Philanthropic Behaviour of Quebecers

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Abstract

Residents of Quebec give less, on average, than those in all other provinces. They also volunteer, on average, the least when compared to time donated in other provinces. Why? This paper empirically examines and compares the giving and volunteering behaviour of Quebecers to that of other Canadians, with the aim of addressing this question. The most recent General Social Survey - Giving Volunteering and Participation (GSS GVP 2013) and Tobit procedure are employed to conduct the analysis. I find that once I control for demographic and socio-economic characteristics, Quebecers behave similarly to others when it comes to money and time donations, except for total volunteering hours. The key factors that seem to explain why the average giving is so much lower in Quebec are that they have the lowest proportion of religious individuals across provinces and that they are in the lower half of low disposable household income when comparing across provinces.

Key words: charitable giving, volunteering, religious donations, secular contributions, Quebec

1. Introduction

According to a series of annual studies by the Fraser Institute, average charitable donations collected from residents of Quebec were the lowest of all the provinces and territories during the period of 2004 to 2012, based on Canadian annual taxation data (LeRoy et al, 2006; Harischandra et al, 2007; Lammam et al, 2008, 2009 and 2010; Gabler et al, 2011 and 2012; MacIntyre, 2013; Lammam, 2014). Similar conclusions were also drawn by Imagine Canada. For example, using the 2010 personal income tax turns data from Statistics Canada's Charitable Donors Databank, Lasby (2011) observes that both median value and average amount of charitable contributions claimed by tax payers in Quebec rank last across the provinces and territories. Keeping track of the average values of annual giving (money and time) from the 2004, 2007 and 2010 Canada Survey of Giving, Volunteering and Participating (CSGVP), Turcotte (2015) reveals that Quebec has maintained last place within the provinces, with one exception, that of average volunteer hours in 2007. Kitchen and Dalton (1990) summarized the average money directed to total donations and religious contributions from the 1982 Survey of Family Expenditure, finding that Quebecers are always the least generous.

It seems that the image of "cheap" Quebecers originated from the average amount of money donated has existed across various data sources over time. And, indeed, according to descriptive statistics in Canada, residents in Quebec always appear to be less generous than others. A few papers have noted differences between individuals in Quebec and elsewhere in empirical analyses, but no one has focused on this question until now. To fill this gap in the literature, I attempt to examine carefully if, indeed, Quebecers give less money and time to charities once I control for the factors that influence these gifts, using the most recent available data in Canada.

This topic has received little research attention to date. A number of empirical papers

pertaining to philanthropic activities in Canada are published (Hwang, Grabb and Curtis, 2005; Perks and Haan, 2010; Andreoni et al, 2011; etc.), and most of them add variables reflecting provincial or regional differences to their regression equations, or some even conduct estimations by province or region separately (Kitchen and Dalton, 1990; Kitchen, 1992; Apinunmahakul and Devlin, 2004 and 2008; Apinunmahakul, Barham and Devlin, 2009; Hossain and Lamb, 2012 and 2015). But these researchers have put little emphasis on regional differences. No one has highlighted the charitable performance of people residing in Quebec with the view to understanding why their average gifts are consistently lower than in other regions of Canada.

To develop my empirical analysis, I employ the most recent cross-sectional survey data with respect to Canadian philanthropic contributions, the 2013 General Social Survey - Giving Volunteering and Participation (GSS GVP). A Tobit regression estimation method is applied because of the existence of respondents who donate zero dollars or hours. I then evaluate my regression results in three main ways: First, I look at the estimated coefficient on the Quebec dummy variable to see if there are differences between residents of that province and others, ceteris paribus. Second, I compare the predicted average value of charitable contributions across provinces using provincial average values from the independent variables, and then, finally, I look at what would happen to the predicted average giving if residents in Quebec had a different stock of average characteristics. I find that most of the difference in giving between Quebec and the rest of Canada comes from the fact that Quebecers tend to be less religious than those elsewhere and they tend to be in the lower half of the disposable income distribution. If they were not, then their giving behaviour would be different.

The remaining parts of this article are structured as follows. Section 2 outlines the primary findings concerning the determinants of monetary donations and volunteerism in the Canadian

literature. Section 3 gives a detailed description of the data set employed to conduct my quantitative analyses, emphasizing provincial characteristics and charitable performances, especially for Quebec. Section 4 explains the econometric techniques and empirical procedures used. Section 5 discusses the generosity of Quebecers based on my results. Section 6 concludes the paper.

2. Literature Review

Many papers are written on the economics of philanthropy. Most of this literature examines the motivations of charitable giving, and most empirical work uses data sets either from the US (Reece, 1979; Clotfelter, 1985; Borg, Mason and Shapiro, 1991; Brown and Lankford, 1992; Gittell & Tebaldi, 2006) or the UK (Peacock, 2000). Fewer studies use Canadian data. This paper tries to see if there are differences in giving and volunteering between Quebecers and those residing in other Canadian jurisdictions. In particular, it wants to examine the often-stated idea that Quebecers are less generous than other Canadian residents and hence the literature review focuses mostly on Canadian studies of the determinants of money and time donations.

The majority of early Canadian empirical studies focus mainly on the roles played by price of contributions (also known as the cost of giving or tax price, usually based on the income tax system), disposable income and wealth on the values of overall contributions. Hood, Martin and Osberg (1977) use data from personal tax returns in Canada from 1968 to 1973 to check the responsiveness of average itemized contributions by income group and year to average price, after-tax average income, average wealth and tax reforms. Through analyzing the panel data, their OLS estimates show that income and wealth are positively but less than proportionately correlated with donations, while the price of giving is negative. The price inelasticity implies that

the savings derived from the reduced price associated with giving are not completely transferred to charitable organizations. They discuss four proposals on tax forms to show how each would affect charitable giving.

Kitchen and Dalton (1990) pay attention to household giving behaviour using the 1982 Survey of Family Expenditure to investigate the impact of price, family income, family wealth and age of the highest income earner in the family on total contributions, as well as religious contributions. To avoid biased OLS estimates arising from many observations at zero from non-givers, they adopt a Tobit strategy to estimate the model for each of five regional subgroups and Canada as a whole (as well as by four income quartiles). They confirm that, in general, income, wealth and age have a positive relationship with contributions, while tax price has a negative one. One noticeable point is that price elasticity is greater than 1, that is, money saved from tax is more than given to charities. Besides, there are more insignificant variables, especially price and income, for individual income quartiles than for combined income groups in the case of total giving and even more in religious giving. Their cross-sectional analysis also indicates that existing givers explain most part of the variation in total giving incurred by the change in one explanatory variable, but new donors have more influence in the case of religious giving.

Apart from the above empirical outputs, Kitchen and Dalton (1990) also notice that for Canada and each region, participation rates of total giving and religious donations rise as income goes up, but the rate of the former is higher. Also, average giving among donors has a positive relationship with income level, but more average donations are given to religious charities. What is more, the proportion of income spent on charities decreases with the increase in the income, but the percentage directed to religious groups is bigger than that for total donations. Their

descriptive statistics reveal that Quebecers are always in the last place for the cash donations and religious giving, irrespective of participation rates, average money donated or share of the income.

Based on the Survey of Family Expenditure in 1986, Kitchen (1992) re-does part of the above regression analysis and compares the outputs and statistical significance level with the earlier ones. The updated study indicates that the overall link between the explanatory variables and the explained variable still holds, whereas the significance level of the independent variables changes with time.

