

Donor Stability: Do the Exact Same Donors Give Every Year?

PRELIMINARY DRAFT:  
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Patrick M. Rooney\*

Melissa S. Brown\*\*

Ke (Samuel) Wu\*\*\*

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\*Director of Research at the Center on Philanthropy at Indiana University and Professor of Economics and Philanthropic Studies, IUPUI

\*\*Associate Director of Research at the Center on Philanthropy at Indiana University and Managing Editor Giving USA.

\*\*\*Research Assistant, the Center on Philanthropy at Indiana University and Masters Candidate, Department of Economics, IUPUI

## **Introduction**

We have observed that in annual surveys of households, approximately two-thirds of American households report being donors to charities in the prior year. We anticipate that many of them are the same donors year to year. However, until the Center on Philanthropy Panel Study (COPPS) data were available for the exact same households from several years, this hypothesis was unable to be tested. In this paper, we describe the characteristics of “repeat donors” (give in two of the three years surveyed) vs. “occasional donors” (give in one of the three survey years) vs. “persistent donors” (give in all three years). We also examine which factors those explain whether or not a household is likely to be a donor in all three years available for analysis. Finally, we investigate which factors are associated with donors becoming non-donors during each of the timeframes studied. These are important to understand from a practitioner and research perspective.

**[overview of findings in tabular form follows]**

**Ordered Probit**

+ = increased probability of being in category

- = lower probability of being in category

Category of donor

Donor for

non-donor

1 year

2 years

3 years

**Independent**

		non-donor	1 year	2 years	3 years
Income		---	---	---	+++
Wealth, no home equity		---	---	---	+++
Negative wealth		+++	+++	++++	---
Age of head of household, 2003		---	---	---	+++
Head of household is	Male	+	+	+	-
Marital status: married (compared with not married)		---	---	---	+++
Number of children	Continuous				
Age of youngest child at home					
Education	compared with high school or less as reference group				
	Some college/technical	---	---	---	+++
	B.A./B.S/A.B.	---	---	---	+++
	Post-graduate degree	---	---	---	+++
	Unknown	---	--	-	++
Race compared with caucasian as reference group					
	Black	+	+	++	-
	Latino/Hispanic	+	+	+++	--
	Other (Asian, Native American, Other)				
	Unknown				
Religious affiliation	Compaed with no religion as reference group				
	Catholic	---	--	--	++
	Jewish	---	---	---	+++
	Protestant	---	---	---	+++
	Other	--	--	-	++
	Unknown				

1st Differences

**Probability of becoming Non-donor**

+ means increased probability of being a non-donor; - means lower probability of becoming a non-donor

	All Giving			Religious Giving			Secular Giving		
	00-02	02-04	00-04	00-02	02-04	00-04	00-02	02-04	00-04
<b>Income (rising income = lower prob of being non)</b>		--	--						---
Wealth, no home equity									
Negative wealth									
Gets married									
<b>Gets divorced</b>	+	+			+		++		
Health improves						-			
Health worsens									
Gets job									
Loses job									
Recovers from disability		++							
Becomes disabled									
<b>Not differenced:</b>									
Age of head of household, 2003					++				
Head of household is male	-								
Education            Some college, no BA		-					+	+	
<b>B.A. or more</b>	---	---	---					---	---
Black					++				
Latino	+						++		
Other race							+		
Religious affiliation		-		++					
1 sign = p<0.05; 2 =p<0.01; 3 = p<.001									

## **Literature Review**

While this particular research has never been done before, there have been many efforts to study the determinants of giving over time (Deb et al, 2003), the impact of survey protocols on reported giving and volunteering (Rooney et al, 2001; Rooney et al, 2005; Wilhelm, 2007), the use of macro and micro level data on estimation of giving (Bielefeld and Rooney, 2004), giving among high net worth households (Rooney and Frederick, 2006 and 2007).

The unique value added of this paper emanates from the power of the Center on Philanthropy Panel Study (COPPS), a module on four consecutive waves of the University of Michigan's Panel Study of Income Dynamics (PSID), beginning in 2001.<sup>①</sup> The PSID is the largest (n = ~8,000 households) and longest running (since 1968) panel study in the world. By tracking the same households over time, we are much more able to isolate the effects of various factors on the incidence of giving at all and the dollars donated in any given year and over time. Wilhelm (2006) shows that COPPS has a very high response rate, very low item-non-response rate and has a very high quality of data overall relative to other surveys of philanthropy by American households.

