Life Satisfaction and Charitable Giving: New Evidence from the PSID

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ABSTRACT

In this paper, we analyze the empirical link between donations to charitable organizations and self-reported levels of life satisfaction. Using the nationally representative Panel Study of Income Dynamics (PSID), we find a positive association between levels of life satisfaction and individuals' acts of giving to charitable organizations. However when we disaggregate donations into religious versus secular donations, we find that only giving to religious charitable organizations are significantly associated with higher levels of life satisfaction. Our results challenge some of the earlier results in the literature that found a positive effect of overall giving to charity and spending money on others on life satisfaction (Dunn et al, 2008) and imply that there may be important differences in tangible/intangible benefits that individuals receive from donations to different causes.

1．Introduction

A large body of cross-sectional survey research has shown that income has a reliable, but surprisingly weak effect on life satisfaction within nations, particularly once basic needs are met (Frey and Stutzer, 2002). Relatively little known is the link between different types of expenditures and their effects on life satisfaction. Dunn, Aknin and Norton (2008) find that spending more of one's money on others in the form of gifts to others and donations to charity predicted greater happiness both cross-sectionally and longitudinally in a nationally representative sample of 632 Americans. They also find experimental evidence supporting that individuals that are given money to spend on charity report higher levels of happiness than those who are given money to spend on personal items. In this study, we examine the link between donations to charitable organizations and life satisfaction using the nationally representative Panel Study of Income Dynamics data from 2009 and 2011.

Nearly two thirds of Americans donate money to charitable organizations in a given year (List, 2011). A large body of work examine why individuals give. Individuals may contribute to charitable organizations because they care about the well-being of service recipients of these organizations or because they derive some utility from their contributions in the form of "warm glow" (Andreoni 89, 90).[1] The empirical analysis of the effect of charitable contributions on life satisfaction can also be regarded as a test for the warm glow motive. If it is pure altruism, life satisfaction should not depend on one's donation but increase with increasing well-being of recipients and total charity output.

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[1] In some cases, individuals can also be direct beneficiaries of charitable organizations. For example, a person may directly contribute from his contribution to a library if he is a member.

This paper makes significant contributions to the literature on life satisfaction and charitable giving. First, we use new data from the nationally representative PSID on life satisfaction. Second, we focus on the effects of charitable giving to nonprofit organizations on life satisfaction whereas prior research (Dunne et. al. (2008); Aknin et. Al. (2014)) combined giving to charity and spending money on others and coined this behavior as pro-social giving. There might be important differences in terms of motivation in giving money to a person versus an organization. Third, we further differentiate donations according to recipient charitable organizations' types. Specifically, we focus on contributions made to religious versus secular organizations. Giving to churches, synagogues and mosques have been considered as contributing towards the provision of a club good where donations are essentially membership fees. Fourth, we discuss our findings in terms of their relative support for warm-glow versus pure altruism hypothesis. The causal relation between the individuals' donations to charitable organizations and individuals' reported well-being is further tested using the instrumental variables and fixed effect methods..

Our results provide evidence for "satisfaction from the mere act of giving" coined as the warm glow motive (Andreoni, 1990) when we use incidence of giving and total donation amounts to charitable organizations and are consistent with Dunne et. al. (2008). However when segregate donations into donations made to religious organizations and donations made to secular organizations, we find that only donations made to religious organizations are positive and significantly associated with life satisfaction. We find that contributions to religious organizations increase life satisfaction of religious individuals whereas contributions to secular organizations does not significantly affect life satisfaction levels. When we control for religious attendance, contributions to religious organizations are no longer significant. Our results are robust to using instrumental variable method where past donations are used to instrument for current donations and individual fixed effect estimation.

Section 2 provides the background for our study. Section 3 describes data. Section 4 presents the econometric framework. Section 5 presents results. Section 6 discusses robustness checks. Section 7 concludes.

2. Background

2.1 Life satisfaction

Data on subjective well-being have been used extensively by psychologists interested in defining happiness (Wilson, 1967; Diener, 1984). Studies undertaken by other psychologists reveal that results based on survey responses to questions on life satisfaction are fairly reliable yielding responses that tend to be highly correlated with alternative indicators of happiness (Kahneman et. al. 1999).

The study of subjective well-being in economics has its origins in the work of Easterlin (1974). After a period of limited interest, there has been resurgence of interest more recently (Veenhoven, 1993; Clark and Oswald, 1994; Di Tella et. al., 2001; Frey and Stutzer, 2002; Dolan et. al. 2008; Knight, Song and Gunatilaka, 2009; Litchfield et. al., 2012).

Veenhoven (1993), in his detailed study, addresses concerns about self-reported well-being levels. One of the stated concerns is that individuals may be unaware of their well-being. Veenhoven (1993) find that eight out of ten people consider their own well-being once a week or more. He also argues that individuals evaluate their happiness level by comparing their circumstances now with those of the past and ones anticipated in the future. In addition to that, Erhardt et. al. (2000) demonstrate that the subjective evaluation of well-being is stable and sensitive to altering circumstances so that subjective well-being or life satisfaction level can be considered as representative of utility. Consistent with the approaches discussed above, Frey and Stutzer (2002), as well as Carbonell and Frijters (2004), propose a microeconometric model of happiness function where happiness depends on socio-demographic and socio-economic characteristics and a random error term. Both questions on happiness and life satisfaction have been used in the literature as dependent variables. Frey and Stutzer (2002) argue that happiness may be a more temporary emotion while life satisfaction could reflect a deeper evaluation of one's life long circumstances.

Certain socio-demographic and socio-economic factors such as age marital status, employment status and income are found to be associated with life satisfaction. Blanch-flower and Oswald (2008) find a U shaped relationship between age and life satisfaction. Frey and Stutzer (2005) find that married people report higher life satisfaction than single individuals.

Clark and Oswald (1994) show that unemployed people report lower well-being levels than the employed. Oswald (1997) and Frey and Stutzer (2002) find that there is a positive association between economic well-being and life satisfaction levels. However this relationship is non-linear since there is diminishing marginal utility with respect to income. Furthermore, differences in income only explain a small proportion of differences in happiness among persons.

As the reliable though weak relationship between income and subjective well-being measures has been established in the literature, a few studies started to question how different types of expenditures might affect life satisfaction. In a pioneering paper Dunne et. al (2008), demonstrate that devoting more money to prosocial spending (gifts for others and charitable donations) was associated with greater well-being, even when controlling for income in a nationally representative sample of 632 Americans (Dunn et al., 2008). Furthermore, in an experimental study, they find that American students who were randomly assigned to spend a small windfall on others were significantly happier at the end of the day than those assigned to spend money on themselves. Konrath and Brown (2012), survey the psychology literature on the effects of pro-social behavior on individuals' health outcomes and report that studies find a positive association between volunteering and health outcomes.

