

The Great Recession and Charitable Giving

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Abstract

We examine the impact of the Great Recession on charitable giving. Using the Panel Study of Income Dynamics, we estimate a variety of specifications and find sharp declines in overall donative behavior that is not accounted for by shocks to income or wealth. These results suggest that overall attitudes towards giving changed over this time period.

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1. Introduction

The impact of the Great Recession on every aspect of economic behavior is palpable. The effects on charitable giving are of particular interest because the need for private philanthropy is generally greatest during times of economic distress, just when the ability of donors to contribute is most limited. Indeed, total giving fell dramatically during that time period, as predicted by earlier studies exploring the relationship between aggregate giving and economic conditions (List, 2011; List and Peysakhovich, 2011).

While several studies have examined aggregate trends in giving around this time period (LeClair, 2014; Melkote, 2015; Reich and Wimer, 2012), there are shortcomings to the approaches these analyses take. Those using IRS data are limited to donors who itemize deductions on their tax returns, about 30 percent of households, most of them high income (Greenberg, 2016) – though itemizers account for most of the dollar value of giving. While informative, these studies can only describe broad patterns of giving during the Great Recession. They cannot, for example, disentangle whether the reduction in giving is driven by shocks to household income and wealth, or whether broader changes in attitudes during that era explain the drop. As an example of the latter, Fisman, Jakiela, and Kariv (2015) show that individuals exposed to the recession behave more selfishly in dictator games, even as they themselves may not have been directly affected.

In this paper, we examine patterns of giving before, during, and after the Great Recession using household-level panel data from the Panel Study of Income Dynamics. We look at both the likelihood of making donations and the amounts given, controlling for a variety of explanatory variables, including income and wealth and, in some specifications, household fixed effects. We find that giving fell on both the extensive and intensive margins during the Great Recession, that it had not recovered by 2012, that it is not explained by a fall in income or wealth, and that the reduction is evident even when controlling for time-invariant unobserved attributes, like tastes for altruism that do not shift over time. These findings provide evidence that other factors, like changing attitudes towards giving or increased uncertainty, explain much of the fall in giving during the Great Recession.

2. Data Summary and Econometric Specifications

We use seven biennial waves of the Panel Study of Income Dynamics (PSID), spanning 2001 through 2013. The data include demographic, income, and wealth information, as well as questions about charitable giving in the previous calendar year. After removing observations with missing values, the data comprise 54,115 observations on 13,109 individuals. We construct indicators for whether a household reported giving in the previous year and the total amount given (adjusted for inflation).¹ In the 2001 wave of the PSID, reporting giving in the previous year, 61.2 percent of households reported making a donation. The mean gift conditional on making one is \$2,597 (s.d. = \$11,247) and the median is \$924 (in 2013 dollars). The median percent of income given is 3.7%. Summary statistics are reported in Table 7.

Our empirical strategy is straightforward. We estimate a series of regressions with a measure of giving as the dependent variable, and vary the set of explanatory variables. Our variables of

¹ See Wilhelm (2006) for details on the construction of the data set.

interest are the coefficients on the year effects, with 2000 (that is, the 2001 wave of the PSID) as the comparison year. These coefficients show the impact of all factors affecting households' giving each year, particularly the macroeconomic environment.

We begin by using ordinary least squares to look at the simple means of the likelihood of giving and the (log) amount given, conditional on making a gift. It is then straightforward to combine the estimates from these two regressions to find the impact on the average amount given, while allowing the effects on the extensive and intensive margins to differ.² The next set of specifications adds a series of demographic controls,³ state of residence, and a state-level housing price index (the All-Transactions Index) and its quadratic to account for the extraordinary fluctuations in the housing market that were present during this period. If the year effects are substantially different in this specification, it suggests that the basic descriptive statistics generated in the first approach actually reflect patterns correlated with those controls. The third set of specifications adds controls for household income, while the fourth adds controls for wealth (including home equity).⁴ If the changes in giving reflect broader trends in giving rather than the impact of shocks to household income and wealth, the year effects from these regressions will be similar to those with fewer controls.

