MA Paper

Philanthropic differences between Natural Disaster donors and Donors to Other Causes

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Abstract

Few research papers look into giving behaviour towards natural disasters and little research have been published on the varying effects of solicitation requests on philanthropy. This study combines the two ideas to distinguish if people who give to natural disasters give differently than people who give to other types for charities where both the decision to donate and the amount given is investigated. It uses the Canadian Survey of Giving Volunteering and Participating (2010) which asks individuals if they gave in response to a natural disaster. Only donors are included in the analysis. This study takes into account different types solicitation requests as well as socio-demographic characteristics to see how much they affect the decision to give and the amount given to natural disaster donors and those that give to other causes.

1. Introduction

Natural disasters cause widespread damage and affect many victims around the world. Such tragedies leave charities reeling to find donors to help those affected. Charities through many different mechanisms try to obtain and increase their donations. There are plenty of studies that look into who donates and how to induce people to give. However, there is evidence that donors to specific types of causes may differ from donors in general, for instance a different set of characteristics influences donors of environmental causes (Israel, 2007) or international causes (Rajan et al., 2009; Micklewright & Schnepf, 2009).

Natural disasters often are catastrophic and typically occur without warning. To help victims immediately money must be collected as soon as possible. Not all charitable activity is equally time-sensitive, for instance, collections for the poor are ongoing. One question of interest to this paper is the extent to which people who give to natural disasters differ in comparison to other donors.

To connect people to charities, organizations use varying fundraising methods. Such methods include solicitation requests. Solicitations may not be equally effective in increasing giving behaviour among different charities. People may give in different fashions depending on the reason they are asked to give. For instance, natural disasters may get a lot of media attention and increased giving due to it (Brown et al., 2008; Yoruk, 2012a).. Other types of charities simply may not have the same type of impact through a media outlet or simply may be targeting the wrong donors. Andreoni and Payne (2003) develop a model donations based on the power of asking. To get donations, most people need to be asked, but solicitation methods are not made equal and some may be more effective than others. For instance, directly speaking to a solicitor

may have greater influence in a person's decision to give by causing the donor to evoke higher levels of empathy (Andreoni and Rao, 2011).

Few research papers look into giving behaviour towards natural disasters and little research have been published on the varying effects of solicitation requests on philanthropy. This study combines the two ideas to distinguish if people who give to natural disasters give differently than people who give to other types for charities where both the decision to donate and the amount given is investigated. Only donors are included in the analysis. This study takes into account different types solicitation requests as well as socio-demographic characteristics to see how much they affect the decision to give and the amount given to natural disaster donors and those that give to other causes.

2. Literature Review

2.1 Donations to Natural disasters

A great deal of research has been done on giving behaviour, although very little focuses on giving to natural disasters. The few studies involving natural disasters do not compare solicitation methods (Brown et al., 2008; Brown et al., 2012; etc.). However, some studies on this topic (Eckel et al., 2007) look into several interesting behavioural determinants affecting donations to these types of charities. Other studies, like List and Lucking-Reiley (2002), do look into factors that could enhance giving to disasters.

Natural disasters such as Hurricane Katrina typically wreak havoc, causing damage and personal losses in the millions even billions of dollars. Victims of such tragedies are often helped by charitable organizations. After Katrina, some researchers looked into behavioural characteristics of these donors. One such study by Fong and Luttmer (2009) examines giving to

victims of the hurricane, particularly investigating whether a person's giving behaviour changes based on the race the subjected potential donor sees oneself as. To perform their study, a picture is shown to survey recipients before they make charitable donations. As a control for a portion of the individuals surveyed, they mask the race of the disaster victims in the pictures. The results show that the probability of giving is unaffected but they do observe an increase in the amount given by a donor who can see they are giving to low income people affected by hurricane Katrina. However, the donor gave more when he/she saw him\herself as the same race as the natural disaster victim shown to them in a picture. When the actual race of the donor is controlled for, changes to the amount donated show no statistically significant change. Perceived race and income appear to be significant factors, however, only data for household income is available and will be used in my analysis.

Another study by Eckel et al. (2007) looked at giving to Hurricane Katrina victims but investigated less common behavioural factors of giving along with other observational characteristics. They focus on measuring how awareness, perception, psychological aspects, fixed donation amounts and subsidies have on the decision to donate to individuals affected by Hurricane Katrina. To measure awareness they use 2 separate groups, one being prepped with knowledge of the disaster and the other not being given information on the disaster. In addition, this study is performed in two different states, Texas and Minnesota. To measure the psychological portion they include measures to assess distress and empathy. For perception, they gauge a person's view of the victim.

To estimate the effect of amounts and subsidies, they use different fixed amounts to be given to charity as well as different levels of subsidies for each donation amount. Those people informed about the Katrina hurricane prior to their donation were less likely to give, particularly

those in Texas who were much closer to the Katrina disaster. The researchers speculate that an excess bombardment of information may actually diminish ones will to donate. In both states empathy is shown to have a positive statistically significant impact on the likelihood of donating, on the other hand, distress had a small negative effect. People who perceived victims as needy were more likely to donate. Finally with larger fixed donation amounts people were less likely to give but as subsidy rates increased the amount donated rose as well as the probability of donating.

Natural disasters are often accompanied by governments using tax payer money to help pay for tragedies. A study looks into whether people prefer being taxed more for such a cause or prefer making more donations (Kim et al., 2010). They use data on from a survey performed by CBS News and the New York Times from September 9th to the 13th in the year 2005 as well as data from a Pew and PSRA survey that was carried out on September 6th and 7th year???. Can we learn more about the data or the question? With their results they cannot tell if people prefer to pay for disasters through more government taxes or privately through donations to charities.

Natural disasters, unlike other sorts of targets for philanthropic giving, are usually highly publicized through several media outlets, in a concentrated period of time. Media can prime an individual about the horrors felt by disaster victims and may also exacerbate the emotions felt by these individuals, thus possibly contributing to the higher likelihood of donating and larger donations. Higher levels of empathy may also be expected from people as more people within a community and may feel obliged to give. At the same time, not all donors are as susceptible and it is important to look at and verify the determinants that embody this type of individual.

The 2004 Indian Ocean tsunami was one the worst disasters in recent times and received much attention from media around the world. The effects of media on giving to this natural disaster were explored by Brown et al. (2008) who used data from five U.S charity agencies that aided victims from the 2004 tsunami. Media data from ABC, CBS and NBC evening news programs as well as media coverage from major newspapers was used in their analysis. To control for possible omitted variable bias caused by not including other television media and newspapers covering the disaster, they instrument media coverage for daily reports of the number military deaths in Iraq. With OLS regression they find that every additional minute of evening news coverage on the tsunami disaster increased donations by 20.8% per day and every extra word of tsunami coverage increased donations by 0.029%. Regressions using reports of the number of Iraq deaths as an instrument for media coverage showed smaller but still statistically significant positive effects. Donation amounts also decreased as time elapsed farther from the disaster.

Media coverage, however, has vastly changed over the years. One recent study by Lobb et al. (2012) look into media coverage and its effect on giving to natural disaster charities but not only do they include traditional media but also new age streams such as twitter. Focusing on the Haiti Earthquake disaster, media coverage up to 4 weeks after its occurrence was used. Donations sharply increase in the beginning week of media coverage but afterwards increase there is sudden drop and then continues dropping for the next 3 weeks. Newer media such as Twitter showed quicker peaks in media coverage but a quicker drop in media coverage thereafter.

Donations are commonly given in a planned manner in the U.S. (Wright, 2002). When a natural disaster occurs people are asked to make unexpected donations. How unexpected donations to natural disasters effect giving to other types of charities (planned donations) is investigated by Brown et al. (2012), particularly examining contributions by American individuals to victims of the 2004 Indian Ocean tsunami. They use the Panel Study of Income Dynamics (PSID) for the year 2005 for their research which captures giving in 2004. Interestingly, they find that when a natural disaster strikes, there is a positive effect on donations to charities of other causes. Furthermore, they find no evidence that future donations are being switched from other causes to natural disasters. They do find differences in the estimated determinants of giving between the charitable donors of unplanned and planned fundraisers. For instance, the researchers find that factors such as price of donating and wealth have no effect on giving to natural disasters (unplanned), where higher price of giving has a statistically significant negative impact on giving to other causes and owning a home has a statistically positive impact.

Yoruk (2012a) also looks at the role of media by examining the effect on charitable donations of the publicized "Give Five" event in which individuals are urged to "give 5 percent of their income and volunteer 5 hours per week." (Yoruk, pg. 813) He finds that this campaign had a positive and significant impact on volunteering as there was an increase of just under half an hour of volunteering by individuals, but its effect on the amount of charitable donations was insignificant as shown by propensity score matching estimators.

2.2 Fundraising methods

There are several solicitation methods used to encourage individuals to give money to charities. Some are more personal than others. Solicitation methods that require requests through

face to face interaction may make it more difficult for some individuals to resist requests for money, as some may feel compelled to donate because they believe most of society or at least their community would expect them to. It is easier to say no if asked in a less personal method, like by mail or electronic requests.

Influencing donors to give has been a subject pondered by many researchers. Much research on encouraging donors is based on the notion of "impure altruism" formally modeled by Andreoni (1990), whereby donors experience a "warm glow" as a result of giving. However these studies do not deal with direct solicitations methods. Solicitation methods themselves are often not the subject of research. Studies that look into charitable donations often use just one solicitation as part of their underlying investigation. For instance, Landry et al. (2006) focuses on using door to door requests to see how donations differ in 4 different procedures: using a voluntary contribution mechanism (VCM), a VCM with seed money, a lottery with one prize and a lottery with multiple prizes. They find that the lotteries made 50% more in donations than the VCM procedures. Also lotteries had twice the amount of donors to the lottery based charities than the VCM charities. Using mail soliciting, List and Lucking-Reiley (2002) look how at seed money being present before soliciting and offers of refunds if goals were not reached effect on donations and amount of donations. They find that the higher the seed money in the charity the more likely a resident was to donate and more likely to donate more. Refunds however did not have the same effect, as the probability of donating did not increase individuals were but were more likely to donate larger amounts.

There are several different types of solicitation methods, some more personal than others. Yoruk (2012b) tries to determine how each method of solicitation affects a person's decision to give and his/her amount, using data from the U.S. household survey on charitable donations that

is done twice yearly for the years 1988 to 1999. He uses OLS and propensity score matching estimators and finds that on average people giving without being solicited give the largest amounts. Also more personable solicitation methods increased the likelihood of donations as well as increased the size of donations. Higher income individuals are more likely to give if requested via media, mail, telephone and in-person solicitations. High income individuals are also more likely to give to charities that they have volunteered for in the past. Black and Hispanic people are more responsive to all solicitations whereas the higher the education the less likely one is to respond to all types of requests. The likelihood of giving is only increases for individuals when asked at work.

Solicitation is not always beneficial.. For instance, Diepen et al. (2009) investigate if large volumes of mail solicitation by charities can have detrimental impact on giving in the Netherlands. They find that people do get annoyed by charities especially if when individuals get more mail solicitation. Despite being bothered, mail solicitation had no significant impact on the probability of giving of an individual. Mail soliciting may also be affected by people shielding themselves from mail soliciting, and especially from charitable organizations as Diamond and Noble (2001) indicate in their research. They find that people with large amounts of charitable solicitation do start to show resistance against soliciting. Due to these excessive solicitation requests people are found to be more likely to not take mail solicitation as seriously by not looking at the requests in an in-depth manner.

Two studies of particular interest to this paper, one by Meer and Rosen (2011) and the other by Wiepking (2010), look into comparing personal to non-personal donations requests. Meer and Rosen (2011) try to find out if personal solicitation requests by telephone affect giving behaviour after previous unsuccessful non-personal requests by mail to university alumni.