Aknin et al (2014) find a positive correlation between subjective wellbeing and giving to charity in 120 of 136 countries controlling for household income. They also conduct psychological experiments that show that individuals report higher levels of past well-being when they remember spending money on others rather than on themselves in experiments conducted Canada and Uganda. In experiments conducted in Canada and South Africa, participants that were randomly assigned to buy a gift bag full of treats for a sick child reported higher increased levels of well-being than those that were assigned to buy the gift bag for themselves.

2.2 Donations to non-profit organizations

Our paper also contributes to the literature on non-profit organizations and provision of public goods. Contributions to non-profit organizations are essential for the provision of public goods in the US. In a typical year, about 70 percent of Americans give to charity and total charitable fits of money now exceed 2 percent of gross domestic product. Moreover, charitable giving

has nearly doubled in real terms since 1990, and the number of nonprofit organizations registered with the IRS grew by nearly 60 percent from 1995 to 2005 (List, 2011). Individual givers compromise more than 75 percent of total gifts given annually. The remaining 25 percent is compromised by bequests, corporations and charitable foundations.

Recent studies have shown that models in which voluntary contributions are considered as public goods are not consistent with the observed data. Before these studies took place, contributions had been taken as public good, but as shown by Sugden (1982, 1999) individuals' contributions are not perfect substitutes, because individuals' utilities also increase by their own act of giving (Andreoni 1989, 1990). In this respect, Andreoni (1989) introduces a generalization of the standard public goods model which includes impurely altruistic motives. Andreoni (1990) also shows that people do not only get utility from public goods' total supply, but they also gain utility from their acts of giving when they make donations to public goods. This is called "the warm glow motive". Therefore, these studies show that individuals are not indifferent between contributions they themselves make and contributions made by others. Sugden (1999) argues that individuals increase their life satisfaction level by contributing to public goods for two reasons. First, they get satisfaction because they comply with societal norms. Second, by contributing they develop their self-esteem. In this context, Videras and Owen (2006) demonstrate that contributing to environmental causes increased life satisfaction of individuals with moderate to high levels of social responsibility while it had no significant effect on life satisfaction of those with low levels of social responsibility. Brekke, Kverndokk, Nyborg (2003) present a model according to which gaining utility from contribution to public good depends on individuals' self-sanctioned norms.

Azzi and Ehrenberg (1975) provide the first theoretical model on religious giving. In this model individuals allocate time and money among religious and secular activities to maximize their life time and after life utility. Iannaccone (1998) points out that most formal economic models of religious participation build from Gary Becker's model of household production (1976). The general idea is that individuals allocate time and money to produce secular and religious activities. In other words, their money and time contributions to religious organizations provide them with tangible (eg. Church services for the sick and the elderly, nice funerals for church members) and intangible (eg. after life consumption) goods and services.

Fehr and Gachter (2000) argue, group members can impose sanctions on free riders and this can act as a deterrent against free riding behavior in the provision of public goods. Carmen (2004) on the other hand, argues that social influences

Since charitable organizations may range from churches, to homeless shelters, from environmental organizations to PTOs motives for giving may also vary by organization type. Exchange considerations may be more relevant for giving to religious organizations while, impure altruism may the driving force for giving to the needy and fear of social sanctions may be the driving force for giving to PTO. Hence it would not be realistic to expect that giving to different types of organizations will have the same effect on life satisfaction.

3. Data

Philanthropy Panel Study (PPS), a module in the Panel Study of Income Dynamics (PSID). These data represents the largest one-time study of philanthropy in the United States, and provide a unique opportunity to study the effect of charitable contributions on life satisfaction. We focus on PPS for 2009 and 2011 since questions on life satisfaction are only available for these years.

The new PSID philanthropy module used in this paper is unique because it provides high-quality data on charitable giving, comparable to the U.S. Individual Taxpayer Return data[2] (Wilhelm, 2002). Most existing data sources on U.S. charitable giving do not provide detailed information on charitable giving and high quality information on income and wealth. In this study, we define charitable giving as contributions to qualified nonprofit organizations that are eligible for the charitable deduction according to the definitions provided by the Internal Revenue Service. Our key dependent variables on charitable giving are constructed using the following questions, which were posed to PSID survey respondents: "During the year 2009, did [you/you or anyone in your family] donate money, assets, or property with a combined value of more than $25 to religious or charitable organizations?"

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[2] The PSID philanthropy module is the only data set on giving that is comparable to the IRS taxpayer data in coverage. However, we should note that the IRS taxpayer database provides a more accurate picture of charitable giving at and above the 90th percentile of charitable giving. The IRS tax data is less suitable for this study because immigrant status and experience is not recorded, and immigrants may be less likely to itemize their deductions.

Furthermore, the detailed PSID philanthropy module provides information on giving to specific charitable organizations for the entire sample.

Measure of satisfaction

An individual's subjective level of well-being is derived from the question;

"Please think about your life-as-a-whole. How satisfied are you with it?" Satisfaction, the well-being level, is coded on a scale from 1 to 5, with 5 being the lowest level in the raw data. We recode this so that 5 represents the highest and 1 represents the lowest level. The question of life satisfaction is considered as an indicator of individuals' well-being. The question is asked annually and individuals consider their overall well-being in that year. The sample median is 3.76 , the 25 and the 75 percentiles are 3 and 4 respectively.

Measures of donations to charitable organizations

Detailed giving information exist for various types of organizations: 1) religious organizations such as church, synagogue, mosque, 2) organizations that serve a combination of purposes such as united way, 3) organizations that help people in need of food and shelter, 4) healthcare and medical research organizations such as hospitals, heart associations, 5) educational organizations such as colleges, PTAs, scholarship funds, 6) youth and family services such as scouting, sports leagues, 7) arts and culture organizations such as museums and public broadcasting, 8) organizations for improving neighborhoods such as community associations, or service clubs, 9) environmental organizations, 10) international aid and world peace organizations such as childrens' funds and disaster relief.

