Faith Affiliation, Religiosity, and Altruistic Behaviors: An Analysis of Gallup World Poll Data

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The relationships between faith affiliation, religiosity, and altruistic behaviors remain debated in the literature. As a recent example of such debates, Decety et al. (2015) published an article suggesting that children from Christian and Muslim households may be less altruistic than children from non-religious homes. Using experimental data collected from 1,151 children between the ages of five and 12 attending schools in Amman (Jordan), Cape Town (South Africa), Chicago (United States), Guangzhou (China), Istanbul and Izmir (Turkey), and Toronto (Canada), Decety et al. concluded that (1) Children in families that identify as religious had on average less altruistic behaviors; (2) Family religiousness was associated with parents self-reporting that their children were more sensitive to injustices and had empathy towards others; but in the experiment (3) Children from religious households were actually harsher in their punitive tendencies.

These results were however challenged in a subsequent communication published by Shariff et al. (2016) in the same journal. When controls were included in the regression analysis for cross-country variations in altruistic behavior, the results pertaining to the effect of religion and religiosity did not hold anymore. Apart from being a cautionary tale about how empirical results may be sensitive to the specification used by authors, this episode suggests that even though much of the literature seems to point to a positive relationship between religiosity and altruistic behaviors (see for example Wodon 2015, in the case of faith-based service delivery in education and health in Africa), there is no universal consensus on the matter, and the matter is complex.

The literature is complex in part because the factors leading to altruistic behaviors are themselves complex, calling for a variety of approaches and data to explore those relationships. Evidence on the relationship between religiosity and altruistic behaviors can be collected in many different ways. The paper by Decety et al. (2015) and the comment by Shariff et al. (2016) relied on experimental data. These analyses remain the exception rather than the rule, with much of the literature still based on non-experimental data despite the limits of such datasets (Sablosky 2014).

In general, as already mentioned, the literature seems to suggest that religiosity is often associated with altruistic behaviors. Examples based on data from the United States help illustrate this finding. Forbes and Zampelli (2014) find that greater intensity of religious belief is associated with more volunteerism. Kim et al. (2016) look at how trajectories of religious attendance relate to volunteering over a 15-year period. They find a positive association between rates of change in religious attendance and volunteering, as well as higher increases in volunteering over time for individuals with higher initial levels of religious attendance. Another interesting paper by Hill and den Dulk (2013) considers how the type of secondary school attended may affect future volunteering among youth. They find that students who attended Protestant secondary schools are more likely to continue to volunteer, while those who were schooled at home or attended private nonreligious schools were less likely to volunteer. Lim and McGregor (2012) suggest that spillover effects may be at work, whereby nonreligious individuals with close friends who have religious affiliations may also be more likely to volunteer. Finally, as a last example, Taniguchi and Thomas (2011) find that religious "exclusiveness" is associated with volunteering in organizations that are more likely to be religious, while religious "inclusiveness" is associated with higher volunteerism

in both religious and secular organizations. The test remains tentative however because the data only identifies four types of organizations: hospitals, nursing homes, and other health facilities, schools and other youth-oriented facilities, political organizations and causes, and any other organization, cause, or charity (which are more likely to be religious given the definition of the four categories as well as basic statistics on religious participation and types of volunteering.

The papers just mentioned and the broader literature tend to rely on data mostly from either the United States or a small set of countries. While they again point to a positive association between religiosity and altruistic behaviors, this does not imply that such associations are always at work, and a lot may depend on context. As one example, in religiously diverse developing countries where faith is often an essential part of people's identity, it is not clear how one's faith affiliation may affect attitudes towards members of other faiths. As a case in point, how does religious priming affect altruism between members of different faiths? In an article published in this journal, Parra Osorio et al. (2015) used experimental methods and found that in Ghana, priming (that is, evoking) religion among game participants decreased altruism and trustworthiness towards people of a different religious affiliation. These results suggest that if religious identity is made more salient, the likelihood of social cooperation between members of different faiths may decrease. In a study for Côte d'Ivoire and Ghana, McCauley (2009) also found lower contributions to members of a different religion after subjects were primed for religion. There are however also cases where priming in other contexts seemed to have positive effects on altruistic behaviors (see for example Shariff and Norenzayan 2009).