Later, researchers incorporate more socio-economic and other policy information as explanatory variables, partly due to the advent of surveys that focus specifically on philanthropic behaviour in Canada. For instance, employing the 1987 Survey of Volunteer Activity, Day and Devlin (1996) focus on the question of whether government spending crowds out the decision to volunteer or the amount of time volunteered. They find that when the types of government expenditures are taken into account, the effect of expenditure on the decision to become a volunteer is ambiguous and depends on the spending areas; total government spending and the probability of doing volunteer work are complementary. When the sample is decomposed by gender, females are more sensitive to the adjustment of government expenditure on different fields.

In the evaluation of the link between direct money donations to charitable sectors and indirect contributions through buying lotteries to support charities, Apinunmahakul and Devlin (2004) utilize the 1997 National Survey of Giving Volunteering and Participating (NSGVP) and Bivariate Probit and Bivariate Tobit techniques, since respondents may simultaneously determine whether to donate and the amount to donate to lotteries and charities. They reveal that

these two ways of giving are complementary to each other, in contrast to the results from Borg, Mason and Shapiro (1991) and Peacock (2000). They also hold that for charitable gambling, tax price negatively affects both participation and amount donated, irrespective of overall donations, religious or secular donations, while tax price just has a negative impact on participation and amount donated for direct secular giving and on participation in direct overall giving. Moreover, they suggest that the longer people live in the community, the more they give, with the exception in the case of direct religious giving. Canada-born people always devote more money to charitable causes, no matter where the destinations of donations are and which ways. Those who spend more time watching TV prefer to donate less (more) for direct giving (indirect giving). Individuals who vote exhibit more generosity. In their work, although all Bivariate Tobit models include regional dummies, only for direct secular giving is the estimated coefficient on the Quebec dummy variable negative and significant.

According to Apinunmahakul and Devlin (2008), social networks positively affect the amount of money and time donated to charities. Formal networks, defined as being a member in a club/organization, more positively affects cash donations and female behaviour of volunteering. Informal network like keeping in touch with family and friends is positively related to charitable giving only for men. Religious networks positively affect both time and money giving for both men and women. The history of being a volunteer encourages the person to give out hours and cashes, so does the past philanthropic behaviour of the person's parents. One noteworthy thing in their paper is that instrumental variables are also applied to fix the endogeneity problem caused by the reverse causality between socialization and volunteer work: networking can affect the contributions and volunteer activities can broaden one's social network. In this paper, there does not appear to be any difference between the giving of residents

of Quebec and that of other provinces.

The study of Apinunmahakul, Barham and Devlin (2009), again uses a Bivariate Tobit procedure, and confirms a complementary link between volunteering and monetary giving. Again, the model takes regional difference into consideration, showing that only employed men from Quebec significantly give less money to charities compared to others.

Many papers have looked at giving outside of Canada. One survey that is interesting is Bekkers and Wiepking (2010) who review over 500 academic papers with respect to charitable donations, and conclude that individuals give for eight reasons: (1) awareness of need; (2) because they are solicited; (3) to gain benefits from tax breaks and services; (4) altruism; (5) to gain recognition; (6) psychological benefits; (7) because giving coincides with our values; and (8) to make a difference. In addition, Bekkers and Wiepking (2010) point out the importance of individual features like, religiosity, political standpoint, sex, marriage, income, education level, and social bonds, and other variables, on giving. These elements mentioned above provide guidance as to selection of explanatory variables for my regression analysis.

3. Data Sets and Descriptive Statistics

Through the Carleton, Ottawa, Outaouais Research Data Centre (COOL-RDC), I accessed the confidential General Social Survey - Giving, Volunteering and Participation (GSS GVP, 2013) data set. Starting from September 2013 and ending in December 2013, Statistics Canada, together with Canadian Heritage, Employment and Social Development Canada, the Public Health Agency of Canada, Health Canada, Canada Revenue Agency, Imagine Canada and Volunteer Canada, conducted this national survey reflecting Canadian philanthropic behaviour via computer assisted telephone interviews (CATI), and with the help of the Residential

Telephone numbers file (RTF).[1] The GSS GVP (2013) replaces the Canadian Survey of Giving, Volunteering and Participation (CSGVP) and covers questions concerning volunteer activities, contributory donations and participation during the last twelve months, as well as demographic and socioeconomic characteristics from 14,714 individuals aged 15 years and older living in the ten provinces of Canada.

Table 1 defines all the dependent and independent variables used in the analysis. Regional dummy variables are employed rather than provincial dummies in order to relieve potentially high collinearity with the tax-price of giving, which only varies by province. I use after-tax household income rather than gross income, which reduces my sample size by 4,327 (respondents with missing data) out of 14,714 respondents. I thought that this was a more appropriate measure of income since it is disposable family income that restricts a consumer's spending behaviour. In the 2013 survey, there is missing information for various personal characteristics, such as marital status, educational acquisition, religiosity, immigrant status, the length of time living in the community and whether to do informal volunteer work, because respondents refused to answer these questions. Hence, I create such variables as "Mms", "Medu", "Mrel", "Mimm", "Mcommu" and "MIV" to pick up these missing observations (details in Table 1).

Table 2 records the unweighted distributions of participation in philanthropic activities and overall amount of money and time donated in the 2013 GSS GVP survey. Of the 14,714 interviewees, 4,327 respondents had missing after-tax household income and 21 respondents reported non-positive after-tax household income. The sample size for my regression analysis is 10,366 observations: 9,041 respondents (87 percent) contribute money and 5,239 (51 percent)

[1] General Social Survey-Giving, Volunteering and Participating, Statistics Canada http://www23.statcan.gc.ca/imdb/p2SV.pl?Function=getSurvey&SDDS=4430

respondents donate time to formal volunteering; 4,890 individuals (47 percent) are both givers and volunteers, 4,151 individuals (40 percent) are solely givers, 349 individuals (3 percent) are just volunteers, and 976 individuals (9 percent) are neither givers nor volunteers. I also pay attention to the fact that religious and secular giving (of money or time) may have different influences. In my data sample, 42% of cash donations (15% of hours volunteered) go to religious organizations, as well as 36% and 83% of respondents take part in religious and non-religious giving (11% and 46%, for volunteering), respectively.[2] It is possible that a giver (volunteer) participated in both types of activities.

Table 3 presents the weighted average cash and time donations by province and region, with both measures of all respondents and just donors. Quebecers give less and volunteer less than those residing in other provinces in almost all types of money and time donations. To be specific, Quebec is at the low end of both average cash giving and average religious giving and ranks the ninth among 10 provinces in the aspect of average non-religious giving, irrespective of across respondents or philanthropic participants. The average volunteer hours in Quebec are always the smallest in terms of across respondents and only the ranking of religious hours volunteered for Quebec is improved from tenth to ninth place in the measurement of across participants.

Table 4 displays the weighted means of the independent variables by province and region. Personal weights are provided by Statistics Canada in the 2013 GSS GVP survey. At the national level, the proportion of females is around 50% and average age is about 50 years old, both of which are a bit higher in Quebec. Prince Edward Island (PEI), Manitoba and New Brunswick (NB) have a higher proportion of females and Alberta is the youngest province, with the average age of 46.62. Most provinces have more married people than single ones. British Columbia has

[2] Respondents who gave money (or time) to religious charities are defined as religious givers (or volunteers). Similarly, respondents who donated money (or time) to secular charities are defined as secular givers (or volunteers).

the lowest population with High School diploma or below, but the highest one with Bachelor's Degree or above, followed by Quebec. The ratio of religious population in Quebec is the smallest, far behind the national rate of 16%.[3] In the Atlantic Region and Saskatchewan, there are fewer immigrants when compared to Quebec. Quebecers show the least percentage of informal volunteers (volunteering outside of a formal organization), three percentage points less than the national average, and a lower after-tax family income, just greater than those in NB and Nova Scotia (NS). The proportion of residents of Quebec living in a community less than three years is the highest, while most residents of Atlantic region, Manitoba and Saskatchewan have lived in a community for more than 10 years and live in rural areas. Quebecers have the largest proportion of having children aged 18 or above, but the average household size is smaller than the national level and size of most provinces.

