# Do fundraisers select charitable donors based on gender and race? <br> Evidence from survey data* 

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#### Abstract

Recent studies document that people are much more likely to donate to charity and volunteer their time when they are asked to. Using household surveys of giving and volunteering in the United States conducted from 1992 to 2001, which contain questions on whether the respondent was personally asked to give or volunteer, this paper investigates the factors associated with the probability of receiving a charitable solicitation and presents substantial evidence that race and gender differences play key roles in the selection of potential donors. In particular, males, blacks, and Hispanics are less likely to be solicited compared with females and whites. Using non-linear decomposition techniques, I find that differences in observable characteristics of individuals explain most of the racial gap in the probability of being solicited for charitable causes, but they fail to explain the gender gap in the probability of being asked to volunteer. Furthermore, these results are robust to alternative specifications. I also discuss related policy implications and argue that the economic impact of selecting potential donors based on gender and race can be considerable.


Keywords: charitable giving, fundraising, volunteering
JEL classification: J15, J16, L38

## 1 Introduction

Among many other fundraising techniques, ${ }^{1}$ the iron law of fundraising, as Andreoni (2006) refers to it, is asking. People are more likely to engage in charitable activities when they are personally

[^0]solicited. Although, it is almost a truism among professional fundraisers that asking facilitates charitable behavior, ${ }^{2}$ economists have only recently begun to investigate the effect of personal solicitations on charitable donations of time and money. Using survey data, Freeman (1997) and Yörük (2008) find that being personally asked to volunteer is the single most important reason for why people volunteer their time, while Schervish and Havens (1997), Yörük (2009), and Meer and Rosen (2009) document the positive effect of personal solicitations on charitable giving. On the theoretical side, Andreoni and Payne (2003) develop a model of fundraising that formally incorporates personal charitable solicitations.

Given the considerable effect of personal solicitations on giving and volunteering, an important question is how fundraisers select potential donors to solicit? In this paper, I investigate this previously unexplored question in the literature. ${ }^{3}$ In particular, I focus on gender and race differences in the probability of being solicited for charitable causes. Using nationally representative biannual household surveys of charitable giving and volunteering conducted from 1992 to 2001, which contain questions on whether the respondent was personally asked to donate money or volunteer time, I document that fundraisers are more likely to solicit charitable contributions from females and whites. In particular, although males and females are equally likely to be solicited to give money, females are around 6 percentage points more likely than males to be asked to volunteer. The racial gap in the the probability of being asked for charitable causes is much wider. Compared with whites, blacks are around 12 percentage points less likely to be asked to give and volunteer, whereas non-white Hispanics are on average 26 percentage points less likely to be asked to give and 13 percentage points less likely to be asked to volunteer.

Looking beyond simple mean differences, I use non-linear decomposition techniques to explore the underlying causes of the selection of charitable donors based on race and gender. I document that observable differences between males and females fail to explain why females are much more likely to be asked to volunteer. I argue that statistical discrimination may explain the male-female gap in the probability of being asked to volunteer since females are much more likely to volunteer and also volunteer more when they are asked to. Observable characteristics of different races explain why whites are more likely to be solicited than blacks or Hispanics. On the other hand, the unexplained portion of the race gap in the probability of being solicited for charitable donations might also be

[^1]attributed to statistical discrimination. Compared with blacks and Hispanics, whites are not only more likely to donate, but also donate more when they are personally asked to. However, statistical discrimination fails to explain the racial gap in the probability of being asked to volunteer. Although blacks are less likely than whites to be asked to volunteer their time, they are both more likely to volunteer and volunteer more hours when solicited. Furthermore, these results are robust to alternative decompositions and selection of different control variables and time periods.

I discuss several policy implications associated with these results and argue that the economic impact of targeting potential donors based on race and gender can be substantial. In particular, I estimate that were blacks and whites equally likely to be asked to volunteer, the additional donated time would have been valued at around $\$ 122$ million per month in 2000 dollars.

The rest of this paper is organized as follows. The next section presents the data and summary statistics. Section three sets out the empirical methodology. Section four discusses the main results and their sensitivity to alternative specifications. Section five interprets the findings and provides a discussion of policy implications. Section six concludes.

## 2 Data

I use five independent nationally representative household surveys of charitable giving and volunteering conducted for Independent Sector from 1992 to 2001. ${ }^{4}$ The surveys were conducted in person with one adult member of the household and offer detailed information on household giving and personal volunteering habits, various indicators of relevant motivations, household social characteristics, selected demographic descriptors, and economic factors. Weighting procedures are used to ensure that the final sample of respondents is nationally representative. These survey series, given their scale, provide one of the most comprehensive and recent assessments of giving and volunteering activity in the United States. ${ }^{5}$ Pooling the data from 1992 to 2001 gives a sample of 13,330 households. However, eliminating observations missing key variables yields a subsample of 10,835 households for the empirical analysis. ${ }^{6}$

[^2]A unique feature of these surveys is that they contain two separate questions on whether the respondent or a member of the respondent's household was asked to give and whether the respondent was asked to volunteer during the survey year. ${ }^{7}$ Simple tabulations of responses to these questions reveals that on average 72 percent of the respondents were personally asked to give and 46 percent of the respondents were asked to volunteer. Raw numbers in Table 1 show the effect of personal solicitations on charitable behavior. Compared with those who were not solicited, people who were asked to give are 41 percentage points more likely to donate and on average contribute $\$ 552$ more. ${ }^{8}$ Similarly, people who were personally asked to volunteer are 59 percentage points more likely to volunteer and on average volunteer 9 hours more per month than those who were not asked to. The effect of charitable solicitations on giving behavior remains robust to the selection of subsamples based on gender and race, yet its magnitude differs considerably across these groups. Conditional on being asked to give, females are more likely to give. However, males are more responsive to charitable solicitations and when solicited, they donate more than females. Looking at the effect of solicitations on different racial groups, a similar pattern emerges. Compared with blacks and Hispanics, whites are more likely to donate when they are personally solicited. Furthermore, as a response to a charitable solicitation, whites donate more money than blacks and Hispanics. However, compared with whites, blacks tend to volunteer more when they are asked to.

Figure 1 shows race differences in the probability of being personally asked to give or volunteer. Although they are more responsive to charitable solicitations, compared with whites, blacks are around 12 percentage points less likely to be asked to give and volunteer their time. Similarly, compared with whites, Hispanics are on average 20 percentage points less likely to be asked to give and 11 percentage points less likely to be asked to volunteer. Furthermore, the differences in the probabilities of being solicited among different races are stable over time. Figure 2 presents the same analysis by gender. Although males and females are almost equally likely to be asked to give over time, males are on average 6 percentage points less likely to be asked to volunteer.

[^3]
## 3 Non-linear decomposition of racial and gender differences

The raw numbers suggest that fundraisers are less likely to solicit charitable contributions from males, blacks, and Hispanics. In this section, I investigate how much of the group differences in the probability of being solicited is explained by the observed characteristics of individuals. Let $X_{j i}$ denote the observable characteristics of individual $i$, belonging to the reference group $j$. Individual $i$ 's probability of being asked to give or volunteer relative to group $j$ is defined as $Y_{j i}^{*}$. This probability is not observed, but one observes whether individual $i$ is personally solicited or not, which is given as

$$
\begin{equation*}
Y_{i j}=\mathbf{1}\left\{X_{i j} \beta_{j}+\varepsilon_{i j} \geq 0\right\} \text { for } j=A, B \tag{1}
\end{equation*}
$$

where $\mathbf{1}($.$) denotes the indicator function and \varepsilon_{i j}$ is a normally distributed random error with zero mean and unit variance. Let $N$ be the total number of individuals who belong to either group $A$ or $B$ with $\sum_{j} N_{j}=N$. Using the standard Blinder-Oaxaca decomposition (Blinder, 1973 and Oaxaca, 1973), one can express the difference between the average values of the outcome variable for two different groups. First consider the following generalized decomposition:

$$
\begin{equation*}
\bar{Y}_{A}-\bar{Y}_{B}=\left[E_{\beta_{A}}\left(Y_{i A} \mid X_{i A}\right)-E_{\beta_{A}}\left(Y_{i B} \mid X_{i B}\right)\right]+\left[E_{\beta_{A}}\left(Y_{i B} \mid X_{i B}\right)-E_{\beta_{B}}\left(Y_{i B} \mid X_{i B}\right)\right] \tag{2}
\end{equation*}
$$

