

# Crowding Out: The Effect of Government Grants on Donors, Fundraisers, and Foundations in Canada

By James Andreoni and A. Abigail Payne\*

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**Abstract:** Using data from charitable organizations in the US, authors have established that government grants to charities largely crowd out giving from other sources, but that this reduction is due mostly to reduced fundraising activities of the charity itself. We use much more detailed data from over 13,000 charities in Canada, measured for up to 15 years, to provide valuable new insights into this phenomenon. In particular, dollars received from individuals would increase with an increase in government grants if fundraising expenditures were held constant. Non-tax receipted giving from fundraising would decrease. A good portion of the crowd-out is attributable to giving from other institutions, such as foundations and other charities. The effect from this measure, about one-third of the measured crowding out—represents a potential loss of dollars to the charitable sector as a result of government grants.

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\*Andreoni: Department of Economics, University of California, San Diego (email: [andreoni@ucsd.edu](mailto:andreoni@ucsd.edu)); Payne: Department of Economics, McMaster University, Hamilton, ON L8S 4M\$ (email: [paynea@mcmaster.ca](mailto:paynea@mcmaster.ca)). This research was supported by grants from the Social Sciences and Humanities Research Council of Canada, and the National Science Foundation.

## 1. Introduction

This question of government crowd out of private donations is one of the oldest and most important public economics issues.<sup>1</sup> The first studies of crowding out treated private charities as passive players in the fundraising game, and found very little crowd out. However, once proper instruments were applied to recognize the simultaneity issues of conditions that encourage both giving and grants, scholars began finding evidence of severe crowd out (Payne, 1998). Andreoni and Payne, in a series of papers (2003, 2011), recognized further that charities themselves could be a third strategic player by changing fundraising in response to government policy. In a surprising result, they found that nearly three quarters of crowding out was due to reduced fundraising efforts by charities after an infusion of government grants.

Recently, researchers have also become aware that the landscape of the charitable sector has changed dramatically over the past two decades. In particular, private foundations have nearly doubled their share of the sector, from 7% in 1990 to 14% in 2010, and growing at twice the rate of donations by individuals (Andreoni and Payne, 2013). This introduces yet a fourth strategic player in the market for charitable giving--the private foundation.

This paper reexamines the questions of government crowding out by taking explicit account of the active role now taken by foundations, in addition to the choices of individual donors and of fundraisers.

To do this, we examine a panel data of data from virtually every charity in Canada over a 15 year period. We turn to data from Canada for three reasons. First, the data are of far greater quality than that available from the United States, which are the target of almost all prior studies, and can give a clearer picture of the relationship between charities, foundations, the government,

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<sup>1</sup> Recent contributions include those by Hungerman, 2005, Kingma, 1989, Payne, 1998, Ribar and Wilhelm, 2002, and Andreoni and Payne, 2003, 2011.

and donors. Second, because of extra precision of the source of donations, we are able to gain insights into charitable giving that would not be possible with U.S. data. Third, we can both confirm the results from US data in Canada, and provide broader policy advice to both countries.

With a population of over 32 million, Canada is ranked by the IMF as the tenth richest country in the world with per capita income in 2011 of nearly \$40,000 (US). It is also one of the most charitable countries in the world. Sixty-four percent of Canadians report giving to charity each year, compared to 60% of Americans, and donors gave a total of \$8.2 billion (US) in 2009. Canada's per capita giving was 0.72% of GDP in 2006, ranking third internationally, after the US (1.67%) and the UK (0.73%).<sup>2</sup> We use government filings of over 13,000 Canadian charities, spanning up to 15 years.

What makes the data on Canada superior to data used in other studies? First, Canada's income and giving patterns are similar to other major western countries. Second, our data contains a long panel on charities, with annual tax filings of Canadian charities from 1992 to 2008. In our preferred sample we have a panel of nearly 140,000 observations. Third, these tax filings are far more detailed and precise than US 990 forms used earlier and cover all charities, regardless of size. Fourth, the Canadian census is taken every 5 years, as opposed to 10 years in the US, and reported census block averaging is on a scale that is typically much finer than in US data, thus giving us more demographic accuracy about the geographic area surrounding the charity. Fifth, the variation in political representation is quite high and cannot be thought to be correlated with giving in the districts, thus has potential as a valuable instrument. Sixth, giving is reported in three primary categories: *Tax Receipted Gifts* are donations that generate a receipt for tax purposes and include most direct contributions by individuals, including those who pay no

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<sup>2</sup> Sources: IMF; Charities Aid Foundation, The World Giving Index 2010; CAF Briefing Paper: International comparisons of charitable giving, November 2006.

taxes; *Revenue from Fundraising* is a slightly misleading term that refers to revenues from, for example, special fundraising events such as a gala or sponsorship; finally, *Revenue from other Charities* includes mostly gifts received by the charity under study from outside foundations.

The findings of the paper refocus the literature on crowding out. Estimates of gross crowding out are on the order of 83 to 98 percent, most of which can be attributed to reduced fundraising by the charities. Both findings are similar to the US data. However, when analysis of giving is divided into the three categories, we find important and interesting new insights. In particular, tax receipted gifts are crowded-*in* by government dollars, consistent with several theories of grants as signals or as seeds (Andreoni, 1998, 2006), while 30 percent of revenue from other charities is directly crowded out by government grants. The crowd out of revenue from fundraising is also mostly attributed to a reduction in fundraising.

This tells an interesting story. Individuals, who are likely the *least* well informed of the finances or effectiveness of a charity, use the grants as a signal of quality and are thus encouraged to give by government grants, while donations from foundations and other charities, who are likely the *most* well informed, are by contrast discouraged by grants. Finally, the revenue from fundraising, probably the most onerous type of fundraising by charities, declines equally with tax-receipted giving as when grants are received, underscoring the assumption made in many models of fundraising: that charities find it a necessary but unpleasant activity.

In telling this story, however, one must be careful to remember that charities are in long term relationships with all of their contributors, and our analysis is not able to capture all the richness about how grants and fundraising may influence these relationships. Nonetheless, these results put in place several important pieces of the puzzle of how fundraising and giving respond to each other and to government grants that no prior study provided.

The paper proceeds as follows. Section 2 gives the background for our analysis. Section 3 describes the data from Canada. Section 4 provides our estimation model and results, while Section 5 is a conclusion.

## **2. Framework for Analysis**

In this section, we summarize the prior literature and discuss how the special features of our data allow us to decompose crowd-out into several types of private giving.

### **A. Background**

The previous literature on fundraising has considered three main actors in the charitable sector: The charities that solicit funds, individual donors who also pay taxes, and the government that spends tax revenues on grants to charities. The dye cast in our previous papers (Andreoni and Payne, 2003, 2011) is to think of these players as interacting in a market for charitable giving (Andreoni 2006a, List 2011).

In this market, charities are the demanders of donations and compete with other charities to attract the suppliers of donations. These suppliers are concerned with the quality of charities and the effectiveness of their donations, on which they likely have only partial information, while they also care about the costs and convenience of donating. Fundraising can reduce the costs of donating by, for instance, soliciting donations over the phone. Fundraisers can also provide information that could attract givers. However, excessive fundraising is also wasteful, and can potentially deter givers (Rose-Ackerman, 1982, Okten and Weisbrod 2000).

Grants from the government have two possible effects. First is the traditional crowding out argument: Individuals involuntarily pay the taxes that then go to the charity, hence people optimally withdraw their voluntary donations in response (Warr 1982, Bergstrom, Blume, and Varian, 1986). But if the quality or effectiveness of the charity is unknown, the fact that a

charity applied for and won a government grant conveys positive information about the charity, hence may encourage more giving (Andreoni, 1998, 2006b, Vesterlund 2003).