Volunteers are used to contact alumni and often do not finish solicitation lists that are in alphabetical order, hence the authors look at the effect of a surname's starting letter on giving. They find that if an alumni's surname beginning with an A to F is 1.2 percentage points more likely to donate than someone with a surname starting letter S to Z, however, they find that the amount given is not affected by surname starting letter. Wiepking (2010) looks into two solicitation methods, door-to-door canvassing and requests by mail, to see if either increases giving and to find if there are characteristics that define a donor to a particular type of organization in the Netherlands. Both solicitation methods are found to increase the likelihood of donating to charity. Interestingly, she finds that not only are there differences in specific individual characteristics donating to certain types of organizations but also that certain people respond differently to the two soliciting types. People who have confidence in a particular charity are also more likely to donate more.

3. Data

This research uses the 2010 survey of Canadian Surveys of Giving, Volunteering and Participating (CSGVP) public, cross-sectional, dataset that surveys individuals 15 years and older who live in Canada. This survey collects information on a whole array of information involving generosity of individuals. It also includes social-economic and socio-demographic characteristics of people within the last year. 14,059 observations were recorded.

The CSGVP dataset is well suited for research into the differences in the ways people give to natural disasters and other causes. The 2010 survey asks individuals whether they contributed as a result of a natural disaster; it also records which solicitation method was used for each donation an individual made. Without such knowledge we would not be able to know how

each method is affecting giving to both subgroups those being individuals that donate to natural disasters and those that do not.

Since I am comparing methods of donation between individuals who give to natural disasters as well as other causes (our "natural disaster" donors) with those who give only to other causes, non-donors in the sample are dropped. Also, individuals that responded "I don't know" to survey questions were dropped from the sample because these individuals represent a very small portion of the survey respondents and also these answers are not particularly useful for analysis. For certain variables in the dataset, individuals had not given answers to the survey questions. Responses are missing for marital status, level of health, level of satisfaction, whether the individual is in school, level of education, employment status, religiosity, place of birth, length of time in community and language spoken at home. The largest portions of data that are missing are for level of education and number of years lived in a community where ten percent are missing for both groups. For the variables dealing with place of birth, religiosity, and language spoken at home; ten percent of answers are missing for those that give to disasters and nine percent is missing for donors that exclude disaster donations. For both groups nine percent of people did not state how many hours worked or if they are a student. Also, for both groups eight percent of people didn't provide an employment status, five percent omitted health status and less than one percent had not indicated their marriage status. These observations are not discarded; instead dummy variables are created containing the unstated answers for each category to see if the variables act differently than the others in their respective category. It is important to note that there are no significant differences in the variables representing the missing data between the two subsamples. Thus, the final sample size includes 12,482 observations.

Table 2 shows the means of the average values of variables used in the empirical analysis. The means are given for those who give to natural disasters and those that give to causes other than natural disasters. Means of variables are also given for samples that are split by religion and whether they are born in Canada. Table 2 also shows the percentages of donors that give by each method of solicitation. The percentages of giving by type of donation request are presented for both individuals that donate to natural disasters and those that forego such charities. People that donate to natural disasters do so at a higher percent in every method. However, there are some methods that are used much more commonly than others by natural disaster donors

From table 2 we see that 33.7 percent of donors donate to natural disasters and other causes. There is a more pronounced difference in the religious and Canadian born split samples whereby 48.4 percent and 43.4 percent of donors make up the portion of natural disaster donors, respectively. We also see that donors to natural disasters give 672 dollars on average, much higher than the other donor group where an average of 331 dollars is given. Natural disaster donors give more than donors that exclude natural disaster donations in all divided samples. Overall the largest amounts for both types of donors are given by religious people where natural disaster donors give on average 606 dollars more and donors of other causes typically give 404 dollars more than the whole sample. The mean amount is the lowest for non-religious donors where natural disaster donors give 226 dollars less and the other type of donor gives 75 dollars. Canadian donors and foreign donors more closely resemble the average of the whole sample.

In the whole sample the largest portion of natural disaster donors give through church where 43.9 percent of donors give in this manner; those that only give to other causes are only represented by 31 percent in the sample. In the religious sample this figure is predictably much

higher and much lower among the non-religious sample of donors. Mail donations also have one of the largest discrepancies as well. Natural disaster donors also give a lot more by mail where 34.9 percent of natural disaster givers donate by this method, 10.6 percentage points higher than the other type. A large difference is experienced throughout all subsamples. Giving is also much higher for natural disaster donors through television, radio or by a telethon requests as 15.6 percent of individuals by this mode, 9.5 percentage points more than those that only give to other causes. One of the solicitation methods gathering donations has a larger portion, street canvassing also differ by a large margin between the two types of donors; whereby 43.2 percent of natural disasters donate in this manner and 35.4 percent of donors do not. Street canvassing makes up a substantial proportion through all split samples and the large difference between natural disaster donors and donors giving to other causes also remains within the divided groups. However, there are some methods that do not show much disparity, for instance, donations by natural disaster donors through telephone requests make up 8.1 percent of natural disaster donors which is only 2.5 percentage points more than the other group and this share and difference between donors types is seen among all the other separated groups.

Women are more representative among natural disasters donors, making up 56 percent of the subsample, 6.6 percentage points higher than females only giving to other causes. In the religious segregation there is higher percent of males that give but in the other samples the portions do not differ much than then the entire sample. For the full sample of other cause donors, 75.1 percent are native born Canadians and 15.2 percent are foreign born; this is fairly different among than the sample of people that give to natural disasters where 67.9 are born in Canada and 22.8 percent are foreign born. For religious and non-religious a Canadian born majority still exists however there is a particularly much larger percentage of foreign born among

religious people and much larger amount of Canadian born among the non-religious for both types of donors. The bulk of donors in the full sample are English speaking encompassing 64.3 percent of people that forego natural disaster giving and 59 percent that do not. For foreigners, lesser values are presented and for the rest of the parsed samples greater values are exhibited when compared to the entire sample for both donor types. The portion of French speakers does not differ much between the two varieties of donors but this is not the case for the divided samples. There are considerably more natural disaster people donating than other causes and in higher proportion (for both) than the full sample for both non-religious and Canadian born. There are lesser proportions for religious and foreign born. Individuals that prefer using foreign languages (more specifically languages other than English and French) make up 10 percent donors for the natural disaster subsample, four percentage points higher than the other group. As expected these values are much higher for the foreign born but also noticeably higher among the religious group.

The most distinct differences between the two groups involve religiosity, level of education, and volunteering. Donors to natural disasters appear to be much more religious constituting 23.2 percent of the subsample, 10.6 percentage points higher than donors of the other group. The majority of donors are religious. All categories of education had substantially different means between the two donor types. University educated individuals take up 30.4 percent of the disaster donor sample which is 9.7 percentage points higher than the other donor. A large difference is consistently seen across all samples. However, for lower levels education the opposite trend is seen; whereby high school and up to post-secondary diploma show a larger proportion of donors that do not contribute to natural disasters comprising 28 and 41.6 percent respectively, five and 5.3 percent higher than the natural disaster donors respectively. For high

school graduates a large difference is not seen among religious and foreign born but similar sized differences are presented for all divided groups with post-secondary school education. Volunteering means also vary noticeably as there are 56.4 percent people that give to natural disasters, nine percentage points higher than the other donors that exclude donating to that cause. Large volunteering differences persist across the parsed samples; however religious donors tend to volunteer much more on average than the entire sample.

There are some small but notable differences in individual unemployment and household income. A small share of donors in both groups is unemployed as 2.3 percent contribute to disaster relief compared to one percent in the other subsample. The household salary variable representing people making above 100,000 dollars constitutes the largest proportion for both groups of donors, however there is still a difference between the groups since there are 35.2 percent natural disaster donors with a salary above 100,000 dollars compared to 31 percent in the other group. Another difference in this category is the mean of the variable denoting those households with income less than 20,000 dollars: 5.6 percent of individuals in these households give to natural disasters which is 1.7 percentage points lower than donors of the other group. Statistics among the parsed samples are mostly similar except in the religious group where the income group of 60,000 dollars to 100,000 dollars shows that a noticeably larger fraction give to natural disasters than to other causes where in the whole sample the difference is very small and larger among other causes. Also religious group has the smallest portion of households with income above 100,000 dollars that give in this group; the difference between natural disasters and other donors is also smaller in this salary category.

There are other small differences in some of the provincial, household size, age of children and the level of satisfaction variables. Most provincial variables do not differ much but

the proportion of natural disaster donors that reside in Saskatchewan and Alberta make up 3.5 and 11.2 percent of individuals, for other cause donors two percent and 9.1 percent of people that do, respectively. The sample of donors encompassing only foreign born differs greatly from the main sample. Only Manitoba, Saskatchewan, and Manitoba are similar to the full sample; Ontario and British Columbia have a greater share of donors of both types, while Quebec and the Maritime Provinces have a smaller share. The variable indicating if there are children under the age of five present shows 15.3 percent of individuals do not give to natural disasters compared to 13.1 percent that do. Similar means are obtained for the other split samples. For household size only living by oneself has any meaningful difference between the two donor types where there 11.1 percent single donors and only 9.7 percent making up the natural disaster donor sample. In the other sample living as a single individual has fairly consistent means across the samples.

Living in a household of two people comprises he largest share of individuals for all samples and both kinds of donors. Dissatisfaction with life also seems to show deviations among the two donor types, whereby 3.5 percent of individuals who are dissatisfied are natural disaster donors, and 4.6 percent represent the other donors in the main sample. This difference is not so much seen for foreign born: there are slightly more dissatisfied natural disaster donors than the other type.

In several categories there are no notable differences between the two subsamples such as age, marital status, health and number of years spent in a community. Respondents between the ages of 45 and 54 represent the largest age category among the two groups, 21 percent for disaster donors and 20 percent for the other group of donors. However, in the religious sample, people in the age group of 65 plus represent the largest category and for foreign sample it is the 35 to 44 age category. The age covering the smallest fraction in the main sample are people

between 15 and 24 age group making up 13 percent of the natural disaster donor sample and 14.3 percent of the other donors. A majority of donors of both types in all subsamples are married and consider themselves to be in good, very good or excellent health. Also, most donors have lived in their community for over 10 years.

4. Empirical Methodology

This research paper aims to investigate the decision to give to natural disasters versus other philanthropic causes, and the amount given to these two groups of causes. To estimate a person's decision to give to natural disaster or to other charities, a probit model can be used.[1] The dependent variable takes on the value "1" if the individual is a "natural disaster" giver, and "0", if he or she gives only to other charities. All of the independent variables are dummy variables where the values are "1" if the variable is present "0" if not. The estimated marginal effects in such a case would give the effects on the probability of donating to a natural disaster of one variable changing from zero to one.

An OLS model estimates the amount given. The model to estimate both the decision and amount given, is similar to the one used by Yoruk (2012b) and is shown below.

$$Give_{ij} = M_i'\alpha' + X_i'\gamma + \varepsilon_i \qquad (1)$$

where $Give_{ij}$ represents either 1) the probability of giving where it is a dummy variable representing one if the individual i gives to a natural disaster charities, and zero if he gives to causes other than natural disasters; and 2) it represents the natural logarithms of the amount donated to a natural disaster event or other cause (indexed by j).