In this article, our objective is to contribute to the literature on the relationships between faith affiliation, religiosity, and altruistic behaviors by analyzing cross-sectional data for many countries using the Gallup World Poll. The dataset has both advantages and limits. One major advantage is that data is available for more than 150 countries. Even after including controls in the analysis for factors affecting altruism, despite missing data for some controls in some countries, we still have more than 100 countries in the sample. A second advantage is that the dataset includes a large number of variables that can be used as controls to try to isolate the effect at the margin of faith affiliation and religiosity on altruistic behavior controlling for other factors affecting these behaviors. A third advantage is the fact that data are available on three types of altruistic behaviors: not only volunteering, but also charitable donations and help provided to strangers.

By contrast, a constraint with the Gallup World Poll dataset is that we must rely on cross-sectional data as opposed to panel or experimental data. This limits the type of analysis that can be conducted. Another constraint is that the variables used to identify faith affiliations and religiosity have limits. Faith affiliation is considered at an aggregate level to allow for comparability (for example considering all Christians together and not individual denominations), and the proxy for religiosity is based on a single question about whether individuals consider religion to be important in their life. Despite these limits, the article hopefully provides valuable insights on the respective roles of faith affiliation and religiosity in affecting various types of altruistic behaviors across the world.

Data and Methodology

The Gallup World Poll typically surveys 1,000 individuals in each country, using a standard set of core questions that has been translated into the major languages of the respective country. While survey data or specific questions are not available for all years for all countries, the

pooled data set used for our regression analysis is very large, with more than 200,000 observations. A total of 114 countries are included in our final sample: 10 from East Asia and the Pacific, 40 from Europe and Central Asia, 21 from Latin America and the Caribbean, four from the Middle East and North Africa, one for North America, seven from South Asia, and 31 from sub-Saharan Africa. While some regions have better representation than others, most of the world population is included, with China being one important exception due to lack of some key covariates.

In this article we focus on measures and correlates of altruism, and specifically on the potential effect of faith affiliation and religiosity on behaviors indicative of generosity towards others. Although we use loosely the term "effect," what we measure through regression analysis is only the correlations at the margin (after controlling for other variables) between faith affiliation and religiosity and altruistic behavior. These correlations are not necessarily indicative of causality.

Three indicators of altruistic behaviors are considered: (1) whether an individual made in the past month a monetary contribution to a charity; (2) whether an individual volunteered his/her time with any organization in the past month; and (3) whether the individual helped a stranger or someone s/he did not know who needed help. In addition, based on answers to these three questions, three more indicators are constructed: (4) whether an individual engaged in all three behaviors in the past month (charitable donation, time volunteering, and helping a stranger); (5) whether an individual engaged in none of these behaviors; and (6) whether an individual engaged in any one of the three behaviors. In all, regression analysis is performed for all six indicators.

Our objective is to explore the relationship between faith affiliation and religiosity and generosity towards others. We code the data to be able to identify the following faith affiliations: Christian, Muslim, Hindu, Buddhist, and all others. As a measure of religiosity, we rely on the response to a single question: *Is religion an important part of your daily life?* Respondents who respond in the affirmative are considered religious, while the others are not. Clearly, the information on religiosity is limited in the Gallup World Poll in comparison to other surveys (such as the World Values Survey), but the advantage of the Poll is the large number of countries included, and the availability of a wide range of variables that can be used as controls, thereby reducing the risk of omitted variable bias. Table 1 reports by region on the composition of the sample by faith affiliation and religiosity using weights that account for survey design as well as the population of the various countries (the substantial weight for Hindus in the sample is due to the inclusion of India, while China, as mentioned earlier, is not included due to lack of information on some key covariates). In the sample, more than three in four respondents (77 percent) state that religion is important in their life.