In a recent theoretical contribution, Correa and Yildirim (2011) provide an extremely elegant and general approach to this complex set of interactions. Like prior models (Andreoni and Payne, 2003), they assume that individuals do not give unless they are solicited directly (see Meer and Rosen, 2011, and Andreoni and Rao, 2011, and Andreoni, Rao, and Trachtman, 2011 for evidence of this effect), and that fundraising is an activity that charities consider a “necessary evil,” that is, they must do it but would prefer to devote the same efforts and dollars to their charitable mission. Correa and Yildirim predict that government grants should result in lower fundraising efforts, reduced private giving, but incomplete crowding out.

#### **B. A Charity Market with Four Players**

In addition to the three actors discussed above, we now must also consider a fourth actor: foundations and other nonprofits that give directly to charities. Unlike private donors, these institutional donors are likely to be quite well informed about the quality and finances of charities and, as a consequence, will attach less signaling value government grants. The informational advantage of foundations, moreover, is likely to make the donating institution feel their marginal impact has been reduced by a government grant, leading to lower giving and more crowding out. But as with private donors, there are costs of attracting institutional gifts, such as making applications and accounting for expenses.

A further difference is that our data also divides individual donations into two pieces: revenues from those for whom the charity issued a tax receipt (“tax receipted gifts”) and those from fundraising events for which a tax-receipt was not issued (“revenues from fundraising”). The tax receipted gifts are the type of donation that Andreoni and Payne (2003) and Correa and

Yildirim (2011) have in mind. Revenues from fundraising, such as sponsoring a run or holding a banquet, is an increasingly important slice of the charitable giving pie that has yet to be explored either theoretically or empirically. Intuitively, one might expect that fundraising from sponsored events is most disruptive to the charity since it requires more “hands on” effort than a mailing or phone bank, that is, tax receipted gifts. Hence, one would not be surprised to find this activity crowded out to a greater degree than other types of fundraising.

While our data gives us precise information on fundraising, it unfortunately does not disentangle fundraising for tax receipted gifts, revenues from fundraising, and revenues from other charities. One way to gain this identification is to assume that a charity is spending its fundraising budget optimally. This implies that the budget should be allocated across the three activities such that the marginal returns from the last dollar spent on each is equal.<sup>3</sup>

Let  $D_i$  be donations from source  $i$ , so that total donations are  $D = D_1 + D_2 + D_3$ .

Likewise, let  $F_i$  be the dollars spent on fundraising from  $i$ , so  $F = F_1 + F_2 + F_3$ . Then by definition<sup>4</sup>

$$\frac{dD}{dF} = \frac{dD_1}{dF_1} \frac{dF_1}{dF} + \frac{dD_2}{dF_2} \frac{dF_2}{dF} + \frac{dD_3}{dF_3} \frac{dF_3}{dF}$$

The assumption of efficient fundraising implies that  $dD_i/dF_i$  be identical for all activities. Hence,  $dD/dF = (dD_i/dF_i) (dF_1/dF + dF_2/dF + dF_3/dF)$ , that is,  $dD_i/dF_i = dD/dF$  for all  $i$ .

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<sup>3</sup> Since fundraising expenditures for revenue from fundraising are more discrete, the assumption of differentiability here will likely be unrealistic. Any bias this may cause is difficult to assess.

<sup>4</sup> This assumes, perhaps too strongly, that there are no complementarities across types of fundraising, nor any non-differentials elements, at the last dollar spent on each type. Given the data restrictions, There is unfortunately no evidence on how restrictive this assumption is.

Since our data will allow us to identify the combined effect,  $dD_i/dF = (dD_i/dF_i)(dF_i/dF)$ , as well as the total effect  $dD/dF$ , we can use the condition above to infer that  $dF_i/dF = (dD_i/dF)/(dD/dF)$ .

After imputing  $dF_i/dF$ , we can look at the effects of policy on each type of giving. In particular, we can identify how government grants affect fundraising. Let  $G$  represent grants. Then our data will allow us to measure  $dF/dG$ , but not the individual  $dF_i/dG$ . We can, however, impute this value using the expression

$$\frac{dF_i}{dG} = \frac{dF}{dG} \frac{dF_i}{dF}.$$

These calculations will be applied when decomposing direct crowding out and indirect crowding out due to reduced fundraising.

### 3. Data

In Canada, any organization that issues tax receipts to individuals for a donation must become a registered charity with the federal tax authority, the Canada Revenue Agency (CRA). CRA regulations mandate that charities must file an information return annually, within six months of the end of the charity's fiscal period. Moreover, charities are also required to submit a copy of its own audited financial statement with CRA. Failure to comply with these regulations can result in the charity having its registration status revoked.<sup>5</sup>

Compared to other sources of data on charities (such as US 990 forms), the Canada charity information returns are richer and more complete. The data, however, are collected for administrative and not research purposes. To develop a data set usable for research, we

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<sup>5</sup> More information on the filing requirements can be found at [www.cra-arc.gc.ca](http://www.cra-arc.gc.ca). In speaking with representatives from CRA, in any given year, approximately 95% of registered charities file their annual returns on time.



attempted to assess the quality of the data and correct for anomalies when possible. Both a data appendix describing the key anomalies addressed, and the final data set is available from the authors.

Each registered charity is classified based on their mission statement and other information filed with the CRA. For this study, we use this classification system to focus on those charities that can be considered as involved in the provision of social welfare and community services.<sup>6</sup> We study just this set of charities as they usually provide goods locally and provide the types of goods for which we might expect to observe crowding out. As explained in previous work, motivations for giving may differ across the spectrum of goods and services that charities provide. By focusing on groups of charities that are likely to provide goods and services for which the donor motivation for giving would be similar, we can provide cleaner estimates of the crowding out effect.

We focus our analysis on the following measures (in real terms) from the information returns:<sup>7</sup>

- Private Giving: This includes funding from tax receipted gifts, revenue from fundraising activities, and revenue from other charities and sources for which a tax receipt is not issued. We also analyze these revenue sources separately.
- Government funding: This covers grants received from all levels of government: federal, provincial, and local.

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<sup>6</sup> This covers the category codes identified as: care, welfare related (three codes), community related (three codes), recreation, and service clubs (two codes). We use the most recent classification of the charity by CRA to group the charities.

<sup>7</sup> Our study includes charitable organizations that file an information return for activities between 1994 and 2008. During the period under study, the information return for the charity changed a few times. The forms from the early periods requested more aggregated information regarding the receipt of revenue from private and government sources. In more recent years, charities have been asked more detailed questions about their revenue from these sources.

- Fundraising activities from two key sources:
  - Fundraising expenditures and advertising/promotional expenditures: On the information return, charities are asked about expenditures for both fundraising and for advertising. Fundraising expenditures is a specific line item on the return. These expenditures include amounts spent on any type of fundraising campaign or general initiative. Charities were required to provide this information in all variations of the information returns filed over the period of study. The line item for advertising expenditures is asked in a section where the charity is to identify the proportion of its reported total expenditures is attributable to advertising. Worded this way, this may or may not include amounts reported as fundraising expenditures. Given our framework defines fundraising broadly to include specific and more general promotion of the charity, we think it is important to include both of these measures in our analysis. To combine the information, however, it may not be appropriate to simply sum reported advertising and fundraising expenditures. To be conservative, we include that part of advertising expenditures that is greater than what is reported as fundraising expenditure. In our robustness check, we report the results if we assume that advertising and fundraising expenditures are treated as independent of each other and are simply added together in cases when the two measures do not have the same values.
  - Categorical measures to reflect the type of fundraising activities: in more recent years, charities are asked about their fundraising methods, including door-to-door solicitations, anonymous sales of goods, mail/phone

solicitations, planned giving, corporate campaigns, contracted fundraisers, advertising, and special events. Information on types of fundraising activities was first asked in the 1996 information return.

- The geographic location of the charity, as identified by its postal code. The postal code is important when linking with data on socio-economic characteristics of the neighborhood in which the charity is located and federal parliamentary measures for the political riding (district) in which the charity is located.<sup>8</sup>

An important issue is whether to include the charities in Canadian territories and in Quebec. We chose to exclude the charities in the territories (104) since these are remote places and the charity operations may be unlike what is typical in most areas. Quebec is the home of the majority of francophones in Canada, and private giving in Quebec is noticeably different than in the rest of Canada. Moreover, the political economy in Quebec and the relationship between the province and the federal government has differed over the last several decades given the province periodically discusses the possibility of separating from Canada. We, therefore, exclude charities located in Quebec.