where $\bar{Y}_{j}=N_{j}^{-1} \sum_{i=1}^{N_{j}} Y_{i j}$ and $E_{\beta_{j}}\left(Y_{i j} \mid X_{i j}\right)$ denotes the conditional expectation of $Y_{i j}$ evaluated at the parameter vector $\beta_{j}$. On the right hand side of equation (2), the first term in the brackets accounts for the difference in the probability of being solicited between two groups due to differences in their observable characteristics, whereas the second term captures the portion due to differences in the group processes determining levels of $Y$. For linear regression models, the generalized decomposition in equation (2) is simply

$$
\begin{equation*}
\bar{Y}_{A}-\bar{Y}_{B}=\left(\bar{X}_{A i}-\bar{X}_{B i}\right) \widehat{\beta}_{A}+\bar{X}_{B i}\left(\widehat{\beta}_{A}-\widehat{\beta}_{B}\right) \tag{3}
\end{equation*}
$$

where $\bar{X}_{j i}$ is a row vector of average values of the independent variables and $\widehat{\beta}_{j}$ denotes the estimated coefficients from the linear regression for group $j$. This decomposition has been used in numerous studies in order to decompose group differentials. However, the standard decomposition yields inconsistent parameter estimates if the dependent variable is binary. In order to address this problem, I use the non-linear decomposition technique proposed by Fairlie (2005). For the probit model, the conditional expectation of $Y_{i j}$ evaluated at the parameter vector $\beta_{j}$ is given as $\Phi\left(X_{i j} \beta_{j}\right)$, where $\Phi($. is the evaluation of the cumulative normal distribution. Then, equation (2) can be rewritten as

$$
\begin{equation*}
\bar{Y}_{A}-\bar{Y}_{B}=\left[N_{A}^{-1} \sum_{i=1}^{N_{A}} \Phi\left(X_{i A} \widehat{\beta}_{A}\right)-N_{B}^{-1} \sum_{i=1}^{N_{B}} \Phi\left(X_{i B} \widehat{\beta}_{A}\right)\right]+\left[N_{B}^{-1} \sum_{i=1}^{N_{B}} \Phi\left(X_{i B} \widehat{\beta}_{A}\right)-N_{B}^{-1} \sum_{i=1}^{N_{B}} \Phi\left(X_{i B} \widehat{\beta}_{B}\right)\right] \tag{4}
\end{equation*}
$$

where $\bar{Y}_{j}$ denotes the average probability of being asked to give or volunteer for group $j .{ }^{9}$ As in equation (2), the first term in brackets in equation (4) represents the "explained" portion of the decomposition that accounts for the differences in observable characteristics, and the second term captures the "unexplained" portion of the gap between two groups due to differences in unobserved characteristics. An equally valid expression can be defined using $\widehat{\beta}_{B}$ as weights for the first term in brackets in the decomposition and using $\bar{X}_{i A}$ as weights for the second term such that

$$
\begin{equation*}
\bar{Y}_{A}-\bar{Y}_{B}=\left[N_{A}^{-1} \sum_{i=1}^{N_{A}} \Phi\left(X_{i A} \widehat{\beta}_{B}\right)-N_{B}^{-1} \sum_{i=1}^{N_{B}} \Phi\left(X_{i B} \widehat{\beta}_{B}\right)\right]+\left[N_{A}^{-1} \sum_{i=1}^{N_{A}} \Phi\left(X_{i A} \widehat{\beta}_{A}\right)-N_{A}^{-1} \sum_{i=1}^{N_{A}} \Phi\left(X_{i A} \widehat{\beta}_{B}\right)\right] . \tag{5}
\end{equation*}
$$

Another alternative decomposition weights the first term of the decomposition using coefficient estimates from a pooled sample of two groups (Neumark, 1988). The alternative methods of calculating the decomposition may yield different estimates due to the well-known index problem with the Blinder-Oaxaca decomposition technique. Following the standard practice in the literature, I report estimates from all these alternative specifications for comparison purposes.

In practice, the sample sizes of two groups are not the same, i.e., $N_{A}>N_{B}$. Hence, identifying the contribution of group differences in observable characteristics to the difference between the predicted probabilities of being asked to give or volunteer is not straightforward. In order to address this problem, following Fairlie (2005), I first use the pooled coefficient estimates to calculate predicted probabilities for each individual in the sample belonging to either group $A$ or $B$. Next, I draw random subsamples of individuals belonging to group $A$ such that $N_{A}=N_{B}$. Then, I separately rank each observation in group $A$ subsample and group $B$ sample by their predicted probabilities and match by their respective ranking. This procedure is repeated for each draw of a randomly selected subsample of individuals belonging to the group $A$ and guarantees that individuals belonging to group $A$ subsample whose characteristics place them at the bottom (top) of their distribution are matched with individuals belonging to group $B$ whose characteristics place them at the bottom (top) of their distribution. Since each random draw yields a different decomposition estimate, the mean value of estimates from the separate decompositions is used to approximate the results for the entire group $A$ sample.

Because of the non-linearity of the decomposition, the results may also be sensitive to the ordering of the observable covariates. In order to address this issue, I randomize the ordering of variables while drawing the random subsample of individuals belonging to group $A$ and calculate the average

[^4]decomposition across all possible ordering of variables after 1000 simulations. ${ }^{10}$

## 4 Results

Individuals in various gender and racial groups typically differ in other observable characteristics that may be associated with higher probability of being targeted as potential charitable donors. To mitigate the likelihood of omitted variable bias stemming from excluding these potential differences, I estimate equation (1) including controls for income, age, family size, marital status, home ownership, religious activity, employment status, and educational attainment. A set of year dummies are also included to account for the impacts of the macroeconomic factors that would affect fundraising spending during the survey period. ${ }^{11}$ As in most of the earlier literature applying the Blinder-Oaxaca type decomposition, in the empirical analysis, I mostly focus on the "explained" portion of the differential between two groups because of the difficulty in interpreting the results from the "unexplained" portion. ${ }^{12}$

### 4.1 Gender differences

Since males' probability of being asked to give is not significantly different than that of females', ${ }^{13}$ I focus on the gender gap in the probability of being asked to volunteer. Table 2 reports estimates of the non-linear decomposition of the male-female gap under three different sets of coefficients. The first specification uses coefficients from the male probit model as weights in the decomposition. ${ }^{14}$ In this decomposition, females are 5.6 percentage points more likely to be asked to volunteer. However, except religious activity and years effects, observable characteristics of individuals negatively contribute to the male/female gap. Overall, all control variables explain only 2.3 percent of the male-female gap in the probability of being asked to volunteer. Furthermore, this "explained" portion of the decomposition is insignificant.

The remaining specifications repeat the same analysis using coefficients from the female and

[^5]female-male pooled probit models as weights in the decomposition. These alternative decompositions yield similar results. The observable characteristics of males and females do not significantly explain the male-female gap in the probability of being asked to volunteer.

### 4.2 Race differences

Raw numbers suggest that compared with blacks and Hispanics, whites are much more likely to be solicited for charitable causes. In Table 3 and Table 4, I present the non-linear decomposition results for the black-white and Hispanic-white gap in the probability of being asked to give and volunteer.

### 4.2.1 The black-white gap

Table 3 reports that the black-white gap in the probability of being asked to give is 12 percentage points. When coefficients from the white or black-white pooled probit models are used as weights in the decomposition, observable characteristics of respondents explain more than 70 percent of the black-white gap. However, when coefficients from the black probit model are used as coefficients, observable covariates explain only 55 percent of the black-white gap. Most of the difference between blacks and whites is explained by income and education. Sex, age, family size, being employed, married, and homeowner are also significant determinants of the black-white gap in the probability of being asked to give.

Compared with whites, blacks are also less likely to be asked to volunteer. The black-white gap in the probability of being asked to volunteer is around 12 percentage points. Under all alternative specifications, the decompositions reveal that group differences in observable characteristics of individuals explain roughly 45 percent of this gap. Again, the main contributors of black-white gap are the differences in educational attainment and income between two groups. Lower income levels in black population account for 16 to 24 percent of the black-white gap in the probability of being asked to volunteer, whereas differences in educational attainment between blacks and whites explain more than 28 percent of this gap.

### 4.2.2 The Hispanic-white gap

In contrast to the male-female and black-white gaps, compared with the raw numbers reported in Figure 1, the Hispanic-white gap increases in the non-linear decompositions. This is due to the decrease in sample size as a result of the inclusion of control variables and the exclusion of respondents who reported being both white and Hispanic. Table 4 shows that whites are 26 percentage points more
likely than non-white Hispanics to be personally solicited for charitable donations. Under alternative decompositions, the observable differences between whites and Hispanics explain 55 to 69 percent of the gap between the two groups. Gender, age, education, and income differences positively contribute to the group differential in the probability of being asked to give.