In addition, in my original sample, there are 231 givers (567 volunteers) for whom the sum of the quantity of money (hours) given to religious and non-religious organizations is not equal to the total amount of money (hours) donated. To fix this problem from the raw data set, I re-calculate the values of non-religious giving for each observation by subtracting religious giving from total giving reported by the respondent.

I also need the donation tax credit rates in Canada in 2013 to obtain the tax price of donations (see Table 5) – the tax-price of donations refers to the "price" associated with the (first) dollar donated. In the Canadian tax system, tax filers who report that they donated dollars to qualified charities can receive 15% of the first $200 of giving and 29% of the remaining as federal tax credit, as well as a provincial donation credit for the first $200 and the amount above

[3] Religious people are defined as those who take part in religious activities or attend religious services or meetings at least once a week. Events like weddings or funerals are not counted.

it, which varies among provinces.[4] Residents of Quebec have the largest tax credit of all jurisdictions. I use the tax credit for the first dollar donated to take account of the potential link between giving and tax price. Following the approach to deal with the problem of the endogeneity of tax price and the amount giving, as discussed in Apinunmahakul and Devlin (2004), this paper utilizes donation credit rates for the first 200 dollars donated. The marginal tax rate is produced by summing federal (or adjusted federal credit, say, for Quebec) and provincial credit rates, and the price of donation is measured by one minus marginal tax rate.

4. Empirical Methodology

The dependent variable in my analysis is the amount of donations (dollars or hours) to charities. Since many individuals do not give any money (or hours), a censored regression model, the Tobit model, is appropriate. The empirical problem underlying the Tobit approach can be expressed as (Wooldridge, 2013, p. 597):

$$Y_i = \begin{cases} Y_i^* & \text{if } Y_i^* > 0 \\ 0 & \text{if } Y_i^* \leq 0 \end{cases}$$

$$Y_i^* = \alpha_i + \mathbf{X_i}\boldsymbol{\beta} + \varepsilon_i, \ \varepsilon_i \sim N(0, \sigma^2)$$

where i-subscript denotes the i^{th} observation; Y_i^* is a latent variable; Y_i is an observed variable indicating the amount of dollars (or hours) given to charitable causes in one year; $\mathbf{X_i}$ is a vector of explanatory variables reflecting such characteristics of the i^{th} observation as gender, age, marital status, educational attainment, religious belief, immigrants or natives, whether to have children within different age groups, income, household size, how long to live in a community, whether to live in rural areas, provinces or regions of residence and tax price of donations (an

[4] For Quebec, a federal tax abatement of 16.5% is applied. http://www.taxtips.ca/filing/donations/tax-credit-rates-2013.htm

extra feature of whether to be an informal volunteer for the volunteering analysis), which may affect the change in the dependent variable Y_i; $\boldsymbol{\beta}$ represents a vector of coefficients to be estimated; α_i and ε_i denote a constant term implying the performance of the reference group while holding all the other variables fixed and a normal error term with zero mean and the variance of σ^2, respectively.

All continuous dependent and independent variables in the regression are transformed by the natural logarithm to alleviate the skewness of a variable's distribution and directly exhibit elasticity.[5] However, before taking the natural logarithm, I add one, a small positive constant, to the amount of dollars (or hours) reported by each observation, which is similar to the technique adopted by Apinunmahakul and Devlin (2004). Thus, the log result with a value of zero stands for non-donors (or non-volunteers) and is left-censored by the Tobit procedure.

One purpose of this paper is to see empirically whether average donations (of money and time) in Quebec are lower than elsewhere, as is suggested by the raw data, once account is taken of the determinants of giving. The following six specifications are estimated:

$$\ln g_{ij} = \alpha_i^j + \mathbf{X_i^g}\boldsymbol{\beta}^j + \varepsilon_i^j, j = 1, 2, 3 \quad (1)$$

$$\ln v_{ij} = \alpha_i^j + \mathbf{X_i^v}\boldsymbol{\beta}^j + \varepsilon_i^j, j = 4, 5, 6 \quad (2)$$

where: j = 1 total giving activity, = 2 religious giving activity, = 3 secular giving activity, = 4 total volunteering activity, = 5 religious volunteering activity, = 6 secular volunteering activity; g: money raised in giving activities; v: hours donated to volunteering activities.

Specifically, g_{i1} is the dependent variable defined as "cash", g_{i2} is "relcash", g_{i3} is "seccash", v_{i4} is "hours", v_{i5} is "relhrs" and v_{i6} is "sechrs" (see Table 1 for details). Again, the only difference between $\mathbf{X_i^g}$ and $\mathbf{X_i^v}$ is that the latter includes additional independent variables "IV"

[5] Log Transformations, Princeton University Library Data and Statistical Services. http://dss.princeton.edu/online_help/stats_packages/stata/log.html

and “MIV” representing informal volunteering information, and all the dependent variables already consider the addition of 1 before being transformed into log.

Once the model is estimated, I examine whether one explanation as to why the average donations in Quebec are low is because of the characteristics of residents in that province. I thus substitute the sample mean of each regressor from a different province into the fitted model, in order to calculate the predicted average donations (money or time) of that province. The ranking of predicted results for every specification will offer some evidence regarding Quebecers’ generosity.

As for the other goal of this article to seek out the potential reasons why residents of Quebec are the least likely to donate money or time, for Quebec, I also examine the impact of the average values of the significant explanatory variables to see if this helps us to understand average giving in that province.

I also disaggregate the full sample into several subgroups, and estimate the model on each group. These groups were chosen because the literature suggests that they may behave differently than the average behaviour in the full sample. The subgroups are: females and males (Day and Devlin, 1996; Apinunmahakul and Devlin, 2008 and 2009); religion and non-religion (Perks and Haan, 2010); informal volunteers and non-informal volunteers (Perks and Haan, 2010); low-, middle- and high- income groups (Kitchen and Dalton, 1990; Dalton, 1992; Andreoni, et al, 2011); less-, middle- and higher-educated groups (Andreoni, et al, 2011); rural and non-rural subgroups. I am particularly interested in the dummy variable representing residents in Quebec in these sub-samples, again, with the view to understanding better what is happening in that province.

A more advanced Tobit technique takes into account that the amount of cash donations and

volunteer hours can affect each other at the same time. To be specific, for the total giving equation, an additional independent variable "lnhours", total hours volunteered to formal volunteering activities, (as well as a variable, "lnrelhrs", for hours volunteered in religious organizations for the religious giving equation) was included in the regressions.

Unfortunately, unlike the 2010 CSGVP, the 2013 GSS GVP survey did not ask retrospective questions like those related to an individual's youth experience, or their parents' giving activities when they were young. The only question concerning the experience of volunteering prior to the last 12 months is confined to non-volunteers within this year. Therefore, it was difficult to find ideal instrumental variables that were not only correlated with the endogenous variable but also exogenous with the error term. As a result, I was unable to deal with the issue of endogeneity in this paper.

5. Empirical Results

5.1 Impact of Socio-economic Characteristics and Policy

Table 6 and Table 7 report the weighted Tobit estimates and robust standard errors of the model specification for total giving, religious and non-religious giving (of dollars and hours). The number of left-censored observations is equivalent to respondents who are non-donors or non-volunteers. The intercept term emphasizes the performance of the reference group, which is made up of single males, who are non-religious, non-informal volunteers, who have acquired no more than a high school degree, immigrated to Canada before 2003, lived in a community for more than 10 years, come from a non-rural area, have no children, and reside in Ontario. All the following interpretations of estimated coefficients are based on ceteris paribus assumptions.