In addition to the charity information returns, we also use data from two other sources. One is from Statistics Canada and covers measures from the Canadian Censuses conducted in 1991, 1996, 2001, and 2006 to reflect the neighborhood in which the charity is located. For the intervening years we linearly interpolate the measures. Our definition of neighborhood is based on the first three characters of the postal code, known as the “forward sortation area” (FSA). FSAs are determined by the postal service, taking into account natural and other barriers such as

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<sup>8</sup> In some instances we could not link the reported postal code to measures such as the federal riding. In these instances we use the latitude and longitude of the postal code to identify the closest postal code for which the riding information was available. If a latitude and longitude for the postal code was not available (usually because the postal code does not exist), we hand-checked the information for the charity to assign a relevant postal code.

rivers, lakes, and expressways in creating the FSA boundaries. On average, there are 8,000 households in an FSA.<sup>9</sup>

The third data source is from the Federal Elections Commission. We developed measures to reflect the party affiliation and tenure of the members elected to represent the province in which a charity is located.<sup>10</sup> We also developed measures to reflect the share of the seats in the provincial parliament held by various parties.<sup>11</sup>

Our initial data extraction covers 20,075 charities operating outside of Quebec and the Canadian Territories. As with other data sets that are based on administrative records, the records for a given charity can be inconsistent over time – or the charity may not be actively engaged in revenue raising. Some of this inconsistency comes from the transformation of the information returns into machine readable code.<sup>12</sup> Some comes from inconsistent reporting by the charities. Another source of inconsistency relates to the differences in how charities operate. In a recent survey, 30 percent of charities classified as social welfare and community indicated that they are not currently operating (providing goods and services) despite their still filing information returns to CRA. Given we cannot hand-check every return of every charity, we explain below the judgment calls we made to ensure a reasonably accurate and relevant set of charities for our analysis.<sup>13</sup>

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<sup>9</sup> As areas expand or contract, the FSA boundaries will change. In assigning charities to FSAs we use the 1996 boundaries. More information on the FSA assignment process is available from the authors. For the purpose of matching in the census measures, we use the last known FSA of the charity.

<sup>10</sup> We also developed measures of party affiliation and tenure for the federal election district in which the charity is located. These measures, however, were not robust in our empirical analysis.

<sup>11</sup> In Canada, across the provinces there are several political parties that are well represented. Thus, unlike the US, there is more than a two-party system. The dominant political parties during the period under study are the Liberal Party, the Conservative Party, the New Democrat Party, and the Bloc Quebecois.

<sup>12</sup> Our understanding is that most returns were scanned into a machine readable code. These scans were done once and were not necessarily checked for accuracy.

<sup>13</sup> Charities/observations were dropped sequentially. Thus, some charities may be excluded for more than one of the listed criteria.

- Charities that indicate on their information return that they only operate nationwide and never indicated operating at a provincial or a local level were dropped (477 charities, 5,423 observations).
- For charities that share the first part of the tax identification number, indicating they operate in some form as a joint operation, we drop those charities that also report the same postal code but there is evidence that they operate elsewhere and we were not able to identify the correct postal code for the charity (8 charities, 8 observations)
- Annual return reports no revenues of any type or no expenditures of any type. We discovered returns for which important parts of the return are missing in one year but regularly provided in other years. Reporting no receipt of any revenues or expenditures is the most flagrant example of this type of misreporting resulting in 9,551 dropped observations
- Charity indicates that it does not issue tax receipts and reports no revenues from fundraising nor from other charities: Given the primary focus of this paper is to understand how individuals react to a change in the level of government received by the charity, it is important to study those charities that regularly issue tax receipts and/or receives funding from other private sources.<sup>14</sup> From our sample: 834 charities report never issuing tax receipts (4,519 observations).
- On the information return, we can observe whether a charity has engaged in fundraising activities using two types of measures. The first measure is the reported expenditures for fundraising and/or advertising/promotion. The second measure is derived from yes/no responses to questions about the use of different types of fundraising activities. While we want to be generous and include charities that report

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<sup>14</sup> On the information return, charities are asked whether they issued tax receipts.

any type of fundraising activities, given our core fundraising measure is the expenditures on fundraising, we exclude charities that never report fundraising expenditures over the sample. (excluding 3,663 charities, 17,593 observations)

- Charities with fewer than 3 observations over the sample (892 charities, 1,412 observations).

There also appear to be a number of systematic reporting errors. If a charity reports its values using dollars *and* cents, when the forms ask only for dollars, then when scanned, the decimal point can get ignored, resulting in the revenues (and other measures) being reported at 100 times the real amounts. We, therefore, exclude those charities whose total revenues are in the top 10% of total revenues for one or more years (1,384 charities, 18,813 observations).

In Panel A of Table 1 we report the summary statistics for our key measures. All dollars amounts have been adjusted to 2001 dollars. Starting with private giving, average private funding per charity is approximately \$49,000 over the sample period. There is a fair bit of variation in this funding – the maximum annual private giving is close to \$1.3 million. One reason for the low average private funding is that all charities, regardless of size, must file an information return. In the United States, smaller charities do not have to file the equivalent form. Across sources of private funding, more funding, on average, is received as a tax-receipted gift than as revenue from a fundraising event (for which a tax-receipt is not issued). Similar to the United States, the average level of government funding is higher than the average level of private funding. The average level of funding is \$88,000 – the maximum level of government funding reported is close to \$1.3 million. The average level of fundraising expenditures is close to \$10,000.

#### 4. Estimation and Results

We are interested in estimating three relationships: (1) the effect of government funding on private funding, controlling for fund-raising; (2) the effect of fund-raising on private funding, controlling for government funding; (3) the effect of government funding on fund-raising. The estimation challenges include controlling for endogeneity from unobserved characteristics or events that cause donations, grants, and fund-raising to be correlated. We also have to be concerned with the specification issues and what might be captured in the error term, suggesting that a three stage least squares technique is not appropriate (Wooldridge, 2002).

For each charity  $i$  at time  $t$  for charity in community  $c$ , we estimate the following three equations:

$$Private\ Giving_{ict} = \alpha^1_i + \lambda^1_t + A \cdot GovtFunds_{ist} + Controls_{ict}\omega^1 + \varepsilon^1_{ict} \quad (1)$$

$$Private\ Giving_{ict} = \alpha^2_i + \lambda^2_t + B \cdot Fundraising_{ist} + Controls_{ict}\omega^2 + \varepsilon^2_{ict} \quad (2)$$

$$Fundraising_{ist} = \rho_i + \varphi_t + C \cdot GovtFunds_{ist} + Controls_{ict}\kappa + \eta_{ict} \quad (3)$$

In equation (1) we are estimating the total effect of a change in government funding on private giving to the charity. The coefficient “A” represents crowd-out both direct and indirect. In equation (2) we estimate the effect of a change in fundraising expenditures on private giving. If a charity is revenue maximizing, we would expect the coefficient “B” to equal one – that, on the margin, the last dollar spent earns an extra dollar of funding. A coefficient greater than one is consistent with the more common notion that charities may be satisficers, raising only enough to satisfy a stated mission. In equation (3), we estimate the effect of a change in government funding on fund-raising efforts by the charity. Our analysis focuses first on the results from each of these specifications. We then use the estimations to decompose total crowd-out into the components attributable to a change in private giving and to a change in charity fund-raising.