4. Empirical Framework

To study the relation between and individual's donation to charitable organizations and his/her well-being, we adopt a model similar to that of Frey and Stutzer (2000) and model life satisfaction a function of socio-demographic and socio-economic characteristics.

$$Life\ satisfaction_i = \beta_0 + \beta_1 Give_i + \beta_2 X_i + e_i \qquad (1).$$

$$Life\ satisfaction_i = \beta_0 + \beta_1 log(donation\ amount)_i + \beta_2 X_i + e_i \qquad (2).$$

Where $Give_i$ is a dummy variable equal to 1 if individual has donated to any charitable organization and $\log(donation\ amount)_i$ is the natural logarithm of individual's donation amount.[3] We do not observe the exact value of life satisfaction, the well-being of the individual, in the data. Rather, it is measured on a scale from 1 to 5. X denotes socio demographic variables such as gender, employment, marital status, education, race, religious status, health, age, and income of individuals which are considered to have effects on their level of well-being. e_i is the random error term with mean zero conditional on X. The self-reported happiness level is treated as it is continuous. Both Frey and Stutzer (2000) and Carbonell and Frijters (2004) find that the Ordinary Least Squares (OLS) estimation method does not distort the findings. According to their study, the OLS estimation method is as successful as other ordinal probit/logit estimation methods. Traditionally OLS has been preferred in the psychology literature and ordinal models have been used in the economics literature on subjective well-being. Our study, in terms of research question is closest to Dunne et. al who use OLS in their estimation. As a result of this and the ease in interpreting results, we will use OLS in most of our paper. However, we will also estimate our baseline specifications using ordered probit model to test the robustness of our results.

We construct three dummy explanatory variables for donations to charitable organization. The first dummy variable donation is equal to 1 if a person makes any donation to any charitable organization 0 otherwise. Donation-secular is equal to 1 if an individual has given a donation to a secular non-profit organization. Donation-religious is equal to 1 if an individual has given a donation to a religious non-profit organization. Non-profit organizations with a combination of purposes, organization helping the needy, health organizations, youth organizations, arts and culture organizations, community organizations, environmental organizations, international aid organizations, educational organizations and non-profits for other purposes are grouped into the secular group; whereas charities for religious purposes are put into the non-secular group.[4] Since we focus on donations to religious vs secular non-profit organization, we also checked the validity

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[3] More precisely, it is the natural logarithm of (donation amount+1). We adopt this formulation in order to not loose observations where donation amount is zero.
[4] We have experimented with combination type organizations by placing them in the religious group or excluding them altogether in the analysis. Our results are robust to these classifications.

of our results for religious and non-religious sub-populations in the sample. In addition to dummy variables indicating whether a donation has been made, we also estimate our regressions using natural logarithm of donations in some specifications.

Dummy explanatory variables are those for gender (male=1), employment (unemployed=1), marital status (married=1), education, race, religion. Education, race and religion are the group of dummy variables in this paper. For education, there are three variables that indicates whether a person has graduated from college (college degree), whether a person has graduated from high school but not graduated from college, (HS degree); or whether a person has less than high school degree (no degree) where no degree is the omitted variable. We construct four dummy variables indicating a person's religion status: Catholic, Protestant, Other religion, No religion. No religion is the omitted dummy variable. We construct three dummy variables for race: race white, race black and race other. Race white is the omitted dummy variable.

Other explanatory variables are age, age squared, number of children (log) income, (log) wealth and health status. The health level of an individual is derived from the answer to the question "would you say your health is in general excellent, very good, good, fair, or poor?". Thus, health is measured on a scale from 1 to 5, with 5 being highest. The income and wealth of individuals are calculated by asking them many detailed questions. In our regressions, a logarithm of income and logarithm of wealth is used to see the effect of change in the annual income and level of wealth more accurately. For instance, a 2000 TL raise for an individual who earns 10,000 TL annually is considered a good raise and makes that person happy, but this raise does not make an individual happy who earns 150000 annually. The second reason for using a logarithm of income and logarithm of wealth is that logarithm of a variable is usually more normally distributed so that the effect of change of income and wealth on a dependent variable can be seen more accurately.

Ordinary least square estimates of equation 1 and 2 can give us biased estimates. First of all, it might be the case that life satisfaction might affect donation behavior resulting with the so called endogeneity problem and biased regression coefficients. Second, intrinsic characteristics of individuals such as the intensity of their religion affiliation might influence both their life satisfaction and donation behavior and if these characteristics are not included as control variables, the regression results might suffer from the so called omitted variable bias problem. We discuss how we address these problems in the robustness checks secion.

5. Results

The descriptive statistics for variables used in the analysis are given in Table 1. The statistics are shown for both 2009 and 2011. The first observation from the descriptive statistics is the high percentage of individuals who donate to any charitable organizations. About 70 percent of individuals in our sample report contributing to charitable organizations in each survey year. The subjective well-being level of individuals as the dependent variable is estimated by using equations 1 and 2 separately for each year. The results of these estimations are shown in Table 2. We find that the natural logarithm of the donation amount is positively and significantly associated with life satisfaction in both 2009 and 2011 while the incidence of giving is positively and significantly associated with life satisfaction in 2009.

Consistent with the literature, we observe that age has a U shaped association with life satisfaction as life satisfaction decreases with age and increases with age squared. Males are more likely to report lower levels of life satisfaction than females. Being married is positively associated with life satisfaction. Interestingly, there does not seem to be any difference between life satisfaction levels of blacks versus whites when all other socio-demographic variables are controlled for.

We observe that the subjective health level is positively associated with the subjective well-being of individuals. Individuals, who report a higher health level, also report a higher level of well-being. Being unemployed is negatively associated with life satisfaction as expected. Household income and level of wealth has a positive effect on life satisfaction. Interestingly, controlling for income, education does not have a statistically significant association with life satisfaction.

We observe significant differences in life satisfaction levels of different religious groups. Here the omitted category is no religion affiliation dummy variable. We will call this group non-religion group. Hence all comparisons are made with regard to this group. A protestant is more likely to have higher life satisfaction than a person in the non-religion group, while a Catholic's life satisfaction is not statistically different than someone in the non-religion group. Interestingly, a

person in the other religion group which is composed of Jew, Muslims, Budhists etc. has lower life satisfaction levels than a non-religion person.

PSID survey data allows us to study different factors that affect the act of giving and the subjective well-being level of individuals. It also provides us with information on types of organization that individuals contribute. In the next set of results, we divide organizations into two groups: secular and non-secular. Table 3 a presents the effect of the incidence of giving to religious and secular organizations for 2009 and 2001 (columns 1 and 2) and the effect of (log) donation amounts to religious and secular organizations for the same periods (columns 3 and 4). The results are striking. Neither the incidence of giving nor the donation amount to secular organizations is significantly associated with life satisfaction. Log donation amounts to religious organization is positively and significantly associated with life satisfaction in both 2009 and 2011 whereas the incidence of giving to religious organizations is significant only in 2009.