## **Data and Methodology**

We used panel data from the 2001, 2003, and 2005 waves of PSID data for households who were participants in all three waves. We use a number of variables that prior research (see references above) has shown to be important in explaining and predicting who might be a donor and how much they might give. We also test these variables using ordered probit and first-difference models. Probits are likely to confirm patterns in the data with prior research and first differences are more likely to identify how changes in circumstances are associated with changes in donation behaviors.

Variables in the PSID survey were previously shown to be related to giving include education (E. Brown 2005), age, income and wealth, marital status, and race (Rooney et

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<sup>①</sup> 2007 wave is currently in the field and is anticipated to be available in late 2008.

al, 2005), religious affiliation (Wilhelm and Steinberg, 2003), and number of dependents, which is associated with giving to some types of charities (Yoshioka, 2006). Also available in the PSID are employment and health status.

We use an ordered probit model of donation frequency, combining all three waves with the social economic and demographic factors in the first wave (2001) and reported the marginal effects. We find that family characteristic affect donor stability.

In order to estimate how changes in household circumstances are associated with changes in giving behaviors, we take first-difference in probit models. This analysis allows us to capture changes in both continuous and dummy variables. For example, we are interested in learning if getting married (or divorced) in the last year or if changes in disability, health or employment status, can better explain who becomes a non-donor in any given year. This is in contrast to the static probit in which these dummy variables simply capture whether the individual is married or divorced, disabled or not, employed or not. With first differences, we can track changes in status over time.

Similarly, the ordered probit measures the marginal effects of income and wealth on the probability of being a donor, but the first differences helps us ascertain whether a decline (or increase) in income (or wealth) for each household in prior years helps explain a change from donor to non-donor in that year.

#### Summary of variables used in analysis

<b>Dependent:</b> Donor		Donor = 1	65.4%	
		Non-donor = 0	34.6%	
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<b>Independent</b>				
Income	Continuous	Log	5,728	2.25
Wealth, no home equity	Continuous	Log	5,728	8.3
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Age of head of household, 2003	Continuous			52.26
<hr/>				
Head of household is	Male		74.3%	
	Female		25.7%	
<hr/>				
Marital status, 2003	Married		58.2%	
	Single (never married)		16.6%	
	Widowed		6.7%	
	Divorce/separated		15.4%	
<hr/>				
Number of children	Continuous		5,728	0.891
<hr/>				
Education	High school or less		19.4%	
	Some college/technical		52.5%	
	B.A./B.S/A.B.		14.2%	

	Post-graduate degree	8.7%
	Unknown	5.2%
Race	White	60.4%
	Black	29.8%
	Latino/Hispanic	4.7%
	Native American	0.6%
	Asian	1.5%
	Other	1.3%
Religious affiliation	Can include any of Catholic, Protestant, Jewish, Other Christian, Muslim, Other	
	Yes (affiliation) [sum of all]	87.6%
	No (no affiliation) [all "none"]	4.1%
	Unknown	8.2%
Health status	Good health: Top 3 of 5 choices	84.5%
	Not good health: Bottom 2 of 5 choices	15.5%
Employment status	Retired	12.1%
	Unemployed	5.2%
	Employed	74.5%
	Other (e.g. student)	7.3%
	Unknown	0.8%
Disability status	Disabled	3.9%
	Not disabled	96.1%

(2003 wave data used for means and observations)

For first-difference models, the same characteristics of donors are considered with an emphasis on the changes from survey to survey. The table here presents the counts from 2001 to 2005 waves. Variables were developed for each possible combination (changes from 01 to 03, from 03 to 05 and from 01 to 05) and used as relevant. Table 2 shows the changes.