In all of the specifications we include a set of charity dummies (fixed effects) to control for time-invariant characteristics of the charities and a set of year dummies to control for macro-level year-to-year changes that would affect all charities similarly. We also include a set of time-varying controls to capture changes at the charity level and the neighborhood and province in which the charity is located. Using time-varying charity level characteristics is delicate given many measures (e.g. other revenue sources) are likely to be endogenous. We employ three types of measures: firm level yearly trends, information about a charity starting (“enters”) or ending over the period (“exits”), and levels of paid staff. We create a dummy variable that is equal to one for the year we first observe the charity, if that year is subsequent to 1993. We create a dummy variable equal to one for the last year we observe the charity if that year is prior to 2008 (the end of our sample). We use three firm level trends: a trend measure for all charities, a trend measure for charities that enter during the sample period, and a trend measure for charities that exit during the sample period. Finally, we use the reported level of full and part time paid staff to create four dummy variables: those with no employees, those with 1-9 employees, those with 10-19 employees and those with 20 or more employees. These measures are designed to capture the trends within the charity and changes that may reflect rapid growth or decline in charity operations.

At the neighborhood level, our controls are average household income, the size of the population, the share of the population that are under 19, between 55 and 64, and over 65, the share of the population that has moved into the neighborhood in the last five years, the share of the population that are immigrants (post 1981), and whether the member of federal parliament representing the area is affiliated with the liberal party. At the provincial level, we include measures for the share of the provincial parliament members that are affiliated with the liberal



party, the new democrat party, and other parties except for the conservative party. These controls capture time-varying changes in the demographic, economic, and political climate of the neighborhoods in which the charities are located.

#### **A. Total crowd-out effect of government grants on private giving**

In Table 2, we present the effects of government grants on total private giving and fundraising expenditures (Equations 1 and 3). In panel A, we focus first on the total crowd-out effect. Column 1 shows results using a standard OLS fixed effects specification. As in many prior studies, the coefficient is small in magnitude and suggests no crowd-out. This is likely attributable to endogeneity and omitted variable bias. Our preferred set of specifications controls for these biases by employing a two-stage least squares specification (2SLS). We use the limited information maximum likelihood (LIML) variation of the 2SLS specification as LIML is generally considered superior when there are concerns about weak instruments (see, e.g., Wooldridge, 2002, Bound, et al, 1995). The challenge with the 2SLS specification is finding a set of measures that explains government grants but do not directly explain the dependent variable, private giving. As we are using a reduced form set of estimating equations, implicit in equation 1 is that fundraising expenditures are included in the error term. Given that government grants also explain fundraising expenditures and there is a relationship between fundraising expenditures and private giving, it is also important to find instruments that do not directly explain fundraising expenditures. We explored two types of instruments. The first type is related to the federal political factors that affect the allocation of government funding to programs that allow for the funding of charities. If the composition of the parliament changes with respect to party affiliation or tenure, funding to programs that support government grants is likely to change. An underlying issue, however, is that donors are also voters. This is why our

control measures include time-varying characteristics of provincial parliament membership and the political party affiliation of the federal member representing the area in which the charity is located. Simply using measures of federal riding party affiliation and/or tenure of the member representing the riding may not be sufficiently exogenous to make them good instruments.

Considering how members of parliament might influence the direction of government funding, it is likely that both seniority and political party are working together. Based on this premise, we explored several instruments that exploit information about the party affiliation and tenure of members in federal parliament. The strongest instruments are those at the provincial level.

In Canada, the party in power can choose when to hold a federal election provided if it is held within five years of the last election. Provinces followed this same pattern until 2001. For the period of our study, British Columbia (in 2001) Ontario (in 2004), and Newfoundland and Labrador (in 2004) implemented fixed election dates. Also in Canada there are three dominant political parties: the Liberal party, the Conservative party, and the New Democrat party (considered to the left of liberal party and not as dominant as the other two parties as a federal level).

Our instruments focus on tenure and political party affiliation of the members of federal parliament. During the sample period, federal elections were held in 1993, 1997, 2000, 2004, 2006, and 2008. From 1993 to 2004 the Liberal Party was in the majority. In 2004, the Liberal Party maintained control but in a minority government. In 2006 and 2008, the Conservative Party gained control

Most federal funds are distributed through provincial or local levels (see, e.g., <http://etatscanadiens-canadiangovernments.enap.ca> for a discussion of transfers from the federal

government to lower levels of government). We hypothesize that if the senior members of federal parliament in a province are affiliated with the majority party in the provincial parliament, this may affect the distribution of funds. If, for instance, the party in power in the provincial parliament is the liberal party, then we use the sum of the tenure of the members in the federal parliament affiliated with the liberal party for the province, regardless of the party in power in the federal government. Table 2 depicts the party in power for the provincial parliaments. There is variation in both timing of provincial elections and the parties in power across the provinces. The composition of the federal riding seats due to decennial changes in the structure of the provinces and changes in the members that are elected also creates a small amount of variation, as do by-elections held when an existing member vacates his seat (usually due to illness or death).

Table 2: Political Party in Control of Provincial Parliament

British Columbia	Alberta	Saskatchewan
1991-2001: NDP 2001-2009: Liberal	1989-2012: Conservative	1991-2003: NDP 2003-2011: Saskatchewan Party
Manitoba	Ontario	New Brunswick
1990-1999: Conservative 1999-2011: NDP	1990-1995: NDP 1995-2003: Conservative 2003-2011: Liberal	1991-1999: Liberal Party 1999-2006: Conservative Party 2006-2010: Liberal Party
Nova Scotia	Newfoundland	Prince Edward Island
1993-1999: Liberal Party 1999-2009: Conservative Party	1993-2003: Liberal Party 2003-2011: Conservative	1993-1996: Liberal Party 1996-2007: Conservative Party 2007-2011: Liberal Party

Saskatchen Party, formed in 1997 as a coalition between Conservative and Liberal Party

Exploiting information about political party affiliation and tenure in the federal parliament, we created the following instruments;

- Total Tenure per 1000 months of all members in the federal parliament representing the province and affiliated with the Liberal Party. Given we include year dummies and yearly trends in our estimation, this measure will vary most around times of federal elections and when a member exits before the next election, requiring a by-election for the riding.
- Total Tenure per 1000 months of all members in the federal parliament representing the province and affiliated with the Conservative Party. Given we include year dummies and yearly trends in our estimation, this measure will vary most around times of federal elections and when a member exits before the next election, requiring a by-election for the riding.
- Total Tenure of members (per 1000 months) of the federal parliament that are affiliated with the political party in control in the provincial parliament. This measure will vary most around times of provincial elections when there is a switch in power in that parliament and around federal elections.
- Total Tenure of federal parliament members affiliated with the Liberal Party times the share of the provincial parliament that is represented by the Liberal Party. This measure will vary most around times of provincial and federal elections.

The sign of the direction of the funding to charities for these instruments is unclear given more senior members of parliament may be rent-seeking and the relationship between rent-seeking behavior and funding to charities is unclear. Moreover, given our control variables include a dummy variable equal to one if the member representing the riding in which the charity is

located is affiliated with the liberal party, the instruments will capture the political aspect of the distribution of the government funding that extends beyond the riding.<sup>15</sup>

In Panel B of Table 1, we report the summary statistics for the instruments for government funding. The first instrument, the tenure of the members of federal parliament affiliated with the political party in power in the provincial parliament, has an average of 1400 months of tenure. In contrast, the average tenure of members affiliated with the liberal party in the federal parliament is 3200 months. The average grant to charities within a province is \$3,000.

Using instruments at a provincial level raises an issue about the precision of these instruments given the core measures are at a local/charity level. There is the potential that in the first stage regression, the standard errors are too low given with a charity fixed effect specification, the standard errors are clustered at the charity and not provincial level. With the charity fixed effects, however, we are controlling for time-invariant differences across charities in the same province. The concern, thus, is limited to potential correlations across charities in a province that are time-varying over the sample period. In Panel C of Table 3, we report the coefficients and F-statistics for four groupings of the instruments in the first stage regression. In column 2, we use the measure that reflects the tenure of federal parliament members affiliated with the Liberal and Conservative political parties, respectively. In column 3, we use these tenure measures and include the measure that is the interaction between the total tenure in the federal parliament by political party and the political party that controls the provincial

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<sup>15</sup> We explored another instrument that exploits the level of government funding that is made available to charities within the province. The hypothesis for this instrument is that the level of funding available to any given charity will be both a function of the number of charities that might receive the funding and the level of funding being allocated. For all registered charities within a province that are not religious and are not foundations, we created a measure that reflects the total government grants reported. This measure includes charities not studied, such as those in the health, education, historical, cultural, and environmental sectors. In general, we find this is not as strong as an instrument as the instruments that are tied to political representation and, therefore, do not discuss this instrument.

parliament. In column 3, we use only the tenure of the Liberal party members of federal parliament and the interaction between the tenure of federal parliament party members and the party in control of the provincial parliament. For these three groupings all coefficients on the instruments are statistically significant and the test of joint significance is within acceptable standards for instruments. Finally, in column 4, we use as instruments the total tenure of Liberal party members of federal parliament and the interaction between this measure and the share of Liberal party members representing the provincial parliament. Individually the instruments are not precisely measured. They are, however, jointly significant.