Since we find that contributions to religious organizations are significantly associated with life satisfaction, we would like to further refine our analysis according to religion related characteristics of survey participants. Hence, we control for religious attendance by including the number of times the person attends church/mosque/synagogue etc. in a year. We also construct attendance dummies according to frequency of attendance. We find that incidence and donation amounts to religious organizations become insignificant when religious attendance is controlled for.

In another specification, respondents are divided into two groups. In one group are those who express their religious preferences as Catholic, Protestant, Jewish, Muslim, Buddhist, Orthodox and other are included in the group called religion affiliate; in the other group are people who report that they have no religious affiliation called non-religion affiliate.

Comparing the descriptive statistics of the two groups, we observe that individuals` level of well-being is slightly higher in the religious group than in the non-religious group. The percentage of individuals who donate to charitable organizations is higher in the religious group than in the non-religious group. In addition to that, religion affiliates' donation amount and incidence to both secular and non-secular charitable organizations is higher than non-religion affiliates' donation. Interestingly, individuals who report that they believe in a religion, have higher education levels. Besides, the average age in the religion affiliate group is higher than the average

in the non-religion affiliates. Racial characteristics with other characteristics of groups are nearly the same.

We estimate results of Table 3a for the religion affiliate and non-religion affiliate groups separately. Table 5a shows the results when incidence (give=1) variable is used and Table5b presents results when log donation amounts are used as explanatory variables. We observe that incidence of giving and donations to religious organizations are significant only for the religion affiliate group. Incidence of giving and donations to secular organizations are insignificant for both religion affiliate and non-religion affiliate groups.

Our results challenge the thesis that spending on charity increases life satisfaction as argued in Dunne et. al, 2008 and Aknin et. al. 2014. While we initially find that there is a positive and significant association between charitable giving and life satisfaction, we have seen that when we separately examined the effects of giving to religious versus secular organizations, we did not find any significant effect of giving to secular organizations on life satisfaction.

Next, we segregate organizations even further. Table 6 presents results on the effects of (log) donations amounts to specific organizations on life satisfaction. We observe that only donation amounts to a combination of purposes type non-profits such as United Way are positively associated with life satisfaction. Different motivations for giving across heterogeneous charitable organizations may explain some of the differences in results.

6. Robustness Checks

We established that there is a positive association between incidence and amount of giving to religious organizations and life satisfaction. It is an econometric challenge to establish that this relationship is causal. First of all, it might be the case that life satisfaction might affect donation behavior resulting with the so called endogeneity problem and biased regression estimates. Second, intrinsic characteristics of individuals such as the intensity of their religion affiliation might influence both their life satisfaction and donation behavior and if these characteristics are not included as control variables, the regression results might suffer from the so called omitted variable bias problem. We will adopt an instrumental variable estimation technique to address the first problem where donation incidence and amounts are instrumented with their lagged values. In order to address the omitted variable bias problem we have controlled for religion affiliation intensity measured by frequency of attendance. In another approach we will pool 2009 and 2011 data and use fixed effects.

6.1 Instrumental Variables Estimation

A valid instrument is correlated with the act of giving but not correlated with the error term of well-being. For this reason, we search for a variable which is related to individuals' contribution but not to individuals well-being, although it is very difficult task to find a factor of individuals which does not affect their subjective well-being level.

Cantor and Sanderson (1999), as well as Keser and Winden (2000) show that an individual's previous social participation is related to their present social participation. In this regard, past contributions to charitable organizations are related to current contributions, but are unlikely to affect current self-reported levels of life satisfaction since the question of life satisfaction is asked annually to respondents and makes them consider the things that are happening that year. In addition to that, there is no obvious relation

between individuals' donation which is made years ago and their current subjective well-being level. We use individuals' donations to charities from 2003, 2005 and 2007 of individuals in order to construct our instrumental variable. If an individual donated any money to charity during these years a variable called donation0307 is set to 1 and otherwise to 0. To show the validity of the instrument the two conditions must be satisfied: instrument exogeneity and instrument relevance. To show instrument relevance an OLS regression in which donation is a dependent variable and donation0307 is one of the explanatory variables with other socio-economic and socio-demographic factors. Since the coefficient of the instrument is significant, as seen in the first column of the table 7, we can conclude that the second condition, instrument validity, is satisfied for this variable. With this new variable instrumental variable regression is done and the result of this regression can be seen in the second column of the table 7. As illustrated in the second column of the table, the variable is significant in IV regression. When did an IV estimation for specification presented in Table 3a, we find that results remain similar, secular contributions as not significant determinants of life satisfaction while contributions to religious organizations are positively and significantly associated with life satisfaction. These results are not shown but available upon request.

6.2   Fixed effect estimation

Intrinsic characteristics of individuals may influence both their life satisfaction and giving behavior. We control for a rich set of socio-demographic characteristics. However, if such characteristics are omitted from the regression, our results may suffer from the omitted variable bias. Individual fixed effect estimation can control for characteristics of individuals that are time invariant. We have two years; 2009 and 2011 that data on life satisfaction and charitable giving is available for survey participants. Hence we estimate specifications in Table 3a using a fixed effect model for each individual. Column 1 in Table 7 present results where religious and secular giving incidence are used as control variables. Column 2 presents results where (log) donation amounts are used instead of incidence. As can be seen from this table our results are robust. Interestingly, we find that neither the incidence nor amounts of donations have any effect on life satisfaction.

We have re-estimated this regression using different types of secular donations. When we use donations to combination of purposes along with donations to religious organizations, we observe that donations to combination of purposes (both incidence and log donation amount) are positive and significantly associated with life satisfaction. This suggest further research in understanding motivations for different types of non-profit organizations.

6.3   Ordered logit model

We have estimated equation 1 and 2 using the ordered logit model. Signs and significance of explanatory variables remain the same. These results are available upon request.