[1] The relationship between variables can be non-linear, whereby simple OLS regressions will not give correct estimates of the dummy variables, in which case probit models will give better estimates. .(http://www3.nd.edu/~rwilliam/stats3/Margins02.pdf)

The vector, M_i', represents methods of solicitation used that successfully persuades individual i to donate to one of the two subgroups of donors and X_i' which represents a vector of observable characteristics. The fundraising methods vector includes mail requests, paid entrance to charitable event, in memoriam, work requests, door to door canvassing, street canvassing, telephone requests, asked by church, TV/radio/telethon request, giving on their own, sponsoring someone in a charitable event and/or requested in another way not specified in the survey. The other influencing determinants in X_i' control individual and socio-demographic characteristics which includes gender, age, marital status, age of children, household size, health, volunteer status, satisfaction in life, student status, level of education, employment status, religiosity, born in Canada status, years living in community, language spoken at home, income and province of residence. Seems to me that you need to be describing the variables in Xi and in Mi separately, and not weaving back and forth between the two….

The socio-demographic characteristics mentioned have all been shown to have an effect on giving behaviour. Studies have shown that females are more likely to donate than males, however, males give in larger amounts on average (Mesch et al., 2006; Andreoni et al., 2003) With increased age, there is a higher probability of donating. The likelihood of donating (Rajan et al., 2009; Devlin & Apinunmahakul, 2004) and amounts given to charity increase with larger incomes (Devlin & Apinunmahakul, 2008) and more religious people (Devlin & Apinunmahakul, 2004; Enter other studies). Moreover, educated people not only decide to give more often but give in larger amounts (Rajan et al., 2009), this trend is also similar among individuals that volunteer (Gittell & Tibaldi, 2006). There is a higher probability of donation among married people but widowed individuals donated the most on average (Rajan et al., 2009;

Apinunmahakul & Devlin, 2004). In this paper the widowed are grouped with single and divorced individuals.

Rajan et al. (2009) finds that individuals born outside of Canada are more likely to donate to international charities. This is of particular importance in Canada because not only is there a large portion of Canadians that are foreign born but most of the recent large scale natural disasters have not occurred in Canada.

I decided to control for household size since a larger household can restrict individuals from donating or making larger contributions (Israel, 2007). Satisfaction of life is also tested in this paper since Rajan et al. (2009) also uses it as a control variable and finds that it has a positive and significant effect on the probability of donating to domestic charities. I suspect employed people have more disposable income than people who are unemployed or not in the labour force, however the latter may be targeted more often by door-to-door canvassing (Wiepking, 2010).

Hours worked can also have an effect on donations as more hours may increase income however spending less time at home may be a counter effect as these individuals may be less likely to be asked to give by such solicitation methods as door to door canvassing. There are two variables that indicate whether an individual has children: one identifies whether children under five are present and the other is an indicator for children between the ages of six and 17. An individual with a child of age five and under may have less time for him/herself as well as smaller income as they may be less set in their career, thus affecting giving negatively. Having children ages six to 17 present may result in individuals having more time to oneself and more income as a parent may either go back to school or stay at home while their children go to school which may increase donations. Years spent in a community may increase donations as people

can feel social pressure to give from peers in the neighbourhood, hence this variable is included in the regression. People whose preferred language is English may have different giving behaviour than those who speak French or another foreign language since. English and French speakers may be more likely to donate to domestic causes than those speaking foreign languages however French speakers may be more likely to donate to causes that support francophone culture as most French speakers in Canada reside in Quebec.

5. Results

The main results for this paper are provided in two tables. Table 3 gives the marginal effects associated with probit estimations of the likelihood that a giver will give in response to a natural disaster. The sample is also split according to whether or not the individual is religious, and whether or not he or she is Canadian born. Table 4 presents the results that look at the amount donated by individuals who give to natural disasters (as well as other causes) and the amount given by individuals to causes other than natural disasters. The sample is also parsed by religion and Canadian born or not.

5.1 Probit Model of Decision to Give to Natural Disasters or to Give to Other Than Natural Disasters

Table 3 gives the marginal effects of the likelihood of donating to natural disasters in a probit model. The table includes the predicted probability of the reference individual, which represents the omitted variables in regression. The reference individual for the whole sample is a non-religious, Canadian born, English speaking, employed, high school graduate, single male in excellent health, living in Ontario in the same community for over 10 years, aged 65 and over, having no children, living alone, dissatisfied with life and with a salary over 100,000 dollars. The estimated model is weighted with probability weights, and estimated using robust standard

errors. The predicted probabilities of the reference individual donating to natural disasters are 32.5 percent for the entire sample, 48.1 percent for the religious sample, 29.3 percent for the non-religious sample, 30.1 percent, for Canadian born individuals and 42.9 percent for foreign born individuals. In these regressions the probability of donating is relatively high as the lowest probability is 29.3 percent thus even a small marginal effect will have a large economic impact.

For solicitation methods the marginal effects are all positive. The methods that are statistically significant at the one percent level are for requests by mail, buying into a charity event, asked at work, street soliciting, at church, by telethon (or radio-a–thon), by some unspecified method and giving purely by your own hand. Marginal effects significant at the five percent level are giving in memoriam of someone and by phone. Door to door soliciting and sponsoring someone for charity showed no statistical significance. Telethon had the strongest marginal effect where donating by this method increased the probability of donating by 23.8 points.

Similar to the full sample, the split sample estimates are all positive, however not the same solicitation methods hold the same significance. Solicitations by mail, street, by telethon or radio-a-thon, and by donating by oneself are positive and highly statistically significant. Television had the largest marginal effect for all except the religious sample where donating by your own had the greatest influence, increasing the decision to donate by 15.6 points.

The non-religious sample most closely resembles the main sample. The only notable difference is that sponsoring someone for charity shows significance for this group. The Canadian born sample has all solicitation variables significant. The two other samples tested differ much more than the main sample. For the foreign born sample, giving in memoriam, by

phone and in church lose statistical significance. The estimate regarding the probability of giving by church is puzzling since a high percentage of foreigners are religious. Even fewer variables have significant marginal effects for the religious group. Marginal effects for buying in to a charity event, being asked at work, phone requests, and being asked by an unspecified method lose statistical significance.

Some of the observational characteristics are similar to previous literature. Females are 0.045/0.325 or 14 percent more likely to donate than is the reference individual and this statistically significant at the one percent level. Comparing this to the other samples, this result is only significant for the non-religious and the Canadian born sample estimates. Mesch et al. (2006) find that single women are more likely to give than single men, thus my result is consistent with previous literature.

The full sample has only a few meaningful results with respect to the impact of provincial variables. The Newfoundland provincial effect shows a five percent level statistical significance of a 5.2 point increase in the probability that the reference person gives (about 14%). If the person lived in Saskatchewan, his percentage would fall significantly by 0.11/0.325 representing a 34 percent decrease in the decision to give and at a one percent significance level. PEI decreases the probability to donate by 12 percent and has significance of at only a 10 percent level.

There are some similarities between the whole sample and the segregated groups. The negative and significant marginal effects for Newfoundland persist in the non-religious and the Canadian born sample. The negative marginal effect for Saskatchewan is significant and remains sizable in all but for the foreigner sample, where no significance is registered. Marginal

effects for PEI are statistically significant except for the foreign-born sample. Even though marginal effects for Quebec are not significant for the main sample, they are for religious, foreign born and Canadian born segregated groups; where they show large increases of 15.1 points and 15.6 points and a decrease of 7 points in the likelihood of donating, respectively.

There are several variables that are strongly statistically significant. Volunteering within the last year showed a positive marginal effect of 0.039 (12 percent) increase in the decision to donate. This positive and statistical significant effect is only seen in the non-religious and foreign born sample estimates. Previous research done by Gittell and Tibaldi (2006) provide similar conclusions to my research regarding the effects of volunteering.

Religiosity compared to previous literature continues to increase the likelihood of giving for all three regressions estimates. For the main sample being religious increases the chance of donating by 12.4 points (38 percent) and the result is statistically significant at the one percent significance level. This strong effect persists in all the samples it was tested in, the Canadian born and foreign born sample estimates. This effect is seen throughout much literature (e.g., Devlin & Apinunmahakul, 2004).

Education does not exactly follow along with literature. Previous literature indicates that higher education increases the likelihood of giving (Rajan et al., 2009). There does not seem to be a positive statistical significant increase for every higher education category in the non-split sample. People who have some post-secondary or have a diploma from a post-secondary institution do not have any significant impact on the decision to donate. When tested with only religious people there is actually a negative effect and is statistically significant at the ten percent level. However for individuals with at least a university degree a sizable 8.1 point increase in

probability is observed. However this positive and statistically significant influence is seen only two of the other samples tested; the non-religious and Canadian born.

Individuals who prefer to speak a foreign language have a large 9.9 point increase in the likelihood of giving and this result is statistically significant at the one percent level. Among the non-religious and foreign born groups, the results are also statistically significant at the one percent level. The other samples show no statistical significance. French speakers do not seem to have any statistically significant effect for the main sample, however, for the solely religious group, there is a strong positive 22.7 point increase in probability and it is significant at the one percent level. Being foreign born also positively increases the probability of giving with one percent statistical significance, increasing the decision to donate by 7.3 points. A positive marginal effect with the same statistical significance is seen in all samples tested, the religious and non-religious group estimates. Rajan et al. (2009) finds that it has a positive effect when dealing with international charities as found for natural disaster charities.

The variable indicating the presence of children under five is associated with a drop in the likelihood of giving to a natural disaster of 4.5 points, however, this result is only significant at the 10 percent level. Statistical significance the same among the religious sample but the magnitude of the negative marginal effect is more pronounced.

Many individual characteristics did not show statistical importance. For the main sample in particular, age, marital status, household size, health, satisfaction with life, student status, length of time spent in community and income show do not show statistically significance. The variables not significant in the full sample for the most part are also not significant in the split samples, with a few exceptions. For instance, in the age category the foreign born regressions

had a statistically significant age group, people aged 55 to 64 where a 9.9 point decrease in probability at the ten percent level is estimated. The overall effect of age is not in line with earlier work as increasing age is usually associated with an increase in the likelihood of giving (Apinunmahakul & Devlin, 2004, Rooney et al., 2005).

Another departure from the results for the main sample is found in the effect of household size with the Canadian sample. Household size only shows a statistically significant positive marginal effect for household size of three in the Canadian born group and for household size of five and above. Both estimates have statistical significance at the ten percent level. The whole sample estimates by Israel (2007) differ than my results as her show positive marginal effect of household size on giving.

For health the non-religious and the Canadian born groups have one health category each that is statistically significant. One representing good health in the non-religious sample shows a negative impact and the other is poor health in the foreign born sample showing a strong positive effect. The only split samples showing any importance among the community variables are the non-religious and the Canadian born regressions where there is an increase in the decision to donate among people living in communities between three and five years and between five and 10 years respectively.

Income does not show any significance any of the regressions. This counters Mesch et al. (2006) Rajan et al. (2009) finding that income increases the probability of donating. Marital status shows no significance. Previous literature does tend to show that being married increases the probability on donating (Mesch et al., 2006), but some studies do not find any significance (Apinunmahakul & Devlin, 2004). Satisfaction in life also showed no significance this is not

entirely different from previous literature as Rajan et al. (2009) finds that only in domestic charities does satisfaction play a positive role in likelihood of giving.

5.2 OLS Model of Decision to Give to Natural Disasters or to Give to Other Than Natural Disasters

Table 4 presents the OLS regression estimates of the effect of solicitation methods on amounts given. The results in the table include regressions from donors that give to natural disasters and those that give to other causes. Estimates for religious, nonreligious, Canadian born and foreign born individuals are also performed separately for both natural disaster donors and donors of other causes and are also presented in table 4.