Similarly, whites are 13 percentage points more likely than Hispanics to be asked to volunteer. When coefficients from the white or pooled probit models are used as weights in the non-linear decomposition of the group differential between whites and Hispanics, explanatory variables account for roughly 35 percent of the gap between two groups. When coefficients from the Hispanic probit model are used in the decomposition however, observable characteristics of two groups explain 67 percent of the gap. As in the other decompositions, differences in income and educational attainment between two groups are the main contributors to the Hispanic-white gap in the probability of being asked to volunteer, whereas being employed and a homeowner also positively contribute to the group differential.

### 4.3 Robustness checks

The distribution of charitable organizations and their fundraising activities vastly differ across different states even after controlling for population. ${ }^{15}$ In order to capture the location based differences in charitable activity, I add state dummies to equation (1) and re-estimate non-linear decompositions of gender and race differences. The first specification in Table 5 implies that including states effects to probit models increases the contribution of the "explained" portion of the non-linear decomposition of black-white and Hispanic-white gaps in the probability of being asked to give. Once state effects are accounted for, observable differences between blacks and whites explain 61 to 80 percent of the gap between these two groups. Similarly, under alternative decompositions, observable differences between Hispanics and whites account for 60 to 93 percent of the difference between these two groups.

As mentioned before, until 2001, Gallup Organization conducted biannual surveys of charitable giving and volunteering for Independent Sector. In 2001 Independent Sector hired Westat Inc. to conduct the same survey. As a result, in the 2001 edition of the survey series, the sample size increased considerably, some questions were dropped from the survey, and the wording of some others changed. ${ }^{16}$

[^6]In order to check whether these changes affect the decomposition results, the second specification in Table 5 excludes this year from the sample. Excluding the 2001 subsample increases the black-white gap in the probability of being asked to give from 0.12 to 0.15 . As in the original decomposition, observable differences between blacks and whites explain most of the gap between two groups. The Hispanic-white gap also increases slightly by 2.5 percentage points and control variables continue to explain at least 64 percent of the race differential.

Excluding the 2001 subsample enables me to include an additional control variable that may be associated with higher probability of being solicited, namely the number of years that the respondent lived in his or her community. ${ }^{17}$ I hypothesize that people who lived in their community longer are more integrated into their neighborhood and hence, more likely to receive a charitable request. ${ }^{18}$ The third specification in Table 5 shows that controlling community effects in non-linear decompositions of black-white and Hispanic-white gaps in the probability of being asked to give yield virtually the same results compared with the second specification which excludes year 2001.

Table 6 reports the results of the same robustness checks for non-linear decompositions of malefemale, black-white, and Hispanic-white gaps in the probability of being asked to volunteer. The gender gap in the probability of being asked to volunteer is not sensitive to controlling for state effects. Differences in observable characteristics of males and females remain to explain only a minor portion of the gap between these two groups. Furthermore, the contribution of the observable differences between males and females to group differential remains insignificant. Excluding the 2001 subsample increases the male-female gap by 1.7 percentage points. Under this specification, observable differences between males and females explain around 11 percent of the gap between the two groups. In all decompositions, the contribution of the "explained" portion is significant. Finally, including community effects as additional controls yields similar results compared with the second specification. Under this specification, observable differences between males and females explain around 10 percent of the group differential. Hence, most of the gender gap in the probability of being asked to volunteer remains unexplained.

Alternative decompositions of the black-white gap in the probability of being asked to volunteer are

[^7]also comparable with the main decomposition results reported in Table 3. Controlling for the states effects decreases the contribution of the "explained" portion of the non-linear decomposition of blackwhite gap by around 8 percentage points when coefficients from the white or pooled probit models are used as weights in the decomposition and by around 2 percentage points when coefficients from the black probit model are used instead. Surprisingly, the black-white differential in the probability of being asked to volunteer remains almost the same even after the 2001 subsample is excluded or community effects are controlled for. Under these specifications, differences in blacks' and whites' characteristics explain at least 51 percent of the gap between these two groups.

Alternative decompositions of the Hispanic-white gap in the probability of being asked to volunteer yield considerably different results compared with the main decomposition results reported in Table 4. When state effects are controlled for and coefficients from the Hispanic probit model are used as weights in the decomposition, observable differences between Hispanics and whites explain almost all of the gap between Hispanics and whites. When coefficients from the white or pooled probit models are used however, observable differences between two groups explain only 38 percent of the group differential. Excluding the 2001 subsample or controlling for community effects decreases the Hispanic/white gap by 0.6 percentage points. Under these alternative specifications, the "explained" portion of the decomposition explains at least 62 percent of the gap the between Hispanics and whites. The contribution of this portion also remains significant under all specifications.

## 5 Discussion of results and policy implications

My estimates under alternative specifications suggest that observable differences between males and females fail to explain why females are on average 6 percentage points more likely to be asked to volunteer. Raw numbers in Table 1 suggest that a likely cause is statistical discrimination. When asked, females are on average more likely to volunteer and also volunteer more hours than males. Given these statistics, fundraisers may be more likely to target females as potential volunteers. A similar argument may also explain the "unexplained" portion of the racial gap in the probability of being solicited for charitable donations. Compared with blacks and Hispanics, whites are not only more likely to donate, but also donate more when they are personally asked to. However, statistical discrimination fails to explain the "unexplained" portion of the racial gap in the probability of being asked to volunteer. Although blacks are less likely than whites to be asked to volunteer their time, they are both more likely to volunteer and volunteer more hours than whites when solicited. Due to
the lack of gender data on fundraisers and possibility of omitted variable bias, how much of the blackwhite gap in the probability of being asked to volunteer can be attributed to taste based discrimination remains unknown, however.

A simple analysis may also shed light on the amount of foregone charity due to the selection of whites as potential volunteers instead of blacks. Obviously, since blacks volunteer more than whites when they are asked to, fundraisers should always solicit from blacks until all blacks are solicited. ${ }^{19}$ Here, I focus on a more interesting scenario. How much additional charity can be created if blacks and whites were equally likely to be solicited? According to the 2000 census, whites and blacks constitute around 75 and 12 percent of the U.S. adult population respectively. Given that on average 50 percent of whites were asked to volunteer compared with 38 percent of blacks, a rough estimate suggest that a total of slightly more than 83.2 million whites and blacks were solicited in $2000 .{ }^{20}$ The same number of people would have been solicited had fundraisers alternatively solicited from 48 percent of blacks and whites. Each year, Independent Sector publishes annual reports on volunteering that include estimated dollar value of volunteering time, which is based on the average hourly wage of all production and non-supervisory workers on private non-farm payrolls as reported by Bureau of Labor Statistics. According to these reports, the average estimated dollar value of volunteering time in 2000 was $\$ 15.7$. Given this amount, a two percentage point decrease in whites' probability of being asked to volunteer is associated with around $\$ 470.5$ million decrease in charity per month, whereas a ten percentage point increase in blacks' probability of being asked to volunteer is associated with $\$ 592.5$ million increase in charity during the same time period. ${ }^{21}$ Therefore, additional charity that would be created if blacks and whites were equally likely to be solicited to volunteer was around $\$ 122$ million per month in 2000 dollars. Hence, the economic impact of targeting potential donors based on race can be considerable.

[^8]
## 6 Conclusion

Recent literature documents the importance of personal charitable solicitations in facilitating charitable behavior. In this paper, using five independent household surveys of charitable giving and volunteering conducted from 1992 to 2001, I document that among other observable demographic characteristics of individuals such as income, education, marital status, and religious activity, race and gender also play key roles in the selection of potential donors to solicit. The findings of this paper imply that males, blacks, and Hispanics are much less likely to receive a charitable solicitation compared with females and whites. Although observable characteristics of individuals explain most of the racial gap in the probability of being solicited for charitable causes, they fail to explain why females are more likely to be asked to volunteer. These results are also robust to alternative decompositions of racial and gender differences, inclusion of extra control variables, and exclusion of a time period.

I discuss several policy implications associated with these results and argue that the amount of foregone charity due to the selection of donors based on gender and race can be considerable. In particular, I estimate that if blacks and whites were equally likely to be solicited to volunteer, the extra amount of charity induces per month would be around $\$ 122$ million in 2000 dollars.