7. CONCLUSION

In this paper, we find a positive and significant association between donations to charitable organizations and life satisfaction consistent with earlier results in Dunne et. al (2008). However, analyzing the effect of overall donations on life satisfaction may be misleading since economic theory provides different motivational explanations for different types of charitable giving. Furthermore, contributions to religious organizations are an important component of charitable giving in US and these contributions have been modeled as expenditures on after-life consumption or tangible services during life time and hence resemble private consumption. Panel Study of Income Dynamics (PSID) provides us with detailed information on types of organizations that are recipient of donations. Hence when we segregate donations into donations to religious versus secular organizations, we observe that only donations to religious organizations are positively and significant associated with life satisfaction. Our results challenge some of the earlier results in the literature that found a positive effect of overall giving to charity and spending money on others on life satisfaction (Dunn et al, 2008) and imply that there may be important differences in tangible/intangible

benefits that individuals receive from donations to different causes. Our results are robust to using the instrumental variables method where we use past donations as an instrument for current donations and fixed effects method where we construct a short panel for 2009 and 2011.

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	2009			2011		
	TABLE 1: DESCRIPTIVE STATISTICS					
Variable	**Mean/ Std. Dev**	**Min**	**Max**	**Mean/ Std. Dev**	**Min**	**Max**
SATISFACTION	3.85 0.8	1	5	3.92 0.79	1	5
DONATION (GIVE)	0.71 0.45	0	1	0.69 0.46	0	1
DONATION (AMOUNT)	3092.48 19869.4	0	799984	3737.94 26723.9	0	899991
AGE	45.54 15.85	17	95	47.56 15.85	19	97
GENDER	0.48 0.5	0	1	0.48 0.50	0	1
RACE WHITE	0.89 0.31	0	1	0.89 0.31	0	1
RACE BLACK	0.0744 0.26	0	1	0.074 0.26	0	1
RACE OTHER	0.0311 0.17	0	1	0.0311 0.17	0	1
NUMBER OF CHILDREN	0.7959 1.139	0	9	0.7971 1.155	0	11
MARRIED	0.77 0.42	0	1	0.75 0.43	0	1
UNEMPLOYED	0.16 0.36	0	1	0.15 0.36	0	1
WEALTH	1408946 2595895	38001	102000000	1356757 1235796	7978	43500000
INCOME	162282 138832	69901	6387100	158910 105706	1	2490001
HEALTH	3.62 1.01	1	5	3.57 1.01	1	5
HIGH SCHOOL	0.44 0.5	0	1	0.44 0.5	0	1
COLLEGE	0.43 0.5	0	1	0.43 0.5	0	1
NODEGREE	0.13 0.34	0	1	0.13 0.34	0	1
REL-CATHOLIC	0.2 0.4	0	1	0.20 0.40	0	1
REL-PROTESTANT	0.56 0.5	0	1	0.57 0.5	0	1
REL-OTHER	0.089 0.28	0	1	0.090 0.29	0	1
REL-NO	0.16 0.36	0	1	0.14 0.34652	0	1

Table 2: Life satisfaction and incidence and amount of charitable giving satisfaction

Explanatory variables	(1) Incidence 09	(2) Incidence 11	(3) Log amount09	(4) Log amount11
Donation	0.0856***	0.0224	0.0122***	0.00733**
	(0.0221)	(0.0213)	(0.00234)	(0.00284)
age	-0.0172***	-0.0251***	-0.0168***	-0.0254***
	(0.00326)	(0.00332)	(0.00325)	(0.00332)
Agesquare	0.000215***	0.000269***	0.000210***	0.000269***
	(3.26e-05)	(3.19e-05)	(3.26e-05)	(3.18e-05)
Male	-0.0291*	-0.0466***	-0.0286*	-0.0462***
	(0.0167)	(0.0165)	(0.0167)	(0.0165)
Race black	-0.0105	0.0645*	-0.0167	0.0673*
	(0.0367)	(0.0381)	(0.0367)	(0.0382)
Race other	0.0720	0.107**	0.0745	0.108**
	(0.0457)	(0.0487)	(0.0456)	(0.0487)
Number of children	0.0213***	0.0279***	0.0192**	0.0269***
	(0.00789)	(0.00820)	(0.00797)	(0.00821)
Married	0.258***	0.357***	0.254***	0.353***
	(0.0239)	(0.0227)	(0.0239)	(0.0227)
Unemployed	-0.334***	-0.226***	-0.336***	-0.225***
	(0.0391)	(0.0440)	(0.0391)	(0.0440)
Log wealth	-1.77e-09	0.110***	-2.17e-09	0.103***
	(2.48e-09)	(0.0262)	(2.44e-09)	(0.0260)
Log income	0.0826***	0.0920***	0.0883***	0.0833***
	(0.0253)	(0.0284)	(0.0252)	(0.0278)
Health status	0.214***	0.200***	0.213***	0.199***
	(0.00987)	(0.00975)	(0.00988)	(0.00974)
HS degree	-0.0262	-0.0176	-0.0209	-0.0210
	(0.0308)	(0.0304)	(0.0306)	(0.0304)
College degree	0.00312	-0.0382	0.00901	-0.0470
	(0.0319)	(0.0315)	(0.0315)	(0.0315)
Religion Catholic	0.0114	0.00564	0.00131	0.00405
	(0.0285)	(0.0286)	(0.0287)	(0.0286)
Religion Protestant	0.0556**	0.0170	0.0405	0.0129
	(0.0250)	(0.0250)	(0.0255)	(0.0250)
Religion Other	-0.0678*	-0.106***	-0.0733**	-0.108***
	(0.0356)	(0.0360)	(0.0358)	(0.0360)
Constant	2.112***	0.827**	2.075***	1.033***
	(0.276)	(0.344)	(0.276)	(0.349)
Observations	8,063	8,063	8,063	8,063
R-squared	0.138	0.145	0.139	0.146

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 3a: Life satisfaction and charitable giving to religious and secular organizations