In the full sample, all fundraising methods other than street solicitations have a positive impact on donation amounts and are statistically significant at the one percent level. Street soliciting however has a negative effect on amount given by individuals donating to other causes. The negative impact found in natural disaster donors is not statistically significant. For natural disaster donors mail requests have the highest effect on the donation amount, with a 1 percent increase in mail requests increasing average donations by 0.73 percent. Fundraising requests at church and being asked by an unspecified method have the next highest effects increasing donations by 0.70 and 0.57 percent respectively. However, people who give on their own have the largest impact on the natural disaster donation amount, with a one percent increase in giving on their own increasing the donation by 0.75 percent. The largest effects can be seen in response church donations, event donations and mail solicitations.

Estimates on solicitation methods of the religious split sample are slightly different than the full sample. The differences are seen most prominently with estimates on the religious subgroup since requests at work, door to door canvassers and by phone are no longer statistically

significant. Giving in memoriam is no longer statistically significant for natural disaster donors and street requests are not either for donors of other causes. Requests at church has the biggest positive impact on the amount given for both samples of religious donors.

The other subgroups non-religious, Canadian born and foreign born individuals are much more similar main sample. The only differences found regarding solicitation methods are that street solicitations are no longer statistically significant for Canadian and foreign donors of other causes, but they do have a statistically significant negative influence on foreigners giving to natural disasters. Also door to door fundraising is not an important factor for foreigners that give to other causes.

The same observational characteristics were estimated as in the probit model. Regression the effect of females on the amount given has previously shown that males give more than females (Mesch et al., 2006). However, for non-religious and Canadian born samples the negative factor is significant but only for donors that give to other causes. Results for age show a positive impact in general on donation amounts for both types of donors and this effect is significant at the one percent level. In general, there is a slightly larger age effect among the donors that forgo natural disaster donations. However, for natural disaster donors the category representing people aged 55 to 64 is not statistically significant at all.

Some of the subsamples show some differences in the age categories. The largest negative effect in age is seen among religious sample among the youngest age category consisting of individuals between 15 and 24 where they give on average less than the average person. People between 55 and 64 have a statistically significant negative impact for natural disaster donors and people aged 45 to 54 do not have any statistically significant estimates for

those that give to other causes. For non-religious people the only difference is the category representing people between the ages of 45 and 54, as this result shows no significance for donors of other causes. Only for foreign born sample, there a notable differences in results as most age groups are not statistically significant. The only significant estimates for foreigners are for the ages of 15 to 24 in the natural disaster sample and the age group 25 to 34 for donors of other causes.

Estimates referring to marital status were negative but not statistically significant. Previous literature used more categories within this domain and found that widowed individuals gave more than people of different marital status (Rajan et al., 2009; Apinunmahakul & Devlin, 2004). In this study, widowed individuals were categorized as single, this perhaps explaining the insignificant results. Only for the religious natural disaster subsample did this result differ as estimates show a statistically significant negative influence.

The estimated coefficient on volunteering has similar results to the Gittell and Tibaldi (2006) paper where a positive increase is seen on quantity given. The influence of volunteering is 6.1 percent larger among natural disaster donors. This result is seen throughout almost all the regressions in table 4, except it is not significant for other cause donors in the foreign born sample.

The education variable indicating university education level or higher increases the amount given to charity for both types of donors. Some post-secondary education or receiving a post-secondary diploma has a much smaller positive effect on amount given; only ten percent significance is seen for natural disaster donors while the sample for other causes shows no

significance at all. This is a slight deviation from a previous literature as amount donated is seen to increase with higher education (Israel, 2007; Rajan et al., 2009).

Religious people are also associated with larger donations in this study, this result is similar to the one found by Devlin and Apinunmahakul (2004). For all regressions, the fact of being religious has a positive estimate coefficient and is statistically significant at the one percent level, except for foreign born donors of other causes where it shows no significance at all.

Having children aged five and under positively influences donation amounts and is statistically significant at the 10 percent level for donors of other causes, on the other hand, having children between the ages of six and 17 negatively affects donations to natural disaster donations. These variables do not show a lot of significance in the other regressions. Only among the religious regression did the children aged under five category remain similar, for the rest of the regressions the estimate is insignificant. The non-religious regression has the estimated coefficient on the variable denoting the presence of children between six and 17 remaining similar and significant but is trivial for the rest of the regressions.

Household size has a small negative impact but does not seem to be a significant factor in giving to natural disasters. This is not so much the case for donors of other causes since there is negative impact on increasing household size, however, estimates for a household of 3 individuals is statistically insignificant. Household size had no effect for natural disaster donors for the other parsed samples. However the statistical significance remained for the religious, non-religious, and Canadian born samples, in fact, all household size variables were significant. Only the religious sample shows that for every increase in household size by one person is there a

steadily larger negative effect on giving. There is a statistically negative effect seen for foreigners but only for households of size two and five plus.

One large negative factor affecting donations to both subsamples is unemployment where the average unemployed person gives less to natural disasters and to other causes relative to others. This statistically significant negative impact of unemployment is seen in all regressions except for foreign born natural disaster donors. Not being in the labour force also factors in negatively for both groups however its effect is much smaller for both groups. This impact is also statistically significant for the non-religious and Canadian born individuals regardless of type of donor.

French speakers tend to give less on average (than English speakers) for both subsamples but this result is only statistically significant at a ten percent level. For natural disaster donors the negative effect is seen for religious, non-religious and Canadian born people but at higher significance levels. This negative impact is only seen among non-religious and Canadian born people when looking at donors giving to other causes.

In the main sample, health is negative and only significant and among natural disaster donors that are in very good health. This statistical significance is seen in all but the foreigner sample. All health variables are statistically significant for religious donors and estimates decrease more for every lower health level, indicating the more unhealthy religious people are, the less they give. Negative effects are also seen among Canadian born people giving to other causes where people with very good health to fair health give less than people of excellent health.

Being satisfied with life is a positive and statistically significant influential factor on donations amounts to other causes but, interestingly, this is not the case for natural disaster donors. This positive significant effect is seen in two other subsamples estimates, the religious and Canadian born. Foreign born individuals did not have any substantial results for the entire sample of natural and other cause contributors. However for only religious donors, there is a negative and statistically significant effect for both types of contributors.

Also results show that with higher income there are larger donations, this corroborates with other literature (Devlin & Apinunmahakul, 2008). The difference between the natural disaster donors and donors of other types of charities lies in the level of significance where income is significant at the ten percent level for the natural disaster sample and one percent for the other causes sample. The results for income are different for religious and foreign sample estimates of donors to other causes. The influence of income is not statistically significant for individuals making under 20, 000 dollars and between 40,000 and 60,000 dollars among religious people. Also, for people making between 60,000 and 100,000 dollars there is a positive estimate meaning the influence of income for this variable is negative. For foreign born individuals results are only negative and statistically significant for incomes up to 40,000 dollars.

Provincial effects do affect the quantity contributed. Living in such provinces as Newfoundland, Prince Edward Island, Nova Scotia, New Brunswick and Quebec negatively affects giving compared to Ontario residents for both natural disaster and other cause donors. Being a Saskatchewan resident only negatively affects donations for natural disaster contributions whereby Albertans only give more to other causes at a statistically significant level.

There are some similarities between the whole sample estimates and the subgroup estimates. However, the regression of non-religious people most closely resembles the whole sample of natural disaster and other cause donors. Only the Quebec provincial effect is no longer significant for contributors to other causes. In the Canadian born sample more variables become insignificant as the Quebec estimator is insignificant for both donor types. New Brunswick also becomes insignificant for other causes.

In the religious and foreign group, provincial variables show little resemblance to the main sample. The natural disaster estimates of religious people only show significance for Newfoundland, Prince Edward Island and Nova Scotia but they remain negative. As for the other type of donor, Quebec and Manitoba have negative influences on charitable giving. For the foreign born sample the only estimate that is significant for natural disaster donors is the Newfoundland variable while for other causes only the Alberta estimator is significant and positive. Alberta variable remains positive and statistically significant for all regressions.

6. Discussion and Conclusion

This research paper investigates the factors associated with giving to natural disasters and looks at whether these associations are different than those that are linked to giving to causes other than natural disasters. This research includes not only socio-demographic characteristics but also controls for solicitation methods to see how much of an impact they have on a person's decision to donate and on how much that person ultimately gives.

Papers dealing with natural disasters mainly look into effects of media (e.g. Brown et al., 2008) finding a positive effect towards giving. Studies looking into soliciting rarely compare different methods where one study looks at several fundraising methods (Yoruk, 2012b) and the

other by Wiepking (2010) only compare two solicitation methods and how they differ across different types charities, however a natural disaster giving is not explicitly looked at.

This research tries to distinguish differences between natural disaster donors and the rest of the donors. Using only a sample of donors from the CSGVP 2012 dataset, this paper indicates through a probit regression that most solicitation methods increase likelihood of donating to natural disasters. The solicitation method that increased the probability of giving the most was a request from telethons/radio-a-thons. Door-to-door soliciting and sponsoring someone for charity showed no statistical significance. People who give without solicitation also increased the likelihood of donating. Social-demographic characteristics show that being a resident of Newfoundland, volunteer ,university graduate, unemployed, religious, foreign born and speaking a foreign language all had statistically significant positive marginal effects. Particularly, being unemployed and religious had the largest effects. Negative marginal effects are seen amount residents of PEI, Saskatchewan, and having children under the age of five. However for PEI and children under five, the effects are small and only statistically significant at the ten percent level.

This paper also investigates in the differences between the two donors based on amounts given. Solicitation effects on the amount given are all positive and statistically significant except for street donations were there is a negative effect but only positive for those donating to other causes. Asking by mail, through church and in another unspecified way where had the biggest effects on donation amounts. Similarly, amounts given by donors of other causes were also highly affected by mail and church but charity events also showed to be highly important. Giving on your own had a larger effect on the amount given than any solicitation method for both types of donors. Even though larger increasing effect of solicitation methods on the amount donated,

the economic impact is larger among natural disaster donors because the average donations are more than twice as high as the other donor sample.

Most controls that are statistically significant on the effect on amounts donated are similar for both types of donors. For instance age, education, employment, speaking French and higher income all have positive statistically significant effects. Quebec and Maritime provinces also were also had negative effects for both types of donors relative to Ontario. However, the economic impact of the variables is much larger among natural disaster donors especially for Quebec and the Maritimes provinces because the average natural disaster donor gives a little over twice as much on average.

There still were some more distinct differences between the estimated variables of the two types of donors. Saskatchewan residence and having children between the ages of six and 17 only showed negative statistically significant effects for natural disaster donors while showing no effect for the other causes donors. On the other hand, having children under five and increasing household size had a negative effect but only donors of other causes. Also, being an Alberta resident only showed a statistically significant positive effect for other causes donors.

Although this research is insightful improvements can certainly be made to the model. It would have been very useful if one could control for empathy (Andreoni & Rao, 2011, Eckel et al. 2007) or perception of need (Eckel et al., 2007. With rapidly changing technologies, there are also more ways to donate, such as the use of social media, as examined by Lobb et al. (2012). This paper does not explicitly take this into account it but it might be possible the solicitation variable giving through an unspecified way could be picking up these observations but this can only be speculated.

Using a time series would have been helpful in distinguishing trends over-time. Since being foreign born and using a foreign language as a primary language are significant positive factors it would have been interesting how these variables would affect giving overtime. This is of interest because Andreoni et al. (2011) look at effect of diversity (both religious and racial) and find negative effects on donations. The CSGVP does not include information on ethnicity but the religion one belongs to is included and could be included in a future study related to this topic.