Finally, we take advantage of the panel nature of the PSID and include head-of-household fixed effects in the four specifications listed above.⁵ These account for all time-invariant attributes of the head including, most importantly, unobserved tastes for altruism. A decline in giving during and after the Great Recession, even accounting for income, wealth, and individual fixed effects, strongly suggests that broader changes in attitudes towards giving are at play.

3. Results

We report our results in a series of tables and accompanying figures, which show the coefficients for the year effects relative to the baseline year of 2000. We begin with Table 1 and Figure 1, which examine the impact on the probability of making a donation using ordinary least squares. In Column 1, corresponding to Panel A, we report the year coefficients with no controls, showing no change in the likelihood of giving until 2006, when giving begins to trend down somewhat, before plummeting 8.8 percentage points in 2010; despite a partial recovery of the economy by 2012, giving falls even further relative to 2000 levels. The inclusion of demographic and state controls in Column 2 and Panel B does not affect this pattern much. Adding income controls in Column 3 and Panel C shows a slight increase in the likelihood of giving by two percentage points after the downturn of 2000-01, with the decline in giving concentrated in 2010 and 2012. Similar results are seen when adding wealth controls in Column 4 and Panel D. Even with this full set of covariates, giving is 5.9 percentage points below its 2000 level in the final year of the sample. As a first pass, this is strong evidence that forces broader than individual circumstances drove the decline in giving.

² We cluster standard errors at the household level in all models.

³ These include age and its quadratic, race, gender, retirement and disability status, number of children, self-reported health, marital status, education, and religious affiliation. These variables are reported for the head of household.

⁴ For flexibility, we use a series of indicators for various levels of income and wealth. The results are not appreciably affected by using, for example, a linear and quadratic parameterization, nor by interacting income and wealth.

⁵ The set of demographic controls is adjusted to include only time-varying variables; age is collinear with the head and year effects and is excluded. Including broader bins for age does not impact the results.

Turning to the intensive margin in Table 2 and Figure 2, we see similar results – the amount given, conditional on donating, falls dramatically during and after the Great Recession. Somewhat surprisingly, the time pattern of giving when there are no controls is very similar to that when including the full slate of controls. Note that this result represents both a treatment effect of the business cycle and a change in the composition of givers; while interesting, one must be cautious in interpretation. We therefore focus primarily on the impacts on the probability of giving and the overall impact on giving. The latter results, in Table 3 and Figure 3, combine our results from the extensive and intensive margins to compute the unconditional impact on giving. Given the steep decline on both margins, it is unsurprising that overall average giving falls dramatically.⁶

We next turn to estimates that include individual fixed effects. As noted above, fixed effects allow us to account for, among other things, permanent income and unobserved time-invariant attitudes towards altruism. Moreover, to some extent, the OLS estimates reflect the changing composition of the panel, as heads of household enter or exit the panel. Unsurprisingly, therefore, the change in giving is less dramatic than in specifications that did not include these controls. In Table 4 and Figure 4, the likelihood of giving increases significantly relative to the 2000 comparison year until 2010, and falls lower still in 2012. It is particularly striking that, even controlling for individual fixed effects, income, wealth, and other factors, the results in Column 4 and Panel D show that the likelihood of giving was roughly four percentage points lower in 2012 than it was during the expansion in the mid-2000s.

Turning to Table 5 and Figure 5 and the effects on the intensive margin, the results are quite different from those without fixed effects. Rather than falling, the amount given conditional on making a gift remains stable over the business cycle. That is, those who remain as donors do not reduce their giving. This change likely reflects shifts in the composition of the conditional sample, and highlights the importance of care in interpreting results on the intensive margin. Table 6 and Figure 6 combine the estimates. The small decline in the probability of giving coupled with the increase by those who still give yields a significant drop in overall donations from the peak of the business cycle, but in most specifications, it does not drop significantly below the levels seen in the 2000 wave.