Explanatory variables	(1) 2009 incidence	(2) 2011 incidence	(3) 2009 amount	(4) 2011 amount
Give religious	0.0825***	0.0259		
	(0.0188)	(0.0187)		
Give secular	0.0287	0.00305		
	(0.0197)	(0.0191)		
Log donation religious			0.0151***	0.00589**
			(0.00263)	(0.00262)
Log donation secular			0.00295	0.00347
			(0.00293)	(0.00293)
Age	-0.0171***	-0.0249***	-0.0172***	-0.0253***
	(0.00317)	(0.00322)	(0.00317)	(0.00322)
agesquare	0.000216***	0.000270***	0.000215***	0.000271***
	(3.15e-05)	(3.06e-05)	(3.15e-05)	(3.06e-05)
Male	-0.0460***	-0.0523***	-0.0459***	-0.0519***
	(0.0170)	(0.0168)	(0.0169)	(0.0168)
Raceblack	-0.0298	0.0549*	-0.0300	0.0570*
	(0.0328)	(0.0325)	(0.0328)	(0.0325)
Raceother	0.0726	0.106**	0.0725	0.106**
	(0.0484)	(0.0478)	(0.0483)	(0.0478)
Number of children	0.0224***	0.0283***	0.0220***	0.0275***
	(0.00816)	(0.00818)	(0.00815)	(0.00817)
Married	0.267***	0.363***	0.265***	0.359***
	(0.0225)	(0.0214)	(0.0225)	(0.0214)
Unemployment	-0.105***	-0.0284	-0.106***	-0.0284
	(0.0240)	(0.0241)	(0.0240)	(0.0241)
Log wealthw	-1.65e-09	0.107***	-2.08e-09	0.101***
	(3.28e-09)	(0.0283)	(3.27e-09)	(0.0285)
Log income	0.0931***	0.103***	0.0865***	0.0954***
	(0.0266)	(0.0260)	(0.0271)	(0.0262)
Health status	0.208***	0.200***	0.207***	0.199***
	(0.00903)	(0.00895)	(0.00904)	(0.00895)
HS degree	-0.0243	-0.0179	-0.0237	-0.0207
	(0.0270)	(0.0266)	(0.0269)	(0.0266)
College degree	0.00605	-0.0368	0.00434	-0.0446
	(0.0293)	(0.0289)	(0.0293)	(0.0290)
Religion Catholic	0.00294	0.000664	0.00393	-0.00142
	(0.0291)	(0.0298)	(0.0290)	(0.0296)
Religion Protestant	0.0465*	0.0132	0.0398	0.00897
	(0.0247)	(0.0257)	(0.0247)	(0.0257)
Religion Other	-0.0772**	-0.107***	-0.0772**	-0.109***
	(0.0353)	(0.0357)	(0.0353)	(0.0356)
Constant	2.014***	0.714*	2.107***	0.910**
	(0.291)	(0.388)	(0.298)	(0.399)
Observations	8,063	8,063	8,063	8,063
R-squared	0.132	0.142	0.133	0.142

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 3b: Life satisfaction and charitable giving to religious and secular organizations controlling for religious attendance

	(1)	(3)	(2)	(4)
Give religious	-0.00595		-0.0340	
	(0.0204)		(0.0231)	
Give secular	0.00862		0.0145	
	(0.0192)		(0.0192)	
Log donreligious		0.00121		-0.00317
		(0.00293)		(0.00333)
Religious attendance	0.00118***	0.00108***		
	(0.000313)	(0.000319)		
Log donsecular		0.00425		0.00516*
		(0.00295)		(0.00296)
freqattender			0.0355	0.0238
			(0.146)	(0.146)
weeklyattender			0.120***	0.113***
			(0.0277)	(0.0286)
monthlyattender			0.0336	0.0249
			(0.0286)	(0.0282)
infreqattender			-0.0325	-0.0370
			(0.0237)	(0.0235)
Age	-0.0249***	-0.0252***	-0.0249***	-0.0252***
	(0.00324)	(0.00323)	(0.00324)	(0.00324)
Age squared	0.000268***	0.000269***	0.000266***	0.000267***
	(3.08e-05)	(3.07e-05)	(3.08e-05)	(3.08e-05)
Male	-0.0468***	-0.0464***	-0.0456***	-0.0453***
	(0.0169)	(0.0169)	(0.0169)	(0.0169)
Race black	0.0568*	0.0587*	0.0503	0.0530
	(0.0326)	(0.0326)	(0.0328)	(0.0328)
Race other	0.108**	0.109**	0.104**	0.105**
	(0.0481)	(0.0481)	(0.0481)	(0.0480)
Number of children	0.0281***	0.0275***	0.0270***	0.0265***
	(0.00823)	(0.00822)	(0.00822)	(0.00822)
Married	0.363***	0.360***	0.360***	0.358***
	(0.0215)	(0.0215)	(0.0215)	(0.0215)
Unemployed	-0.0252	-0.0248	-0.0261	-0.0257
	(0.0242)	(0.0242)	(0.0242)	(0.0242)
Log wealthw	0.108***	0.103***	0.110***	0.105***
	(0.0286)	(0.0288)	(0.0286)	(0.0287)
Log income	0.108***	0.1000***	0.111***	0.104***
	(0.0262)	(0.0264)	(0.0262)	(0.0264)
Health status	0.199***	0.198***	0.197***	0.197***
	(0.00900)	(0.00899)	(0.00900)	(0.00900)
Hs degree	-0.0111	-0.0138	-0.0130	-0.0151
	(0.0267)	(0.0267)	(0.0266)	(0.0266)
College degree	-0.0282	-0.0352	-0.0330	-0.0385
	(0.0290)	(0.0291)	(0.0290)	(0.0291)
Religion catholic	0.000900	-0.00143	0.00110	-0.000212
	(0.0299)	(0.0298)	(0.0303)	(0.0303)
Religion protestant	0.0126	0.0104	0.00899	0.00965
	(0.0258)	(0.0258)	(0.0263)	(0.0264)
Religion other	-0.0945***	-0.0966***	-0.0865**	-0.0877**
	(0.0359)	(0.0359)	(0.0361)	(0.0361)
Constant	0.642	0.823**	0.589	0.749*
	(0.391)	(0.402)	(0.391)	(0.402)
Observations	7,962	7,962	7,962	7,962
R-squared	0.144	0.144	0.146	0.146

