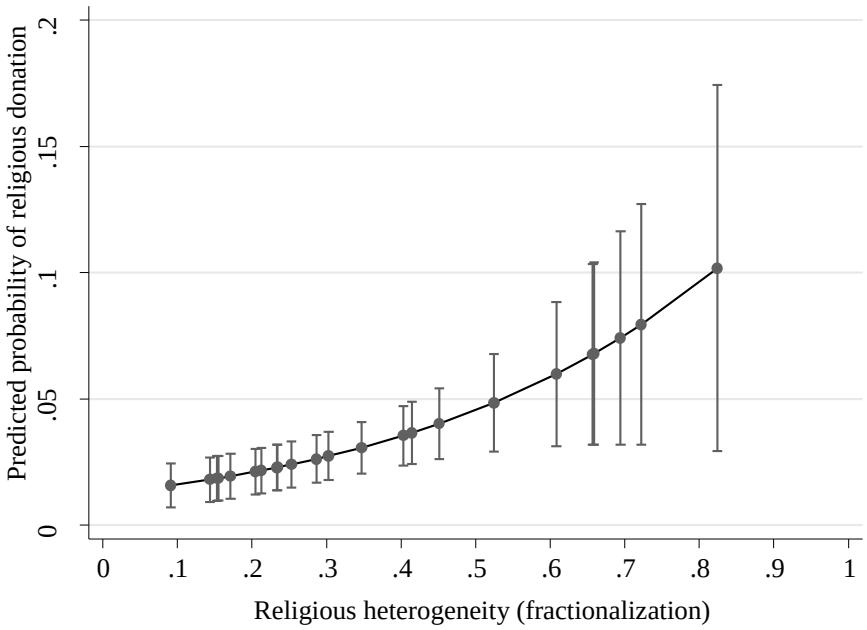


Figure 1 Predicted probability of engagement in religious giving for people living in countries with increasing levels of religious heterogeneity (with 95 per cent confidence intervals)

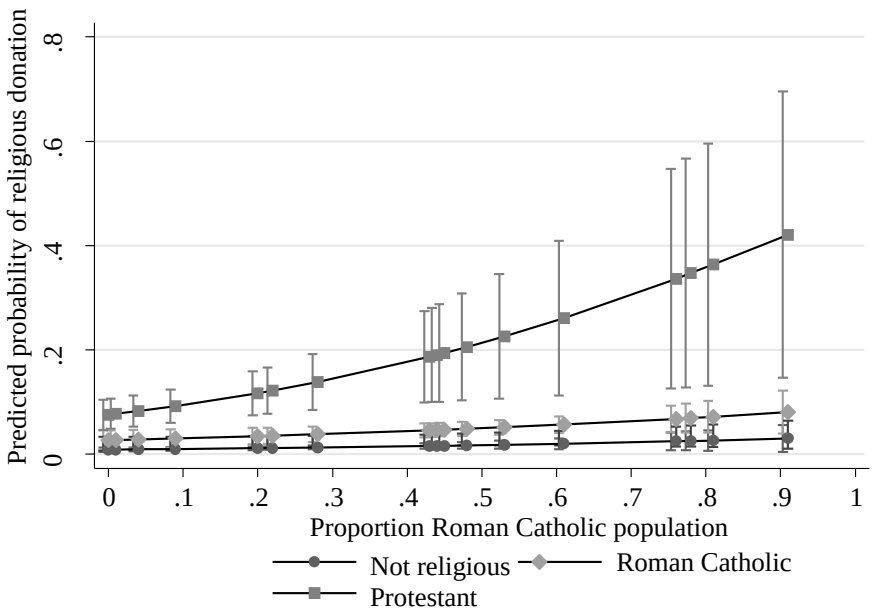


Figure 2a Predicted probability of engagement in religious giving for Roman Catholics, Protestants and those not religiously affiliated living in countries with a higher proportion of Roman Catholics (with 95 per cent confidence intervals)