This paper should be viewed as a first step in understanding the effect of gender and race on the selection of potential charitable donors. Although, it documents the existence and economic impact of selecting charitable donors based on race and gender, some questions remain unanswered primarily due to the lack of detailed survey data. First, this paper does not distinguish between statistical or taste based discrimination in fundraising. Raw numbers suggest that most of the unexplained portion of the race and gender gap in the probability of being asked to give may be attributed to statistical discrimination, whereas taste based discrimination may explain at least some portion of the black-white gap in the probability of being asked to volunteer. Yet, more research is needed to explore the possible causes of the selection of females and whites as potential charitable donors. Second. to what extent do the results of this paper on aggregate fundraising patterns apply to different areas of charitable activity? Do fundraisers raising money for different charitable categories such as environment and education also tend to select their donors based on gender and race? Future research can focus on fundraising activities in specific charity areas. This calls for more detailed survey or experimental data on charitable giving and volunteering.

## References

[1] Andreoni, J., 1998, Toward a theory of charitable fundraising, Journal of Political Economy, 106, 1186-1213.
[2] Andreoni, J. and A. Payne, 2003, Government grants to private charities: do they crowd-out giving or fund-raising, American Economic Review, 93, 792-812.
[3] Andreoni, J., 2006, Philanthropy, Handbook of Giving, Reciprocity and Altruism, S-C. Kolm and J. Mercier Ythier, eds., Amsterdam, North Holland, 1201-1269.
[4] Blinder, A.S., 1973, Wage discrimination: Reduced form and structural variables, Journal of Human Resources, 8, 436-455.
[5] Bryant, W.K., H. Jeon-Slaughter, H. Kang, and A. Tax, 2003, Participation in Philanthropic Activities: Donating money and time, Journal of Consumer Policy, 26, 43-73.
[6] Duncan, B., 2002, Pumpkin pies and public goods: The raffle fundraising strategy, Public Choice, 111, 49-71.
[7] Fairlie, R.W., 2005, An extension of the Blinder-Oaxaca decomposition technique to logit and probit models, Journal of Economic and Social Measurement, 30, 305-316.
[8] Freeman, R.B., 1997, Working for nothing: The supply of volunteer labor. Journal of Labor Economics, 15, 140-166.
[9] Harbaugh, W.T., 1998, What do donations buy? A model of philanthropy based on prestige and warm glow, Journal of Public Economics, 67, 269-284.
[10] Jones, F.L., 1983, On decomposing wage gap: A critical comment on Blinder's Method, Journal of Human Resources, 18, 126-130.
[11] Keegan, B., 1994, Fundraising for nonprofits: How to build community partnership, Harper Collins Publishers, NY.
[12] List, J.A. and D. Lucking-Reiley, 2002, The effects of seed money and refunds on charitable giving: Experimental evidence from a university capital campaign, Journal of Political Economy, 110, 215-233.
[13] Meer, J. and Rosen, H.S., 2009. The ABCs of charitable solicitation, NBER Working Paper No. 15037.
[14] Neumark, D., 1988, Employers' discriminatory behavior and the estimation of wage discrimination, Journal of Human Resources, 23, 279-295.
[15] Oaxaca, R.J., 1973, Male-female wage differentials in urban labor markets, International Economic Review, 14, 693-709.
[16] Romano, R. and H. Yildirim, 2001, Why charities announce donations: A positive perspective, Journal of Public Economics, 81, 423-447.
[17] Schervish, P.G., Havens J.J., 1997. Social participation and charitable giving: A multivariate analysis. Voluntas: International Journal of Voluntary and Non-profit Organizations, 8, 235-260.
[18] van Diepen, M., B. Donkers, and P.H. Franses, 2009, Does irritation induced by charitable direct mailings reduce donations?, forthcoming in International Journal of Research in Marketing.
[19] Yörük, B.K., 2009. How responsive are charitable donors to requests to give?, Journal of Public Economics, 93, 1111-1117.
[20] Yörük, B.K., 2008. The power of asking in volunteering: Evidence from a matched sample, Economics Letters, 99, 79-84.

## Appendix A

Table A1. Description of key variables and summary statistics

| Variable | Definition | Number of Obs. | Mean | Standard <br> Deviation |
| :---: | :---: | :---: | :---: | :---: |
| Asked to give | $=1$ if the respondent or a member of the respondent's family was personally asked to give. | 13,174 | 0.724 | 0.447 |
| Asked to volunteer | $=1$ if the respondent was personally asked to volunteer. | 13,161 | 0.457 | 0.498 |
| Female | $=1$ if the respondent is female. | 13,330 | 0.530 | 0.499 |
| Black | $=1$ if the respondent is black. | 12,940 | 0.110 | 0.313 |
| White | $=1$ if the respondent is white. | 12,940 | 0.860 | 0.347 |
| Hispanic | $=1$ if the respondent is Hispanic. | 13,281 | 0.077 | 0.266 |
| Income | Total household income in 1996 dollars. ${ }^{\text {a }}$ | 12,691 | 41,722 | 30,493 |
| Age | Age of the respondent. | 13,191 | 45.40 | 17.54 |
| Family size | Number of people in the household including the respondent. | 13,285 | 2.96 | 1.49 |
| Married | $=1$ if the respondent is married. | 13,308 | 0.621 | 0.485 |
| Emloyed | $=1$ if the respondent is employed. | 13,222 | 0.589 | 0.492 |
| High School Graduate ${ }^{\text {b }}$ | $=1$ if the highest level of education obtained by the respondent is a high school degree. | 13,242 | 0.314 | 0.464 |
| Attended College | $=1$ if the respondent attended college but did not receive a four-year degree. | 13,242 | 0.264 | 0.441 |
| College Graduate | $=1$ if the respondent obtained a four-year college or higher degree. | 13,242 | 0.221 | 0.415 |
| Homeowner | $=1$ if the respondent owns her current residence. | 13,250 | 0.682 | 0.466 |
| Churchgoer | $=1$ if the respondent reported attending religious services for every week or nearly every week. | 12,163 | 0.487 | 0.500 |
| Member of a religious congregation | $=1$ if the respondent is a member of a religious congregation. | 13,329 | 0.157 | 0.364 |

Notes: Sample weighted means are reported.
a. Respondents reported income in one of 15 before-tax income ranges. The midpoint of the each range is used as the actual income measure. The empirical analysis uses $\ln$ (income) as a control variable.
b. Those who did not complete the high-school are the omitted category in the empirical analysis.

## Appendix B

Table B1. Probit regressions for probability of being asked to give

|  | White | Black | White/Black | Hispanic | White/Hispanic |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Pooled |  |  |  |  |  |
| Male |  |  |  |  |  |

Notes: Marginal effects are reported. Standard errors are in parentheses. The signs *, ${ }^{* *}$, ${ }^{* * *}$ denote statistical significance at $10 \%, 5 \%$, and $1 \%$ respectively.

Table B2. Probit regressions for probability of being asked to volunteer

|  | Male | Female | Male/Female <br> Pooled | White | Black | White/Black | Pooled | Hispanic | White/Hispanic |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Pooled |  |  |  |  |  |  |  |  |  |

Notes: Marginal effects are reported. Standard errors are in parentheses. The signs *, ${ }^{* *}$, ${ }^{* * *}$ denote statistical significance at $10 \%, 5 \%$, and $1 \%$ respectively.

## Tables

Table 1. The effect of personal solicitations on charitable giving and volunteering

|  |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |

Notes: Sample weighted means are reported. Standard errors are in parentheses.

Table 2. Non-linear decompositions of male/female gap in the probability of being asked to volunteer