4. Conclusions

Our examination of patterns of charitable giving around the time of the Great Recession indicates that the propensity to give fell sharply and stayed well below previous levels, even when accounting for individual fixed effects. Overall giving falls relative to the levels seen in the mid-2000s, during the peak of the business cycle. Shocks to income and wealth do not account for this drop, suggesting that broader shifts in attitudes towards giving or increased uncertainty are at work. Given previous results on habit formation in charitable giving (Meer, 2013) and later-life impacts of macroeconomic shocks on behavior (Malmendier and Nagel, 2009), this finding suggests that the Great Recession might have serious long-term negative consequences for philanthropic behavior.

⁶ Recall that the usual approximation in a log-linear regression does not hold for such large coefficients in absolute value; for example, an effect of -0.50 log points is a 39.3% reduction.

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Figure 1: Effects on Probability of Giving
OLS Estimates

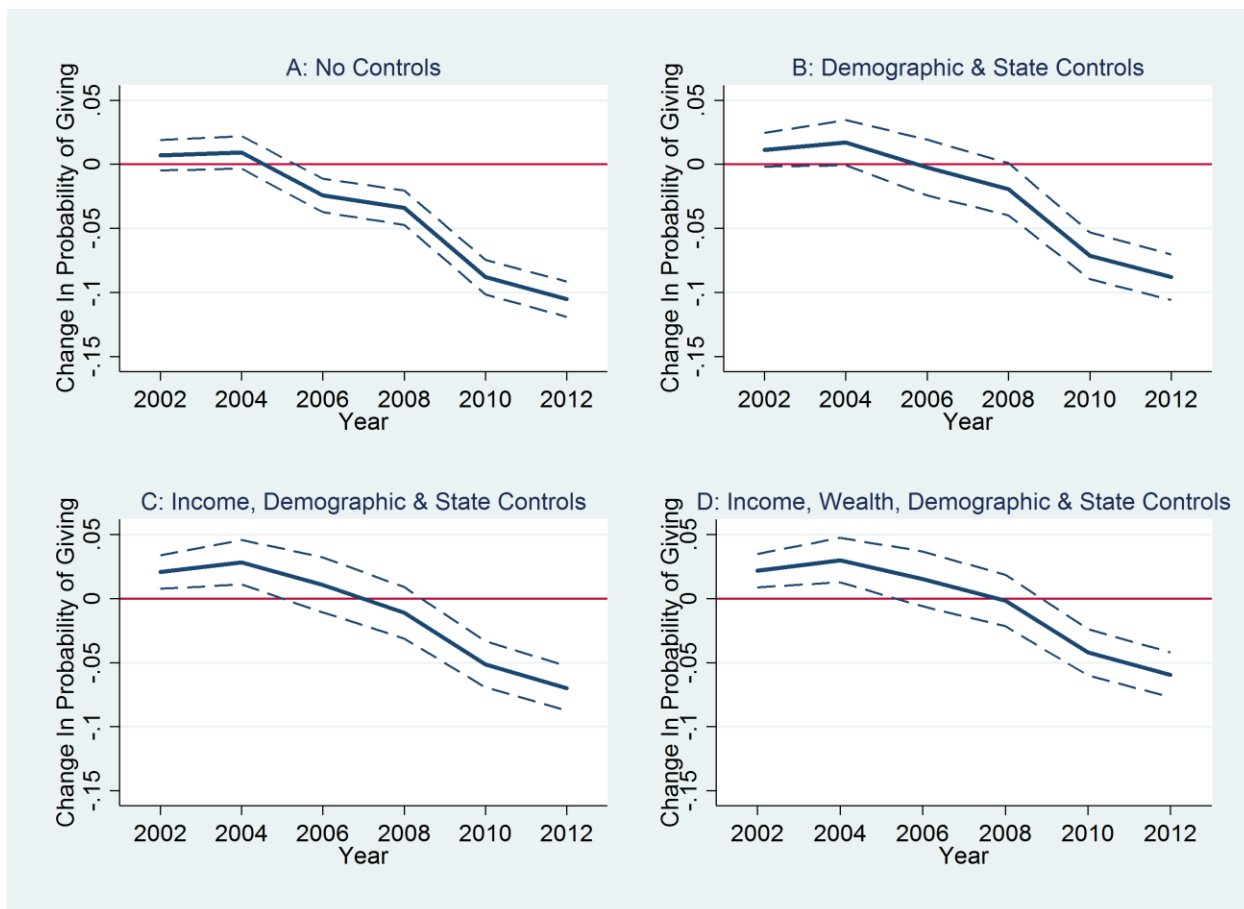


Figure 2: Effects on Log Amount Given Conditional on Making a Gift
OLS Estimates



Figure 3: Effects on Total Log Amount Given
OLS Estimates

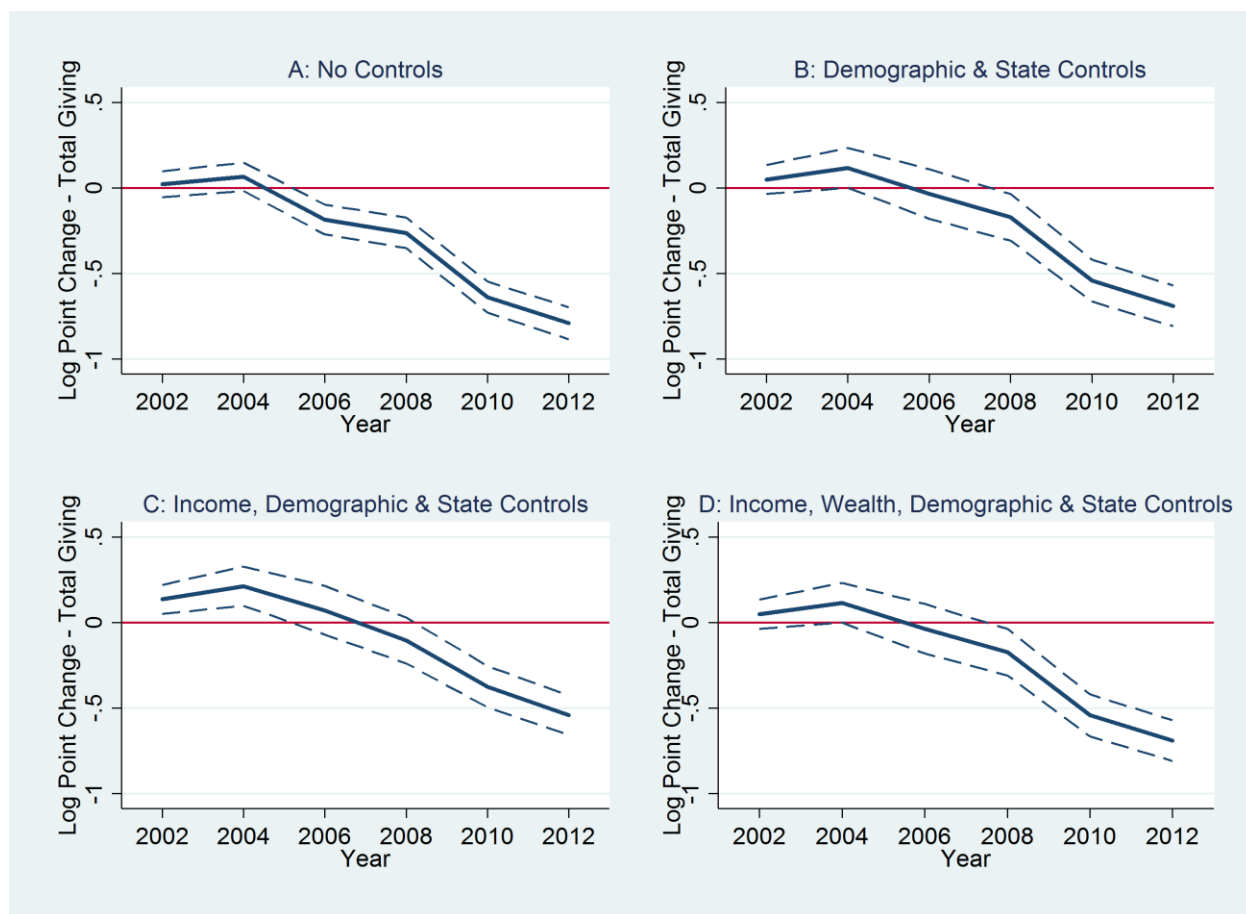


Figure 4: Effects on Probability of Giving
Individual Fixed Effects Estimates



Figure 5: Effects on Log Amount Given Conditional on Making a Gift
Individual Fixed Effects Estimates