According to Table 6, holding all the remaining factors fixed, females significantly contribute more money than males to charities, no matter what types these charities belong to, although the significant level is relatively small for religious giving. This result is in line with the findings by Apinunmahakul and Devlin (2004).

Age and its squared term (both in logarithm) do not show consistent impacts. In the total giving equation, it seems that age does not matter, which is different from many existing papers finding a positive relationship (e.g., Kitchen and Dalton, 1990; Kitchen, 1992; Rajan, Pink and Dow, 2008; Hossain and Lamb, 2015). However, solving out the quadratic term, I find that individuals younger than 20 donate less money to religious institutions, thereafter the effect of age is positive.[6] An individual is more likely to donate more to secular institutions as he or she grows older, which corroborates Apinunmahakul and Devlin (2004).

Marriage has a significantly positive effect on the amount of money donated to total contributions and secular giving, while the magnitude of its effect is greater in the former. This makes sense since the overall income of a couple usually exceeds that of an individual. However, being married does not seem to affect religious giving.

As one would expect, the level of education is significantly and positively correlated with monetary contributions, irrespective of the destinations of giving. The more educated a respondent is, the higher level of cash donations this person offers. This is consistent with results in the literature conducted by Canada and other countries (e.g., Brown and Lankford, 1992; Gittell and Tebaldi, 2006; Rajan, Pink and Dow, 2008; Hossain and Lamb, 2015).

It is clear that those attending religious activities more than once a week, my "religious

[6] For $y=ax^2+bx+c$, the quadratic formula, $x^*= b/(-2a)$, calculates the threshold where the impact of x on y is zero. In the case of religious donations, a = 1.783, b = -10.762, then x* = 3.01794728. As x is in the form of logarithm, (lnage)* = 3.01794728. A further step of taking the anti-logarithm produces the optimal value of age, age* = 20, rounded to the nearest whole number.

people", are more generous than their non-religious counterparts. In particular, the coefficient of religious believers in the religious regression is more than 3.5 times bigger than found in the total giving regression and about 20 times larger than found in the secular equation. This positive relationship between religiosity and monetary amount donated is widely supported by the existing literature (Turcotte, 2012; Hossain and Lamb, 2015; etc.).

Compared with immigrants, Canada-born people significantly give more money to charitable sectors and non-religious sectors but less to religious organizations, which is exactly the same as the conclusions drawn by Apinunmahakul and Devlin (2004). Furthermore, there is not much difference between new immigrants (less than or equal to 10 years in Canada) and old ones (more than 10 years) when it comes to overall giving and religious giving. Only for non-religious causes do interviewees who immigrated to Canada within the last 10 years contribute less than old immigrants. Although I have information on 12 charitable sectors defined according to the International Classification of Non-profit Organizations (ICNPO), this paper does not examine the potential difference in financial giving among Canada-born individuals and immigrants by sector.

In most cases, the length of time living in one community does not significantly influence philanthropic activities. Only individuals living in their current abode for 5 to 10 years give less than those for 10 years and over in the religious donations. The expectation is that an individual who lives in a place for a longer period is more likely to make larger donations because, for instance, they are solicited more; this result is found in Apinunmahakul and Devlin (2004), where people living in the community for five years and more significantly give more dollars to charities and secular organizations.

Respondents residing in rural areas tend to give more money, especially to religious groups, where they give about twice as much as to secular organizations. Similarly, Apinunmahakul and Devlin (2008) observe that people living in the city make less money donations than their counterparts living in a rural area, which holds, even if the sample is divided into female and male subgroups.

People who have children aged less than 6 are more willing to contribute more money to charity than those who do not have kids in this age group. This factor has the greatest impact for religious giving, followed by total giving and non-religious giving. As for respondents with 6 to 12-year-old kids, they just significantly give more to overall donations. Having children within the age range of 13 to 17 has no significant effect on monetary donations, whereas there exists a positive link between having children aged 18 or over and overall giving (or religious giving). People having young children aged 0 to 5 are more generous than those having 18-year-olds (or older) children for both religious and secular giving.

Rajan, Pink and Dow (2008) reveal that the number of family members is negatively related to cash donations. Likewise, in my study, household size is negatively related to total and secular cash donations as well.

After-tax family income exerts a significant and positive effect on cash donations, as expected. People from high-income groups are inclined to contribute more dollars than those with lower income, ceteris paribus (i.e., donations are a normal good). This result is common in the literature (e.g., Martin, Hood and Osberg, 1977; Auten, Sieg and Clotfelter, 2002; Gittell and Tebaldi, 2006; Hossain and Lamb, 2015).

In my results, the tax price of donations has no impact at all on how much to give in each kind of donations. This result is a little surprising on the face of it: normally, tax price is found to

be negatively related to donations. But there is some discussion in the literature, especially in Canada where the variation in tax price is only inter provincial (and territorial).[7] For example, the findings from Kitchen and Dalton (1990) and Kitchen (1992) illustrate that the amount of dollars given to all charitable donations and religious contributions declines with the tax price of giving, moreover, the tax price effect on the quantity of cash donated to religious institutions disappears with time. Apinunmahakul and Devlin (2008) find that the price of giving does not play a statistically significant impact on dollar giving, regardless of full sample, female sub-sample or male sub-sample.

When the attention is turned to volunteering activities (see Table 7), I find that the impact of sex is weak. More specifically, while women donate more hours to secular volunteer activities than men, for overall volunteering and religious volunteerism, women perform similarly to men in the amount of volunteer hours. In the work of Day and Devlin (1996), males show a lower likelihood of becoming volunteers, but once they decide to volunteer time, males volunteer more time than females. Handy and Greenspan (2009) point out that volunteer hours per week offered by male immigrants significantly dominate those given by female immigrants.

Also in contrast to gifts of money, age and squared age have significant influences on total volunteering and secular volunteering but not religious volunteering. Up to 57 years of age, volunteering hours appears to increase with age, thereafter they decline.[8] The hours donated by a person to secular activities decreases with age. These are sensible since old people usually do not own excellent health nor too much energy required by volunteerism.

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[7] The tax price (really tax credit system) in Canada also varies by the amount donated, but we cannot use that source of variation as it is endogenous with the dependent variable (amount donated).

[8] For $y=ax^2+bx+c$, the quadratic formula, $x^*= b/(-2a)$, calculates the threshold where the impact of x on y is zero. For overall volunteering, a = 0.889, b = -7.2, then x* = 4.049493813. As x is in the form of logarithm, (lnage)* = 4.049493813. A further step of taking the anti-logarithm produces the optimal value of age, age* = 57, rounded to the nearest whole number.

The Tobit estimates reveal that marital status does not significantly influence time volunteered. This is similar to Apinunmahakul, Barham and Devlin (2009), where marriage has no impact on the hours volunteered to overall volunteering by employed men and unemployed women, whereas single employed females are likely to supply more time to do volunteer work than their married counterparts and single unemployed men volunteer less hours than married men without employment.

Consistent with the evidence from giving analysis, educational attainment has a significant and positive relationship with the number of hours spent on volunteerism. People with a Bachelor's Degree or above donate the most number of hours to volunteer work, followed by those with the highest degree of diploma. Comparatively speaking, the effect of education level is the biggest in secular volunteering and the smallest in volunteering with religious organizations.

Again, people with religious beliefs are more likely to give more hours to various categories of volunteering. This element displays the strongest importance in religious volunteering, 4 times and 23 times larger than total and non-religious volunteering, respectively.