| Sample used for coefficients | Male | Female | Pooled |
| :---: | :---: | :---: | :---: |
| Male/Female gap | $\begin{gathered} 0.056 \\ (0.010)^{* * *} \end{gathered}$ | $\begin{gathered} 0.056 \\ (0.010)^{* * *} \end{gathered}$ | $\begin{gathered} 0.056 \\ (0.010)^{* * *} \end{gathered}$ |
| Explained | $\begin{gathered} 0.002 \\ (0.004) \end{gathered}$ | $\begin{aligned} & (0.000) \\ & (0.003) \end{aligned}$ | $\begin{aligned} & (0.001) \\ & (0.002) \end{aligned}$ |
|  | [2.3\%] | [0.5\%] | [1.8\%] |
| Number of Males | 5045 | 5045 | 5045 |
| Number of Females | 5790 | 5790 | 5790 |
| Contributions from race differences in: |  |  |  |
| Income | $\begin{gathered} -0.009 \\ (0.002)^{* * *} \end{gathered}$ | $\begin{gathered} -0.011 \\ (0.002)^{* * *} \end{gathered}$ | $\begin{gathered} -0.010 \\ (0.001)^{* * *} \end{gathered}$ |
|  | [-16.4\%] | [-18.9\%] | [-17.9\%] |
| Race and age | $\begin{gathered} -0.003 \\ (0.001)^{* * *} \end{gathered}$ | $\begin{gathered} -0.003 \\ (0.000)^{* * *} \end{gathered}$ | $\begin{gathered} -0.003 \\ (0.000)^{* * *} \end{gathered}$ |
|  | [-5.3\%] | [-4.6\%] | [-5.3\%] |
| Family size and marital status | $\begin{gathered} -0.003 \\ (0.001)^{* *} \end{gathered}$ | $\begin{gathered} 0.002 \\ (0.001) \end{gathered}$ | $\begin{aligned} & -0.000 \\ & (0.001) \end{aligned}$ |
|  | [-5.2\%] | [2.8\%] | [-0.3\%] |
| Education | $\begin{gathered} -0.008 \\ (0.001)^{* * *} \end{gathered}$ | $\begin{gathered} -0.007 \\ (0.001)^{* * *} \end{gathered}$ | $\begin{gathered} -0.007 \\ (0.001)^{* * *} \end{gathered}$ |
|  | [-13.8\%] | [-12.4\%] | [-12.9\%] |
| Other controls | $\begin{gathered} 0.002 \\ (0.003 \end{gathered}$ | $\begin{aligned} & -0.000 \\ & (0.002) \end{aligned}$ | $\begin{gathered} 0.000 \\ (0.002) \end{gathered}$ |
|  | [3.8\%] | [-0.8\%] | [0.8\%] |
| Religion | $\begin{gathered} 0.021 \\ (0.002)^{* * *} \end{gathered}$ | $\begin{gathered} 0.019 \\ (0.002)^{* * *} \end{gathered}$ | $\begin{gathered} 0.020 \\ (0.001)^{* * *} \end{gathered}$ |
|  | [34.5\%] | [34.4\%] | [35.8\%] |
| Year Effects | $\begin{gathered} 0.002 \\ (0.001)^{* * *} \end{gathered}$ | $\begin{aligned} & -0.000 \\ & (0.001) \end{aligned}$ | $\begin{gathered} 0.001 \\ (0.001)^{*} \end{gathered}$ |
|  | [3.5\%] | [-0.0\%] | [1.6\%] |

Notes: Contribution estimates are mean values of the decomposition using 1000 sub-samples of females. Standard errors are in parentheses. Percentage contributions of variables to group differential are in brackets. Race and age category includes age, age squared, and dummies for being black and Hispanic. Other controls include dummies for being employed and homeowner. Religion category includes dummies controlling for regular church attendance and membership of a religious congregation. Variable definitions are as in Table A1. The signs *, **, *** denote statistical significance at $10 \%, 5 \%$, and $1 \%$ respectively.

Table 3. Non-linear decompositions of black/white gap in the probability of being asked to give and volunteer

| Sample used for coefficients | Asked to give |  |  | Asked to volunteer |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | White | Black | Pooled | White | Black | Pooled |
| Black/White gap | $\begin{gathered} 0.122 \\ (0.013)^{* * *} \end{gathered}$ | $\begin{gathered} 0.122 \\ (0.013)^{* * *} \end{gathered}$ | $\begin{gathered} 0.122 \\ (0.013)^{* * *} \end{gathered}$ | $\begin{gathered} 0.122 \\ (0.014)^{* * *} \end{gathered}$ | $\begin{gathered} 0.122 \\ (0.014)^{* * *} \end{gathered}$ | $\begin{gathered} 0.122 \\ (0.014)^{* * *} \end{gathered}$ |
| Explained | $\begin{gathered} 0.092 \\ (0.005)^{* * *} \\ {[74.9 \%]} \end{gathered}$ | $\begin{gathered} 0.067 \\ (0.012)^{* * *} \\ {[54.9 \%]} \end{gathered}$ | $\begin{gathered} 0.087 \\ (0.005)^{* * *} \\ {[70.9 \%]} \end{gathered}$ | $\begin{gathered} 0.054 \\ (0.005)^{* * *} \\ {[44.4 \%]} \end{gathered}$ | $\begin{gathered} 0.055 \\ (0.012)^{* * *} \\ {[45.2 \%]} \end{gathered}$ | $\begin{gathered} 0.055 \\ (0.005)^{* * *} \\ {[45.0 \%]} \end{gathered}$ |
| Number of Blacks | 1402 | 1402 | 1402 | 1403 | 1403 | 1403 |
| Number of Whites | 8825 | 8825 | 8825 | 8804 | 8804 | 8804 |
| Contributions from race differences in: |  |  |  |  |  |  |
| Income | $\begin{gathered} 0.044 \\ (0.004)^{* * *} \end{gathered}$ | $\begin{gathered} 0.014 \\ (0.009) \end{gathered}$ | $\begin{gathered} 0.039 \\ (0.004)^{* * *} \end{gathered}$ | $\begin{gathered} 0.029 \\ (0.004)^{* * *} \end{gathered}$ | $\begin{gathered} 0.020 \\ (0.009)^{* *} \end{gathered}$ | $\begin{gathered} 0.028 \\ (0.004)^{* * *} \end{gathered}$ |
|  | [36.2\%] | [11.6\%] | [32.1\%] | [23.9\%] | [16.2\%] | [22.9\%] |
| Sex and age | $\begin{gathered} 0.012 \\ (0.002)^{* * *} \end{gathered}$ | $\begin{gathered} 0.016 \\ (0.005)^{* * *} \end{gathered}$ | $\begin{gathered} 0.012 \\ (0.002)^{* * *} \end{gathered}$ | $\begin{gathered} -0.011 \\ (0.002)^{* * *} \end{gathered}$ | $\begin{gathered} -0.012 \\ (0.005)^{* *} \end{gathered}$ | $\begin{gathered} -0.013 \\ (0.002)^{* * *} \end{gathered}$ |
|  | [9.4\%] | [13.1\%] | [9.6\%] | [-9.4\%] | [-10.1\%] | [-10.3\%] |
| Family size and marital status | $\begin{gathered} 0.008 \\ (0.004)^{* *} \end{gathered}$ | $\begin{gathered} 0.010 \\ (0.008) \end{gathered}$ | $\begin{gathered} 0.008 \\ (0.003)^{* *} \end{gathered}$ | $\begin{gathered} -0.006 \\ (0.004)^{*} \end{gathered}$ | $\begin{aligned} & -0.006 \\ & (0.008) \end{aligned}$ | $\begin{gathered} -0.006 \\ (0.003)^{*} \end{gathered}$ |
|  | [6.2\%] | [7.8\%] | [6.6\%] | [-5.1\%] | [-4.8\%] | [-4.5\%] |
| Education | $\begin{gathered} 0.029 \\ (0.002)^{* * *} \end{gathered}$ | $\begin{gathered} 0.027 \\ (0.007)^{* * *} \end{gathered}$ | $\begin{gathered} 0.028 \\ (0.002)^{* * *} \end{gathered}$ | $\begin{gathered} 0.035 \\ (0.002)^{* * *} \end{gathered}$ | $\begin{gathered} 0.035 \\ (0.007)^{* * *} \end{gathered}$ | $\begin{gathered} 0.035 \\ (0.002)^{* * *} \end{gathered}$ |
|  | [23.6\%] | [22.4\%] | [23.2\%] | [29.0\%] | [28.9\%] | [28.7\%] |
| Other controls | $\begin{gathered} 0.016 \\ (0.004)^{* * *} \end{gathered}$ | $\begin{gathered} 0.017 \\ (0.008)^{* *} \end{gathered}$ | $\begin{gathered} 0.016 \\ (0.003)^{* * *} \end{gathered}$ | $\begin{gathered} 0.015 \\ (0.004)^{* * *} \end{gathered}$ | $\begin{gathered} 0.033 \\ (0.008)^{* * *} \end{gathered}$ | $\begin{gathered} 0.019 \\ (0.003)^{* * *} \end{gathered}$ |
|  | [13.5\%] | [13.8\%] | [13.3\%] | [12.6\%] | [27.0\%] | [15.5\%] |
| Religion | $\begin{gathered} -0.004 \\ (0.001)^{* * *} \end{gathered}$ | $\begin{gathered} -0.004 \\ (0.002)^{* *} \end{gathered}$ | $\begin{gathered} -0.003 \\ (0.001)^{* * *} \end{gathered}$ | $\begin{gathered} -0.009 \\ (0.001)^{* * *} \end{gathered}$ | $\begin{gathered} -0.010 \\ (0.002)^{* * *} \end{gathered}$ | $\begin{gathered} -0.009 \\ (0.001)^{* * *} \end{gathered}$ |
|  | [-2.9\%] | [-3.3\%] | [-2.8\%] | [-7.0\%] | [-8.1\%] | [-7.2\%] |
| Year Effects | $\begin{gathered} -0.013 \\ (0.007)^{* * *} \end{gathered}$ | $\begin{gathered} -0.013 \\ (0.004)^{* * *} \end{gathered}$ | $\begin{gathered} -0.014 \\ (0.002)^{* * *} \end{gathered}$ | $\begin{gathered} 0.001 \\ (0.002) \end{gathered}$ | $\begin{gathered} -0.005 \\ (0.004) \end{gathered}$ | $\begin{gathered} -0.000 \\ (0.001) \end{gathered}$ |
|  | [-10.9\%] | [-10.5\%] | [-11.2\%] | [0.6\%] | [-4.1\%] | [-0.1\%] |

Notes: Contribution estimates are mean values of the decomposition using 1000 sub-samples of whites. Standard errors are in parentheses. Percentage contributions of variables to group differential are in brackets. Sex and age category includes age, age squared, and a dummy for being female. Other controls include dummies for being employed and homeowner. Religion category includes dummies controlling for regular church attendance and membership of a religious congregation. Variable definitions are as in Table A1. The signs *, **, *** denote statistical significance at $10 \%, 5 \%$, and $1 \%$ respectively.