Figure 6: Effects on Total Log Amount Given
Individual Fixed Effects Estimates

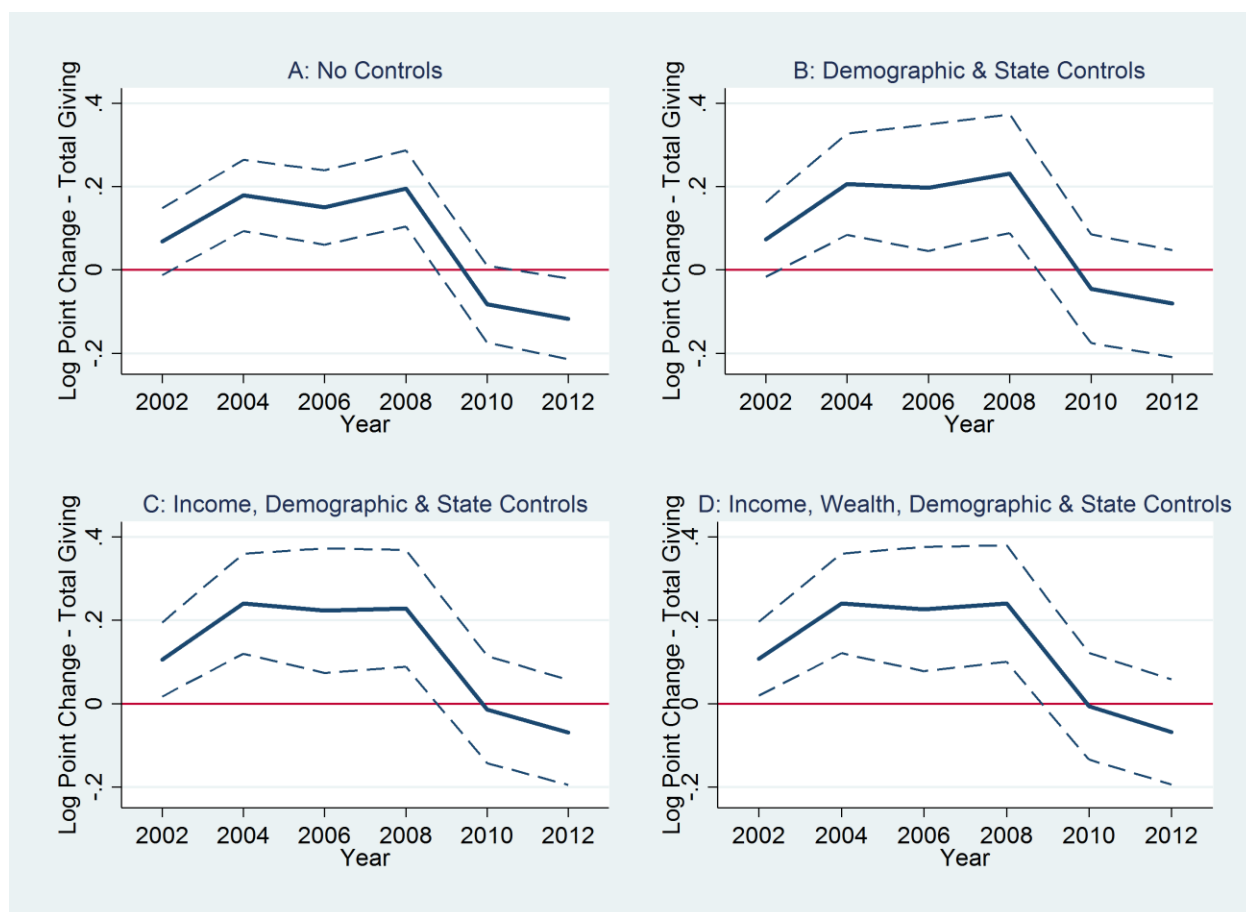


Table 1: Effects on Probability of Giving
OLS Estimates

	(1)	(2)	(3)	(4)
2002	0.007 (0.006)	0.011 (0.007)	0.021** (0.007)	0.022** (0.007)
2004	0.009 (0.006)	0.017 (0.009)	0.028** (0.009)	0.030*** (0.009)
2006	-0.024*** (0.007)	-0.003 (0.011)	0.011 (0.011)	0.015 (0.011)
2008	-0.034*** (0.007)	-0.019 (0.010)	-0.011 (0.010)	-0.002 (0.010)
2010	-0.088*** (0.007)	-0.071*** (0.009)	-0.051*** (0.009)	-0.042*** (0.009)
2012	-0.105*** (0.007)	-0.088*** (0.009)	-0.070*** (0.009)	-0.059*** (0.009)
Demographic Controls		X	X	X
Income			X	X
Wealth				X

Column (1) is estimated using OLS for likelihood of giving with controls for years only. Column (2) is estimated using OLS with year, demographic, and geographic controls. Column (3) is estimated using OLS with Column (2) controls plus income bin controls. Column (4) is estimated using OLS with Column (3) controls plus wealth bin controls. Each regression uses 54,115 observations. Standard errors are in parentheses and clustered by head of household.