Under the 2SLS/LIML specifications, panel A of Table 3, the results suggest there is complete crowd-out of private giving. The point estimates range -0.83 to -1.098 depending on the set of instruments used. All coefficients are significant at a p-value of less than 5 percent. For these instruments, we can test whether the instruments have any predictive power for private giving through the use of the Sargan test of over-identifying restrictions. This test produces a chi-square statistic with degrees of freedom equal to the number of instruments less the number of endogenous measures (one). A low statistic (high p-value) suggests the instruments, on their own, do not explain private giving. The p-value from the over-identification test ranges from 0.593 to 0.693.

### **B. Effect of Government Grants on Fundraising Expenditures**

In Panel B of Table 3, we report the coefficient on government funding when fundraising expenditures is the dependent variable. For all instruments the coefficient is negative, although it is only precisely measured for instrument set #3, suggesting an increase in government funding decreases fundraising efforts. In general, measuring the effect of government grants on fundraising is the most difficult to estimate.

### **C. Effect of Fundraising on Private Giving**

The final equation estimated is the effect of fundraising expenditures on private giving, which we report in Table 4. As with the other estimations, we include charity fixed effects, year dummies, and controls for time varying changes to the charity, the neighborhood in which the charity is located, and the partisanship of the provincial parliament. In column 1 we report the estimates under an OLS specification. This point estimate suggests that an additional dollar of fundraising brings in approximately 36 cents of private giving.

Given that fundraising expenditures also react to changes in government funding, however, we must find exogenous variation in fundraising expenditures that is also exogenous to changes in government funding and not directly correlated with changes in private giving. An advantage to the Canadian data is that in later years (starting in 1996) charities must identify the type of fundraising activity they undertake by designation expenditures to one of a number of choices. We grouped these activities into the following categories:

Category 1: Door-to-door solicitations and through anonymous solicitations, sales (e.g. candy bars on the street, poppies for Remembrance day) and non-specified fundraising activities (identified as other).

Category 2: Mail and telephone solicitations.

Category 3: Corporate campaigns and the hiring of contracted fundraisers.

Category 4: Planned events

Category 5: Planned giving, such as bequests.

In columns 2-4 we report the results for three combinations of these instruments. In Panel B we report the coefficients on the instruments and the F-statistic from the first stage regression. Across all three specifications, the instruments are mostly individually statistically significant

and the F-statistic for the combination of instruments exceeds accepted standards. Across the three groupings, the results are similar, suggesting that an additional dollar of fundraising brings in between \$4.94 and \$5.11 in private giving. These estimates are analogous to those reported in Andreoni and Payne (2011) using US data. As argued in our 2011 paper, while the coefficient is not consistent with notions of net revenue maximization, given the scrutiny charities often face if they report high values of expenditures not directly tied to the provision of charitable services, it is not surprising that charities may act more as satisficers than maximizers.

Appendix Tables 1 and 2 reports the results if we use different sample restrictions. For nearly all of these restrictions, the results are similar to those reported in Tables 3 and 4.

#### **D. Decomposition Across Types of Giving**

Thus far we have discussed total private giving. In Table 4, we estimate separate impacts across the three types of private giving. We report the results for all instrument sets. In Panel A we report the results from the estimation of change in government funding on the measure of private giving. In column 1 we report the results when we use tax-receipted gifts as the dependent variable. Across the four sets of instruments, the coefficient ranges from -0.19 to -0.36, suggesting a modest level of overall crowd-out. In column 2, we report the results when we use revenue from fundraising as the dependent variable. The coefficient ranges from -0.27 to -0.55. To the extent that this revenue is tied to specific fundraising efforts by the charity, it is not surprising that the point estimates are higher than for tax-receipted giving. In column 3, we report the results when revenue from other charities is the dependent variable. The overall crowd-out attributable to this source ranges from -0.15 to -0.30. The lower point estimate is only significant at the 10 percent level. If we use a significance of 5 percent or lower, the lower end of the point estimate range is -0.17.



In Panel B, we report the results of the estimation of the private giving measure regressed on fundraising expenditures. For all three sets of measures, instruments sets 2 and 3 work best in terms of satisfying the test for over-identifying restrictions. For tax-receipted gifts, the coefficient ranges between \$2.73 and \$3.13. For revenues from fundraising, the coefficient ranges from \$1.52 to \$2.07. And for revenues from other charities, the coefficient ranges from 0.74 to 1.00.

When interpreting these results, one should be reminded that we do not know the extent to which fundraising expenditures were actually directed at these specific components, nor are we able to measure if fundraising efforts are complementary across categories.

Across the three instrument sets, the set for which the coefficients sum most closely to the coefficient reported when we use overall private giving as the dependent variable is that for instrument set #3. The coefficient on fundraising for all private giving is 5.11 and the sum of the three coefficients for each type of private giving is 4.99. In the discussion below, therefore, we will use the coefficients from this instrument set.

### **E. Decomposing Crowd-out**

To what extent is crowd-out attributable to a change in donor behavior and to what extent is it attributable to a change in charity behavior? In Table 5, we present the decomposition based on our preferred specifications. In Panel A, we report the coefficients from the estimations reported in Tables 2-4 for our preferred sample. For measures of overall crowd-out, we use both the upper and lower bounds in our estimates of overall crowd-out for each measure of private giving. For the measures of the effect of government funding on fundraising, we use the most statistically significant estimate. And for the measures of the effect of fundraising on private

giving, we use the results from the third set of instruments. We also report the imputed values of  $dF_i/dF$ ,  $dD_i/dF_i$ , and  $dF_i/dG$  needed for policy analysis.

In Panel B, we present the decomposition of crowd-out using the imputed values. Direct crowd-out is the reduction in individuals' gifts in immediate response to increases in government funding. Indirect crowd-out refers to reduction in giving caused by a reduction in fundraising, when the reduction in fundraising is itself due to an increased government grant. Total crowd out includes both direct and indirect components. In column 1 we show that total crowd-out is estimated at close to dollar-for-dollar for the upper bound and close to 80 cents per dollar for the lower bound. This suggests that, overall, crowd-out is attributable to a change in charity fundraising. There is a slight crowd-in from the direct effect from a change in government funding. In Panel C, we decompose the crowd-out after adding back in the savings from reduced fundraising. The crowd-out, however, is still attributable to a change in charity behavior.

In columns 2-4, we further decompose the crowd-out based on the type of private giving. Starting first with tax-receipted gifts (columns 2a and 2b), recall the total level of crowd-out is on the lower end of the measured crowd-out, ranging from -0.19 to -0.36. The indirect effect of the increase in government grants is a decline in private giving. The direct effect of the grants, however, is a crowding in – an increase in tax-receipted gifts (a range of 24 to 41 cents for a dollar of government funding). Thus, when focusing on tax-receipted gifts, because charities decrease their fundraising, there is a high amount of indirect crowding out – countering the crowding in attributable to donor behavior.

Next, when looking at revenues from fundraising activities (columns 3a and 3b), the measured crowd-out is mostly attributable to direct crowd-out if we focus on the higher coefficient. Approximately 40 percent of the crowd-out is attributable to indirect crowd-out.