Table 1: Share of Population by Faith Affiliation and Religiosity

Religion	Global	East Asia & Pacific	Europe & Central Asia	Latin America & Caribbean	Middle East & North Africa	North America	South Asia	Sub-Saharan Africa
				Region				
Christian	0.39	0.21	0.76	0.94	0.02	0.79	0.02	0.67
Islam	0.24	0.36	0.05	-	0.85	-	0.31	0.29
Hindu	0.25	0.01	-	-	-	-	0.65	-
Buddhist	0.04	0.22	-	-	-	0.02	0.01	-
Other	0.08	0.20	0.18	0.05	0.13	0.19	0.02	0.04
Religion is								
Important	0.77	0.74	0.45	0.79	0.84	0.45	0.81	0.95
Not important	0.23	0.26	0.55	0.21	0.16	0.55	0.19	0.05

Source: Authors based on Gallup World Poll data. Cells with values at or rounded up to 0.00 are not shown.
Note: Statistics are based on the sample of all countries with the latest year for each country. For basic statistics, we use the sample from the volunteering regression since it has slightly more observations than other regressions.

To assess the potential effect of faith affiliation and religiosity on altruistic behaviors at the margin, we need to control for the potential effect of other variables as well. Apart from controls for country effects (which do typically matter as illustrated in the introduction), the first set of independent variables consists of the characteristics of the individual, including the respondent's gender, education level (elementary, secondary, four years beyond high school and/or college), income level (by quintile of per capita household income), marital status (single, married, separated, divorced, widowed, having domestic partner), age (according to the six age groups, 15-19, 20-29, 30-39, 40-49, and 50+), household size, and geographic location (urban or rural).

The analysis controls for the level of economic development of countries as measured through per capita GDP and its squared value, the average growth of GDP in the last two years, and the Gini index to capture income inequality. As already mentioned, the socio-economic background of individuals is controlled for using quintiles of household per capita income. In addition, to complement these indicators of well-being, the Gallup data also provides a rich set of subjective measures related to the individual's financial situation and the economic situation of the community in which s/he lives. Information is also available about how individuals perceive their own socio-economic status. To capture this information, we include controls in the regression analysis based on dichotomous (yes/no) answers by individuals to three questions: *"Right now, do you feel your standard of living is getting better or getting worse?;Which one of these phrases comes closest to your own feelings about your household's income these days: living comfortably on present income, getting by on present income, finding it difficult on present income, or finding it very difficult on present income?; Are you satisfied or dissatisfied with your standard of living, all the things you can buy and do?"* In addition, we include in the independent variables the Gallup's Economic Confidence Index, which is based on responses to the following question: *"How would you rate economic conditions in this country today -- as excellent, good, only fair, or poor?"*

Another set of independent variables used as controls consists of variables about the respondent's employment status and the perception of her/his work environment. Gallup classifies respondents into one of six categories of employment: employed full time by an employer, self-employed full time, employed part time (whether self-employed or working for an employer) and

does not want to work full time, employed part time and wants to work full time, unemployed, out of the work force. In terms of the work environment, the answer (yes or no) of the respondent to the following question is relied upon: *"Thinking about the job situation in the city or area where you live today, would you say that it is now a good time or a bad time to find a job?"*

The Gallup data also provide a rich set of variables related to the networks of social support to which individuals have access. Specifically, answers to two of these questions (coded as dichotomic variables) were used in the controls: *"If you were in trouble, do you have relatives or friends you can count on to help you whenever you need them, or not?; In the city or area where you live, are you satisfied or dissatisfied with the opportunities to meet people and make friends?"*

Finally, the community context may also have an impact on whether individuals are likely to engage in altruistic behaviors. Answers to questions related to the respondents' satisfaction with the city or area where they live, their likelihood to move away or recommend that city or area to a friend, and how they evaluate everyday life in their community were therefore used as controls, as were variables related to satisfaction with the education system, development opportunities and respect for youth, and the quality of the political environment. Specifically, respondents' confidence in key institutions such as the military, the judicial system, the national government were included, along with perceptions related to the honesty of elections and patterns of corruption. This was done by constructing an index related to such perceptions using principal component analysis based on six different variables (details are provided in Nguyen and Wodon 2018).