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 2: Effects on Log Amount Given Conditional on Making a Gift
OLS Estimates

	(1)	(2)	(3)	(4)
2002	-0.046 [*] (0.024)	-0.043 (0.025)	0.004 (0.025)	0.009 (0.025)
2004	0.003 (0.025)	0.011 (0.034)	0.054 (0.033)	0.063 (0.033)
2006	-0.035 (0.025)	-0.033 (0.042)	0.005 (0.042)	0.028 (0.041)
2008	-0.058 [*] (0.026)	-0.081 [*] (0.039)	-0.058 (0.039)	-0.012 (0.039)
2010	-0.071 ^{**} (0.027)	-0.137 ^{***} (0.036)	-0.077 [*] (0.035)	-0.035 (0.035)
2012	-0.134 ^{***} (0.028)	-0.205 ^{***} (0.034)	-0.159 ^{***} (0.034)	-0.113 ^{***} (0.034)
Demographic Controls		X	X	X
Income			X	X
Wealth				X

Column (1) is estimated using OLS for the log of giving with controls for years only. Column (2) is estimated using OLS with year, demographic, and geographic controls. Column (3) is estimated using OLS with Column (2) controls plus income bin controls. Column (4) is estimated using OLS with Column (3) controls plus wealth bin controls. Each regression uses 31,078 observations. Standard errors are in parentheses and clustered by head of household.
^{*} $p < 0.05$, ^{**} $p < 0.01$, ^{***} $p < 0.001$