Table 4. Non-linear decompositions of Hispanic/white gap in the probability of being asked to give and volunteer

| Sample used for coefficients | Asked to give |  |  | Asked to volunteer |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | White | Hispanic | Pooled | White | Hispanic | Pooled |
| Hispanic/White gap | $\begin{gathered} 0.262 \\ (0.022)^{* * *} \end{gathered}$ | $\begin{gathered} 0.262 \\ (0.022)^{* * *} \end{gathered}$ | $\begin{gathered} 0.262 \\ (0.022)^{* * *} \end{gathered}$ | $\begin{gathered} 0.134 \\ (0.025)^{* * *} \end{gathered}$ | $\begin{gathered} 0.134 \\ (0.025)^{* * *} \end{gathered}$ | $\begin{gathered} 0.134 \\ (0.025)^{* * *} \end{gathered}$ |
| Explained | $\begin{gathered} 0.145 \\ (0.010)^{* * *} \end{gathered}$ | $\begin{gathered} 0.181 \\ (0.035)^{* * *} \end{gathered}$ | $\begin{gathered} 0.147 \\ (0.010)^{* * *} \end{gathered}$ | $\begin{gathered} 0.046 \\ (0.010)^{* * *} \end{gathered}$ | $\begin{gathered} 0.090 \\ (0.040)^{* *} \end{gathered}$ | $\begin{gathered} 0.051 \\ (0.009)^{* * *} \end{gathered}$ |
|  | [55.4\%] | [69.4\%] | [56.1\%] | [34.7\%] | [67.0\%] | [37.9\%] |
| Number of Hispanics | 439 | 439 | 439 | 436 | 436 | 436 |
| Number of Whites | 8132 | 8132 | 8132 | 8111 | 8111 | 8111 |
| Contributions from race differences in: |  |  |  |  |  |  |
| Income | $\begin{gathered} 0.037 \\ (0.004)^{* * *} \end{gathered}$ | $\begin{gathered} 0.067 \\ (0.016)^{* * *} \end{gathered}$ | $\begin{gathered} 0.039 \\ (0.004)^{* * *} \end{gathered}$ | $\begin{gathered} 0.025 \\ (0.004)^{* * *} \end{gathered}$ | $\begin{gathered} 0.061 \\ (0.017)^{* * *} \end{gathered}$ | $\begin{gathered} 0.028 \\ (0.004)^{* * *} \end{gathered}$ |
|  | [14.2\%] | [25.6\%] | [14.9\%] | [18.7\%] | [45.8\%] | [20.6\%] |
| Sex and age | $\begin{gathered} 0.034 \\ (0.006)^{* * *} \end{gathered}$ | $\begin{gathered} 0.039 \\ (0.031) \end{gathered}$ | $\begin{gathered} 0.033 \\ (0.006)^{* * *} \end{gathered}$ | $\begin{gathered} -0.026 \\ (0.006)^{* * *} \end{gathered}$ | $\begin{gathered} -0.027 \\ (0.030) \end{gathered}$ | $\begin{gathered} -0.027 \\ (0.006)^{* * *} \end{gathered}$ |
|  | [13.0\%] | [14.9\%] | [12.6\%] | [-19.2\%] | [-20.5\%] | [-20.0\%] |
| Family size and marital status | $\begin{gathered} -0.003 \\ (0.007) \end{gathered}$ | $\begin{gathered} 0.022 \\ (0.017) \end{gathered}$ | $\begin{gathered} 0.001 \\ (0.007) \end{gathered}$ | $\begin{gathered} -0.037 \\ (0.007)^{* * *} \end{gathered}$ | $\begin{gathered} 0.009 \\ (0.018) \end{gathered}$ | $\begin{gathered} -0.031 \\ (0.006)^{* * *} \end{gathered}$ |
|  | [-1.2\%] | [8.3\%] | [0.4\%] | [-27.4\%] | [6.4\%] | [-23.3\%] |
| Education | $\begin{gathered} 0.051 \\ (0.005)^{* * *} \end{gathered}$ | $\begin{gathered} 0.033 \\ (0.019)^{*} \end{gathered}$ | $\begin{gathered} 0.049 \\ (0.005) \end{gathered}$ | $\begin{gathered} 0.057 \\ (0.005)^{* * *} \end{gathered}$ | $\begin{gathered} 0.030 \\ (0.020) \end{gathered}$ | $\begin{gathered} 0.056 \\ (0.005)^{* * *} \end{gathered}$ |
|  | [19.6\%] | [12.7\%] | [18.7\%] | [43.0\%] | [22.4\%] | [41.8\%] |
| Other controls | $\begin{gathered} 0.018 \\ (0.005)^{* * *} \end{gathered}$ | $\begin{aligned} & -0.002 \\ & (0.016) \end{aligned}$ | $\begin{gathered} 0.018 \\ (0.005)^{* * *} \end{gathered}$ | $\begin{gathered} 0.015 \\ (0.005)^{* * *} \end{gathered}$ | $\begin{gathered} 0.014 \\ (0.017) \end{gathered}$ | $\begin{gathered} 0.016 \\ (0.005)^{* * *} \end{gathered}$ |
|  | [7.0\%] | [-0.6\%] | [6.7\%] | [11.3\%] | [10.7\%] | [11.7\%] |
| Religion | $\begin{gathered} 0.001 \\ (0.001) \end{gathered}$ | $\begin{gathered} 0.000 \\ (0.003) \end{gathered}$ | $\begin{gathered} 0.001 \\ (0.001) \end{gathered}$ | $\begin{gathered} -0.004 \\ (0.001)^{* * *} \end{gathered}$ | $\begin{gathered} -0.004 \\ (0.004) \end{gathered}$ | $\begin{gathered} -0.004 \\ (0.001)^{* * *} \end{gathered}$ |
|  | [0.3\%] | [0.2\%] | [0.3\%] | [-2.7\%] | [-3.1\%] | [-2.8\%] |
| Year Effects | $\begin{gathered} 0.006 \\ (0.004)^{*} \end{gathered}$ | $\begin{gathered} 0.022 \\ (0.018) \end{gathered}$ | $\begin{gathered} 0.007 \\ (0.004)^{* *} \end{gathered}$ | $\begin{gathered} 0.015 \\ (0.004)^{* * *} \end{gathered}$ | $\begin{gathered} 0.007 \\ (0.018) \end{gathered}$ | $\begin{gathered} 0.013 \\ (0.003)^{* * *} \end{gathered}$ |
|  | [2.3\%] | [8.5\%] | [2.7\%] | [10.9\%] | [5.2\%] | [10.0\%] |

Notes: Contribution estimates are mean values of the decomposition using 1000 sub-samples of whites. Standard errors are in parentheses. Percentage contributions of variables to group differential are in brackets. Sex and age category includes age, age squared, and a dummy for being female. Other controls include dummies for being employed and homeowner. Religion category includes dummies controlling for regular church attendance and membership of a religious congregation. Variable definitions are as in Table A1. The signs *, **, ${ }^{* * *}$ denote statistical significance at $10 \%, 5 \%$, and $1 \%$ respectively.