Natives indeed offer more hours than immigrants to both overall volunteering and secular organizations; what is more, new immigrants donate less than their old immigrant counterparts. However, for volunteer services related to religion, no difference exists among natives, new immigrants and old immigrants. Day and Devlin (1996) view language frequently spoken in the household as indirect information on immigrants and find that people who neither speak English nor French at home, highly possibly immigrants, tend to donate less time to all charitable causes. Handy and Greenspan (2009) find that recent immigrants donate fewer volunteer hours than their old counterparts, but this difference is not statistically significant.

As for how long a person has lived in a community, this covariate seems to have a better explanatory power in the volunteering equation than in the giving money one. Except for volunteering affiliated with places of worship, people living in a community for a short period of less than three years supply less time when compared with those residing for 10 years or more. This is similar to what Apinunmahakul, Barham and Devlin (2009) find. The more time living in one's current abode, the more likely the person will offer volunteer work. Residents from rural areas are inclined to volunteer more than their urban counterparts, which confirms the findings in the existing Canadian literature (e.g., Apinunmahakul et al, 2008 and 2009).

Respondents with children less than six years old contribute fewer hours than those without children within this age interval. It is understandable that these people have to spend more time taking care of their babies. What is more, individuals with children aged 6 to 12 or 13 to 17 volunteer more hours in comparison with those who do not have children at these ages. One explanation may be related to participating in children's sports and recreational activities. The only exception to these findings is religious volunteering where the impact of having children on giving time is zero. Unlike the giving cases, household size has no impact at all on hours directed to all types of volunteerism.

Disposable household income is still positively related to total hours volunteered and secular volunteer hours. This positive correlation also exists in the study by Menchik and Weisbod (1987). An evaluation of volunteering and the labour market suggests that household income is positively correlated to the volunteer work across all the employment and sex subgroups (Apinunmahakul, Barham and Devlin, 2009).

Apinunmahakul and Devlin (2008) do not find a significant relationship between the tax price of donations and volunteering, even when the sample is parsed by sex. I also do not find a

statistically significant impact of tax price on volunteering.

The new variable pertaining to informal volunteering explains the variation in hours very well. People who do informal volunteer work, including helping others with work at their home, doing shopping for others or driving them to someplace, assisting others with paperwork assignments, offering services on health/care or teaching, and so on, also volunteer more hours to formal organizations when compared to those who do not volunteer informally. This complementary link between informal and formal volunteering may be attributed to otherwise unobservable qualities in the individual.

I included some dummy variables to pick up any influence from those individuals who failed to respond to some questions of interest to my study. Some of these dummy variables for missing observations were statistically significant. For example, those who did not respond to the question regarding their immigrant status donate less money to religious causes than the benchmark group, old immigrants. This may be explained by the fact that a fraction of people in this group are foreigners, neither natives nor permanent residents (for example, international students), thus, these people donate less due to less income, unfamiliarity with local culture, and so on.

5.2 Are Quebecers "Cheaper" than Other Residents of Canada?

The question of interest in this paper is whether Quebecers are less generous compared to residents of the rest of Canada once one takes account of the factors influencing giving. Therefore, I pay attention to the significance and sign of the Quebec dummy variable.

Table 6 reveals that keeping all the other variables constant, respondents residing in Quebec are not different from Ontarians in the amount of dollars donated to various destinations of

charities. Neither do they give less than residents from most other regions. In other words, the Tobit analysis tells that Quebecers donate the same amount of money as most other Canadians, when personal, family and policy features are held constant. Only British Columbians stand out as giving less than others and only when it comes to religious giving.

As shown in Table 7, turning to total volunteer hours, Quebecers do less volunteer work at the 10% level of significance compared to residents of Ontarians, holding all the remaining variables constant. Furthermore, residents living in the Prairies and Atlantic regions do not show differences in hours given to overall volunteering services; British Columbians do more volunteer work, compared to Ontarians. This means that some unobserved factors from the error term cause Quebecers to volunteer less than others. But for religious and secular volunteering, Quebecers behave similarly to most other Canadians, with one exception, namely those from British Columbia in the case of non-religious volunteering work. Thus, once account is taken on the various factors influencing giving, there is little evidence to suggest that Quebecers are less generous than others, ceteris paribus.

Table 8 reports the predicted average donations (cash and time; in the logarithmic form) by province, which are obtained by combining the Tobit regression estimates with the sample means of corresponding variables in a given province. Note that for continuous variables (age, income and household size), I calculate their mean values firstly, then take the logarithm of these levels, and finally plug them into the fitted model to obtain the predicted values. Also, since the natural logarithm of x is increasing with x, if $\ln(x_1) < \ln(x_2)$, then $x_1 < x_2$.

According to the rankings of average donations of dollars or hours (in logarithms) in every regression equation, it is straightforward to see that residents from Quebec rank at the bottom in all forms of volunteering activities, overall money donations and non-religious giving. The best

performance of Quebecers, coming in at 9th out of the 10 provinces, lies in the religious cash contributions, where residents of the province of British Columbia give even less than people in Quebec. These empirical findings are generally consistent with the descriptive statistics of provincial average money and time giving mentioned in Section 3.

5.3 Why are Quebecers Less Generous?

Residents of Quebec give less on average than others. What happens if I relax the assumption of *ceteris paribus*? Will Quebecers still behave similarly to those of other provinces if we vary the characteristics of individuals in that province? In other words, we know from Table 3 that the average donations of time and money are much lower in Quebec than in other provinces. My results seem to suggest that these differences are explained by the characteristics controlled for in my regression analyses. Does this mean that individuals in Quebec give less time and money because they have a lower endowment of "giving-promoting" characteristics?

I now pay particular attention to those factors which have statistically significant effects on giving as well as on provincial dummy variables. I then recalculate the predicted average values of the dependent variables when the "stock" of these independent variables takes on either an extreme value or when, for instance, Quebecers take on the average values of individuals from another province.

Table 9 provides the adjusted predicted average contributions for Quebecers (in logarithms), based on adjusting some key characteristics of individuals in Quebec. For total giving, the lowest average donations from Quebec can be attributed to the collective impact of religion and family income. For one thing, the proportion of religious population in Quebec is the smallest (10%) in Canada and the provincial average after-tax household income is on the low-end of the distribution: just higher than that of NS and NB, 1.5 times lower than the highest level from

Alberta (see Table 4). My Tobit estimates from the total giving specification indicate that religion and income are both economically and statistically significant determinants of giving. When the sample means of religion from PEI and income from Alberta replace those of Quebec, the predicted ranking for giving by Quebecers increases to sixth place, which is obtained by comparing the numbers in Table 9 with those in Table 8. So if Quebecers were as religious as PEI'ers, and as "rich" as Albertans, their giving would be much higher.

For religious donations, as long as individuals in Quebec were as religious as PEI'ers, then their religious giving would rise to second place. Income has the biggest effect on the size of secular giving. Merely increasing the disposable income in Quebec to the level of Alberta will give rise to a better performance with a ranking of seventh in charitable contributions of money. Therefore, the less disposable family income plays a crucial role in the disappointing performance given by Quebecers in the non-religious cash giving.

However, it is not that straightforward to seek out why average volunteering is so different between Quebec and the other provinces. According to the Tobit results, regional differences are large: in particular, Quebec is significantly lower than the rest of Canada in terms of hours volunteered because of some unknown reasons. If residents of Quebec were much younger, participated more in informal volunteering, had higher disposable income, were more religious, better educated, lived more in non-rural areas, had fewer immigrants, fewer children under the age of six, one could still only manage to increase their ranking to eighth place out of ten. The same point holds for secular volunteering. My regression analysis does not capture why Quebecers volunteer less than others to the religious sectors.

In addition, it is worth noting I also parsed the sample into a number of subgroups (sex, religiosity, income quartile, education level, informal and non-informal volunteers, and rural and

non-rural areas) to see if I could understand better what was happening in Quebec. The results from these regressions could not add much to this understanding, and hence I eliminated them from the discussion.