**Table 2**  
**Changes between waves**

	Variable type	Specification	Number of cases	Mean
<b>Dependent</b>	Binary	Changed from being donor in 2000 to non-donor in 2005	6.9%	
<b>Independent</b>				
Income	Continuous	Log of change from 2001 to 2005	5,728	2.21
Wealth, no home equity	Continuous	Log of change from 2001 to 2005	5,728	0.88
Marital status	Binary	"Got married" Dummy variable created for respondents who got married between two waves, 2001 and 2005	5.0%	
	Binary	"Became divorced" Dummy variable for respondents	2.5%	

who moved from married to divorced  
from 2001 to 2005

Number of children living at home	Continuous	change between waves	-0.6
Health status	Binary	“health better” : change from bad health to good health	8.6%
	Binary	“health worse” : change from good health to bad health	5.1%
Employment status	Binary	“Loses job” : Moved from employed to unemployed	8.2%
	Binary	“Gets job” : Moved from unemployed to employed	5.7%
Disability status	Binary	“Becomes disabled” Change from not disabled to disabled	2.7%
	Binary	“Recovers” Change from disabled to not disabled	1.1%

## Results

We first describe the descriptive statistics, and then examine the results of the ordered probit regression analysis. Prior research has found that simply looking at the means and cross-tabulations can lead to misleading conclusions, so that regression results are crucial to understanding the true determinants of giving. For example, Rooney, Mesch, et al (2005) found that whites gave 41% more than minorities when looking at the unconditional means (averages) but that this presumed racial difference in giving became statistically insignificantly different once controls for income and educational attainment etc. were used, suggesting this presumed racial difference was in reality attributable to differences in income and educational attainment rather than differences in philanthropy due to differences in skin color.

### Descriptive statistics

In the entire set for 2001-2005 (n=5,728), weighted summary statistics show that there are 3,195 donors who gave in all three years (56 percent), 1,000 donors (17.5 percent) who are repeat (2 years of 3 surveyed) and 678 (12 percent) who are occasional donors (gave in 1 of the 3 years). In addition, there are 855 respondents (15 percent) who never gave.

### **Summary statistics of different types of givers**

<b>Type</b>	<b>N =</b>	<b>Percent</b>
3-year giver (persistent)	3,195	55.8%
2-year giver (repeat)	1,000	17.5%
1 year giver (occasional)	678	11.8%
Non-donor	855	14.9%
<b>Total</b>	<b>5,728</b>	<b>100.0%</b>

We find that 3-year givers give more than repeat or occasional donors in a specific year. The data in the following table are based on giving in 2004 (2005 wave of COPPS). The N column will not match the three-year data above, since we only count families who gave in 2004.

### Summary giving amount 2004 (2005 wave)

(weighted with 2005 weight)

<b>3 year giver (persistent)</b>	<b>N =</b>	<b>Mean</b>	<b>Median</b>
Religious giving	2,815	\$1,627	\$500
Secular giving	2,815	1,033	380
Total giving	2,815	2,659	1,260
<b>Repeat donor</b>			
	<b>N =</b>	<b>Mean</b>	<b>Median</b>
Religious giving	1,058	592	50
Secular giving	1,058	430	127
Total giving	1,058	1,022	400
<b>Occasional Donor</b>			
	<b>N =</b>	<b>Mean</b>	<b>Median</b>
Religious giving	385	216	0
Secular giving	385	190	51
Total giving	385	406	150
<b>All donors</b>			
	<b>N =</b>	<b>Mean</b>	<b>Median</b>
Religious giving	3,991	1,342	300
Secular giving	5,991	865	300
Total giving	3,991	\$2,207	\$925

A wide range of demographic traits appear to be important when considering whether a donor will be a persistent giver (3 years); repeat donor (2 of 3 years) or occasional donor (any one of the 3 years).

### Means for 2005 wave, donor characteristics, Donors for 3, 2, or 1 years

	Persistent donor	Repeat Donor	Occasional donor
Income	\$117,314	\$49,766	\$34,686
Wealth - no home equity	260,795	82,680	45,233
Age	49.5	44.45	40.9
Marital Status	1.6	2.0	2.1
Number of children at home	0.80	0.84	1.04
Education	2.30	1.95	1.73
Race	1.40	1.65	1.77
Religious affiliation	0.91	0.86	0.84
Health status	2.20	2.4	2.46
Unemployed	0.023	0.059	0.077
Disabled	0.013	0.044	0.052

For marital status, 1 = married; 2 = never married; 3 = widowed; 4 = divorced; 5 = separated

For education, 1 = H.S. or less; 2 = some college; 3 = Bachelor's; 4 = post-graduate

For race, 1=white; 2 = black; 3 = Native American; 4 = Asian; 5 = Latino, 6&7 = other

For religious affiliation, 1 = any religious affiliation; 0 = no religious affiliation

For health status, 1 = excellent, 5 = poor

For unemployed, 1 = unemployed, 0 = employed

For disabled, 1 = disabled, 0 = not disabled

### **Regression Results: Ordered Probit Model (Table 1)**

We use frequency of donation in all three waves as the dependent variable. Since there are 4 possible outcomes: never gave in all three years (Freq=0), gave once (Freq=1), gave twice (Freq=2), gave in all three years (Freq=3), an ordinary probit model is no longer suitable. We use an ordered probit model instead.