Table 5. Alternative non-linear decompositions of black/white and Hispanic/white gap in the probability of being asked to give

| Alternative specifications | Sample used for coefficients |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Black | White | Pooled | Hispanic | White | Pooled |
| 1. Include state effects |  |  |  |  |  |  |
| Group differential | $\begin{gathered} 0.122 \\ (0.013)^{* * *} \end{gathered}$ | $\begin{gathered} 0.122 \\ (0.013)^{* * *} \end{gathered}$ | $\begin{gathered} 0.122 \\ (0.013)^{* * *} \end{gathered}$ | $\begin{gathered} 0.262 \\ (0.022)^{* * *} \end{gathered}$ | $\begin{gathered} 0.262 \\ (0.022)^{* * *} \end{gathered}$ | $\begin{gathered} 0.262 \\ (0.022)^{* * *} \end{gathered}$ |
| Explained | $\begin{gathered} 0.074 \\ (0.038)^{* *} \end{gathered}$ | $\begin{gathered} 0.098 \\ (0.007)^{* * *} \end{gathered}$ | $\begin{gathered} 0.096 \\ (0.006)^{* * *} \end{gathered}$ | $\begin{gathered} 0.245 \\ (0.077)^{* * *} \end{gathered}$ | $\begin{gathered} 0.158 \\ (0.013)^{* * *} \end{gathered}$ | $\begin{gathered} 0.161 \\ (0.012)^{* * *} \end{gathered}$ |
|  | [60.9\%] | [80.3\%] | [78.5\%] | [93.8\%] | [60.4\%] | [61.5\%] |
| Number of Blacks / Hispanics | 1402 | 1402 | 1402 | 439 | 439 | 439 |
| Number of Whites | 8825 | 8825 | 8825 | 8132 | 8132 | 8132 |
| 2. Exclude year 2001 |  |  |  |  |  |  |
| Group differential | $\begin{gathered} 0.152 \\ (0.015)^{* * *} \end{gathered}$ | $\begin{gathered} 0.152 \\ (0.015)^{* * *} \end{gathered}$ | $\begin{gathered} 0.152 \\ (0.015)^{* * *} \end{gathered}$ | $\begin{gathered} 0.287 \\ (0.025)^{* * *} \end{gathered}$ | $\begin{gathered} 0.287 \\ (0.025)^{* * *} \end{gathered}$ | $\begin{gathered} 0.287 \\ (0.025)^{* * *} \end{gathered}$ |
| Explained | $\begin{gathered} 0.093 \\ (0.014)^{* * *} \end{gathered}$ | $\begin{gathered} 0.129 \\ (0.007)^{* * *} \end{gathered}$ | $\begin{gathered} 0.120 \\ (0.006)^{* * *} \end{gathered}$ | $\begin{gathered} 0.226 \\ (0.041)^{* * *} \end{gathered}$ | $\begin{gathered} 0.184 \\ (0.014)^{* * *} \end{gathered}$ | $\begin{gathered} 0.185 \\ (0.013)^{* * *} \end{gathered}$ |
|  | [61.1\%] | [85.3\%] | [79.2\%] | [78.7\%] | [64.1\%] | [64.4\%] |
| Number of Blacks / Hispanics | 1038 | 1038 | 1038 | 297 | 297 | 297 |
| Number of Whites | 5494 | 5494 | 5494 | 4959 | 4959 | 4959 |
| 3. Include community effects |  |  |  |  |  |  |
| Group differential | $\begin{gathered} 0.152 \\ (0.015)^{* * *} \end{gathered}$ | $\begin{gathered} 0.152 \\ (0.015)^{* * *} \end{gathered}$ | $\begin{gathered} 0.152 \\ (0.015)^{* * *} \end{gathered}$ | $\begin{gathered} 0.287 \\ (0.025)^{* * *} \end{gathered}$ | $\begin{gathered} 0.287 \\ (0.025)^{* * *} \end{gathered}$ | $\begin{gathered} 0.287 \\ (0.025)^{* * *} \end{gathered}$ |
| Explained | $\begin{gathered} 0.094 \\ (0.014)^{* * *} \end{gathered}$ | $\begin{gathered} 0.130 \\ (0.007)^{* * *} \end{gathered}$ | $\begin{gathered} 0.121 \\ (0.006)^{* * *} \end{gathered}$ | $\begin{gathered} 0.244 \\ (0.039)^{* * *} \end{gathered}$ | $\begin{gathered} 0.186 \\ (0.014)^{* * *} \end{gathered}$ | $\begin{gathered} 0.187 \\ (0.013)^{* * *} \end{gathered}$ |
|  | [62.2\%] | [85.8\%] | [79.8\%] | [84.8\%] | [64.6\%] | [64.9\%] |
| Number of Blacks / Hispanics | 1038 | 1038 | 1038 | 297 | 297 | 297 |
| Number of Whites | 5494 | 5494 | 5494 | 4959 | 4959 | 4959 |

Notes: Contribution estimates are mean values of the decomposition using 1000 sub-samples of whites. Standard errors are in parentheses. Percentage contributions of variables to group differential are in brackets. The signs ${ }^{*},{ }^{* *},{ }^{* * *}$ denote statistical significance at $10 \%, 5 \%$, and $1 \%$ respectively.

Table 6. Alternative non-linear decompositions of male/female, black/white, and Hispanic/white gap in the probability of being asked to volunteer

| Alternative specifications | Sample used for coefficients |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Gender differences |  |  | Race differences |  |  |  |  |  |
|  | Male | Female | Pooled | Black | White | Pooled | Hispanic | White | Pooled |
| 1. Include state effects |  |  |  |  |  |  |  |  |  |
| Group differential | $\begin{gathered} 0.056 \\ (0.010)^{* * *} \end{gathered}$ | $\begin{gathered} 0.056 \\ (0.010)^{* * *} \end{gathered}$ | $\begin{gathered} 0.056 \\ (0.010)^{* * *} \end{gathered}$ | $\begin{gathered} 0.122 \\ (0.014)^{* * *} \end{gathered}$ | $\begin{gathered} 0.122 \\ (0.014)^{* * *} \end{gathered}$ | $\begin{gathered} 0.122 \\ (0.014)^{* * *} \end{gathered}$ | $\begin{gathered} 0.134 \\ (0.025)^{* * *} \end{gathered}$ | $\begin{gathered} 0.134 \\ (0.025)^{* * *} \end{gathered}$ | $\begin{gathered} 0.134 \\ (0.025)^{* * *} \end{gathered}$ |
| Explained | $\begin{gathered} 0.001 \\ (0.004) \end{gathered}$ | $\begin{aligned} & -0.001 \\ & (0.003) \end{aligned}$ | $\begin{aligned} & -0.000 \\ & (0.002) \end{aligned}$ | $\begin{gathered} 0.065 \\ (0.033)^{* *} \end{gathered}$ | $\begin{gathered} 0.081 \\ (0.007)^{* * *} \end{gathered}$ | $\begin{gathered} 0.077 \\ (0.006)^{* * *} \end{gathered}$ | $\begin{gathered} 0.132 \\ (0.120) \end{gathered}$ | $\begin{gathered} 0.051 \\ (0.012)^{* * *} \end{gathered}$ | $\begin{gathered} 0.051 \\ (0.009)^{* * *} \end{gathered}$ |
|  | [1.3\%] | [-2.5\%] | [0.2\%] | [53.4\%] | [66.9\%] | [63.2\%] | [99.0\%] | [37.9\%] | [37.9\%] |
| Number of Males / Blacks / Hispanics | 5045 | 5045 | 5045 | 1403 | 1403 | 1403 | 436 | 436 | 436 |
| Number of Females / Whites | 5790 | 5790 | 5790 | 8804 | 8804 | 8804 | 8111 | 8111 | 8111 |
| 2. Exclude year 2001 |  |  |  |  |  |  |  |  |  |
| Group differential | $\begin{gathered} 0.073 \\ (0.012)^{* * *} \end{gathered}$ | $\begin{gathered} 0.073 \\ (0.012)^{* * *} \end{gathered}$ | $\begin{gathered} 0.073 \\ (0.012)^{* * *} \end{gathered}$ | $\begin{gathered} 0.122 \\ (0.017)^{* * *} \end{gathered}$ | $\begin{gathered} 0.122 \\ (0.017)^{* * *} \end{gathered}$ | $\begin{gathered} 0.122 \\ (0.017)^{* * *} \end{gathered}$ | $\begin{gathered} 0.128 \\ (0.030)^{* * *} \end{gathered}$ | $\begin{gathered} 0.128 \\ (0.030)^{* * *} \end{gathered}$ | $\begin{gathered} 0.128 \\ (0.030)^{* * *} \end{gathered}$ |
| Explained | $\begin{gathered} 0.009 \\ (0.005)^{*} \end{gathered}$ | $\begin{gathered} 0.008 \\ (0.004)^{*} \end{gathered}$ | $\begin{gathered} 0.008 \\ (0.003)^{* * *} \end{gathered}$ | $\begin{gathered} 0.062 \\ (0.016)^{* * *} \end{gathered}$ | $\begin{gathered} 0.071 \\ (0.007)^{* * *} \end{gathered}$ | $\begin{gathered} 0.069 \\ (0.006)^{* * *} \end{gathered}$ | $\begin{gathered} 0.091 \\ (0.053)^{*} \end{gathered}$ | $\begin{gathered} 0.079 \\ (0.013)^{* * *} \end{gathered}$ | $\begin{gathered} 0.083 \\ (0.013)^{* * *} \end{gathered}$ |
|  | [12.4\%] | [10.9\%] | [11.1\%] | [51.0\%] | [57.7\%] | [56.8\%] | [71.1\%] | [61.9\%] | [64.5\%] |
| Number of Males / Blacks / Hispanics | 3343 | 3343 | 3343 | 1037 | 1037 | 1037 | 294 | 294 | 294 |
| Number of Females / Whites | 3541 | 3541 | 3541 | 5466 | 5466 | 5466 | 4932 | 4932 | 4932 |
| 3. Include community effects |  |  |  |  |  |  |  |  |  |
| Group differential | $\begin{gathered} 0.073 \\ (0.012)^{* * *} \end{gathered}$ | $\begin{gathered} 0.073 \\ (0.012)^{* * *} \end{gathered}$ | $\begin{gathered} 0.073 \\ (0.012)^{* * *} \end{gathered}$ | $\begin{gathered} 0.122 \\ (0.017)^{* * *} \end{gathered}$ | $\begin{gathered} 0.122 \\ (0.017)^{* * *} \end{gathered}$ | $\begin{gathered} 0.122 \\ (0.017)^{* * *} \end{gathered}$ | $\begin{gathered} 0.128 \\ (0.030)^{* * *} \end{gathered}$ | $\begin{gathered} 0.128 \\ (0.030)^{* * *} \end{gathered}$ | $\begin{gathered} 0.128 \\ (0.030)^{* * *} \end{gathered}$ |
| Explained | $\begin{gathered} 0.007 \\ (0.005) \end{gathered}$ | $\begin{gathered} 0.007 \\ (0.004)^{*} \end{gathered}$ | $\begin{gathered} 0.007 \\ (0.003)^{* *} \end{gathered}$ | $\begin{gathered} 0.065 \\ (0.016)^{* * *} \end{gathered}$ | $\begin{gathered} 0.072 \\ (0.007)^{* * *} \end{gathered}$ | $\begin{gathered} 0.071 \\ (0.006)^{* * *} \end{gathered}$ | $\begin{gathered} 0.096 \\ (0.053)^{*} \end{gathered}$ | $\begin{gathered} 0.082 \\ (0.013)^{* * *} \end{gathered}$ | $\begin{gathered} 0.085 \\ (0.013)^{* * *} \end{gathered}$ |
|  | [9.9\%] | [9.8\%] | [9.6\%] | [53.3\%] | [59.2\%] | [58.2\%] | [75.0\%] | [64.2\%] | [66.0\%] |
| Number of Males / Blacks / Hispanics | 3343 | 3343 | 3343 | 1037 | 1037 | 1037 | 294 | 294 | 294 |
| Number of Females / Whites | 3541 | 3541 | 3541 | 5466 | 5466 | 5466 | 4932 | 4932 | 4932 |