When we factor in the savings from reduced fundraising (Panel C), close to 45 percent of the crowd-out is attributable to the direct effect.

Finally, when looking at revenues from other charities (column 4), about half of the measured crowd-out (46%) is attributable to the direct effect. When we factor in the savings from reduced fundraising (Panel C), more than half of the crowd-out is attributable to the direct effect.

Decomposing the private giving into its three components reveals that the impact of government funding is not the same across all types of giving. If we focus solely on direct donations (tax-receipted gifts), all of the crowd-out is attributable to the choice by the charity to reduce its fundraising. The results suggest that individual donors only decrease their donations because the charity puts in less effort seeking donations. Not surprisingly, if fundraising expenditures decline, then there is a big direct effect on the revenue from fundraising, providing further support that charities may view fundraising as a necessary evil. The greatest direct crowd-out is observed by the gifts from other charities and foundations. These likely are the most informed sources of revenues. The results suggest other charities and foundations may view government funding as a direct substitute for their own contributions. The latter effect could be muted if charities are required to find matching amounts from non-governmental sources in order to receive the government grant.

## **5. Conclusion**

This question of government crowd out of private donations is one of the oldest and most important public economics issues. While it has been studied extensively in the US, this study is, we believe, is the first of its kind for Canada. The analysis here followed that of Andreoni and Payne (2011, 2003). Using US data, they found that, in total, \$1000 government grants

crowd out is close to \$750 in other donations—crowding out 75 percent—but most of this crowding out is attributable to reduced fundraising by the charity.

Here we find similar results, but the greater quality and precision of the Canadian data provides further important insights into the market for charity. First, estimates of gross crowding out are nearly 100 percent, of which 100 percent can be attributed to reduced fundraising by the charities. Crowd-out, however, varies dramatically across the different sources of private revenue. Direct giving by individuals (tax-receipted gifts) is only reduced if the charity reduces its fundraising—crowding out of gifts from individuals is fully the result of reduced fundraising. In fact, the government grants have a small effect of crowding-*in* individual donors, which is consistent with a view that individuals are either unaware of changes in government grants, or are using them as signals of the quality of the charity. Accounting for both the crowding-in of donors and the reduction in fundraising efforts, revenue from direct donations remains constant on average. By contrast, donations from other charities or foundations, which come from the source that is perhaps best informed about both the finances and the quality of the charity, is the very responsive to government grants: each \$1000 in grants reduces revenue from other charities by \$300, which accounts for 46 percent of crowding out from this source. Turning to the third source, revenue from special fundraising programs (revenue from fundraising), such as galas or sponsorships, we find the biggest marginal reductions in donations. A \$1000 grant reduces revenues from special events by \$550.

Taken together we get something of a different picture than was allowed in the US data. Each \$1000 in grants reduces revenue from other sources by about \$1000, but this total crowding out is not due to declining individual donations, but rather due to reduced revenue from foundations and other charities, and from holding fewer fundraising events. While the overall

finding in both the US and Canada are the same—that crowding out is high, but mostly attributable to direct reductions in fundraising activities of the charities themselves—the explanation for this effect is more precise with the current analysis.

It is important to keep in mind when interpreting the analysis of these data that it is capturing behavior at a very high level. The management decisions of the charities and the personal relationships with donors cannot be observed. In particular, one must be careful to remember that charities are in long term relationships with their contributors, be they individuals, foundations, or the government. It is well known in fundraising communities, for instance, that getting the first contribution from an individual is the hardest, but that obtaining repeat donations is far easier. If this is true, then the assumption that within a given year the charity allocates its fundraising across revenue sources to equalize the marginal contributions will be erroneous—we would need to equate the marginal expected present value of donations instead. It is difficult, however, to know how this would affect our conclusions, if at all.

It is also important to note that reductions in donations to one charity do not necessarily mean a reduction in charitable giving overall. In fact, our results allow us to characterize an upper bound on this amount. In particular, one third of all the crowding out is donations from foundations and other institutions. This money will likely stay within the charitable sector since it represents money that has already been donated, but just not allocated to the providers of final charitable goods and services. Hence, even though we estimate a grant to a particular charity reduces contributions to that charity nearly dollar for dollar, at most two thirds of the dollars lost to this charity are lost to the charitable sector overall.

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**Table 1: Summary Statistics on Key Measures**

<b>Panel A: Summary Statistics for Preferred Sample</b>	# of Observations	Mean	Standard Deviation	Maximum
Any Type of Donation/Revenue From Fundraising (/1000)	136,348	49.44	(105.84)	1331.78
Tax Received Gifts (/1000)	136,348	21.11	(62.92)	1293.68
Revenue from Fundraising (/1000)	115,508	14.77	(46.10)	1103.28
Revenue from Other Charities (/1000)	136,348	13.56	(49.51)	1331.78
Government Funding (/1000)	136,348	87.66	(181.72)	1366.21
Fundraising Expenditures (/1000)	136,348	10.33	(46.79)	3512.63
<b>Panel B: Summary Statistics for Measures Used as Instruments In 2SLS specification</b>				
Total tenure of Liberal Partymembers of federal parliament (months) within the province (/1000)	136,348	3200.25	(4028.07)	13095.00
Total tenure of Conservative party members of federal parliament (months) within the province (/1000)	136,348	755.78	(836.00)	3115.00
Total tenure of members in federal parliament affiliated with majority political party in the provincial parliament (/1000)	136,348	1.40	(2.94)	13.10
Total tenure of Liberal Party members in federal parliament * Share of Liberal Party members in the provincial parliament (/1000)	136,348	1454.70	(2140.83)	9153.79
<b><i>Instruments for Fundraising Expenditures</i></b>				
1 Fundraising through door to door, anonymous sales	115,048	0.52	(0.70)	4.00
2 Fundraising through mail and phone solicitations	115,048	0.15	(0.40)	2.00
3 Fundraising through advertising and contracted fundraisers	115,048	0.15	(0.37)	2.00
4 Fundraising through planned events	115,048	0.44	(0.50)	1.00
5 Fundraising through planned giving	115,048	0.02	(0.14)	1.00

Notes:

revenue from donations/fundraising include: tax-receipted gifts, amounts received from other charities, other gifts, and revenue from fundraising

**Table 3: Effect of Government Grants on Private Donations and Fundraising Expenditures**

	Total Private Giving, Preferred Data				
	(1)	(2)	(3)	(4)	(5)
<b>Panel A: Effect of Government Funding on Private Giving</b>					
Government Funding	<b>-0.01</b> (0.005)	<b>-0.86</b> (0.20)	<b>-0.84</b> (0.18)	<b>-0.83</b> (0.25)	<b>-0.98</b> (0.34)
Over-Identification Test (chi-square statistic) (p-value)		0.01 (0.944)	0.08 (0.963)	0.07 (0.795)	0.29 (0.593)
<b>Panel B: Effect of Government Funding on Fundraising Expenditures</b>					
Government Funding	0.004 (0.003)	-0.02 (0.07)	-0.10 (0.07)	<b>-0.22</b> (0.12)	-0.20 (0.17)
Over-Identification Test (chi-square statistic) (p-value)		0.09 (0.760)	4.85 (0.089)	2.63 (0.105)	3.24 (0.072)
<b>Panel C: First Stage Results (Government Grants)</b>					
		#1	#2	#3	#4
F-Statistic on Instruments (p-value)		17.50 (0.00)	15.01 (0.00)	12.50 (0.00)	8.46 (0.00)
<i>Coefficients on Instruments</i>					
Total Tenure of Liberal Members of Federal Parliament representing the province		<b>-0.0019</b> (0.0003)	<b>-0.0017</b> (0.0003)	<b>-0.0007</b> (0.0003)	-0.0006 (0.0004)
Total tenure of Conservative members of Federal Parliament representing the province		<b>-0.0051</b> (0.0012)	<b>-0.0051</b> (0.0012)		
Total tenure of federal parliament members affiliated with the provincial parliament party in power			<b>-0.47</b> (0.18)	<b>-0.46</b> (0.18)	
Share of Provincial Parliament represented by Liberal Party * Total tenure of Liberal members of Federal Parliament					-0.0007 (0.0006)
# of Observations	136,348	136,348	136,348	136,348	136,348
# of Charities	12,202	12,202	12,202	12,202	12,202

Notes: Robust and clustered standard errors reported in parentheses unless otherwise stated. Coefficients in bold  $p < .05$ , coefficients in bold & italics  $p < .10$ . All regressions include the following covariates: charity fixed effects, charity specific time trend and square of charity specific time trend, year dummy variables. The following measures at the neighbourhood (forward sortation area) level: average household income, square of average household income, total population share of population in the following age groups: less than 19, 55 to 64, 65 and greater, share of population that has moved in the last five years, share of the population that immigrated since 1981, and share of the population that is a visible minority. The following measures at the provincial level: share of the seats in the provincial parliament that are held by liberals, the new democratic party, and parties other than conservatives.