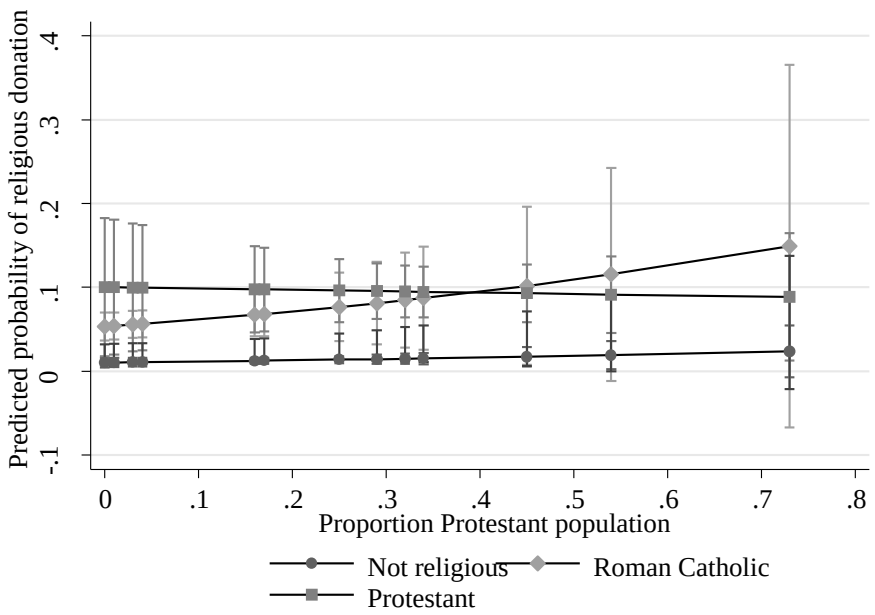


Figure 2b Predicted probability of engagement in religious giving for Roman Catholics, Protestants and those not religiously affiliated living in countries with a higher proportion of Protestants (with 95 per cent confidence intervals)

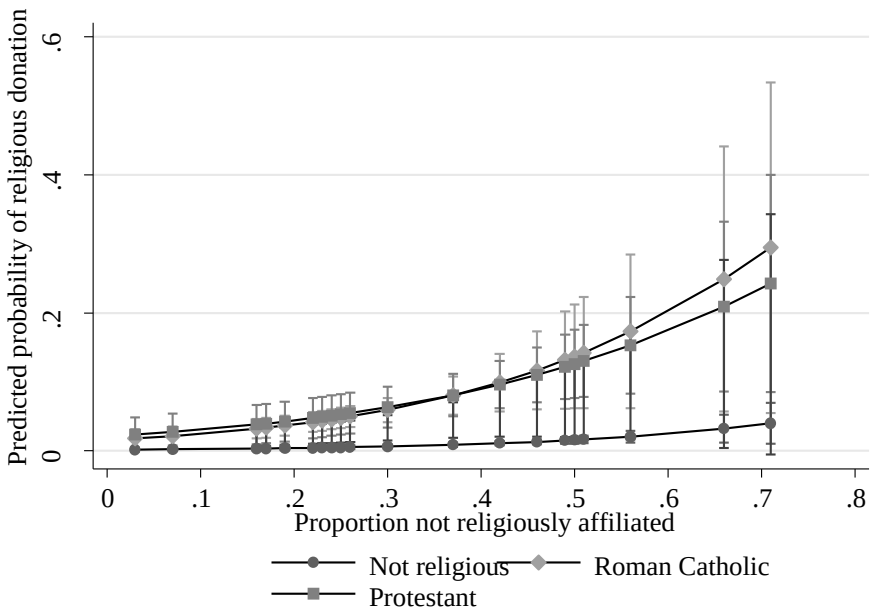


Figure 2c Predicted probability of engagement in religious giving for Roman Catholics, Protestants and those not religiously affiliated living in countries with a higher proportion of people not religiously affiliated (with 95 per cent confidence intervals)

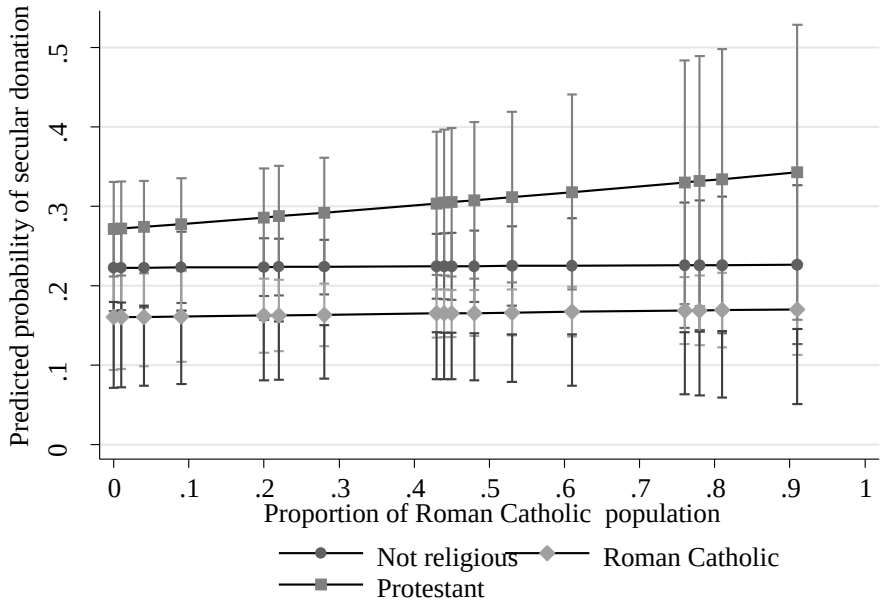


Figure 3a Predicted probability of engagement in secular giving for Roman Catholics, Protestants and those not religiously affiliated living in countries with a higher proportion of Roman Catholics (with 95 per cent confidence intervals)