Table 3: Effects on Total Log Amount Given
OLS Estimates

	(1)	(2)	(3)	(4)
2002	0.021 (0.039)	0.049 (0.043)	0.136** (0.043)	0.146*** (0.043)
2004	0.065 (0.042)	0.116 (0.059)	0.214*** (0.058)	0.230*** (0.058)
2006	-0.185*** (0.044)	-0.036 (0.074)	0.072 (0.073)	0.115 (0.072)
2008	-0.263*** (0.046)	-0.172* (0.070)	-0.105 (0.068)	-0.016 (0.068)
2010	-0.639*** (0.046)	-0.542*** (0.063)	-0.375*** (0.062)	-0.290*** (0.062)
2012	-0.792*** (0.048)	-0.690*** (0.061)	-0.542*** (0.059)	-0.448*** (0.060)
Demographic Controls		X	X	X
Income			X	X
Wealth				X

Each column combines the estimates from an OLS regression of the probability of giving and an OLS regression of the amount given conditional on making a gift. Column (1) includes controls for years only. Column (2) includes year, demographic, and geographic controls. Column (3) includes the controls from Column (2) controls plus income bin controls. Column (4) includes the controls from Column (3) plus wealth bin controls. Each estimate uses 54,115 observations. Standard errors are in parentheses and clustered by head of household.

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 4: Effects on Probability of Giving
Individual Fixed Effects Estimates

	(1)	(2)	(3)	(4)
2002	0.009 (0.006)	0.010 (0.007)	0.014 ^ˆ (0.007)	0.014 ^ˆ (0.007)
2004	0.017 ^{ˆˆ} (0.006)	0.022 ^ˆ (0.009)	0.026 ^{ˆˆ} (0.009)	0.027 ^{ˆˆ} (0.009)
2006	0.012 (0.006)	0.021 (0.011)	0.024 ^ˆ (0.011)	0.024 ^ˆ (0.011)
2008	0.018 ^{ˆˆ} (0.006)	0.024 ^ˆ (0.010)	0.024 ^ˆ (0.010)	0.025 ^ˆ (0.010)
2010	-0.020 ^{ˆˆ} (0.007)	-0.015 (0.009)	-0.012 (0.009)	-0.011 (0.009)
2012	-0.025 ^{ˆˆˆ} (0.007)	-0.020 ^ˆ (0.009)	-0.019 ^ˆ (0.009)	-0.019 ^ˆ (0.009)
Demographic Controls		X	X	X
Income			X	X
Wealth				X

Column (1) is estimated including head-of-household fixed effects for likelihood of giving with controls for years only. Column (2) is estimated including head-of-household fixed effects with year, demographic, and geographic controls. Column (3) is estimated including head-of-household fixed effects with Column (2) controls plus an income bin control. Column (4) is estimated including head-of-household fixed effects with Column (3) controls plus a wealth bin control. Each regression uses 54,115 observations. Standard errors are in parentheses and clustered by head of household.

^ˆ $p < 0.05$, ^{ˆˆ} $p < 0.01$, ^{ˆˆˆ} $p < 0.001$

Table 5: Effects on Log Amount Given Conditional on Making a Gift
Individual Fixed Effects Estimates

	(1)	(2)	(3)	(4)
2002	0.009 (0.020)	0.004 (0.022)	0.026 (0.022)	0.027 (0.022)
2004	0.108 ^{***} (0.021)	0.096 ^{**} (0.030)	0.114 ^{***} (0.030)	0.113 ^{***} (0.030)
2006	0.121 ^{***} (0.022)	0.099 ^{**} (0.038)	0.112 ^{**} (0.038)	0.112 ^{**} (0.038)
2008	0.130 ^{***} (0.023)	0.118 ^{**} (0.036)	0.119 ^{***} (0.035)	0.125 ^{***} (0.035)
2010	0.098 ^{***} (0.024)	0.093 ^{**} (0.033)	0.111 ^{***} (0.033)	0.113 ^{***} (0.033)
2012	0.097 ^{***} (0.025)	0.096 ^{**} (0.033)	0.101 ^{**} (0.032)	0.098 ^{**} (0.032)
Demographic Controls		X	X	X
Income			X	X
Wealth				X

Column (1) is estimated including head-of-household fixed effects for the log of giving with controls for years only. Column (2) is estimated including head-of-household fixed effects with year, demographic, and geographic controls. Column (3) is estimated including head-of-household fixed effects with Column (2) controls plus an income bin control. Column (4) is estimated including head-of-household fixed effects with Column (3) controls plus a wealth bin control. Each regression uses 31,078 observations. Standard errors are in parentheses and clustered by head of household.