We used 2001 as the base year, so we included information about the household head's income, wealth, age, gender, and marital status, number of dependents, education, race and religious affiliation in 2001 as independent variables. The regression results appear in Table 1. We reported marginal effects on the probability of the four outcomes.

According to Table 1, income, wealth, age, marital status, education and religious affiliation have very significant effects on giving frequencies (most are  $p \leq 0.001$  significance level). Gender and race also have statistically significant effects (most at  $p \leq 0.05$ ). Income plays a more important role than wealth as the coefficients are about 5 times bigger than those of wealth. For a 10% income increase, the probability of giving in all three years is expected to increase by 1.58%, but for 10% positive wealth increase it is just 0.35%. The coefficients for negative wealth are nearly the same size as those of positive wealth, but with opposite signs, which makes the effects of wealth consistent.

Income and wealth have the same pattern: increases in either are associated with a declining probability of being an 'unstable' donor (that is, the household gave 0, 1 or 2 times out of three) and an increasing probability of being a 'stable' donors. In fact many other variables, such as age, married, education attainment and religious affiliation, follow the same pattern.

Families with male heads are more likely to be unstable donors (about 5.6% less likely to give all three years). Marriage and education have very economically significant effects. Married couples are 11% more likely to be stable donors. Some kind of college education increases the likelihood of giving in all three years by 17% compared to those with high school education or less. Bachelor and postgraduate education are approximately equivalent in effect, both are about a 28% increase.

Race and religious affiliation also matter a lot. If heads are Black or Latino, they are more likely to be unstable (respectively 6%, and 9% lower in probability of being 'stable' donors) compared to White heads. Other races (which includes Asian, Native American, and people who selected "other race) are not significantly different from Whites.

The benchmark for religious affiliation is people with no religion. We can expect families with Catholic, Jewish and Protestant heads to be more stable donors, the effects are 9%, 23% and 11% separately. Other religions like Orthodox Christianity and Buddhism are also more stable (9%) than people who are not religiously affiliated.

### **Regression Results: First Differences-Donors Who Become Non-donors (Table2-4)**

In this analysis, the dependent variable is whether or not the household changes from donor to non-donor. The independent variables in these probits with first-differences measure whether or not the change in an independent variable significantly affects the probability of the household changing from being a donor household to becoming a non-donor household. In order to capture these effects, we had to redefine the independent variables to focus on the change, such as the change in income or wealth, the change in marital status, the change in employment or disability status, and the change in the number of children.

Some variables might be important but do not change (i.e., race/ethnicity, or gender). Other variables might be important but do not change frequently enough to be measured, such as religious affiliation and educational attainment. Yet a third group of variables might be important but change in the same manner for all households (i.e., age). Given these three types, along with the variables that do change and can be measured annually, we included the following variables in these first differences estimations as control variables but without differences: age, gender of head of household, race/ethnicity, religiously affiliated (or not), and educational attainment.

We look at first differences over the entire time period (2000 to 2004) and between each of the unique time periods (2000 to 2002; 2002 to 2004). While not many variables attain significance, there are some interesting effects. First, two factors (income and education)

that are typically associated with predicting donation behaviors are important in predicting who does (or does not) become a non-donor. Income is measured as the first difference in the log of income and attains significance in the 2002 to 2004 period and the overall period (2000 to 2004), but not the 2000 to 2002 period. The results suggests that a 10% increase in income is associated with a very small (less than 0.1%) but significant ( $p=.01$ ) reduction in the probability of that household becoming a non-donor.

Educational attainment is arguably the most important factor: Those who had attended some college (but did not graduate) were 15.6% less likely to become a non-donor household than those with a high school education or less ( $p=.04$ ) over the entire period and 18.4% less likely in the 2002-2004 period (but this was not significant in the 2000 to 2002 period). Similarly, those with a college degree or more education were 34.6% less likely to become non-donors than those with a high school degree or less ( $p=.000$ ) in the overall period and between 30% and 35% less likely to become non-donors in the two shorter timeframes.