6. Conclusion

Employing the most recent cross-sectional social survey data on philanthropy in Canada, this paper empirically evaluates the provincial difference in the quantity of cash and hours donated given to all organizations, religious organizations and secular organizations. I am particularly interested in the giving behaviour of residents residing in Quebec, and I seek out reasons why their average donations are significantly lower than others in Canada. No papers have focused on this question of the generosity of Quebecers before.

My Tobit regression results shed light on the fact that when one controls for a host of explanatory factors, Quebec residents behave similarly to residents living in most other provinces when it comes to money giving, and religious and secular volunteering. The sole case of the least generosity caused by unknown factors is in the regression on overall volunteerism.

As to which characteristics seem to matter the most when it comes to explaining philanthropy, my findings point to two: religiosity and after-tax income. Because Quebec is home to the smallest proportion of religious individuals in Canada, and they are in the bottom half of the distribution of after-tax family income in Canada, these two factors help to explain their apparent "cheapness" when it comes to private philanthropy. However, I cannot explain why their overall volunteering is so low.

Inevitably, there are limitations in my study. In the first place, this is a cross-sectional analysis, which only reflects and explains Canadians' charitable responses in 2013. Better data

that tracked individuals over time would help explain better philanthropic choices. Another data problem concerns the lack of retrospective information, for instance, information on charitable behaviour when a person was young. This caused problems when trying to implement an instrumental variables procedure to deal with the potential simultaneity of giving in time and money.

The 2013 GSS GVP survey provides a variety of options when it comes to income. In this paper, I chose after-tax household income, which resulted in the loss of a large number of respondents. In the future, I would re-estimate the models using different income measures.

In addition, although this paper focuses solely on giving and volunteering to formal organizations, generosity can be measured in other ways as well. Moreover, since residents of Quebec face the highest income taxes of all Canadian provinces, it could be argued that they do not give directly to charities because they already give via their taxes to support public services.

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Tables

Table 1: Variable Definitions

Dependent Variables	Description
cash	Total dollars donated in the past 12 months
lncash	Total dollars donated in the past 12 months (add 1 to the variable before taking the log) *(in logarithms)*
religiouscash	Total dollars donated to religion in the past 12 months
lnrelcash	Total dollars donated to religion in the past 12 months (add 1 to the variable before taking the log) *(in logarithms)*
secularcash	Total dollars donated to non-religion in the past 12 months (total dollars donated minus total dollars donated to religion)
lnseccash	Total dollars donated to non-religion in the past 12 months (total dollars donated minus total dollars donated to religion; add 1 to the variable before taking the log) *(in logarithms)*
hours	Total hours volunteered in the past 12 months (formal volunteering)
lnhours	Total hours volunteered in the past 12 months (formal volunteering; add 1 to the variable before taking the log) *(in logarithms)*
religioushours	Total hours volunteered to religion in the past 12 months
lnrelhrs	Total hours volunteered to religion in the past 12 months (add 1 to the variable before taking the log) *(in logarithms)*
secularhours	Total hours volunteered to non-religion in the past 12 months (total hours volunteered minus total hours volunteered to religion)
lnsechrs	Total hours volunteered to non-religion in the past 12 months (total hours volunteered minus total hours volunteered to religion; add 1 to the variable before taking the log) *(in logarithms)*
Independent Variables	**Description**
female	=1, female; =0, otherwise
age	Respondent's age
lnage	Respondent's age *(in logarithms)*
lnagesq	lnage squared
married	=1, married or living common-law; =0, otherwise
single	=1, single, separated, divorce or widowed; =0, otherwise **(ref. group)**
Mms	=1, missing (refusal or unknown); =0, otherwise
HS	=1, high school diploma or below; =0, otherwise **(ref. group)**
diploma	=1, trade or non-university diploma, or university diploma below BA; =0, otherwise
BA	=1, Bachelor's degree or above; =0, otherwise
Medu	=1, missing (refusal, unknown or unstated); =0, otherwise
religious	=1, religion (at least once a week participation); =0, otherwise
nonrel	=1, non-religion (at least once a month, once/twice per year, at least 3 times per year participation, or not at all); =0, otherwise **(ref. group)**

Mrel	=1 missing (refusal, unknown or unstated); =0, otherwise
immnew	=1, born outside Canada immigrated within 10 years; =0, otherwise
immold	=1, born outside Canada immigrated more than 10 years ago; =0, otherwise **(ref. group)**
Mimm	=1, unable to determine; =0, otherwise
bornCA	=1, born in Canada; =0, otherwise
IV	=1, do informal volunteering in the past 12 months; =0, otherwise
NONIV	=1, not do informal volunteering in the past 12 months; =0, otherwise **(ref. group)**
MIV	=1, missing (not stated); =0, otherwise
commu3	=1, live in city/local community less than 3years; =0, otherwise
commu35	=1, live in city/local community for 3 to less than 5 years; =0, otherwise
commu510	=1, live in city/local community for 5 to less than 10 years; =0, otherwise
commu10	=1, live in city/local community for 10 years and over; =0, otherwise **(ref. group)**
Mcommu	=1, missing (refusal, unknown or unstated); =0, otherwise
rural	=1, live in rural areas; =0, otherwise (core, fringe, population centre outside CMAs and CAs, or secondary core)
kid05	=1, respondent has children aged 0 to 5 in the household; =0, otherwise
kid612	=1, respondent has children aged 6 to 12 in the household; =0, otherwise
kid1317	=1, respondent has children aged 13 to 17 in the household; =0, otherwise
kid18	=1, respondent has children aged 18 or over in the household; =0, otherwise
hhsize	Number of persons in the respondent's household
lnhhsize	Number of persons in the respondent's household *(in logarithms)*
income	After-tax household income
lnincome	After-tax household income *(in logarithms)*
QC	=1, from Quebec; =0, otherwise
ON	=1, from Ontario; =0, otherwise **(ref. group)**
BC	=1, from British Columbia; =0, otherwise
Prairies	=1, from Alberta, Saskatchewan or Manitoba ; =0, otherwise
Atlantic	=1, from Newfoundland and Labrador, New Brunswick, Nova Scotia or Prince Edward Island; =0, otherwise
taxprice	Tax price of donations (1 minus marginal tax rate)
lntaxprice	Tax price of donations *(in logarithms)*

Table 2 Distributions of Participation in Philanthropic Activities and Amount of Donations

Obs. = 10,366

	Number of Respondents	**Percentage of Total Respondents %**		**Number of Respondents**	**Percentage of Total Respondents %**
Givers & Volunteers	4,890	47	Non-Givers but Volunteers	349	3
Givers but Non-Volunteers	4,151	40	Non-Givers & Non-Volunteers	976	9
Religious Givers	3,742	36	Religious Volunteers	1,157	11
Secular Givers	8,654	83	Secular Volunteers	4,721	46
	$	**Percentage of Total Amount %**		**hrs**	**Percentage of Total Amount %**
cash	5,761,853	1	hours	871,250	1
religiouscash	2,412,366	42	religioushours	128,488	15
secularcash	3,349,487	58	secularhours	742,762	85

Table 3: Average Donations by Province and Region

Obs. = 10,366
Givers Obs. = 9,041; Secular Givers Obs. = 3,742; Secular Givers Obs. = 8,654
Volunteers Obs. = 5,239; Secular Volunteers Obs. = 1,157; Secular Volunteers Obs. = 4,721