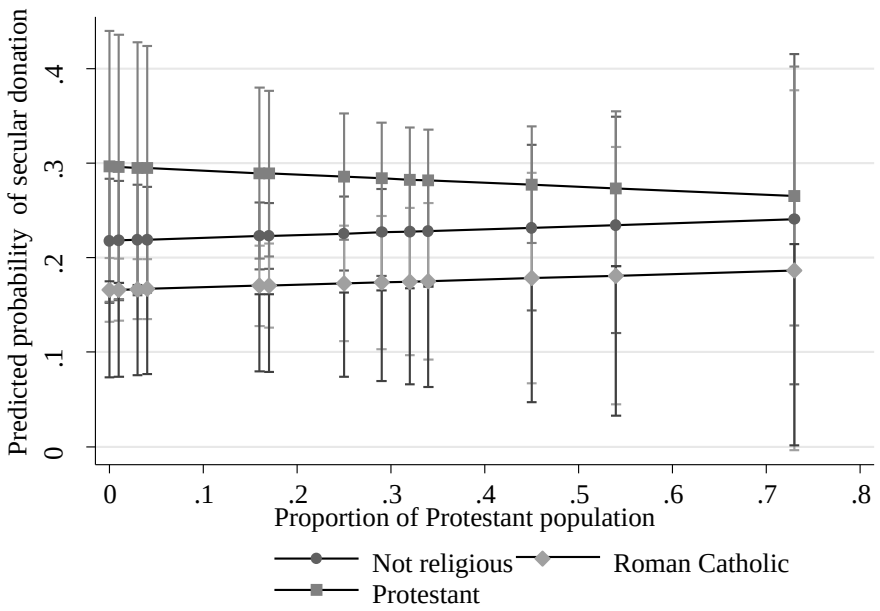


Figure 3b Predicted probability of engagement in secular giving for Roman Catholics, Protestants and those not religiously affiliated living in countries with a higher proportion of Protestants (with 95 per cent confidence intervals)

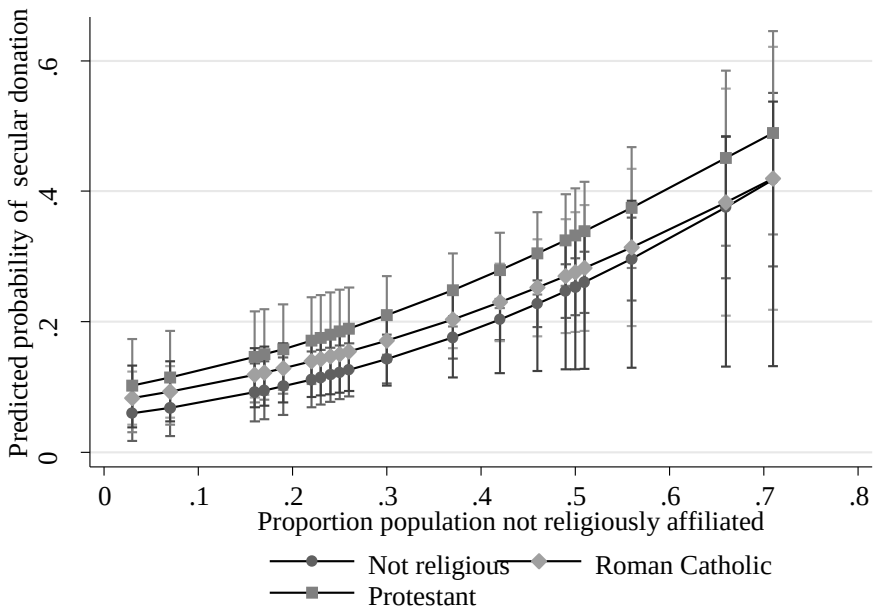


Figure 3c Predicted probability of engagement in secular giving for Roman Catholics, Protestants and those not religiously affiliated living in countries with a higher proportion of people not religiously affiliated (with 95 per cent confidence intervals)

# Examining the association of religious context with giving to non-profit organizations

## Tables

Table 1 Percentage of donors per type of non-profit sector organization in twenty-one European countries and the United States (N=41,314)

| | **Percentage donors** |
|---|---|
| *Religious donation* | |
| a religious or church organization | **7** |
| | |
| *Secular donations* | |
| an organization for humanitarian aid, human rights, minorities, or immigrants | 11 |
| an organization for environmental protection, peace or animal rights | 7 |
| an organization for science, education, or teachers and parents | 2 |
| an organization for cultural or hobby activities | 4 |
| a sports club or club for outdoor activities | 5 |
| a social club, club for the young, the retired/ elderly, women, or friendly societies | 3 |
| a political party | 1 |
| a trade union | 2 |
| a business, professional, or farmers' organization | 1 |
| a consumer or automobile organization | 1 |
| any other voluntary organization | 3 |
| **Any secular donation** | **23** |

*Sources:* ESS, 2002; CID, 2005.