Second, our first differences suggest that the change in the status of some variables does matter. Getting divorced was associated with between a 44% (in 2002 to 2004) and 58% (in 2000 to 2002) increase in the probability of being a non-donor, holding changes in income, wealth, etc. constant. Becoming divorced, however, is insignificant for the entire period 2000-2004, which suggests that this longer timeframe may be just long enough for many recently divorced households to recuperate enough to resume being donors.

An unexpected result is that in 2002-2004 period, those who went from being disabled to being not disabled were 65% more likely to become non-donors ( $p<.01$ ). It may be that their incomes have not returned to the status quo ante of their disability. One effect that approaches traditional levels of significance ( $p=.059$ ) was improvements in health had a large and negative coefficient (-.26), which would suggest those whose health improved were much less likely to become non-donors than those whose health was unchanged.

Third, two of our control variables are significant in one of the time periods but not the others. Male headed households were 15% less likely to become non-donors in 2000-

2002 time period. Those who have some religious affiliation were 21% less likely to become non-donors in the 2002-2004 period.

Several of the differenced variables were not significant in these probits: changes in wealth, number of children, health status, and employment status. Likewise, age, which is a control variable, but was not differenced (because all households age exactly one year annually) did not attain significance.

In order to test the robustness of the results, we experimented with different measures of income and wealth. In each case, educational attainment was very important—those with some college or more were much less likely to become a non-donor than those with a high school education or less. Also, each specification found that improvement in health status approached but did not attain significance at traditional levels.

We were concerned that there might be some problems with collinearity among the health, disability and employment status variables. Those with worsening health not surprisingly are more likely to become disabled ( $r=.08$ ;  $p=.000$ ) and to become unemployed ( $r=.14$ ;  $p=.000$ ). Similarly, those becoming disabled are also more likely to become unemployed ( $r=.28$ ;  $p=.000$ ). Given that there were some statistically significant correlations among some of the variables of interest, we tested whether or not multicollinearity was a serious problem using VIF ( $>10$  suggest harmful levels of collinearity). In our model, VIF is just over 1, so multicollinearity is not a serious problem. Therefore, we did not do anything further to adjust for potential multicollinearity.

### **Regression Results: First Differences: Secular Donors Who Become Non-donors**

Using the same approach as immediately above, we try to isolate which of the independent variables help explain what changes are associated with secular donors becoming non-donors—at least with respect to secular giving. We find several similarities to the model for becoming a non-donor in general. For example, we find that the change in the log of income is negatively and significantly related to becoming a non-secular-donor for the longer period (2000-2004) but not for either of the shorter periods.

Becoming divorced in 2000-2002 is associated with a 15% increase in becoming a secular non-donor, but this relationship is not significant in 2002-2004 nor the longer timeframe.

College attendance is significant in both of the shorter time periods. However, in 2002-2004 college attendees are 2.4% less likely to become secular non-donors, but in 2000-2002, college attendees are 3% more likely to be non-donors, which seem odd. Those with a BA/BS and higher levels of educational attainment are associated with an approximate decrease in the likelihood of becoming a secular non-donor of 5% in 2002-2004 and 2000-2004.

Race has a larger effect than we anticipated. Both Latinos and “Other” races are 7% more likely to become secular non-donors in 2000-2002 relative to Whites, but these differences do not attain significance in the other time periods. Remarkably, none of the other explanatory variables has a statistically significant effect on becoming a secular non-donor.

### **Regression Results: First Differences: Religious Donors Who Become Non-donors**

Using the same approach as immediately above, we try to isolate which of the independent variables help explain what changes are associated with religious donors becoming non-donors—at least with respect to religious giving. We find several similarities to the model for becoming a non-donor in general. Age has a very small effect on the likelihood of becoming a non-religious donor (0.1% per year) and only in the 2002-2004 time period. Becoming divorced is associated with a 10% increase in the likelihood of becoming a non-religious donor in 2002-2004, and has no effect in the other timeframes. Blacks are 4% more likely than Whites, to become non-religious donors in 2002-2004 but not in the other time periods, holding other factors constant.