Table 4: Descriptive Statistics: Religion Affiliated vs Non-religion affiliated

Variable	2009 Religion affiliate obs. = 6799 Mean/Std. Dev.	2011 Religion affiliate obs. = 6938 Mean/Std. Dev.	2009 Non-religion Obs. = 1125 Mean/Std. Dev.	2011 Non-religion Obs. = 1125 Mean/Std. Dev.
SATISFACTION	3.861597	3.92433	3.759494	3.858667
	0.7963179	0.7943575	0.81109	0.7950738
DONATION (DUMMY)	0.7380497	0.7167772	0.5522152	0.5297778
	0.4397281	0.4505962	0.4974629	0.4993345
DONATION (AMOUNT)	3494.974	2496.738	927.4715	388.6907
	21392.88	17488.8	7157.873	2150.454
AGE	46.71775	48.69905	39.2318	40.51378
	15.81619	15.8817	14.47599	13.71219
AGE2	2432.663	2623.789	1748.523	1829.223
	1606.26	1676.199	1348.859	1290.687
GENDER	0.4730107	0.4635342	0.5	0.5617778
	0.4993078	0.4987044	0.5001979	0.4963895
RACEWHITE	0.8942492	0.8927645	0.8955696	0.9057778
	0.3075411	0.3094347	0.3059391	0.2922676
RACE BLACK	0.0751581	0.0755261	0.0704114	0.0657778
	0.2636657	0.2642574	0.2559403	0.2480035
RACE OTHER	0.0305927	0.0317094	0.034019	0.0284444
	0.1722242	0.175238	0.1813497	0.1663128
# OF CHILDREN	0.7829093	0.7819256	0.8655063	0.8906667
	1.139283	1.154933	1.140605	1.155042
MARRIED	0.7815855	0.760738	0.7333861	0.6933333
	0.4132006	0.4266637	0.4423638	0.4613148
UNEMPLOYED	0.1511987	0.1517728	0.1914557	0.1635556
	0.3582688	0.3588264	0.3936026	0.3700363
WEALTH	1426916	1376605	1312283	1234355
	2526293	1295219	2941396	763482.4
INCOME	164940.8	161041.6	147978.5	145766.9
	146527.5	109439.6	85006.53	77618.46
HEALTH	3.622297	3.570049	3.595728	3.539556
	1.011122	1.016829	1.010012	0.9625967
HIGHSCHOOL	0.4450655	0.4437878	0.4216772	0.4168889
	0.4970096	0.496866	0.4940229	0.4932634
COLLEGE	0.4340344	0.4351398	0.3844937	0.3928889
	0.4956659	0.495811	0.4866679	0.4886097
RELIGIONCATHOLIC	0.2345933	0.2330643	0	0
	0.4237755	0.4228133	0	0
RELIGIONPROTESTANT	0.6598029	0.6618622	0	0
	0.4738101	0.4731098	0	0
RELIGIONOTHER	0.1056038	0.1050735	0	0
	0.3073524	0.3066702	0	0
NORELIGION	0	0	1	1
	0	0	0	0

Table 5a: Life satisfaction and religion affiliation

	(1) 2009 Religion affiliation	(2) 2011 Religion affiliation	(3) 2009 No religion	(4) 2011 No religion
Give religious	0.0961***	0.0412**	-0.0460	-0.110
	(0.0198)	(0.0195)	(0.0596)	(0.0685)
Give secular	0.0215	-0.00467	0.0658	0.0361
	(0.0215)	(0.0206)	(0.0499)	(0.0510)
Age	-0.0202***	-0.0250***	-0.00167	-0.0318***
	(0.00344)	(0.00349)	(0.00878)	(0.0100)
Agesquare	0.000244***	0.000266***	6.39e-05	0.000370***
	(3.38e-05)	(3.27e-05)	(9.38e-05)	(0.000107)
Male	-0.0547***	-0.0479***	-0.00971	-0.0835*
	(0.0184)	(0.0182)	(0.0441)	(0.0449)
Race Black	-0.0418	0.0586*	0.0395	0.0507
	(0.0354)	(0.0349)	(0.0868)	(0.0902)
Raceother	0.0536	0.0918*	0.170	0.148
	(0.0528)	(0.0514)	(0.120)	(0.134)
Children	0.0150*	0.0247***	0.0570***	0.0496**
	(0.00886)	(0.00892)	(0.0212)	(0.0209)
Married	0.268***	0.371***	0.261***	0.312***
	(0.0247)	(0.0234)	(0.0556)	(0.0536)
Unemployment	-0.0837***	-0.0156	-0.216***	-0.103
	(0.0263)	(0.0261)	(0.0581)	(0.0632)
Log wealth	6.27e-10	0.108***	-8.70e-09	0.0811
	(3.64e-09)	(0.0299)	(7.60e-09)	(0.0921)
Log income	0.0914***	0.100***	0.0923	0.125
	(0.0284)	(0.0274)	(0.0747)	(0.0834)
Health status	0.215***	0.197***	0.163***	0.212***
	(0.00978)	(0.00960)	(0.0234)	(0.0250)
HS degree	-0.0350	-0.0427	0.0216	0.0835
	(0.0302)	(0.0295)	(0.0612)	(0.0623)
College degree	0.0102	-0.0649**	-0.0314	0.0732
	(0.0326)	(0.0320)	(0.0688)	(0.0699)
Religion protestant	0.0440**	0.108***	1.822**	0.839
	(0.0221)	(0.0333)	(0.814)	(1.236)
Religion other	-0.0814**	0.117***		
	(0.0335)	(0.0300)	1,264	1,125
Constant	2.089***	0.671	0.113	0.167
	(0.314)	(0.412)		
			-0.0460	
			(0.0596)	-0.110
Observations	6,799	6,938	0.0658	(0.0685)
R-squared	0.137	0.139	(0.0499)	0.0361

Table 5b. Life satisfaction and religion affiliation. Log donation amounts

	(1) 2009 Religion affiliation	(2) 2011 Religion affiliation	(3) 2009 No religion
Log donreligious	0.0178***	0.00868***	-0.00188
	(0.00273)	(0.00271)	(0.00920)
Log donsecular	0.000775	0.00209	0.0113
	(0.00317)	(0.00316)	(0.00761)
Age	-0.0194***	-0.0244***	-0.00157
	(0.00343)	(0.00348)	(0.00878)
Age squared	0.000235***	0.000260***	5.90e-05
	(3.38e-05)	(3.26e-05)	(9.39e-05)
Male	-0.0537***	-0.0464**	-0.00883
	(0.0184)	(0.0182)	(0.0441)
Race black	-0.0355	0.0623*	0.0398
	(0.0352)	(0.0347)	(0.0870)
Race other	0.0279	0.0697	0.174
	(0.0525)	(0.0510)	(0.121)
Children	0.0148*	0.0241***	0.0555***
	(0.00885)	(0.00892)	(0.0212)
Married	0.268***	0.368***	0.258***
	(0.0247)	(0.0234)	(0.0556)
unemployed	-0.0852***	-0.0136	-0.217***
	(0.0263)	(0.0261)	(0.0582)
Log wealth	0	0.0971***	-8.91e-09
	(3.64e-09)	(0.0301)	(7.60e-09)
logincome	0.0761***	0.0879***	0.0848
	(0.0289)	(0.0276)	(0.0759)
Health status	0.214***	0.197***	0.163***
	(0.00980)	(0.00959)	(0.0235)
Hs degree	-0.0327	-0.0420	0.0200
	(0.0301)	(0.0295)	(0.0612)
College degree	0.00661	-0.0725**	-0.0380
	(0.0326)	(0.0320)	(0.0690)
Constant	2.282***	1.054**	1.915**
	(0.319)	(0.421)	(0.828)
Observations	6,799	6,938	1,264
R-squared	0.136	0.138	0.113