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Table 1. Variable Definitions:

Variables	Definitions
Dependent Variables	
Disaster	Equal to 1 if individual donated money to Natural Disasters , 0 otherwise
DisasterAmnt	Amount donated by individuals that give to natural disasters (in logarithms)
OtherAmnt	Amount donated by individuals that do not give to natural disasters (in logarithms)
Independent Variables	
Mail	Equal to 1 if donated money to natural disasters because was asked by mail, 0 otherwise
Event	Equal to 1 if donated money to natural disasters by attending an event where entrance proceeds went to charity, 0 otherwise
Memoriam	Equal to 1 if donated money to natural disasters in memoriam or in the name of a deceased individual, 0 otherwise
AskedWork	Equal to 1 if donated money to natural disasters because was asked at work, 0 otherwise
Door	Equal to 1 if donated money to natural disasters because was asked by door-to-door canvassers, 0 otherwise
Street	Equal to 1 if donated money to natural disasters because was asked by canvassers in malls or on the street, 0 otherwise
Phone	Equal to 1 if donated money to natural disasters because was asked through the telephone, 0 otherwise
Church	Equal to 1 if donated money to natural disasters because was asked through the church, 0 otherwise
Television	Equal to 1 if donated money to natural disasters because was asked through television, radio or telethon, 0 otherwise
NoOne	Equal to 1 if donated money to natural disasters because individual donated without being asked by anyone , 0 otherwise
Sponsor	Equal to 1 if donated money to natural disasters because individual sponsored someone at a charitable event , 0

	otherwise
OtherAsk	Equal to 1 if donated money to natural disasters because individual was asked in another way , 0 otherwise
Female	Equal to 1 if individual is female, 0 otherwise
NFLD	Equal to 1 if individual is from Newfoundland, 0 otherwise
PEI	Equal to 1 if individual is from Prince Edward Island, 0 otherwise
NS	Equal to 1 if individual is from Nova Scotia, 0 otherwise
NB	Equal to 1 if individual is from New Brunswick, 0 otherwise
QC	Equal to 1 if individual is from Quebec, 0 otherwise
ONT	Equal to 1 if individual is from Ontario, 0 otherwise **(Reference Group)**
MAN	Equal to 1 if individual is from Manitoba, 0 otherwise
SASK	Equal to 1 if individual is from Saskatchewan, 0 otherwise
ALTA	Equal to 1 if individual is from Alberta, 0 otherwise
BC	Equal to 1 if individual is from British Columbia, 0 otherwise
Age15_24	Equal to 1 if individual between the ages of 15 to 24, 0 otherwise
Age25_34	Equal to 1 if individual between the ages of 25 to 34, 0 otherwise
Age35_44	Equal to 1 if individual is in the age group of 35 to 44, 0 otherwise
Age45_54	Equal to 1 if individual is in the age group of 45 to 54, 0 otherwise
Age55_64	Equal to 1 if individual is in the age group of 55 to 64, 0 otherwise
Age65Plus	Equal to 1 if individual is 65 and over, 0 otherwise **(Reference Group)**

Married	Equal to 1 if individual is married, 0 otherwise Includes single, widowed and separated individuals
Single	Equal to 1 if individual is single, 0 otherwise Single also includes widowed and separated individuals **(Reference Group)**
MMarried	Equal to 1 if information is missing on marital status, 0 otherwise
Child0_5	Equal to 1 if individual has 1 or more children in the 0 to 5 age group, 0 otherwise
Child6_17	Equal to 1 if individual has 1 or more children in the 6 to 17 age group, 0 otherwise
HhSize1	Equal to 1 if individual's household size is 1 person, 0 otherwise **(Reference Group)**
HhSize2	Equal to 1 if individual's household size is 2 people, 0 otherwise
HhSize3	Equal to 1 if individual's household size is 3 people, 0 otherwise
HhSize4	Equal to 1 if individual's household size is 4 people, 0 otherwise
HhSize5plus	Equal to 1 if individual's household size is 5 people or more, 0 otherwise
Volunteer	Equal to 1 if individual has volunteered, 0 otherwise
Ehealth	Equal to 1 if individual is in excellent health, 0 otherwise **(Reference Group)**
VGhealth	Equal to 1 if individual is in very good health, 0 otherwise
Ghealth	Equal to 1 if individual is in good health, 0 otherwise
Fhealth	Equal to 1 if individual is in fair health, 0 otherwise
Phealth	Equal to 1 if individual is in poor health, 0 otherwise
Mhealth	Equal to 1 if there is missing information for the individual's health, 0 otherwise

Satisfied	Equal to 1 if individual is very satisfied or somewhat satisfied in their life, 0 otherwise
Dissatisfied	Equal to 1 if individual is very dissatisfied or somewhat dissatisfied in their life, 0 otherwise **(Reference Group)**
MSatisifed	Equal to 1 if there is missing information on whether individual is satisfied, 0 otherwise
Student	Equal to 1 if individual is in school, 0 otherwise
NonStudent	Equal to 1 if individual is not in school, 0 otherwise **(Reference Group)**
MStudent	Equal to 1 if there is missing information on whether individual is not in school, 0 otherwise
HS	Equal to 1 if individual has a high school diploma or below , 0 otherwise **(Reference Group)**
PS	Equal to 1 if individual has a post-secondary diploma or at least some post-secondary schooling, 0 otherwise
Uni	Equal to 1 if individual has University degree, 0 otherwise
MEducation	Equal to 1 if there is missing information regarding an individual's education level, 0 otherwise
Employed	Equal to 1 if individual is employed, 0 otherwise **(Reference Group)**
Unemployed	Equal to 1 if individual is unemployed, 0 otherwise
NILF	Equal to 1 if individual is not in the labour force (this includes retirees, students and people not searching for work), 0 otherwise
MLF	Equal to 1 if there is missing information regarding an individual's labour force status, 0 otherwise
Religious	Equal to 1 if an individual is religious, 0 otherwise
NotReligious	Equal to 1 if an individual is not religious, 0 otherwise **(Reference Group)**
MReligious	Equal to 1 if there is missing information regarding an

	individual's religiosity, 0 otherwise
CanadaBorn	Equal to 1 if individual if individual is born in Canada, 0 otherwise **(Reference Group)**
ForeignBorn	Equal to 1 if individual if individual is foreign born, 0 otherwise
MCanadaBorn	Equal to 1 if there is missing information regarding an individual's place of birth, 0 otherwise
Community3	Equal to 1 if individual if lived 0 to 3 years in their community, 0 otherwise
Community5	Equal to 1 if individual if lived 3 to 5 years in their community, 0 otherwise
Community10	Equal to 1 if individual if lived 5 to 10 years in their community, 0 otherwise
Community10Plus	Equal to 1 if individual if lived 10 plus years in their community, 0 otherwise **(Reference Group)**
MCommunity	Equal to 1 if there is missing information regarding an individual's length of time in the community, 0 otherwise
English	Equal to 1 if English is an individual's most common language used, 0 otherwise **(Reference Group)**
French	Equal to 1 if French is an individual's most common language used, 0 otherwise
OtherLang	Equal to 1 if another language is an individual's most common language used, 0 otherwise
MLanguage	Equal to 1 if information is missing regarding an individual's language spoken at home, 0 otherwise
HhIncome20k	Equal to 1 if income of an individual is below 20,000 dollars, 0 otherwise
HhIncome40k	Equal to 1 if income of an individual is between 20,000 and 40,000 dollars, 0 otherwise
HhIncome60k	Equal to 1 if income of an individual is between 40,000 and 60,000 dollars, 0 otherwise

HhIncome100k	Equal to 1 if income of an individual is between 60,000 and 100,000 dollars, 0 otherwise
HhIncome100kPlus	Equal to 1 if income of an individual is above 100,000 dollars, 0 otherwise **(Reference Group)**

Table 2. Variables Used in the Analysis and Average Values

	Natural Disasters	Other Causes	Natural Disasters	Other Causes	Natural Disasters	Other Causes	Natural Disasters	Other Causes	Natural Disasters	Other Causes
			Religious		Not Religious		Canadian Born		Foreign Born	
Amount Given	$672	$331	$1,278	$735	$446	$256	$661	$295	$658	$466
Mail	0.349	0.243	0.424	0.286	0.317	0.231	0.347	0.230	0.339	0.284
Event	0.314	0.252	0.346	0.272	0.302	0.253	0.321	0.263	0.294	0.217
Memoriam	0.280	0.240	0.339	0.274	0.268	0.233	0.314	0.251	0.207	0.177
AskedWork	0.286	0.245	0.220	0.175	0.311	0.262	0.286	0.251	0.292	0.243
Door	0.339	0.301	0.362	0.300	0.337	0.306	0.369	0.313	0.271	0.263
Street	0.432	0.354	0.361	0.258	0.462	0.376	0.459	0.367	0.369	0.327
Phone	0.081	0.056	0.079	0.060	0.084	0.055	0.080	0.053	0.091	0.069
Church	0.439	0.310	0.850	0.783	0.289	0.232	0.400	0.290	0.531	0.405
Television	0.156	0.061	0.118	0.062	0.167	0.064	0.168	0.070	0.113	0.033
NoOne	0.157	0.102	0.179	0.101	0.155	0.103	0.162	0.102	0.159	0.106
Sponsor	0.391	0.349	0.382	0.361	0.394	0.354	0.435	0.374	0.262	0.264
OtherAsk	0.125	0.087	0.108	0.105	0.130	0.086	0.125	0.087	0.125	0.093
Female	0.560	0.494	0.542	0.561	0.559	0.486	0.558	0.501	0.548	0.481
NFLD	0.019	0.015	0.023	0.020	0.019	0.015	0.026	0.019	0.003	0.002
PEI	0.004	0.005	0.006	0.009	0.004	0.004	0.006	0.006	0.001	0.002
NS	0.026	0.031	0.028	0.032	0.027	0.033	0.033	0.038	0.008	0.008
NB	0.023	0.024	0.028	0.032	0.021	0.023	0.028	0.027	0.007	0.010
QC	0.248	0.229	0.144	0.153	0.286	0.249	0.305	0.256	0.085	0.136
ONT	0.402	0.383	0.459	0.442	0.381	0.366	0.336	0.339	0.592	0.560
MAN	0.032	0.037	0.053	0.051	0.028	0.038	0.034	0.042	0.035	0.027
SASK	0.020	0.035	0.024	0.045	0.019	0.035	0.025	0.041	0.009	0.013
ALTA	0.091	0.112	0.119	0.102	0.088	0.119	0.100	0.120	0.086	0.098
BC	0.135	0.128	0.115	0.115	0.127	0.119	0.107	0.113	0.175	0.145
Age15_24	0.130	0.143	0.090	0.151	0.135	0.145	0.128	0.151	0.112	0.123
Age25_34	0.152	0.165	0.095	0.119	0.177	0.174	0.160	0.165	0.144	0.169
Age35_44	0.177	0.182	0.158	0.147	0.188	0.188	0.161	0.183	0.233	0.176