**Table 4: Effect of Fundraising on Private Donations**

	Total Private Giving, Preferred Data			
	(1)	(2)	(3)	(4)
<b>Panel A: Effect of Fundraising on Private Donations</b>				
Fundraising expenditures	<b>0.36</b> (0.05)	<b>5.07</b> (0.67)	<b>4.94</b> (0.47)	<b>5.11</b> (0.48)
<b>Instrument Set for Fundraising</b>		#1	#2	#3
Over-Identification Test (chi-square statistic) (p-value)		3.038 (0.219)	2.14 (0.343)	3.82 (0.431)
<b>Panel B: First Stage Results (Fundraising)</b>				
F-Statistic on Instruments (p-value)		18.28 (0.00)	46.14 (0.00)	28.67 (0.00)
<i>Coefficients on Instruments</i>				
1 Fundraising through door to door, anonymous sales		<b>0.57</b> (0.23)		0.37 (0.23)
2 Fundraising through mail and phone solicitations		<b>2.48</b> (0.69)	<b>2.40</b> (0.69)	<b>2.29</b> (0.69)
3 Fundraising through advertising and contracted fundraisers		<b>2.43</b> (0.49)	<b>2.17</b> (0.50)	<b>2.07</b> (0.50)
4 Fundraising through planned events			<b>2.30</b> (0.29)	<b>2.20</b> (0.30)
5 Fundraising through planned giving				<b>2.30</b> (1.24)
# of Observations	136,348	114,905	110,314	110,314
# of Charities	12,202	11,952	11,402	11,402

Notes: Robust and clustered standard errors reported in parentheses unless otherwise stated. Coefficients in bold  $p < .05$ , coefficients in bold & italics  $p < .10$ . All regressions include the following covariates: charity fixed effects, charity specific time trend and square of charity specific time trend, year dummy variables. The following measures at the neighbourhood (forward sortation area) level: average household income, square of average household income, total population share of population in the following age groups: less than 19, 55 to 64, 65 and greater, share of population that has moved in the last five years, share of the population that immigrated since 1981, and share of the population that is a visible minority. The following measures at the provincial level: share of the seats in the provincial parliament that are held by liberals, the new democratic party, and parties other than conservatives.

Table 5: Effect of Government Funding and Fundraising on Components of Private Giving

	Tax Received Gifts*	Revenue from Fundraising	Revenue from Other Charities
	(1)	(2)	(3)
<b>Panel A: Effect of Government Funding on Private Giving</b>			
<i>Instrument Set #1</i>	<b>-0.19</b>	<b>-0.55</b>	<b>-0.15</b>
	(0.090)	(0.13)	(0.08)
Over-Identification Test (Chi-Square Statistic)	0.653	1.43	1.04
(p-value)	(0.42)	(0.231)	(0.307)
<i>Instrument Set #2</i>	<b>-0.20</b>	<b>-0.51</b>	<b>-0.17</b>
	(0.087)	(0.11)	(0.08)
Over-Identification Test (Chi-Square Statistic)	0.880	3.10	1.53
(p-value)	(0.64)	(0.212)	(0.465)
<i>Instrument Set #3</i>	<b>-0.29</b>	<b>-0.27</b>	<b>-0.27</b>
	(0.125)	(0.11)	(0.11)
Over-Identification Test (Chi-Square Statistic)	0.002	0.19	0.00
(p-value)	(0.96)	(0.662)	(0.948)
<i>Instrument Set #4</i>	<b>-0.36</b>	<b>-0.32</b>	<b>-0.30</b>
	(0.167)	(0.14)	(0.14)
Over-Identification Test (Chi-Square Statistic)	0.597	0.02	0.09
(p-value)	(0.44)	(0.895)	(0.767)
<b>Panel B: Effect of Fundraising on Private Giving</b>			
<i>Instrument Set #1</i>	<b>2.51</b>	<b>2.45</b>	<b>0.68</b>
	(0.29)	(0.27)	(0.14)
Over-Identification Test (chi-square statistic)	10.19	15.77	11.90
(p-value)	(0.037)	(0.003)	(0.018)
<i>Instrument Set #2</i>	<b>3.13</b>	<b>2.07</b>	<b>1.00</b>
	(0.57)	(0.39)	(0.27)
Over-Identification Test (chi-square statistic)	-0.36	6.59	0.97
(p-value)	(0.150)	(0.037)	(0.616)
<i>Instrument Set #3</i>	<b>2.73</b>	<b>1.52</b>	<b>0.74</b>
	(0.45)	(0.22)	(0.19)
Over-Identification Test (chi-square statistic)	3.63	0.09	0.86
(p-value)	(0.057)	(0.767)	(0.355)

See notes to Table 2 and 3

**Table 6: Decomposition of Crowd-Out**

	Total		Tax-Received Gifts		Revenue From Fundraising		Revenue from Other Charities	
	<i>High Value</i> <i>dD/dG</i>	<i>Low Value</i> <i>dD/dG</i>	<i>High Value</i> <i>dD/dG</i>	<i>Low Value</i> <i>dD/dG</i>	<i>High Value</i> <i>dD/dG</i>	<i>Low Value</i> <i>dD/dG</i>	<i>High Value</i> <i>dD/dG</i>	<i>Low Value</i> <i>dD/dG</i>
	(1a)	(1b)	(2a)	(2b)	(3a)	(3b)	(4a)	(4b)
<b>Panel A: Summary of Estimations</b>								
A: Effect of Government on Donations (dD / dG) [Table 2]	-0.98	-0.83	-0.36	-0.19	-0.55	-0.27	-0.30	-0.17
B: Effect of Fundraising on Donations (dD / dF) [Table 3]	5.11	5.11	2.73	2.73	1.52	1.52	0.74	0.74
C: Effect of Government on Fundraising (dF / dG) [Table 2]	-0.22	-0.22	-0.22	-0.22	-0.22	-0.22	-0.22	-0.22
<i>Imputed values for Fundraising</i>								
Allocation of Fundraising: $dF_i/dF=(dD_i/dF)/(dD/dF)**$	1.00	1.00	0.53	0.53	0.30	0.30	0.14	0.14
B': Effect of Fundraising on Donations ( $dD_i / dF_i=dD/dF$ )	5.11	5.11	5.11	5.11	5.11	5.11	5.11	5.11
C': Effect of Government on Fundraising ( $dF_i / dG=(dF/dG)*(dF_i/dF)$ )	-0.22	-0.22	-0.12	-0.12	-0.06	-0.06	-0.03	-0.03
<b>Panel B: Decomposition of Crowd-Out</b>								
Total Crowd-Out (A)	-0.98	-0.83	-0.36	-0.19	-0.55	-0.27	-0.30	-0.17
Direct Crowd-Out (A-B'*C')	0.14	0.29	0.24	0.41	-0.22	0.06	-0.14	-0.01
% of Total Crowd-Out	-13.9%	-34.6%	-65.7%	-214.0%	39.6%	-23.0%	46.1%	4.9%
Indirect Crowd-Out (B'*C')	-1.12	-1.12	-0.60	-0.60	-0.33	-0.33	-0.16	-0.16
% of Total Crowd-Out	113.9%	134.6%	165.7%	314.0%	60.4%	123.0%	53.9%	95.1%
<b>Panel C: Decomposition of Crowd-out based on spending (adding back in savings from fundraising)</b>								
Total Crowd-Out (A-C')	-0.76	-0.61	-0.24	-0.07	-0.49	-0.21	-0.27	-0.14
Direct Crowd-Out (A-B'*C')	0.14	0.29	0.24	0.41	-0.22	0.06	-0.14	-0.01
% of Total Crowd-Out	-17.9%	-46.9%	-97.2%	-554.9%	44.9%	-30.3%	51.5%	6.0%
Indirect Crowd-Out (B'*C'-C')	-0.90	-0.90	-0.48	-0.48	-0.27	-0.27	-0.13	-0.13
% of Total Crowd-Out	117.9%	146.9%	197.2%	654.9%	55.1%	130.3%	48.5%	94.0%

\*\* The values in three categories of contributions do not sum 1 because of other minor fundraising activities recorded but not analysed.