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 6: OLS for Specific Organization Types of Organizations - Amount

VARIABLES	(1) Life satisfaction 2009	(2) Life satisfaction 2011
logdonreligious	0.0137***	0.00396
	(0.00264)	(0.00265)
logdoncombo	0.0102***	0.00698**
	(0.00346)	(0.00339)
logdonneedy	-0.000556	0.00517
	(0.00317)	(0.00342)
logdonhealth	0.00525	0.00165
	(0.00405)	(0.00420)
logdonedu	0.00996**	-0.00214
	(0.00472)	(0.00461)
logdonyouth	0.000980	0.0115**
	(0.00522)	(0.00563)
logdoncultural	-0.0156**	-0.00487
	(0.00666)	(0.00617)
logdoncommun	0.00335	0.0176**
	(0.00773)	(0.00865)
logdonenv	-0.0103*	-0.0158**
	(0.00625)	(0.00616)
logdonintp	0.000819	0.00217
	(0.00699)	(0.00630)
logdonother	-0.0139***	-0.00665
	(0.00515)	(0.00560)
Age	-0.0175***	-0.0255***
	(0.00317)	(0.00322)
agesquare	0.000219***	0.000273***
	(3.16e-05)	(3.06e-05)
Male	-0.0459***	-0.0527***
	(0.0169)	(0.0168)
Race black	-0.0329	0.0490
	(0.0327)	(0.0325)
Race other	0.0680	0.106**
	(0.0483)	(0.0478)
Children	0.0199**	0.0265***
	(0.00816)	(0.00821)
Married	0.264***	0.357***
	(0.0225)	(0.0214)
Unemployed	-0.104***	-0.0274
	(0.0240)	(0.0241)
Log wealth	-1.89e-09	0.101***
	(3.27e-09)	(0.0291)
Log income	0.0814***	0.0901***
	(0.0274)	(0.0263)
Health status	0.206***	0.199***
	(0.00903)	(0.00894)
Hs degree	-0.0250	-0.0212
	(0.0269)	(0.0266)
College degree	0.00525	-0.0431
	(0.0293)	(0.0289)
Religion catholic	-0.00764	-0.00739
	(0.0290)	(0.0298)
Religion protestant	0.0337	0.00580
	(0.0248)	(0.0258)
Religion other	-0.0781**	-0.112***
	(0.0353)	(0.0356)
Constant	2.183***	0.980**
	(0.303)	(0.413)
Observations	8,063	8,063
R-squared	0.136	0.145

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 7: IV Regression

Variable	Inst. Validity (DUMMY)	IV (DUMMY)	Inst. Val. (AMOUNT)	IV (AMOUNT)
DONATION0307 (DUMMY)	0.253***	0.409***		
	(0.0115)	(0.0938)		
LOG-DONATION0307 (AMOUNT)			0.0348***	0.0402***
			(0.00975)	(0.00730)
HEALTH STATUS	0.0178***	0.202***	0.175***	0.200***
	(0.00473)	(0.00931)	(0.0331)	(0.00925)
MARRIED	0.0785***	0.282***	0.595***	0.280***
	(0.0115)	(0.0225)	(0.0803)	(0.0223)
MALE	-0.0142	-0.0323*	-0.0943	-0.0380**
	(0.0887)	(0.0177)	(0.0619)	(0.0173)
UNEMPLOYMENT	-0.0208***	-0.101***	-0.0816	-0.106***
	(0.0125)	(0.0244)	(0.0874)	(0.0242)
AGE	-0.00527***	-0.0377***	-0.0756***	-0.0307***
	(0.00176)	(0.00579)	(0.0121)	(0.00409)
AGE2	8.72e-05***	0.000362***	0.000947***	0.000300***
	(1.70e-05)	(4.80e-05)	(0.000117)	(3.61e-05)
LOG (INCOME)	0.170**	0.0201	1.470***	0.0111
	(0.0147)	(0.0309)	(0.103)	(0.0304)
LOG (WEALTH)	0.0208	0.0779***	0.435***	0.0452
	(0.0146)	(0.0284)	(0.102)	(0.0290)
HIGHSCHOOL	0.104***	-0.0779**	0.451***	-0.0552**
	(0.0141)	(0.0286)	(0.0984)	(0.0278)
COLLEGE	0.224***	-0.0312	1.324***	-0.0380
	(0.0152)	(0.0316)	(0.106)	(0.0310)
RACEBLACK	-0.0683***	-0.00423	-0.540***	-0.0164
	(0.0171)	(0.0338)	(0.119)	(0.0330)
RACEOTHER	-0.00714	0.102**	-0.0518	0.0909*
	(0.0253)	(0.0496)	(0.177)	(0.0489)
REL-CATHOLIC	0.0739***	0.00680	0.365***	0.00898
	(0.0151)	(0.0296)	(0.105)	(0.0293)
REL-PROTESTANT	0.0804***	0.0440*	0.645***	0.0372
	(0.0127)	(0.0225)	(0.0890)	(0.0253)
REL-OTHER	0.0678***	-0.0704**	0.474***	-0.0756**
	(0.0184)	(0.0358)	(0.129)	(0.0356)
Constant	-2.051***	2.209***	-21.34***	2.697***
	(0.200)	(0.459)	(1.431)	(0.478)
Observations	8,063	8,063	8,063	8,063
R-squared	0.265	0.101	0.403	0.112

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 8. Fixed effects

Variable	give	amount	give	amount
donation religious	0.003	0.002	0	0.0017
	(0.02)	(0.00)	(0.02)	(0.00)
donation secular*	0.003	0.0026	0.04**	0.008***
	(0.02)	(0.00)	(0.02)	(0.00)
Health status	0.095***	0.0946***	0.095***	0.0944***
	(0.01)	(0.01)	(0.01)	(0.01)
Married	0.251***	0.2487***	0.247***	0.2465***
	(0.03)	(0.03)	(0.03)	(0.03)
Children	0.052***	0.0529***	0.054***	0.0539***
	(0.02)	(0.02)	(0.02)	(0.02)
Log income	-0.018	-0.02	-0.02	-0.019
	(0.03)	(0.03)	(0.03)	(0.03)
unemployed	0.066***	-0.066***	-0.07***	-0.066***
	(0.03)	(0.03)	(0.03)	(0.03)