^{*} $p < 0.05$, ^{**} $p < 0.01$, ^{***} $p < 0.001$

Table 6: Effects on Total Log Amount Given
Individual Fixed Effects Estimates

	(1)	(2)	(3)	(4)
2002	0.068 (0.041)	0.073 (0.046)	0.106 [*] (0.045)	0.108 [*] (0.045)
2004	0.179 ^{***} (0.043)	0.206 ^{***} (0.062)	0.240 ^{***} (0.061)	0.241 ^{***} (0.061)
2006	0.150 ^{**} (0.045)	0.197 [*] (0.077)	0.223 ^{**} (0.076)	0.227 ^{**} (0.076)
2008	0.195 ^{***} (0.046)	0.231 ^{**} (0.073)	0.229 ^{**} (0.072)	0.240 ^{***} (0.071)
2010	-0.082 (0.047)	-0.045 (0.066)	-0.014 (0.065)	-0.006 (0.065)
2012	-0.117 [*] (0.049)	-0.081 (0.065)	-0.069 (0.064)	-0.068 (0.064)
Demographic Controls		X	X	X
Income			X	X
Wealth				X

Each column combines the estimates from a regression of the probability of giving and a regression of the amount given conditional on making a gift, including head-of-household fixed effects. Column (1) includes controls for years only. Column (2) includes year, demographic, and geographic controls. Column (3) includes the controls from Column (2) controls plus income bin controls. Column (4) includes the controls from Column (3) plus wealth bin controls. Each estimate uses 54,115 observations. Standard errors are in parentheses and clustered by head of household. ^{*} $p < 0.05$, ^{**} $p < 0.01$, ^{***} $p < 0.001$

Table 7
Summary Statistics

	Mean	Standard Deviation	Median	
Made a Donation	0.57	0.49	0	
Total Giving (Unconditional)	\$1397.79	\$4704.30	\$162.00	
Total Giving (Conditional on Making a Gift)	\$2433.93	\$6001.13	\$899.25	
Family Income	\$73.04	\$108.47	\$52.32	
Wealth (Including Home Equity)	\$255.24	\$1268.40	\$38.22	
Age	45.37	16.35	44.00	
Retired	0.12	0.33	0	
Disabled	0.04	0.21	0	
Female	0.31	0.46	0	
Number of Children	0.83	1.17	0	
African-American	0.35	0.48	0	
Hispanic	0.07	0.26	0	
Health	Excellent	0.20	0.40	0
	Very Good	0.33	0.47	0
	Good	0.30	0.46	0
	Fair	0.12	0.33	0
	Poor	0.04	0.20	0
Education	Dropout	0.18	0.38	0
	HS Degree	0.31	0.46	0
	Some College	0.25	0.43	0
	College Degree	0.15	0.36	0
	Grad Degree	0.10	0.29	0
Marital Status	Married/ Cohabiting	0.48	0.50	0
	Single	0.26	0.44	0
	Widowed	0.07	0.25	0
	Divorced	0.15	0.36	0
	Separated	0.04	0.21	0
Religious Affiliation	None	0.134	0.341	0
	Catholic	0.191	0.393	0
	Protestant	0.019	0.137	0
	Jewish	0.615	0.487	1
	Other Non- Christian	0.014	0.117	0
	Orthodox	0.002	0.047	0
	Other	0.025	0.156	0

Summary statistics reported for 54,115 observations; total giving conditional on making a gift is reported for 31,078 observations. Income and wealth are in thousands of 2013 dollars.