	Average Donations ($, hrs) Among Respondents					
	cash	**religiouscash**	**secularcash**	**hours**	**religioushours**	**secularhours**
Canada	556	233	323	84	12	72
NF	353	196	158	82	19	63
PEI	571	293	278	81	16	65
NS	476	228	248	96	13	83
NB	458	254	205	89	15	74
QC	**256**	**61**	**195**	**61**	**5**	**57**
ON	654	281	373	100	17	83
MB	670	270	399	79	12	67
SK	755	346	409	73	11	62
AB	912	356	556	84	13	71
BC	737	261	476	95	10	85
Prairies	771	321	450	79	12	67
Atlantic	467	244	224	88	16	72

	Average Donations ($, hrs) Among Corresponding Donors					
	cash	**religiouscash**	**secularcash**	**hours**	**religioushours**	**secularhours**
Canada	637	645	387	166	111	157
NF	386	401	177	169	152	142
PEI	636	625	319	170	101	155
NS	544	614	291	188	102	184
NB	528	637	245	199	115	189
QC	**304**	**174**	**244**	**131**	**93**	**129**
ON	739	798	444	179	132	167
MB	751	752	466	162	97	157
SK	841	912	475	142	79	132
AB	1,053	1,141	671	165	104	157
BC	874	1,004	596	173	109	169
Prairies	871	913	530	157	93	149
Atlantic	527	575	260	183	115	170

Table 4 Data Summary

Obs. = 10,366

Variable	Mean										
	QC	ON	BC	AB	SK	MB	NS	NB	NF	PEI	Canada
female	0.51	0.49	0.51	0.47	0.49	0.54	0.49	0.53	0.50	0.55	0.50
age	50.28	49.72	51.21	46.62	50.01	51.60	51.61	50.87	50.47	49.45	49.91
lnage	3.92	3.91	3.94	3.84	3.91	3.94	3.94	3.93	3.92	3.90	3.83
lnagesq	15.35	15.26	15.49	14.76	15.30	15.55	15.55	15.44	15.38	15.22	14.87
married	0.67	0.66	0.70	0.70	0.69	0.65	0.68	0.71	0.71	0.64	0.67
single	0.33	0.34	0.30	0.30	0.31	0.35	0.32	0.29	0.29	0.36	0.33
Mms	2.87E-04	0.00	0.00	0.00	0.00	0.00	1.63E-03	0.00	0.00	0.00	1.24E-03
HS	0.37	0.39	0.36	0.39	0.44	0.45	0.43	0.48	0.52	0.47	0.39
diploma	0.34	0.30	0.32	0.36	0.33	0.32	0.30	0.28	0.28	0.31	0.32
BA	0.25	0.28	0.28	0.23	0.21	0.21	0.24	0.21	0.17	0.20	0.26
Medu	0.04	0.03	0.04	0.03	0.02	0.01	0.02	0.02	0.04	0.02	0.03
religious	0.10	0.19	0.14	0.18	0.20	0.22	0.16	0.20	0.19	0.24	0.16
nonrel	0.85	0.78	0.81	0.78	0.78	0.77	0.82	0.78	0.78	0.74	0.80
Mrel	0.05	0.04	0.04	0.04	0.03	0.02	0.02	0.02	0.03	0.02	0.04
immnew	0.03	0.05	0.04	0.06	0.02	0.05	0.01	0.01	0.01	0.02	0.04
immold	0.05	0.17	0.21	0.11	0.03	0.09	0.02	0.02	0.01	0.03	0.12
bornCA	0.86	0.71	0.68	0.78	0.91	0.83	0.94	0.95	0.94	0.93	0.78
Mimm	0.05	0.07	0.07	0.05	0.03	0.03	0.03	0.03	0.04	0.02	0.06
IV	0.77	0.78	0.83	0.88	0.85	0.84	0.83	0.78	0.78	0.82	0.80
NONIV	0.22	0.20	0.15	0.12	0.14	0.16	0.17	0.21	0.21	0.17	0.19
MIV	0.01	0.01	0.01	1.12E-03	0.01	4.06E-03	4.30E-03	0.01	7.96E-03	6.67E-03	0.01
commu3	0.09	0.08	0.07	0.09	0.08	0.06	0.06	0.05	0.05	0.08	0.08
commu35	0.06	0.05	0.06	0.05	0.05	0.07	0.05	0.04	0.05	0.06	0.06
commu510	0.12	0.15	0.17	0.17	0.14	0.11	0.10	0.10	0.09	0.12	0.14
commu10	0.70	0.69	0.66	0.67	0.71	0.76	0.78	0.79	0.77	0.73	0.70
Mcommu	0.03	0.03	0.04	0.03	0.02	0.01	0.02	0.02	0.03	0.01	0.03
rural	0.19	0.13	0.14	0.11	0.27	0.20	0.39	0.52	0.43	0.56	0.17

kid05	0.14	0.13	0.11	0.19	0.16	0.12	0.12	0.14	0.11	0.13	0.14
kid612	0.11	0.13	0.11	0.16	0.13	0.10	0.11	0.10	0.11	0.11	0.12
kid1317	0.04	0.04	0.03	0.06	0.07	0.04	0.03	0.04	0.04	0.03	0.04
kid18	0.09	0.07	0.06	0.07	0.06	0.07	0.07	0.05	0.08	0.09	0.07
hhsize	2.50	2.69	2.47	2.75	2.60	2.39	2.37	2.47	2.51	2.60	2.59
lnhhsize	0.91	0.99	0.90	1.01	0.96	0.87	0.86	0.90	0.92	0.95	0.84
income	67,669	84,736	75,770	110,800	89,516	70,361	66,504	63,870	71,084	69,892	79,994
lnincome	11.12	11.35	11.24	11.62	11.40	11.16	11.11	11.06	11.17	11.15	11.05
taxprice	0.67475	0.7995	0.7994	0.75	0.74	0.742	0.7621	0.7561	0.773	0.752	0.75524
lntaxprice	-0.3934	-0.2238	-0.2239	-0.2877	-0.3011	-0.2984	-0.2717	-0.2796	-0.2575	-0.2850	-0.2832

Table 5: 2013 Canadian Donation Tax Credit Rate

provincial and federal levels	tax credit rate	marginal tax rate
Federal	15.00%	N/A
NF	7.70%	22.70%
PEI	9.80%	24.80%
NS	8.79%	23.79%
NB	9.39%	24.39%
QC	20.00%	32.525%
ON	5.05%	20.05%
MB	10.80%	25.80%
SK	11.00%	26.00%
AB	10.00%	25.00%
BC	5.06%	20.06%

Data source: Canadian Tax and Financial Information
http://www.taxtips.ca/filing/donations/tax-credit-rates-2013.htm
For Quebec, a federal tax abatement of 16.5% is applied.
Tax price = 1- marginal tax rate

Table 6 Tobit Regression Results (Giving Part)