Basic Statistics and Regression Results

Results from the full statistical and regression analysis are available in Nguyen and Wodon (2018). Here, we focus only on results pertaining to the potential effects of faith affiliation and religiosity, using the simple categorization for both variables outlined in Table 1.

Table 2 provides basic statistics on altruistic behaviors. Each cell shows the mean value of the variable, which is the share of population practicing a specific type of altruistic behavior. For example, on average, 29 percent of Christians donated to charity in the previous month. There are some surprising results. Buddhists appear much more likely to donate than other groups. However, they are not necessarily more likely to volunteer or help strangers. Christians and Muslims are slightly more likely to help strangers, but not necessarily more likely to donate or volunteer, despite clear injunctions to do so in their faith. Recall however that the analysis is based on donations, volunteering, and help to strangers over the last month, so that different patterns might emerge when considering a full year, especially in religions where altruistic behaviors tend to be observed at specific periods of time during the year such as Christmas for Christians. In some cases, financial contributions may also take place without necessarily being perceived as charitable donations, as may be the case for zakat among Muslims. Finally, we observe only whether individuals donate, volunteer, or help strangers, not the amount of money or time donated or volunteered, nor the number of times that they help strangers. For all of these reasons, and given that patterns of altruistic behavior differ between countries, the implicit ranking of altruistic behaviors by religion suggested in Table 2 must be taken with great caution.

Table 2: Basic Statistics on Altruistic Behaviors by Faith Affiliation and Religiosity

	Individual Behaviors			Combinations of Behaviors		
	Donate	Volunteer	Help Stranger	All of the Behaviors	None of the Behaviors	One of the Behaviors
Mean	0.32	0.25	0.52	0.11	0.34	0.66
Faith Affiliation						
Christian	0.29	0.25	0.56	0.10	0.32	0.68
Muslim	0.41	0.27	0.53	0.13	0.28	0.72
Hindu	0.26	0.25	0.48	0.12	0.42	0.59
Buddhist	0.53	0.22	0.40	0.12	0.33	0.67
Other	0.32	0.21	0.44	0.09	0.41	0.59
Religion is…						
Important	0.34	0.27	0.54	0.12	0.31	0.69
Not important	0.27	0.18	0.44	0.08	0.44	0.56

Source: Authors based on Gallup World Poll data.
Note: Statistics are based on the sample of all countries with the latest year for each country. We use the sample based on the volunteering regression with the most observations.

Another reason to take the basic statistics provided in Table 2 with caution is that they do not control for other factors that may affect altruistic behaviors. Individuals with a better education or a higher per capita income may have higher expected or actual earnings, and may therefore be able to donate more often. Individuals who are not working full time may be more likely to have volunteered over the past month. Attitudes towards the community and perceptions of one's own situation may also affect whether individuals are likely to help strangers or not. To assess the potential effect of faith affiliation and religiosity on altruistic behaviors, we must control for other variables that may affect those behaviors. This is done through standard probit regressions.

Results from the regression analysis are reported in Table 3. The coefficient estimates reported are in comparison to the reference category and must be interpreted in percentage terms. For example, the coefficient of 0.039 for Muslim vs. Christian on donations suggests that controlling for other variables affecting donations, Muslims are 3.9 percentage points more likely to donate than Christians. When effects are not statistically different from zero, this is indicated by NS (not statistically significant) in Table 3. A fairly different picture emerges as compared to the results suggested by the basic statistics presented in Table 2. Two main points are worth making.