Table 2 Descriptive statistics ($N_1$=39,976; $N_2$=22)

| **Variable** | **Mean** | ***S.D.*** | **Min** | **Max** |
|---|---|---|---|---|
| Religious donation | .07 | - | 0 | 1 |
| Secular donation | .23 | - | 0 | 1 |
| *Individual level* | | | | |
| Not religious (ref.) | .35 | - | 0 | 1 |
| Roman Catholic | .34 | - | 0 | 1 |
| Protestant | .16 | - | 0 | 1 |
| Other religion | .15 | - | 0 | 1 |
| Religious attendance (ln) | 1.49 | 1.55 | 0 | 5.90 |
| *Country level* | | | | |
| Devoutness[a] | 1.48 | .67 | .81 | 3.06 |
| Religious heterogeneity[b] | .37 | .21 | .09 | .82 |
| *Cross-level* | | | | |
| Roman Catholic (i) * ‰ Roman Catholic (c) | .21 | .32 | 0 | .91 |
| Protestant (i) * ‰ Roman Catholic (c) | .02 | .07 | 0 | .91 |
| Not religious (i) * ‰ Roman Catholic (c) | .10 | .20 | 0 | .91 |
| Roman Catholic (i) * ‰ Protestant (c) | .02 | .06 | 0 | .73 |
| Protestant (i) * ‰ Protestant (c) | .07 | .18 | 0 | .73 |
| Not religious (i) * ‰ Protestant (c) | .07 | .15 | 0 | .73 |
| Roman Catholic (i) * ‰ Not religious (c) | .10 | .17 | 0 | .71 |
| Protestant (i) * ‰ Not religious (c) | .07 | .16 | 0 | .71 |
| Not religious (i) * ‰ Not religious (c) | .16 | .24 | 0 | .71 |
| Minority | .38 | - | 0 | 1 |

*Notes:* *[a] average religious attendance (ln); [b] fractionalization index; (i) dummy variable individual belongs to religious category; (c) proportion belonging to religious category at country level.*

*Sources:* *ESS, 2002; CID, 2005.*

Table 3 Results of multilevel logistic regression analyses for engagement in religious giving ($N_1$=39,976; $N_2$=22)

| | (1) | | (2) | | (3) | | (4) | | (5) | | (6) | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **b** | ***S.E.*** | **b** | ***S.E.*** | **b** | ***S.E.*** | **b** | ***S.E.*** | **b** | ***S.E.*** | **b** | ***S.E.*** |
| Intercept | -7.418** | (1.212) | -8.291** | (1.184) | -7.050** | (1.593) | -9.502** | (1.038) | -8.245** | (1.090) | -9.461** | (1.408) |
| *Individual level* | | | | | | | | | | | | |
| Not religious (ref.) | - | | - | | - | | - | | - | | - | |
| Roman Catholic | 2.112** | (.077) | 1.312** | (.083) | 1.319** | (.083) | 1.322** | (.083) | 1.184** | (.084) | 1.189** | (.084) |
| Protestant | 2.174** | (.076) | 1.575** | (.079) | 1.574** | (.079) | 1.572** | (.079) | 1.388** | (.085) | 1.386** | (.085) |
| Other religion | 2.523** | (.092) | 1.643** | (.100) | 1.643** | (.099) | 1.639** | (.099) | 1.390** | (.107) | 1.387** | (.107) |
| Religious attendance (ln) | | | .474** | (.015) | .475** | (.015) | .475** | (.015) | .476** | (.015) | .476** | (.015) |
| *Country level* | | | | | | | | | | | | |
| Average religious attendance (ln) | | | | | -.399 | (.354) | | | | | .035 | (.292) |
| Religious heterogeneity[a] | | | | | | | 2.676** | (.808) | | | 2.450** | (.795) |
| *Cross-level* | | | | | | | | | | | | |
| Minority | | | | | | | | | .324** | (.063) | .322** | (.063) |
| Individual-level variance | 3.297 | | 3.295 | | 3.281 | | 3.286 | | 3.280 | | 3.284 | |
| Country-level variance | 1.024 | | .973 | | .920 | | .640 | | .820 | | .548 | |
| ICC | .237 | | .228 | | .219 | | .163 | | .200 | | .143 | |
| -2 loglikelihood (df) | -8744.1 (13) | | -8201.0 (14) | | -8200.4 (15) | | -8196.6 (15) | | -8188.4 (15) | | -8184.1 (17) | |