Obs. = 10,366

Variables		Total Giving		Religious Giving		Secular Giving	
		coefficients	**Robust Std. Err**	**coefficients**	**Robust Std. Err**	**coefficients**	**Robust Std. Err**
constant		-13.804***	4.531	10.148	10.267	-20.196***	4.898
female		0.196***	0.069	0.341**	0.162	0.240***	0.075
lnage		2.452	2.241	-10.762**	4.973	4.789**	2.432
lnagesq		-0.150	0.294	1.783***	0.651	-0.478	0.320
married	**ref: single**	0.448***	0.120	0.384	0.283	0.385***	0.125
Mms		-1.275	2.223	-27.575	n/a	-0.868	2.224
diploma	**ref: HS**	0.599***	0.086	0.523***	0.199	0.716***	0.094
BA		1.286***	0.096	1.181***	0.244	1.437***	0.103
Medu		0.326	0.391	0.756	0.957	0.173	0.428
religious	**ref: nonrel**	1.909***	0.097	7.124***	0.167	0.363***	0.115
Mrel		0.083	0.417	-0.878	0.862	0.222	0.431
immnew	**ref: immold**	-0.377	0.269	-0.006	0.572	-0.660**	0.302
bornCA		0.253**	0.114	-0.965***	0.258	0.526***	0.136
Mimm		-0.375	0.292	-1.790***	0.532	-0.078	0.317
commu3	**ref: commu10**	-0.133	0.140	-0.200	0.331	-0.190	0.159
commu35		0.128	0.160	-0.254	0.382	0.064	0.163
commu510		-0.124	0.114	-0.554**	0.268	-0.043	0.124
Mcommu		0.557	0.593	3.101**	1.363	0.114	0.626
rural		0.386***	0.078	0.984***	0.199	0.352***	0.085
kid05		0.325**	0.127	1.008***	0.306	0.240*	0.139
kid612		0.392***	0.126	0.291	0.317	0.320	0.136
kid1317		-0.103	0.179	0.035	0.415	-0.069	0.190
kid18		0.404***	0.155	0.656*	0.398	0.207	0.178
lnhhsize		-0.604***	0.166	0.557	0.401	-0.750***	0.175
lnincome		0.839***	0.070	0.304*	0.160	1.021***	0.072
lntaxprice		-2.206	6.160	11.975	14.058	-1.495	6.658
QC	**ref: ON**	-1.031	1.046	2.322	2.392	-0.849	1.134
BC		-0.165	0.116	-0.961***	0.265	-0.143	0.124
Prairies		0.140	0.472	1.198	1.053	0.193	0.514
Atlantic		-0.387	0.309	0.938	0.712	-0.299	0.334
sigma		2.309	0.034	4.586	0.073	2.475	0.035
left-censored Obs.		1,325		6,624		1,712	
uncensored Obs.		9,041		3,742		8,654	

Note: Coefficients are significant at 1% ***, 5%** and 10%* level, respectively.

Table 7 Tobit Regression Results (Volunteering Part)

Obs. = 10,366

Variables		Total Volunteering		Religious Volunteering		Secular Volunteering	
		coefficients	Robust Std. Err	coefficients	Robust Std. Err	coefficients	Robust Std. Err
constant		1.713	8.173	-27.856*	16.181	4.193	8.728
female		0.017	0.133	0.314	0.268	0.006**	0.142
lnage		-7.200*	3.984	6.913	8.065	-9.500**	4.264
lnagesq		0.889*	0.524	-0.831	1.058	1.192	0.561
married	**ref: single**	0.242	0.212	0.624	0.411	0.138	0.231
Mms		-22.830	n/a	-24.564	n/a	-24.537	n/a
diploma	**ref: HS**	1.017***	0.169	0.728**	0.328	1.106***	0.182
BA		2.453***	0.180	1.562***	0.357	2.648***	0.192
Medu		-0.142	0.986	2.909**	1.208	-0.511	1.147
religious	**ref: nonrel**	2.156***	0.171	8.582***	0.239	0.372*	0.198
Mrel		-1.225*	0.688	-1.053	1.605	-1.216*	0.722
immnew	**ref: immold**	-0.957**	0.462	-1.151	1.029	-1.142**	0.483
bornCA		1.011***	0.227	0.450	0.446	1.044***	0.248
Mimm		-0.149	0.537	0.342	0.923	-0.169	0.572
IV	**ref: NONIV**	2.141***	0.188	2.250***	0.418	2.195***	0.200
MIV		3.793***	0.733	3.235**	1.338	4.392***	0.773
commu3		-0.564**	0.282	0.008	0.566	-0.617**	0.299
commu35	**ref: commu10**	0.311	0.282	0.065	0.605	0.302	0.297
commu510		-0.152	0.203	-0.023	0.413	-0.142	0.218
Mcommu		3.225**	1.319	2.467	2.041	2.878*	1.491
rural		0.583***	0.162	0.769***	0.297	0.628***	0.175
kid05		-0.556**	0.240	-0.200	0.501	-0.607**	0.254
kid612		1.535***	0.240	0.267	0.496	1.750***	0.254
kid1317		1.113***	0.328	-0.676	0.705	1.303***	0.344
kid18		0.278	0.334	0.041	0.702	0.160	0.358
lnhhsize		-0.459	0.282	-0.031	0.520	-0.476	0.310
lnincome		0.456***	0.118	-0.066	0.216	0.566***	0.131
lntaxprice		-14.274	12.251	-3.047	23.721	-15.210	13.384
QC	**ref: ON**	-3.547*	2.087	-2.562	4.053	-3.590	2.279
BC		0.669***	0.210	0.065	0.391	0.686***	0.224
Prairies		-0.488	0.931	0.605	1.813	-0.570	1.016
Atlantic		-0.730	0.616	0.143	1.214	-0.746	0.673
sigma		4.156	0.053	5.283	0.128	4.397	0.056
left-censored Obs.		5,127		9,209		5,645	
uncensored Obs.		5,239		1,157		4,721	

Note: Coefficients are significant at 1% ***, 5%** and 10%* level, respectively.

Table 8 Predicted Average Donations by Provinces

	Total Giving	Religious Giving	Secular Giving	Total Volunteering	Religious Volunteering	Secular Volunteering
QC	3.6292***	-2.0578***	3.2273***	-2.0249***	-11.1995***	-2.4879***
ON	4.5054***	-1.6156***	3.9081***	-0.7294***	-8.5065***	-1.4340***
BC	4.2720***	-2.8262***	3.7478***	-0.0539	-8.5804***	-0.6809***
AB	4.9189***	-1.3703***	4.4033***	-0.0296	-7.6922***	-0.7225***
SK	4.9806***	-1.2997***	4.4226***	0.2930*	-7.3408***	-0.4127***
MB	4.8059***	-1.2056***	4.1646***	-0.0687	-7.3727***	-0.8479***
NS	4.2366***	-1.4237***	3.7450***	-0.5520***	-8.0820***	-1.1940***
NB	4.2597***	-1.1606***	3.6940***	-0.4644***	-7.7811***	-1.1656***
NF	4.1839***	-1.0584***	3.6486***	-0.8493***	-7.9732***	-1.5717***
PEI	4.3582***	-0.9231***	3.7290***	-0.2104	-7.3441***	-0.9701***

Note: Coefficients are significant at 1% ***, 5%** and 10%* level, respectively.
Values of predicted average donations are in logarithms, which preserves the same ranking as would occur if they were in levels.

Table 9 Adjusted Predicted Average Donations for Quebec

	Adjusted Predicted Average Donations	Rank	the Group Characteristics Adjusted
Total Giving	4.3063***	6	religion from PEI; income from AB
Religious Giving	-1.035***	2	religion from PEI
Secular Giving	3.7306***	7	income from AB
Total Volunteering	-0.7190 ***	8	age, informal volunteering, have kids aged 6-12, income from AB; education from BC; religion, rural areas from PEI; time of living in a community, kids aged 0-5 from NF; immigrants or natives from NB; kids aged 13-17 from SK (All significant covariates are adjusted.)
Religious Volunteering	-9.4352***	10	religion, rural areas from PEI; education from BC; informal volunteering from AB(all significant covariates are adjusted)
Secular Volunteering	-1.4293***	8	age, informal volunteering, have kids aged 6-12, income from AB; education from BC; rural areas from PEI; time of living in a community, kids aged 0-5 from NF; immigrants or natives from NB; kids aged 13-17 from SK (Almost all significant covariates are adjusted.)

Note: Coefficients are significant at 1% ***, 5%** and 10%* level, respectively.
Values of predicted average donations are in logarithms, which preserves the same ranking as would occur if they were in levels.
By comparing predicted average values with those in Table 8, rank is obtained.