**Appendix Table 1: Effect of Government Grants on Private Donations and Fundraising Expenditures, Robustness**

	Include All Base Charities	Drop Top 5% of Observations	Drop Top 15% of Observation	Drop Top 20% of Observations	Robustness Checks keep if at least 30% observations with + donations have no sign of fundraising	For at least 30% of the observations a charity reports having issued tax receipts	Change Fundraising to Fundraising + Advertising
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
<b>Panel A: Effect of Government Funding on Private Giving</b>							
Government Funding	-0.22 (0.44)	<b>-0.52</b> (0.17)	<b>-0.89</b> (0.19)	<b>-0.86</b> (0.32)	<b>-0.78</b> (0.24)	<b>-0.90</b> (0.28)	<b>-0.83</b> (0.25)
Over-Identification Test (chi-square statistic) (p-value)	0.03 (0.870)	1.86 (0.176)	0.35 (0.553)	1.61 (0.204)	0.09 (0.770)	0.08 (0.779)	0.07 (0.795)
<b>Panel B: Effect of Government Funding on Fundraising Expenditures</b>							
Government Funding	<b>0.04</b> (0.02)	-0.02 (0.06)	0.06 (0.08)	-0.22 (0.18)	<b>-0.22</b> (0.13)	<b>-0.25</b> (0.13)	<b>-0.38</b> (0.22)
Over-Identification Test (chi-square statistic) (p-value)	0.57 (0.452)	0.52 (0.471)	0.15 (0.702)	1.56 (0.212)	4.11 (0.043)	1.97 (0.160)	2.33 (0.127)
<b>Panel C: First Stage Results (Government Grants)</b>							
F-Statistic on Instruments (p-value)	#4 11.28 (0.00)	#1 17.41 (0.00)	#1 23.10 (0.00)	#3 11.02 (0.00)	#3 13.31 (0.00)	#3 11.20 (0.00)	#3 12.50 (0.00)
<i>Coefficients on Instruments</i>							
Total Tenure of Liberal Members of Federal Parliament representing the province	<b>8.38</b> (0.01)	<b>-0.0032</b> (0.0006)	<b>-0.0014</b> (0.0021)	-0.0001 (0.0001)	<b>-0.0089</b> (0.0003)	<b>-0.0007</b> (0.0003)	<b>0.001</b> (0.0003)
Total tenure of Conservative members of Federal Parliament representing the province		<b>-0.0062</b> (0.0021)	<b>-0.0038</b> (0.0008)				
Total tenure of federal parliament members affiliated with the provincial parliament party in power				<b>-0.34</b> (0.08)	<b>-0.42</b> (0.19)	<b>-0.49</b> (0.19)	<b>-0.46</b> (0.18)
Share of Provincial Parliament represented by Liberal Party * Total tenure of Liberal members of Federal Parliament	<b>0.0459</b> (0.0097)						
# of Observations	151,892	144,107	128,647	120,891	126,698	118,230	136,348
# of Charities	13,038	12,614	11,748	11,285	11,343	10,536	12,202

Notes: Robust and clustered standard errors reported in parentheses unless otherwise stated. Coefficients in bold p<.05, coefficients in bold & italics p<.10. All regressions include the following covariates: charity fixed effects, charity specific time trend and square of charity specific time trend, year dummy variables. The following measures at the neighbourhood (forward sortation area) level: average household income, square of average household income, total population share of population in the following age groups: less than 19, 55 to 64, 65 and greater, share of population that has moved in the last five years, share of the population that immigrated since 1981, and share of the population that is a visible minority. The following measures at the provincial level: share of the seats in the provincial parliament that are held by liberals, the new democratic party, and parties other than conservatives.

For Tax-Received Gifts: Under instrument 3, the coefficient is -0.232 with a standard error of .124 (p-value=.062); the p-value from the over-id test is 0.923

**Appendix Table 2: Effect of Fundraising on Private Donations, Robustness**

	Robustness Checks						
	Include All Base Charities	Drop Top 5% of Observations	Drop Top 15% of Observations	Drop Top 20% of Observations	keep if at least 30% observations with + donations have no sign of fundraising	For at least 30% of the observations a charity reports having issued tax receipts	Change Fundraising to Fundraising + Advertising
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
<b>Panel A: Effect of Fundraising on Private Donations</b>							
Fundraising expenditures	<b>6.52</b> (2.34)	<b>4.92</b> (0.65)	<b>4.79</b> (0.43)	<b>4.81</b> (0.42)	<b>4.93</b> (0.48)	<b>5.01</b> (0.51)	<b>2.53</b> (0.22)
<b>Instrument Set for Fundraising</b>	#2	#2	#2	#2	#2	#2	#2
Over-Identification Test (chi-square statistic) (p-value)	0.96 (0.618)	2.48 (0.289)	2.73 (0.256)	1.74 (0.420)	1.92 (0.382)	4.33 (0.115)	1.97 (0.227)
<b>Panel B: First Stage Results (Fundraising)</b>							
F-Statistic on Instruments (p-value)	14.63 (0.00)	29.66 (0.00)	43.30 (0.00)	42.38 (0.00)	44.46 (0.00)	44.21 (0.00)	50.73 (0.00)
<i>Coefficients on Instruments</i>							
1 Fundraising through door to door, anonymous sales							
2 Fundraising through mail and phone solicitations	<b>7.16</b> (1.98)	<b>2.44</b> (0.80)	<b>1.87</b> (0.49)	<b>1.17</b> (0.41)	<b>2.36</b> (0.69)	<b>2.38</b> (0.70)	<b>4.34</b> (1.15)
3 Fundraising through advertising and contracted fundraisers	2.57 (0.29)	<b>3.02</b> (0.83)	<b>1.89</b> (0.42)	<b>1.38</b> (0.35)	<b>2.11</b> (0.50)	<b>2.49</b> (0.51)	<b>4.26</b> (0.99)
4 Fundraising through planned events	<b>4.39</b> (0.94)	<b>2.75</b> (0.40)	<b>2.15</b> (0.25)	<b>2.10</b> (0.23)	<b>2.29</b> (0.29)	<b>2.16</b> (0.30)	<b>4.72</b> (0.55)
5 Fundraising through planned giving							
# of Observations	151,892	121,550	108,315	101,656	107,075	99,712	114,905
# of Charities	13,038	12,391	11,479	11,009	11,120	10,318	11,952

Notes: Robust and clustered standard errors reported in parentheses unless otherwise stated. Coefficients in bold p<.05, coefficients in bold & italics p<.10. All regressions include the following covariates: charity fixed effects, charity specific time trend and square of charity specific time trend, year dummy variables. The following measures at the neighbourhood (forward sortation area) level: average household income, square of average household income, total population share of population in the following age groups: less than 19, 55 to 64, 65 and greater, share of population that has moved in the last five years, share of the population that immigrated since 1981, and share of the population that is a visible minority. The following measures at the provincial level: share of the seats in the provincial parliament that are held by liberals, the new democratic party, and parties other than conservatives.