*Notes:* *Significance levels: * $p \leq 0.05$, ** $p \leq 0.01$ (two-tailed tests); [a] fractionalization index; unstandardized coefficients reported; control variables included in the analyses (but not presented in the tables): individual age, education, generalized trust and country level GDP per capita and generalized trust.*

*Sources:* *ESS, 2002; CID, 2005.*

Table 4 Results of multilevel logistic regression analyses for engagement in secular giving ($N_1$=39,976; $N_2$=22)

| | (1) | | (2) | | (3) | | (4) | | (5) | | (6) | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **b** | ***S.E.*** | **b** | ***S.E.*** | **b** | ***S.E.*** | **b** | ***S.E.*** | **b** | ***S.E.*** | **b** | ***S.E.*** |
| Intercept | -4.455** | (.652) | -4.542** | (.650) | -3.995** | (.887) | -4.674** | (.692) | -4.549** | (.645) | -4.154** | (1.001) |
| *Individual level* | | | | | | | | | | | | |
| Not religious (ref.) | - | | - | | - | | - | | - | | - | |
| Roman Catholic | .138** | (.036) | .027 | (.039) | .028 | (.039) | .028 | (.039) | .014 | (.040) | .015 | (.040) |
| Protestant | .225** | (.039) | .154** | (.040) | .154** | (.040) | .154** | (.040) | .119** | (.042) | .119** | (.042) |
| Other religion | .136* | (.056) | .025 | (.058) | .025 | (.058) | .025 | (.058) | -.012 | (.059) | -.011 | (.059) |
| Religious attendance (ln) | | | .071** | (.010) | .071** | (.010) | .071** | (.010) | .071** | (.010) | .071** | (.010) |
| *Country level* | | | | | | | | | | | | |
| Average religious attendance (ln) | | | | | -.175 | (.198) | | | | | -.145 | (.208) |
| Religious heterogeneity[a] | | | | | | | .291 | (.543) | | | .124 | (.567) |
| *Cross-level* | | | | | | | | | | | | |
| Minority | | | | | | | | | .082** | (.025) | .081** | (.028) |
| Individual-level variance | 3.314 | | 3.314 | | 3.278 | | 3.269 | | 3.313 | | 3.276 | |
| Country-level variance | .300 | | .300 | | .285 | | .292 | | .292 | | .281 | |
| ICC | .083 | | .083 | | .080 | | .082 | | .081 | | .079 | |
| -2 loglikelihood (df) | -19618.3 (13) | | -19594.1 (14) | | -19593.7 (15) | | -19593.9 (15) | | -19589.9 (15) | | -19589.5 (17) | |

*Notes:* *Significance levels: * $p \leq 0.05$, ** $p \leq 0.01$ (two-tailed tests); [a] fractionalization index; unstandardized coefficients reported; control variables included in the analyses (but not presented in the tables): individual age, education, generalized trust and country level GDP per capita and generalized trust.*

*Sources:* *ESS, 2002; CID, 2005.*

# Examining the association of religious context with giving to non-profit organizations

Supplementary materials

Supplementary Table 1 Correlation table dependent variables and country level variables ($N_1$=39,976; $N_2$=22)

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
|---|---|---|---|---|---|---|---|---|
| 1 Religious donation | 1.000 | | | | | | | |
| 2 Secular donation | 0.282 | 1.000 | | | | | | |
| | (0.000) | | | | | | | |
| 3 Devoutness[a] | -0.004 | -0.125 | 1.000 | | | | | |
| | (0.441) | (0.000) | | | | | | |
| 4 Religious heterogeneity[b] | (0.109 | 0.062 | -0.384 | 1.000 | | | | |
| | (0.000) | (0.000) | (0.000) | | | | | |
| 5 Minority | 0.122 | 0.059 | -0.212 | 0.182 | 1.000 | | | |
| | (0.000) | (0.000) | (0.000) | (0.000) | | | | |
| 6 ‰ not religious | 0.062 | 0.182 | -0.808 | 0.441 | 0.192 | 1.000 | | |
| | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | | | |
| 7 ‰ Roman Catholic | -0.006 | -0.088 | 0.560 | -0.207 | -0.107 | -0.385 | 1.000 | |
| | (0.212) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | | |
| 8 ‰ Protestant | 0.036 | 0.103 | -0.492 | 0.162 | 0.093 | 0.269 | -0.600 | 1.000 |
| | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | |

*Notes:* *Standard errors in parentheses; [a] average religious attendance (ln); [b] fractionalization index.*
*Sources:* *ESS, 2002; CID, 2005.*

**Explanation for Supplementary Tables 2 and 3:**
As a robustness check, we performed a multiple imputation procedure to replace the missing values in wave I of the ESS (Rubin, 1987). We allowed the regression function of the imputed variable to vary by country, in order to account for clustering of the data by country and heterogeneity in the regression parameters (Graham, 2009). We found that the results are not significantly different using the original, non-imputed, dataset. However, when including income as control variable, list-wise deletion with the non-imputed data leads to a significant drop in the number of individual level cases ($N_1$), from 40,517 to 32,459. Therefore we conducted additional robustness tests, conducting our analyses with and without income as a control variable. The results did not differ notably between these two specifications (results available from the authors). The results reported in the article are based on the non-imputed data, using list-wise deletion and do not include income as a control variable. Supplementary Tables 2 and 3 display the results of multilevel logistic regression analyses for engagement in religious giving (Supplementary Table 2) and secular giving (Supplementary Table 3) based on multiple imputed data.