Notes: In the first three columns, contribution estimates are mean values of the decomposition using 1000 sub-samples of females. In the rest of columns, contribution estimates are mean values of the decomposition using 1000 sub-samples of whites. Standard errors are in parentheses. Percentage contributions of variables to group differential are in brackets. The signs ${ }^{*},{ }^{* *}$, ${ }^{* * *}$ denote statistical significance at $10 \%, 5 \%$, and $1 \%$ respectively.

## Figures

Figure 1. Race differences in the probability of being solicited
A. Probability of being asked to give

B. Probability of being asked to volunteer


Figure 2. Gender differences in the probability of being solicited
A. Probability of being asked to give

B. Probability of being asked to volunteer



[^0]:    *I thank Michael Jerison for his helpful comments. All errors remain mine.
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    ${ }^{1}$ Other fundraising techniques include publicizing donor names and contribution amounts (Harbaugh, 1998; Romano and Yildirim, 2001). raffles (Duncan, 2002), and using seed money and refunds (Andreoni, 1998; List and Lucking-Reiley, 2002).

[^1]:    ${ }^{2}$ See, for example, Keegan (1994).
    ${ }^{3}$ Bryant et al. (2003) is an exception. Using cross-sectional survey data, they find that older, well-educated people with higher household incomes are more likely to be solicited by charities. On the other hand, Yörük (2009) argues that fundraisers use donor databases to select potential donors.

[^2]:    ${ }^{4}$ The 1992, 1994, 1996, and 1999 editions of the survey were conducted by the Gallup Organization. The 2001 edition was conducted by Westat Inc.
    ${ }^{5}$ Independent Sector collected data for $1988,1990,1992,1994,1996,1999$ and 2001. I do not use the data from 1988 and 1990 since respondents of these surveys were not asked whether they were personally asked to give. Notice also that charitable giving data are at the household level, while volunteering data are at the individual level.
    ${ }^{6}$ I present the definition of key variables and summary statistics in Appendix A. I use the full sample to calculate summary statistics.

[^3]:    ${ }^{7}$ The wording of the questions are as follows: "Were you and the members of your family or household (personally) asked to give money or other property to charitable organizations, including religious organizations in the last year?" and "Were you (personally) asked to volunteer in the last year?". The word "personally" was added in the 2001 edition of the survey.
    ${ }^{8}$ On average, compared with those who were not solicited, people who were asked to give donated 0.87 percentage points more of their incomes to charitable causes.

[^4]:    ${ }^{9}$ Alternatively, one can use logit model to estimate equation (1) and use the logistic distribution in the decomposition.

[^5]:    ${ }^{10}$ I use the Stata command "fairlie" to implement the non-linear decomposition and associated randomization procedure. See, Fairlie (2005) for further discussion of the methodology.
    ${ }^{11}$ An example is the change in the amount of government grants transfered to charities over time. An increase in government grants transfered to charities may crowd out fundraising spending. See, for example, Andreoni and Payne (2003).
    ${ }^{12}$ For more discussion, see Jones (1983).
    ${ }^{13}$ Females are 0.2 percentage points more likely than males to be solicited by a charity. This difference is not statistically significant, however.
    ${ }^{14}$ The estimates of probit models are reported in Appendix B.

[^6]:    ${ }^{15}$ Using Urban Institute data on charitable organizations (2006), I calculate the number of charitable organizations per capita for each state and find that the concentrations of charitable organizations differ considerably across states. The number of charitable orghanizations per thousand people is the lowest in Nevada (2.8) and the highest in the District of Columbia (25).
    ${ }^{16}$ Westat Inc. conducted the 2001 survey with a sample of 4,216 adults, whereas previous versions were conducted by Gallup Organization on about 2,500 households.

[^7]:    ${ }^{17}$ In the $1992,1994,1996$, and 1999 editions of the survey, respondents were asked the following question: "How long have you lived in the community you presently reside?". I use the answers to this question to generate three community dummies. These dummy variables control for whether the respondent lived in her community two to four years, five to nine years, and ten or more years. The excluded category is those who reside in their community less than two years.
    ${ }^{18}$ This hypothesis can easily be verified. Probit regressions of asked-to-give and asked-to-volunteer dummies on a set of community dummies yield significantly positive effect of number of years spend in a community on the probability of being solicited. The results are available from the author upon request.

[^8]:    ${ }^{19}$ Here, I assume that the costs of soliciting from whites and blacks are the same and fundraising spending is constant. Furthermore, I assume that each person can be solicited only once since additional solicitations may affect charitable contributions negatively due to donor fatigue. See, for example, van Diepen, Donkers, and Franses (2009) for discussion.
    ${ }^{20}$ The U.S. adult population in 2000 was $196,899,193$.
    ${ }^{21}$ In 2000 , adult white and black populations in the U.S. were approximately $147,900,000$ and $24,218,601$ respectively. The economic impact of a two percentage point decrease in whites' probability of being asked to volunteer is $0.02 \times \$ 15.7 \times 10.132 \times 147,900,000=\$ 470,536,159$, whereas the economic impact of a ten percentage point decrease in whites' probability of being asked to volunteer is $0.1 \times \$ 15.7 \times 15.582 \times 24,218,601=\$ 592,477,558$.