First, the differences in altruistic behaviors between faith affiliations tend not to be large, and they are indeed smaller than those observed in Table 2. In many cases, effects are not statistically significant, and when the effects are statistically significant, they are not necessarily large since they vary between one and four percentage points. In addition, the effects do not always have the same sign. In many cases, when individuals of one faith appear to display more altruistic behavior in one area, this is not necessarily the case in another area. For example, while Muslims appear to donate and help strangers more than Christians after controlling for other variables, they also appear less likely to volunteer. One should therefore be cautious when making broad-based statements about comparisons of altruistic behaviors across faith affiliations.

Second, the role of religiosity, even though it is measured in a very rough way given data limitations, appears more important than faith affiliation. First, all coefficient estimates are statistically significant. Second, the coefficient estimates are larger, suggesting that individuals who seem themselves as religious (by stating that religion is important in their life) have substantially higher likelihoods of donating (7.3 percentage point increase), volunteering (5.5 point

increase) and helping strangers (7.6 point increase). In simple terms, faith affiliation does not matter that much, but religiosity does. After controlling for other factors that could affect behaviors, considering that religion is important in one's life is associated with altruism.

Table 3: Marginal Effect of Faith Affiliation and Religiosity on Altruistic Behaviors

	Individual Behaviors			Combinations of Behaviors		
	Donate	**Volunteer**	**Help Stranger**	**All of the Behaviors**	**None of the Behaviors**	**One of the Behaviors**
Faith Affiliation						
Christian	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
Muslim vs. Christian	0.039***	-0.012***	0.033***	0.015***	-0.024***	0.024***
Hindu vs. Christian	NS	-0.023***	NS	NS	NS	NS
Buddhist vs. Christian	NS	0.031***	NS	0.013*	-0.023*	0.022*
Other vs. Christian	-0.024***	-0.012***	0.024***	NS`	NS	NS
Religion is…						
Important	0.073***	0.055***	0.076***	0.036***	-0.082***	0.082***
Not important	Reference	Reference	Reference	Reference	Reference	Reference

Source: Authors based on Gallup World Poll data.
Note: NS stands for not (statistically) significant. Only coefficients that are statistically significant at least at the 0.1 percent level are shown (the levels of statistical significance are 0.1 *, 0.05 ** and 0.001 ***).

Conclusion

As noted in the introduction, while the relationships between faith affiliation, religiosity, and altruistic behaviors remain debated, the literature typically suggests a positive relationship between religion and altruism. In this article, our objective was to test for this relationship using the Gallup World Poll. The analysis is based on data for more than 100 countries on three types of altruistic behaviors: charitable donations, volunteering, and help provided to strangers.

We find that differences in altruistic behaviors by faith affiliations tend not to be large and in many cases are not statistically significant. By contrast, the role of religiosity, even though it is measured in a rough way given data limitations, appears more significant. Individuals who declare that religion is important in their life tend to have a higher likelihood of demonstrating altruistic behaviors, with effects ranging from six to eight percentage points depending on the behavior considered. This effect of our (admittedly limited) measure of religiosity is observed even after controlling for a wide range of other variables that may affect altruistic behaviors.

Our finding on the effect of religiosity is consistent with much of the existing literature, but it does not imply that religion is associated with altruism in all contexts, as previous research on priming in this review has shown. As the effect of religiosity or even faith affiliation may depend on context, given that a substantial share of the work on this topic has been conducted with datasets for Western countries, one area for future research would be to assess whether effects are similar in other contexts. In this paper, we provided broad stylized facts based on data for many countries, but more could be done to measure the relationships between faith affiliation, religiosity, and altruistic behaviors at the country level or for subsets of countries that have similar characteristics.

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[1] While the authors are with the World Bank, this article need not reflect the views of the World Bank, its Executive Director, or the countries they represent.