Supplementary Table 2 Results of multilevel logistic regression analyses for engagement in religious giving based on multiple imputed data ($N_1$=41,314; $N_2$=22)

| | **(1)** | **(2)** | **(3)** | **(4)** | **(5)** | **(6)** |
|---|---|---|---|---|---|---|
| Intercept | -6.23** | -6.86** | -6.55** | -6.41** | -6.81** | -6.10** |
| | (.71) | (.72) | (.69) | (.61) | (.67) | (.61) |
| *Individual level* | | | | | | |
| Not religious (ref.) | - | - | - | - | - | - |
| Roman Catholic | 2.05** | 1.26** | 1.26** | 1.93** | 1.13** | 1.14** |
| | (.07) | (.08) | (.08) | (.08) | (.08) | (.08) |
| Protestant | 2.14** | 1.55** | 1.55** | 2.07** | 1.37** | 1.35** |
| | (.07) | (.08) | (.08) | (.07) | (.08) | (.08) |
| Other religion | 2.48** | 1.62** | 1.62** | 2.27** | 1.36** | 1.36** |
| | (.09) | (.10) | (.10) | (.09) | (.10) | (.10) |
| Religious attendance (ln) | | .47** | .47** | .47** | .47** | .47** |
| | | (.01) | (.01) | (.01) | (.01) | (.01) |
| *Country level* | | | | | | |
| Average religious attendance (ln) | | | -.62 | | | .02 |
| | | | (.33) | | | (.29) |
| Religious heterogeneity[a] | | | | 2.50** | | 2.48** |
| | | | | (.89) | | (.77) |
| *Cross-level* | | | | | | |
| Minority | | | | | .33** | .34** |
| | | | | | (.06) | (.06) |
| Individual-level variance | 3.30 | 3.45 | 3.44 | 3.37 | 3.44 | 3.48 |
| Country-level variance | 1.10 | 1.15 | .97 | .79 | .97 | .52 |
| ICC | .25 | .25 | .22 | .19 | .22 | .13 |

*Notes:* *Significance levels: * $p \leq 0.05$, ** $p \leq 0.01$ (two-tailed tests); unstandardized coefficients reported; Standard errors in parentheses; [a] fractionalization index; regression models include controls for individual age, education, generalized trust and income and country level GDP per capita and generalized trust (coefficients not displayed). Results based on five multiple imputed datasets.*

*Sources:* *ESS, 2002; CID, 2005.*

Supplementary Table 3 Results of multilevel logistic regression analyses for engagement in secular giving based on multiple imputed data ($N_1$=41,314; $N_2$=22)

| | (1) | (2) | (3) | (4) | (5) | (6) |
|---|---|---|---|---|---|---|
| Intercept | -4.19** | -4.28** | -4.11** | -4.20** | -4.28** | -4.03** |
| | (.39) | (.39) | (.38) | (.39) | (.39) | (.42) |
| *Individual level* | | | | | | |
| Not religious (ref.) | - | - | - | - | - | - |
| Roman Catholic | .13** | .01 | .02 | .12** | .00 | .01 |
| | (.04) | (.04) | (.04) | (.04) | (.04) | (.04) |
| Protestant | .24** | .16** | .16** | .23** | .13** | .12** |
| | (.04) | (.04) | (.04) | (.04) | (.04) | (.04) |
| Other religion | .14* | .02 | .02 | .12* | -.02 | -.00 |
| | (.06) | (.06) | (.06) | (.06) | (.06) | (.06) |
| Religious attendance (ln) | | .08** | .08** | .08** | .08** | .08** |
| | | (.01) | (.01) | (.01) | (.01) | (.01) |
| *Country level* | | | | | | |
| Average religious attendance (ln) | | | -.32 | | | -.18 |
| | | | (.18) | | | (.20) |
| Religious heterogeneity[a] | | | | .23 | | .13 |
| | | | | (.57) | | (.55) |
| *Cross-level* | | | | | | |
| Minority | | | | | .08** | .08** |
| | | | | | (.03) | (.03) |
| Individual-level variance | 3.34 | 3.34 | 3.34 | 3.24 | 3.24 | 2.99 |
| Country-level variance | .33 | .33 | .29 | .32 | .32 | .26 |
| ICC | .09 | .09 | .08 | .09 | .09 | .08 |