Age45_54	0.208	0.195	0.179	0.169	0.213	0.204	0.203	0.201	0.209	0.189
Age55_64	0.158	0.152	0.166	0.150	0.159	0.152	0.176	0.151	0.119	0.162
Age65Plus	0.175	0.162	0.311	0.265	0.127	0.137	0.172	0.149	0.182	0.181
Married	0.684	0.657	0.717	0.629	0.682	0.655	0.687	0.651	0.705	0.658
Single	0.315	0.342	0.281	0.371	0.317	0.343	0.312	0.347	0.295	0.341
MMarried	0.002	0.001	0.003	0.000	0.001	0.001	0.002	0.001	0.001	0.001
Child0_5	0.131	0.153	0.108	0.141	0.138	0.151	0.118	0.143	0.167	0.182
Child6_17	0.307	0.305	0.276	0.341	0.316	0.297	0.285	0.297	0.364	0.329
HhSize1	0.097	0.111	0.111	0.112	0.091	0.110	0.099	0.112	0.088	0.107
HhSize2	0.358	0.336	0.389	0.302	0.349	0.341	0.378	0.347	0.304	0.286
HhSize3	0.188	0.192	0.159	0.163	0.198	0.201	0.194	0.194	0.168	0.206
HhSize4	0.210	0.225	0.170	0.216	0.223	0.229	0.203	0.224	0.228	0.233
HhSize5Plus	0.146	0.136	0.172	0.208	0.139	0.118	0.126	0.123	0.212	0.167
Volunteer	0.564	0.472	0.692	0.646	0.525	0.449	0.582	0.496	0.526	0.378
NonVolunteer	0.436	0.528	0.308	0.354	0.475	0.551	0.418	0.504	0.474	0.622
EHealth	0.263	0.244	0.225	0.256	0.292	0.257	0.281	0.257	0.255	0.254
VGHealth	0.322	0.315	0.332	0.319	0.351	0.338	0.355	0.345	0.314	0.283
GHealth	0.232	0.256	0.294	0.267	0.226	0.264	0.237	0.252	0.265	0.327
FHealth	0.096	0.100	0.119	0.100	0.094	0.105	0.102	0.107	0.101	0.094
PHealth	0.032	0.036	0.029	0.057	0.036	0.036	0.024	0.038	0.066	0.042
MHealth	0.055	0.048	0.001	0.000	0.000	0.000	0.001	0.000	0.000	0.000
Satisfied	0.910	0.906	0.980	0.961	0.960	0.950	0.969	0.951	0.952	0.957
Dissatisfied	0.035	0.046	0.019	0.039	0.040	0.049	0.031	0.048	0.047	0.043
MSatisfied	0.056	0.049	0.001	0.000	0.000	0.001	0.000	0.001	0.000	0.000
Student	0.124	0.128	0.126	0.156	0.141	0.140	0.134	0.137	0.146	0.168
NonStudent	0.787	0.779	0.874	0.838	0.859	0.860	0.866	0.863	0.854	0.827
MStudent	0.089	0.092	0.000	0.007	0.000	0.000	0.000	0.000	0.000	0.005
HS	0.233	0.280	0.322	0.324	0.235	0.305	0.257	0.322	0.254	0.241
PS	0.366	0.416	0.386	0.439	0.405	0.462	0.427	0.475	0.326	0.381
Uni	0.304	0.207	0.281	0.225	0.352	0.227	0.306	0.197	0.415	0.369
MEducation	0.097	0.098	0.010	0.012	0.008	0.006	0.010	0.006	0.004	0.008

Employed	0.587	0.598	0.516	0.514	0.688	0.681	0.643	0.663	0.641	0.632
Unemployed	0.023	0.013	0.024	0.018	0.026	0.013	0.023	0.014	0.035	0.016
NILF	0.308	0.307	0.459	0.468	0.286	0.304	0.334	0.323	0.323	0.348
MLF	0.082	0.083	0.001	0.000	0.000	0.001	0.001	0.000	0.001	0.004
Religious	0.232	0.126	1.000	1.000	0.000	0.000	0.221	0.118	0.360	0.247
NotReligious	0.674	0.775	0.000	0.000	1.000	1.000	0.776	0.877	0.639	0.747
MReligious	0.093	0.099	0.000	0.000	0.000	0.000	0.003	0.005	0.001	0.006
CanadaBorn	0.679	0.751	0.645	0.702	0.781	0.850	1.000	1.000	0.000	0.000
ForeignBorn	0.228	0.152	0.354	0.297	0.217	0.146	0.000	0.000	1.000	1.000
MCanadaBorn	0.093	0.097	0.001	0.001	0.002	0.003	0.000	0.000	0.000	0.000
Community3	0.095	0.108	0.105	0.133	0.105	0.116	0.089	0.107	0.151	0.175
Community5	0.070	0.065	0.088	0.052	0.072	0.074	0.066	0.067	0.107	0.092
Community10	0.124	0.107	0.102	0.142	0.148	0.115	0.104	0.106	0.228	0.181
Community10Plus	0.611	0.620	0.685	0.654	0.666	0.689	0.740	0.720	0.472	0.507
MCommunity	0.101	0.101	0.019	0.019	0.009	0.006	0.001	0.000	0.042	0.045
English	0.590	0.643	0.660	0.719	0.644	0.708	0.690	0.733	0.525	0.597
French	0.211	0.201	0.150	0.116	0.261	0.239	0.298	0.257	0.039	0.050
OtherLang	0.105	0.061	0.180	0.165	0.093	0.051	0.010	0.009	0.428	0.349
MLanguage	0.094	0.095	0.010	0.001	0.002	0.002	0.002	0.000	0.007	0.004
HhIncome20k	0.056	0.073	0.082	0.103	0.049	0.071	0.056	0.075	0.062	0.079
HhIncome40k	0.151	0.168	0.177	0.216	0.143	0.160	0.149	0.170	0.158	0.162
HhIncome60k	0.181	0.177	0.211	0.217	0.170	0.170	0.170	0.167	0.218	0.235
HhIncome100k	0.259	0.272	0.261	0.221	0.259	0.276	0.260	0.274	0.256	0.244
HhIncome100kPlus	0.352	0.310	0.268	0.242	0.379	0.322	0.365	0.315	0.306	0.280
Sample Size	4343	8139	1219	1294	2803	6192	3326	6630	705	885

Table 3: Estimated Marginal Effects from Probit Model of Decision to Give to Natural Disasters and Other Causes

	All Marg. Effects	Religious Marg. Effects	Not Religious Marg. Effects	Born in Canada Marg. Effects	Foreign Born Marg. Effects
Mail	0.102***	0.133***	0.086***	0.096***	0.072*
	(0.016)	(0.035)	(0.018)	(0.017)	(0.042)
Event	0.054***	0.055	0.042**	0.042**	0.082*
	(0.016)	(0.036)	(0.018)	(0.017)	(0.044)
Memoriam	0.034**	0.063*	0.040**	0.042**	0.069
	(0.016)	(0.037)	(0.018)	(0.018)	(0.043)
AskedWork	0.060***	0.043	0.055***	0.047**	0.086**
	(0.017)	(0.044)	(0.019)	(0.019)	(0.043)
Door	0.022	0.019	0.019	0.028*	0.024
	(0.015)	(0.035)	(0.017)	(0.016)	(0.042)
Street	0.091***	0.123*	0.088***	0.096***	0.117***
	(0.014)	(0.036)	(0.016)	(0.016)	(0.037)
Phone	0.054**	0.020	0.073***	0.066**	0.039
	(0.025)	(0.054)	(0.029)	(0.028)	(0.061)
Church	0.061***	0.121***	0.037**	0.034**	0.062
	(0.016)	(0.042)	(0.018)	(0.017)	(0.043)
Television	0.238***	0.099**	0.244***	0.211***	0.294***
	(0.022)	(0.050)	(0.024)	(0.024)	(0.060)
NoOne	0.106***	0.156***	0.092***	0.107***	0.093*
	(0.020)	(0.040)	(0.024)	(0.022)	(0.055)
Sponsor	0.021	-0.040	0.029*	0.031*	-0.071
	(0.015)	(0.035)	(0.017)	(0.016)	(0.043)
OtherAsk	0.087***	-0.028	0.104***	0.086***	0.097*
	(0.023)	(0.051)	(0.027)	(0.026)	(0.059)
Female	0.045***	-0.038	0.044***	0.029*	0.060
	(0.014)	(0.035)	(0.016)	(0.015)	(0.037)
NFLD	0.052**	0.079	0.064**	0.053**	0.192
	(0.024)	(0.054)	(0.029)	(0.026)	(0.170)
PEI	-0.038*	-0.063	-0.012	-0.018	-0.236***
	(0.022)	(0.04)	(0.027)	(0.024)	(0.062)
NS	-0.028	0.001	-0.036	-0.033	-0.004
	(0.023)	(0.055)	(0.025)	(0.024)	(0.098)
NB	0.000	-0.080	0.014	0.020	-0.065
	(0.027)	(0.057)	(0.033)	(0.031)	(0.105)
QC	0.024	-0.151*	0.044	0.070*	-0.156**
	(0.033)	(0.077)	(0.040)	(0.042)	(0.063)
MAN	-0.029	0.016	-0.036	-0.041*	0.031

	(0.022)	(0.055)	(0.024)	(0.024)	(0.067)
SASK	-0.110***	-0.164*	-0.099***	-0.105***	-0.123
	(0.020)	(0.049)	(0.023)	(0.022)	(0.082)
ALTA	-0.027	0.039	-0.038	-0.018	-0.047
	(0.022)	(0.054)	(0.024)	(0.025)	(0.056)
BC	0.023	0.010	0.021	0.005	0.051
	(0.020)	(0.049)	(0.023)	(0.024)	(0.045)
Age15_24	0.057	-0.099	0.059	0.010	0.079
	(0.044)	(0.111)	(0.050)	(0.045)	(0.115)
Age25_34	0.024	0.009	0.035	0.021	-0.004
	(0.035)	(0.085)	(0.040)	(0.038)	(0.087)
Age35_44	0.003	0.069	-0.008	-0.033	0.070
	(0.031)	(0.080)	(0.035)	(0.032)	(0.084)
Age45_54	0.011	0.012	0.006	-0.017	-0.011
	(0.027)	(0.064)	(0.031)	(0.028)	(0.073)
Age55_64	-0.007	-0.073	0.013	0.004	-0.099*
	(0.023)	(0.049)	(0.027)	(0.025)	(0.057)
Married	-0.009	0.058	-0.013	-0.013	0.082
	(0.024)	(0.055)	(0.027)	(0.026)	(0.059)
Mmarried	0.004	0.490***	-0.074	0.123	-0.114
	(0.100)	(0.048)	(0.107)	(0.123)	(0.225)
Child0_5	-0.045*	-0.114*	-0.038	-0.049	-0.069
	(0.025)	(0.065)	(0.027)	(0.027)	(0.062)
Child6_17	-0.003	-0.081	0.008	-0.003	-0.027
	(0.023)	(0.064)	(0.025)	(0.026)	(0.060)
HhSize2	0.034	0.012	0.036	0.038	-0.006
	(0.024)	(0.059)	(0.028)	(0.027)	(0.063)
HhSize3	0.036	-0.051	0.046	0.060*	-0.102
	(0.032)	(0.075)	(0.036)	(0.036)	(0.075)
HhSize4	0.019	-0.082	0.036	0.040	-0.051
	(0.037)	(0.089)	(0.041)	(0.042)	(0.085)
HhSize5PLus	0.051	-0.032	0.088*	0.076	0.011
	(0.045)	(0.097)	(0.052)	(0.050)	(0.102)
Volunteer	0.039***	0.050	0.036**	0.022	0.114***
	(0.015)	(0.040)	(0.016)	(0.017)	(0.039)
VGHealth	-0.002	0.026	-0.004	-0.007	0.031
	(0.018)	(0.044)	(0.019)	(0.019)	(0.049)
Ghealth	-0.026	0.046	-0.040*	-0.018	-0.041
	(0.019)	(0.048)	(0.021)	(0.021)	(0.051)
Fhealth	0.010	0.063	0.003	0.002	0.064
	(0.029)	(0.062)	(0.032)	(0.031)	(0.071)
Phealth	-0.002	-0.074	0.022	-0.071	0.263**
	(0.050)	(0.087)	(0.055)	(0.044)	(0.104)