Those who are religiously affiliated in 2000-2002 are 3.5% more likely to become non-religious donors (no significant effects in other years). While at first glance, this seems counter-intuitive, as we would expect those who are religiously affiliated to be religious donors. Our hypothesis to explain this behavior is that most households who are not

religiously affiliated are already non-religious donors, so the change action is among those who are already religiously affiliated and then become non-religious donors either because of a change in their personal circumstances (becoming unemployed, divorced, etc.) or because of a change in their faith values.

Finally, those whose health improved over the longer time period (2000-2004) were associated with a 4% decline in the likelihood of being a non-religious donor. This result did not matter in the two shorter periods, so it might be the case that it takes a longer period of time for them to adjust to the status quo ante (returning to good health) and resume their donation behaviors.

**Table 1**  
**Ordered Probit Models**

Independent Variables	Dependent Variable: Frequencies of Donation in Three Waves											
	Freq=0			Freq=1			Freq=2			Freq=3		
log income 00	-0.062	(0.006)	***	-0.053	(0.006)	***	-0.043	(0.005)	***	0.158	(0.015)	***
log positive wealth 01	-0.014	(0.002)	***	-0.012	(0.001)	***	-0.009	(0.001)	***	0.035	(0.004)	***
log negative wealth 01	0.013	(0.002)	***	0.011	(0.002)	***	0.009	(0.001)	***	-0.032	(0.005)	***
age 01	-0.002	(0.000)	***	-0.002	(0.000)	***	-0.001	(0.000)	***	0.005	(0.001)	***
male 01	0.021	(0.009)	*	0.019	(0.008)	*	0.016	(0.007)	*	-0.056	(0.024)	*
married 01	-0.045	(0.010)	***	-0.036	(0.007)	***	-0.028	(0.005)	***	0.109	(0.022)	***
# of kids 01	-0.001	(0.003)		-0.001	(0.003)		-0.001	(0.002)		0.004	(0.009)	
age of youngest kid 01	0.000	(0.001)		0.000	(0.001)		0.000	(0.001)		0.000	(0.002)	
college attendee 01	-0.067	(0.010)	***	-0.056	(0.008)	***	-0.045	(0.007)	***	0.167	(0.024)	***
bachelor 01	-0.085	(0.007)	***	-0.090	(0.009)	***	-0.102	(0.012)	***	0.276	(0.025)	***
postgraduate 01	-0.081	(0.007)	***	-0.090	(0.009)	***	-0.108	(0.015)	***	0.279	(0.029)	***
education unknown 01	-0.041	(0.012)	***	-0.041	(0.014)	**	-0.041	(0.017)	*	0.123	(0.043)	**
Black 01	0.025	(0.011)	*	0.020	(0.008)	*	0.015	(0.006)	**	-0.060	(0.025)	*
Latino 01	0.041	(0.017)	*	0.030	(0.011)	**	0.020	(0.006)	***	-0.092	(0.035)	**
race others 01	0.016	(0.016)		0.013	(0.012)		0.010	(0.008)		-0.038	(0.036)	
race unknown	-0.003	(0.031)		-0.002	(0.027)		-0.002	(0.023)		0.007	(0.081)	

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Catholic 01	-0.033	(0.010)	***	-0.030	(0.009)	**	-0.027	(0.009)	**	0.089	(0.028)	**
Jewish 01	-0.066	(0.010)	***	-0.076	(0.015)	***	-0.091	(0.026)	***	0.233	(0.050)	***
Protestant 01	-0.044	(0.011)	***	-0.037	(0.009)	***	-0.030	(0.007)	***	0.111	(0.027)	***
religion others 01	-0.031	(0.010)	**	-0.030	(0.011)	**	-0.028	(0.012)	*	0.088	(0.033)	**
religion unknown	-0.024	(0.021)		-0.023	(0.022)		-0.021	(0.023)		0.069	(0.066)	
Sample size	4906			4906			4906			4906		
Pseudo R- squared	0.1662			0.1662			0.1662			0.1662		

Standard errors are in parentheses. Marginal Effects reported.