*Notes:* *Significance levels: * p≤ 0.05, ** p ≤ 0.01 (two-tailed tests); unstandardized coefficients reported; Standard errors in parentheses; [a] fractionalization index; regression models include controls for individual age, education, generalized trust and income and country level GDP per capital and generalized trust (coefficients not displayed). Results based on five multiple imputed datasets.*

*Sources:* *ESS, 2002; CID, 2005.*

Supplementary Table 4 Results of multilevel logistic regression analyses for engagement in religious and secular giving – with percentage of the population religiously affiliated as indicator for country level devoutness ($N_1$=39,976; $N_2$=22)

| | **Religious giving** | | **Secular giving** | |
|---|---|---|---|---|
| **Model # from Table 3 and 4** | **(3)** | **(6)** | **(3)** | **(6)** |
| Intercept | -5.10** | -7.37** | -2.89** | -2.66** |
| | (1.37) | (1.38) | (.77) | (.90) |
| *Individual level* | | | | |
| Not religious (ref.) | - | - | - | - |
| Roman Catholic | 1.32** | 1.19** | .03 | .02 |
| | (.08) | (.08) | (.04) | (.04) |
| Protestant | 1.58** | 1.39** | .15** | .12** |
| | (.08) | (.08) | (.04) | (.04) |
| Other religion | 1.65** | 1.40** | .03 | -.01 |
| | (.10) | (.11) | (.06) | (.06) |
| Religious attendance (ln) | .48** | .48** | .07** | .07** |
| | (.01) | (.01) | (.01) | (.01) |
| *Country level* | | | | |
| **Percentage population religiously affiliated** | **-3.30**** | **-1.77** | **-1.70**** | **-1.80**** |
| | (1.00) | (.95) | (.57) | (.61) |
| Religious heterogeneity[a] | | 1.86* | | -.32 |
| | | (.76) | | (.50) |
| *Cross-level* | | | | |
| Minority | | .31** | | .08** |
| | | (.06) | | (.03) |
| Individual-level variance | 3.41 | 3.15 | 3.29 | 3.13 |
| Country-level variance | .65 | .47 | .21 | .20 |
| ICC | .16 | .13 | .06 | .06 |

*Notes:* *Significance levels: * p≤0.05, ** p ≤0.01 (two-tailed tests); unstandardized coefficients reported; Standard errors in parentheses; [a] fractionalization index; regression models include controls for individual age, education, generalized trust and country level GDP per capita and generalized trust (coefficients not displayed).*

*Sources:* *ESS, 2002; CID, 2005*.

**Interpretation Supplementary Table 4:**

Country level devoutness has a significant negative relationship with religious and secular giving when operationalizing it with the 'proportion of people indicated to be religiously affiliated in a country' instead of 'average religious attendance in a country' as an indicator. This significant negative relationship becomes non-significant when controlling for religious heterogeneity of a country and whether the respondent belongs to a religious minority in the case of religious giving, but not in the case of secular giving.

Supplementary Table 5 Results of multilevel logistic regression analyses for engagement in religious giving – including interactions between individual level religious affiliation and country level religious group size of (1) Roman Catholics; (2) Protestants; (3) Not religious ($N_1$=39,976; $N_2$=22)

| | **(1) Roman Catholic** | | **(2) Protestant** | | **(3) Not religious** | |
|---|---|---|---|---|---|---|
| | **b** | ***S.E.*** | **b** | ***S.E.*** | **b** | ***S.E.*** |
| Intercept | -12.815** | (1.374) | -12.325** | (1.355) | -12.836** | (1.420) |
| *Individual level* | | | | | | |
| Not religious (ref.) | - | | - | | - | |
| Roman Catholic | 1.306** | (.169) | 1.221** | (.123) | 1.198** | (.296) |
| Protestant | 1.284** | (.118) | 1.881** | (.171) | 1.767** | (.301) |
| Other religion | 1.629** | (.157) | 1.416** | (.164) | 1.535** | (.292) |
| Religious attendance (ln) | .472** | (.015) | .470** | (.015) | .475** | (.015) |
| | | | | | | |
| *Country level* | | | | | | |
| Average religious attendance (ln) | .775* | (.352) | .705* | (.347) | .786* | (.360) |
| Religious heterogeneity[a] | 1.920** | (.666) | 1.847** | (.658) | 2.016** | (.678) |
| ‰ Not religious | 4.611** | (1.257) | 4.194** | (1.239) | 4.583** | (1.337) |
| ‰ Roman Catholics | 1.411* | (.672) | 1.192* | (.601) | 1.263* | (.627) |
| ‰ Protestants | 1.146 | (1.189) | 1.162 | (1.226) | .727 | (1.218) |
| | | | | | | |
| *Cross-level* | | | | | | |
| Roman Catholic (i) * ‰ Roman Catholic (c) | -.147 | (.387) | | | | |
| Protestant (i) * ‰ Roman Catholic (c) | .990** | (.367) | | | | |
| Other religion (i) * ‰ Roman Catholic (c) | -.679 | (.434) | | | | |
| Roman Catholic (i) * ‰ Protestant (c) | | | .395 | (.556) | | |
| Protestant (i) * ‰ Protestant (c) | | | -1.350** | (.478) | | |
| Other religion (i) * ‰ Protestant (c) | | | .373 | (.540) | | |
| Roman Catholic (i) * ‰ Not religious (c) | | | | | .030 | (.679) |
| Protestant (i) * ‰ Not religious (c) | | | | | -.782 | (.651) |
| Other religion (i) * ‰ Not religious (c) | | | | | -.259 | (.652) |
| Minority | .259** | (.080) | .207** | (.072) | .329** | (.086) |
| | | | | | | |
| Individual-level variance | 3.313 | | 3.299 | | 3.272 | |
| Country-level variance | .292 | | .283 | | .304 | |
| ICC | .081 | | .079 | | .085 | |