Mhealth	-0.001		0.129	0.653***	
	(0.139)		(0.306)	(0.056)	
Satisfied	0.010	0.140	-0.002	0.020	-0.037
	(0.038)	(0.102)	(0.037)	(0.038)	(0.093)
Msatisfied	0.068	0.342	-0.121	-0.143	0.025
	(0.149)	(0.218)	(0.132)	(0.103)	(0.395)
Student	-0.006	0.087	-0.006	0.022	-0.024
	(0.029)	(0.086)	(0.030)	(0.031)	(0.069)
Mstudent	-0.108	-0.432*	-0.117	-0.140	
	(0.114)	(0.068)	(0.151)	(0.124)	
PS	-0.006	-0.078*	0.009	0.009	-0.063
	(0.018)	(0.040)	(0.020)	(0.019)	(0.049)
Uni	0.081***	-0.030	0.105***	0.114***	-0.017
	(0.022)	(0.049)	(0.024)	(0.024)	(0.053)
Meducation	0.126	-0.162	0.119	0.185	-0.208
	(0.132)	(0.154)	(0.193)	(0.169)	(0.153)
Unemployed	0.157**	0.080	0.169**	0.135*	0.217
	(0.070)	(0.127)	(0.078)	(0.078)	(0.127)
NILF	0.020	-0.001	0.018	0.019	-0.038
	(0.020)	(0.044)	(0.022)	(0.022)	(0.049)
MLF	0.054		-0.171	0.027	-0.182
	(0.065)		(0.082)	(0.178)	(0.162)
Religious	0.124***			0.148***	0.100**
	(0.023)			(0.024)	(0.048)
Mreligious	-0.085			-0.099	-0.240
	(0.066)			(0.068)	(0.150)
ForeignBorn	0.073***	0.120***	0.068***		
	(0.023)	(0.046)	(0.026)		
MCanadaBorn	-0.058	-0.264	-0.117		
	(0.111)	(0.194)	(0.123)		
Community3	-0.011	-0.011	-0.006	-0.018	0.003
	(0.025)	(0.060)	(0.025)	(0.026)	(0.059)
Community5	0.024	0.154**	0.001	0.007	0.066
	(0.027)	(0.065)	(0.029)	(0.028)	(0.065)
Community10	0.027	-0.054	0.046*	0.003	0.069
	(0.024)	(0.052)	(0.025)	(0.023)	(0.054)
MCommunity	0.004	-0.016	0.003	0.155	0.050
	(0.087)	(0.182)	(0.104)	(0.374)	(0.111)
French	0.027	0.227***	0.001	-0.011	0.140
	(0.033)	(0.070)	(0.039)	(0.038)	(0.095)
OtherLang	0.099***	0.065	0.124***	0.001	0.144***
	(0.038)	(0.064)	(0.046)	(0.093)	(0.045)
Mlanguage	0.148	0.470**	0.077	0.284**	0.092

	(0.115)	(0.079)	(0.128)	(0.140)	(0.175)
HhIncome20k	-0.045	-0.076	-0.041	-0.038	-0.049
	(0.032)	(0.083)	(0.035)	(0.034)	(0.091)
HhIncome40k	-0.019	-0.120	0.006	-0.015	-0.009
	(0.025)	(0.055)	(0.029)	(0.028)	(0.062)
HhIncome60k	-0.006	-0.076	0.002	0.003	-0.066
	(0.022)	(0.052)	(0.024)	(0.024)	(0.054)
HhIncome100k	-0.018	0.013	-0.019	-0.016	0.001
	(0.018)	(0.049)	(0.020)	(0.020)	(0.051)
Sample Size					
Total	12482	2508	8995	9956	1589
Natural Disaster	4343	1219	2803	3326	705
Other Causes	8139	1294	6192	6630	885
Predicted Probability	0.325	0.481	0.293	0.301	0.429

Table 4. Estimated Coefficients of Determinants Effecting Donation Amounts to Natural Disasters and Other Causes

	Natural Disaster	Other Cause	Natural Disaster	Other Cause	Natural Disaster	Other Cause	Natural Disaster	Other Cause	Natural Disaster	Other Cause
Variables			Religious		Not Religious		Canadian Born		Foreign Born	
	Coef. (Std. Err.)	Coef. (Std. Err.)	Coef. (Std. Err.)	Coef. (Std. Err.)	Coef. (Std. Err.)	Coef. (Std. Err.)	Coef. (Std. Err.)	Coef. (Std. Err.)	Coef. (Std. Err.)	Coef. (Std. Err.)
Mail	0.732***	0.792***	0.488***	0.711***	0.880***	0.864***	0.728***	0.764***	0.798***	1.093***
	(0.059)	(0.044)	(0.098)	(0.105)	(0.071)	(0.047)	(0.059)	(0.043)	(0.141)	(0.146)
Event	0.475***	0.801***	0.304***	0.518***	0.546***	0.833***	0.444***	0.779***	0.486***	0.759***
	(0.053)	(0.049)	(0.097)	(0.115)	(0.062)	(0.048)	(0.057)	(0.048)	(0.132)	(0.126)
Memoriam	0.378***	0.638***	-0.133	0.349***	0.590***	0.667***	0.395***	0.643***	0.361***	0.538***
	(0.056)	(0.045)	(0.107)	(0.110)	(0.063)	(0.049)	(0.062)	(0.046)	(0.134)	(0.157)
AskedWork	0.321***	0.575***	0.132	0.108	0.357***	0.618***	0.300***	0.581***	0.367***	0.437***
	(0.058)	(0.048)	(0.126)	(0.148)	(0.066)	(0.052)	(0.066)	(0.050)	(0.133)	(0.165)
Door	0.176***	0.217***	0.028	0.050	0.218***	0.274***	0.151***	0.229***	0.236*	0.097
	(0.051)	(0.043)	(0.097)	(0.116)	(0.060)	(0.046)	(0.057)	(0.047)	(0.128)	(0.122)
Street	-0.059	-0.094**	-0.066	0.003	0.003	-0.082*	0.029	-0.052	-0.218*	-0.161
	(0.053)	(0.045)	(0.110)	(0.110)	(0.060)	(0.046)	(0.059)	(0.047)	(0.124)	(0.120)
Phone	0.265***	0.502***	0.158	0.229	0.275***	0.590***	0.193**	0.481***	0.396**	0.703***
	(0.078)	(0.075)	(0.130)	0.165	(0.091)	(0.080)	(0.083)	(0.074)	(0.199)	(0.221)
Church	0.697***	0.822***	1.014***	1.451***	0.592***	0.652***	0.686***	0.721***	0.782***	0.993***
	(0.063)	(0.052)	(0.151)	0.132	(0.071)	(0.050)	(0.069)	(0.049)	(0.144)	(0.147)
Television	0.461***	0.570***	0.494***	0.380**	0.400***	0.647***	0.376***	0.595***	0.706***	0.671***
	(0.056)	(0.067)	(0.119)	(0.172)	(0.061)	(0.071)	(0.061)	(0.071)	(0.159)	(0.221)
NoOne	0.743***	0.974***	0.675***	0.741***	0.708***	0.984***	0.692***	0.989***	0.816***	1.056***
	(0.073)	(0.060)	(0.130)	(0.162)	(0.084)	(0.066)	(0.080)	(0.066)	(0.176)	(0.171)
Sponsor	0.331***	0.320***	0.245**	0.230**	0.357***	0.346***	0.345***	0.305***	0.314**	0.331**
	(0.054)	(0.040)	(0.108)	(0.113)	(0.063)	(0.043)	(0.061)	(0.043)	(0.130)	(0.129)
OtherAsk	0.571***	0.661***	0.483***	0.387***	0.534***	0.758***	0.494***	0.703***	0.604***	0.715***
	(0.078)	(0.080)	(0.138)	(0.150)	(0.088)	(0.089)	(0.086)	(0.088)	(0.181)	(0.193)
Female	-0.045	-0.056	-0.115	-0.068	-0.024	-0.101**	-0.040	-0.141***	-0.102	0.126

	(0.055)	(0.044)	(0.103)	(0.110)	(0.063)	(0.044)	(0.060)	(0.044)	(0.134)	(0.127)
NFLD	-0.602***	-0.447***	-0.511***	-0.280	-0.571***	-0.441***	-0.516***	-0.420***	-1.048**	0.088
	(0.082)	(0.068)	(0.177)	(0.192)	(0.097)	(0.075)	(0.091)	(0.073)	(0.438)	(0.664)
PEI	-0.416***	-0.207***	-0.362**	-0.188	-0.414***	-0.195**	-0.366***	-0.203***	-0.556	-0.061
	(0.083)	(0.070)	(0.161)	(0.148)	(0.102)	(0.079)	(0.090)	(0.074)	(0.351)	(0.243)
NS	-0.496***	-0.177**	-0.329*	-0.205	-0.575***	-0.165**	-0.478***	-0.175**	-0.163	0.136
	(0.088)	(0.070)	(0.179)	(0.154)	(0.107)	(0.076)	(0.100)	(0.074)	(0.451)	(0.328)
NB	-0.319***	-0.193**	0.035	-0.159	-0.492***	-0.163*	-0.289***	-0.144	-0.111	0.139
	(0.102)	(0.085)	(0.164)	(0.217)	(0.127)	(0.092)	(0.110)	(0.091)	(0.467)	(0.365)
QC	-0.370***	-0.283**	-0.265	-0.799**	-0.362**	-0.093	-0.251	-0.037	-0.333	-0.404
	(0.122)	(0.121)	(0.199)	(0.318)	(0.159)	(0.109)	(0.163)	(0.116)	(0.217)	(0.249)
MAN	-0.094	0.039	0.232	0.370**	-0.159	0.020	-0.055	0.092	-0.061	0.010
	(0.087)	(0.064)	(0.161)	(0.182)	(0.104)	(0.067)	(0.097)	(0.069)	(0.212)	(0.219)
SASK	-0.190*	-0.011	0.252	0.219	-0.323***	-0.047	-0.112	0.003	-0.241	0.056
	(0.101)	(0.074)	(0.187)	(0.203)	(0.113)	(0.079)	(0.107)	(0.078)	(0.372)	(0.317)
ALTA	0.006	0.296***	0.269	0.537***	-0.066	0.301***	0.100	0.345***	-0.179	0.324*
	(0.089)	(0.067)	(0.182)	(0.189)	(0.099)	(0.069)	(0.105)	(0.071)	(0.192)	(0.184)
BC	-0.105	0.082	0.122	0.108	-0.094	0.118*	0.030	0.141*	-0.158	0.063
	(0.082)	(0.069)	(0.141)	(0.179)	(0.101)	(0.071)	(0.096)	(0.074)	(0.157)	(0.152)
Age15_24	-1.097***	-1.051***	-2.343***	-0.999**	-0.753*	-0.887***	-1.082***	-1.037***	-0.889**	-0.518
	(0.187)	(0.140)	(0.319)	(0.427)	(0.212)	(0.118)	(0.187)	(0.123)	(0.368)	(0.333)
Age25_34	-0.558***	-0.718***	-0.835***	-0.917***	-0.412**	-0.607***	-0.638***	-0.649***	-0.343	-0.606**
	(0.134)	(0.102)	(0.247)	(0.312)	(0.161)	(0.101)	(0.146)	(0.101)	(0.271)	(0.306)
Age35_44	-0.437***	-0.469***	-0.759***	-0.491*	-0.321**	-0.455***	-0.490***	-0.532***	-0.222	-0.149
	(0.129)	(0.085)	(0.241)	(0.253)	(0.154)	(0.090)	(0.134)	(0.089)	(0.263)	(0.271)
Age45_54	-0.355***	-0.363***	-0.697***	-0.331	-0.215	-0.334***	-0.359***	-0.390***	-0.260	-0.058
	(0.116)	(0.075)	(0.191)	(0.212)	(0.142)	(0.082)	(0.119)	(0.081)	(0.251)	(0.234)
Age55_64	-0.143	-0.274***	-0.235*	-0.393***	-0.071	-0.292***	-0.162	-0.328***	-0.084	-0.252
	(0.093)	(0.072)	(0.136)	(0.151)	(0.123)	(0.076)	(0.101)	(0.071)	(0.197)	(0.204)
Married	-0.109	-0.064	-0.365**	0.240	-0.104	-0.025	-0.141	-0.016	-0.252	0.106
	(0.098)	(0.084)	(0.159)	(0.188)	(0.114)	(0.067)	(0.109)	(0.068)	(0.187)	(0.190)