*Notes:* *Significance levels: * $p \leq 0.05$, ** $p \leq 0.01$ (two-tailed tests); [a] fractionalization index; unstandardized coefficients reported; control variables included in the analyses (but not presented in the tables): individual age, education, generalized trust, and country level GDP per capita and generalized trust.*

*Sources:* *ESS, 2002; CID, 2005.*

Supplementary Table 6 Results of multilevel logistic regression analyses for engagement in secular giving – including interactions between individual level religious affiliation and country level religious group size of (1) Roman Catholics; (2) Protestants; (3) Not religious ($N_1$=39,976; $N_2$=22)

| | **(1) Roman Catholic** | | **(2) Protestant** | | **(3) Not religious** | |
|---|---|---|---|---|---|---|
| | **b** | ***S.E.*** | **b** | ***S.E.*** | **b** | ***S.E.*** |
| Intercept | -6.254** | (.101) | -6.234** | (1.008) | -6.518** | (1.015) |
| *Individual level* | | | | | | |
| Not religious (ref.) | - | | - | | - | |
| Roman Catholic | -.005 | (.095) | .030 | (.048) | .217 | (.145) |
| Protestant | .080 | (.051) | .261** | (.099) | .294 | (.160) |
| Other religion | .075 | (.084) | .073 | (.078) | .393* | (.154) |
| Religious attendance (ln) | .069** | (.010) | .070** | (.010) | .071** | (.010) |
| | | | | | | |
| *Country level* | | | | | | |
| Average religious attendance (ln) | .538* | (.262) | .535* | (.262) | .515* | (.263) |
| Religious heterogeneity[a] | -.297 | (.494) | -.295 | (.494) | -.248 | (.495) |
| ‰ Not religious | 3.245** | (.920) | 3.198** | (.920) | 3.558** | (.932) |
| ‰ Roman Catholics | .025 | (.438) | .041 | (.430) | .142 | (.437) |
| ‰ Protestants | .075 | (.881) | .177 | (.884) | .080 | (.884) |
| | | | | | | |
| *Cross-level* | | | | | | |
| Roman Catholic (i) * ‰ Roman Catholic (c) | .056 | (.185) | | | | |
| Protestant (i) * ‰ Roman Catholic (c) | .346 | (.228) | | | | |
| Other religion (i) * ‰ Roman Catholic (c) | -.329 | (.250) | | | | |
| Roman Catholic (i) * ‰ Protestant (c) | | | .018 | (.305) | | |
| Protestant (i) * ‰ Protestant (c) | | | -.389 | (.235) | | |
| Other religion (i) * ‰ Protestant (c) | | | -.395 | (.309) | | |
| Roman Catholic (i) * ‰ Not religious (c) | | | | | -.506 | (.357) |
| Protestant (i) * ‰ Not religious (c) | | | | | -.426 | (.355) |
| Other religion (i) * ‰ Not religious (c) | | | | | -1.086** | (.389) |
| Minority | .085* | (.034) | .066* | (.032) | .144** | (.047) |
| | | | | | | |
| Individual-level variance | | | | | | |
| Country-level variance | .165 | | .165 | | .166 | |
| ICC | .048 | | .048 | | .048 | |

*Notes:* *Significance levels: * $p \leq 0.05$, ** $p \leq 0.01$ (two-tailed tests); [a] fractionalization index; unstandardized coefficients reported; control variables included in the analyses (but not presented in the tables): individual age, education, generalized trust, and country level GDP per capita and generalized trust.*

*Sources:* *ESS, 2002; CID, 2005.*

**References**

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