MMarried	0.253	0.242	0.490	1.155***	-0.514	0.297	0.119	0.377	-1.542***	-0.357
	(0.452)	(0.328)	(0.406)	(0.415)	(0.364)	(0.327)	(0.404)	(0.403)	(0.407)	(0.319)
Child0_5	-0.032	0.147*	0.142	0.575**	-0.119	0.064	-0.093	0.109	-0.013	0.296
	(0.102)	(0.088)	(0.213)	(0.226)	(0.114)	(0.080)	(0.120)	(0.079)	(0.194)	(0.229)
Child6_17	-0.184**	-0.030	0.100	0.282	-0.237**	0.000	-0.166	0.004	-0.248	0.231
	(0.089)	(0.083)	(0.206)	(0.199)	(0.101)	(0.072)	(0.104)	(0.072)	(0.208)	(0.203)
HhSize2	-0.162	-0.187**	-0.018	-0.484**	-0.125	-0.205***	-0.093	-0.211***	-0.208	-0.361*
	(0.101)	(0.081)	(0.176)	(0.190)	(0.120)	(0.074)	(0.115)	(0.074)	(0.221)	(0.214)
HhSize3	-0.177	-0.145	0.288	-0.458**	-0.185	-0.194**	-0.108	-0.231**	-0.097	-0.366
	(0.119)	(0.103)	(0.219)	(0.226)	(0.141)	(0.093)	(0.143)	(0.093)	(0.235)	(0.238)
HhSize4	-0.138	-0.342***	0.021	-0.507*	-0.140	-0.366***	-0.243	-0.401***	0.167	-0.426
	(0.142)	(0.129)	(0.242)	(0.286)	(0.175)	(0.110)	(0.166)	(0.110)	(0.287)	(0.293)
HhSize5Plus	-0.224	-0.305*	-0.020	-1.047***	-0.222	-0.320**	-0.040	-0.373***	-0.452	-0.793**
	(0.161)	(0.185)	(0.279)	(0.330)	(0.192)	(0.127)	(0.187)	(0.128)	(0.303)	(0.347)
Volunteer	0.202***	0.141***	0.521***	0.298**	0.165**	0.134***	0.197***	0.198***	0.315**	-0.062
	(0.059)	(0.046)	(0.119)	(0.134)	(0.067)	(0.046)	(0.067)	(0.047)	(0.130)	(0.128)
VGHealth	-0.128**	-0.074	-0.231*	-0.236	-0.137*	-0.089	-0.132*	-0.148**	-0.189	0.148
	(0.064)	(0.059)	(0.131)	(0.147)	(0.071)	(0.060)	(0.071)	(0.059)	(0.144)	(0.174)
GHealth	-0.075	-0.018	-0.288**	-0.176	-0.048	-0.059	-0.121	-0.118*	0.012	0.124
	(0.077)	(0.068)	(0.135)	(0.158)	(0.090)	(0.065)	(0.081)	(0.065)	(0.173)	(0.179)
FHealth	-0.150	-0.031	-0.309*	-0.232	-0.129	-0.081	-0.177	-0.140*	-0.121	0.282
	(0.112)	(0.077)	(0.181)	(0.185)	(0.143)	(0.080)	(0.124)	(0.080)	(0.283)	(0.211)
PHealth	-0.267	-0.018	-0.448*	0.039	-0.116	-0.060	-0.092	-0.068	-0.270	0.265
	(0.214)	(0.117)	(0.238)	(0.255)	(0.243)	(0.121)	(0.193)	(0.109)	(0.284)	(0.319)
MHealth	-0.957**	0.220	-1.525***	0.000	0.214	-1.483***	-0.238	1.968***	0.000	0.000
	(0.414)	(0.378)	(0.452)	(omitted)	(0.398)	(0.516)	(0.412)	(0.489)	(omitted)	(omitted)
Satisfied	-0.040	0.219**	0.116	0.487**	0.015	0.122	0.058	0.212**	0.069	0.049
	(0.204)	(0.099)	(0.402)	(0.238)	(0.227)	(0.100)	(0.217)	(0.102)	(0.385)	(0.221)
MSatisfied	0.825*	-0.070	0.008	-1.798***	0.150	-0.233	0.491	-0.370**	-1.530***	0.519
	(0.460)	(0.335)	(0.577)	(0.461)	(0.820)	(0.179)	(0.433)	(0.183)	(0.584)	(0.683)
Student	-0.157	-0.073	0.143	-0.168	-0.277**	-0.148*	-0.265**	-0.065	-0.083	-0.263

	(0.109)	(0.095)	(0.211)	(0.290)	(0.114)	(0.087)	(0.125)	(0.093)	(0.201)	(0.215)
MStudent	0.364	1.143**	-1.029**	-0.716	0.494	-0.309**	0.090	-0.240	0.000	-0.044
	(0.337)	(0.532)	(0.469)	(0.519)	(0.563)	(0.133)	(0.504)	(0.226)	(omitted)	(0.564)
PS	0.138*	0.040	0.081	0.143	0.165*	0.021	0.085	0.024	0.332*	0.166
	(0.075)	(0.052)	(0.127)	(0.129)	(0.088)	(0.056)	(0.079)	(0.055)	(0.179)	(0.156)
Uni	0.269***	0.360***	0.328**	0.331**	0.291***	0.369***	0.260***	0.347***	0.347**	0.477***
	(0.083)	(0.066)	(0.140)	(0.165)	(0.098)	(0.068)	(0.094)	(0.066)	(0.177)	(0.180)
MEducation	-0.151	-0.225	0.211	-0.424	-0.406	-0.376	-0.323	-0.459*	1.217	-0.382
	(0.234)	(0.292)	(0.318)	(0.332)	(0.360)	(0.345)	(0.300)	(0.269)	(0.825)	(0.697)
Unemployed	-0.836***	-0.416***	-0.804***	-0.705*	-0.788***	-0.366**	-1.031***	-0.278*	-0.189	-0.843**
	(0.255)	(0.156)	(0.267)	(0.385)	(0.307)	(0.158)	(0.268)	(0.147)	(0.379)	(0.370)
NILF	-0.155**	-0.147**	0.073	-0.112	-0.208**	-0.131**	-0.167**	-0.170***	-0.140	-0.078
	(0.073)	(0.059)	(0.140)	(0.151)	(0.085)	(0.065)	(0.082)	(0.065)	(0.169)	(0.158)
MLF	-0.352*	-0.461**	-0.640	0.000	-0.911***	-0.763**	-0.753**	-0.094	-1.220*	-0.676
	(0.211)	(0.213)	(0.636)	(omitted)	(0.354)	(0.382)	(0.330)	(0.425)	(0.705)	(0.799)
Religious	0.587***	0.458***	-	-	-	-	0.663***	0.614***	0.414***	0.146
	(0.076)	(0.079)					(0.087)	(0.078)	(0.149)	(0.174)
MReligious	0.434*	0.315	-	-	-	-	0.197	-0.072	-0.529	0.765*
	(0.243)	(0.263)					(0.225)	(0.295)	(0.641)	(0.424)
ForeignBorn	-0.034	0.039	-0.280**	-0.293*	0.056	0.110	-	-	-	-
	(0.084)	(0.075)	(0.134)	(0.167)	(0.101)	(0.080)				
MCanadaBorn	0.987**	-0.253	0.516	0.120	0.499*	-0.358	-	-	-	-
	(0.461)	(0.233)	(0.836)	(0.346)	(0.275)	(0.261)				
Community3	0.151	0.077	-0.013	0.312	0.194*	0.029	0.210**	0.060	-0.105	0.117
	(0.092)	(0.079)	(0.161)	(0.196)	(0.109)	(0.075)	(0.095)	(0.077)	(0.206)	(0.196)
Community5	0.000	0.105	-0.131	0.372*	0.021	0.053	0.094	0.055	-0.309	0.253
	(0.101)	(0.079)	(0.198)	(0.202)	(0.105)	(0.082)	(0.122)	(0.086)	(0.190)	(0.206)
Community10	-0.030	-0.064	0.030	-0.331*	-0.021	-0.022	0.019	-0.029	-0.129	-0.165
	(0.092)	(0.065)	(0.193)	(0.178)	(0.099)	(0.067)	(0.084)	(0.065)	(0.183)	(0.178)
MCommunity	-0.228	-0.274	-1.032***	-0.721	0.327	-0.092	0.173	0.086	-0.290	-0.236
	(0.304)	(0.306)	(0.296)	(0.641)	(0.366)	(0.257)	(0.303)	(0.383)	(0.347)	(0.357)

French	-0.441*	-0.211*	-0.687***	-0.390	-0.365**	-0.287***	-0.512***	-0.427***	0.132	0.468
	(0.122)	(0.110)	(0.180)	(0.277)	(0.159)	(0.108)	(0.152)	(0.111)	(0.290)	(0.317)
OtherLang	-0.122	0.030	-0.096	-0.098	-0.092	0.115	-0.058	-0.181	-0.089	0.082
	(0.124)	(0.134)	(0.168)	(0.234)	(0.159)	(0.142)	(0.219)	(0.245)	(0.146)	(0.151)
MLanguage	-0.858*	-0.123	-1.007***	-0.092	0.177	-0.312	-0.570**	0.665**	-1.810**	-0.031
	(0.469)	(0.387)	(0.334)	(0.407)	(0.358)	(0.403)	(0.290)	(0.310)	(0.799)	(0.379)
HhIncome20k	-0.643*	-0.702***	-0.761***	-0.317	-0.453***	-0.599***	-0.712***	-0.573***	-0.254	-0.904***
	(0.128)	(0.097)	(0.182)	(0.311)	(0.173)	(0.105)	(0.153)	(0.106)	(0.294)	(0.298)
HhIncome40k	-0.467*	-0.572***	-0.577***	-0.358*	-0.419***	-0.506***	-0.584***	-0.536***	-0.218	-0.423*
	(0.104)	(0.078)	(0.166)	(0.193)	(0.134)	(0.077)	(0.119)	(0.075)	(0.224)	(0.221)
HhIncome60k	-0.334*	-0.284***	-0.382***	0.178	-0.386***	-0.282***	-0.378***	-0.244***	-0.328*	-0.167
	(0.081)	(0.065)	(0.141)	(0.173)	(0.094)	(0.069)	(0.093)	(0.068)	(0.176)	(0.179)
HhIncome100k	-0.244*	-0.221***	-0.311**	0.330*	-0.214***	-0.197***	-0.254***	-0.157**	-0.165	-0.166
	(0.068)	(0.063)	(0.146)	(0.180)	(0.074)	(0.061)	(0.076)	(0.062)	(0.143)	(0.173)
_cons	4.907***	3.911***	4.818***	3.167	3.759***	3.530***	3.816***	3.699***	4.353***	2.715
	(0.267)	(0.160)	(0.558)	(0.559)	(0.493)	(0.225)	(0.456)	(0.216)	(0.681)	(0.584)
Sample Size	4343	8139	1219	1294	2803	6192	3326	6630	705	885