Note: \*  $p < 0.05$  \*\*  $p < 0.01$  \*\*\*  $p < 0.001$

**Table 2**

**Probit First-Difference Model for Overall Donor**

Independent Variables	Dependent Variable: Donor becomes Non-donor							
	2000-2002		2002-2004		2000-2004			
log income change_0002 (0204, 0004)	-0.000	(0.000)	-0.001	(0.000)	**	-0.001	(0.000)	**
log wealth change_0103 (0305, 0105)	-0.001	(0.000)	-0.001	(0.000)		-0.000	(0.000)	
age_03 (05, 05)	-0.001	(0.000)	-0.000	(0.000)		0.000	(0.000)	
male_03 (05, 05)	-0.023	(0.012)	*	-0.015	(0.011)		-0.017	(0.011)
gets married_0103 (0305, 0105)	0.028	(0.030)		-0.001	(0.025)		-0.020	(0.016)
becomes divorced_0103 (0305, 0105)	0.119	(0.062)	*	0.084	(0.052)	*	0.029	(0.031)
change # of kids_0103 (0305, 0105)	-0.002	(0.007)		-0.003	(0.007)		0.000	(0.005)
college attendee_03 (05, 05)	-0.009	(0.011)		-0.025	(0.009)	*	-0.021	(0.009)
bachelor or higher_03 (05, 05)	-0.045	(0.012)	***	-0.039	(0.010)	***	-0.043	(0.009)
Black_03 (05, 05)	0.012	(0.013)		0.008	(0.014)		0.010	(0.012)
Latino_03 (05, 05)	0.053	(0.026)	*	0.003	(0.017)		-0.004	(0.016)
race other3_03 (05, 05)	0.016	(0.028)		-0.018	(0.021)		-0.022	(0.023)
race unknown_03 (05, 05)	-0.022	(0.026)		0.040	(0.111)		0.056	(0.109)
religiously affiliated_03 (05, 05)	0.001	(0.014)		-0.033	(0.015)	*	-0.012	(0.013)
health better_0103 (0305, 0105)	-0.003	(0.020)		-0.017	(0.019)		-0.031	(0.014)
health worse_0103 (0305, 0105)	0.016	(0.019)		0.009	(0.017)		0.008	(0.016)
gets job_0103 (0305, 0105)	0.003	(0.022)		0.000	(0.021)		0.015	(0.022)
loses job_0103 (0305, 0105)	0.007	(0.020)		-0.010	(0.018)		0.004	(0.016)
disability recovers_0103 (0305, 0105)	0.054	(0.056)		0.142	(0.074)	**	0.055	(0.061)
becomes disabled_0103 (0305, 0105)	0.015	(0.036)		0.032	(0.037)		0.012	(0.027)
constant	-1.027	(0.164)	***	-0.986	(0.141)	***	-1.241	(0.154)
Sample size	4940		5728		5728			
Pseudo R-squared	0.0276		0.0276		0.0252			

Standard errors are in parentheses. Marginal Effects reported.

Note: \* p < 0.05 \*\* p < 0.01 \*\*\* p < 0.001

**Table 3**

**Probit First-Difference Model for Religious Donor**

Independent Variables	Dependent Variable: Religious Donor becomes Non-donor					
	2000-2002		2002-2004		2000-2004	
log income change_0002 (0204, 0004)	-0.000	(0.001)	-0.001	(0.001)	-0.000	(0.001)
log wealth change_0103 (0305, 0105)	0.000	(0.000)	0.000	(0.000)	-0.000	(0.000)
age_03 (05, 05)	-0.000	(0.000)	0.001	(0.000)	**	0.000 (0.000)
male_03 (05, 05)	-0.011	(0.012)	-0.003	(0.011)		-0.003 (0.011)
gets married_0103 (0305, 0105)	0.003	(0.025)	0.001	(0.030)		-0.007 (0.020)
becomes divorced_0103 (0305, 0105)	0.029	(0.036)	0.101	(0.056)	*	0.049 (0.035)
change # of kids_0103 (0305, 0105)	-0.006	(0.008)	-0.010	(0.008)		-0.005 (0.006)
college attendee_03 (05, 05)	-0.002	(0.012)	0.005	(0.012)		-0.011 (0.011)
bachelor or higher_03 (05, 05)	-0.018	(0.013)	-0.005	(0.012)		-0.016 (0.011)
Black_03 (05, 05)	0.020	(0.014)	0.041	(0.016)	**	0.013 (0.014)
Latino_03 (05, 05)	0.036	(0.023)	0.034	(0.021)		-0.019 (0.016)
race other3_03 (05, 05)	-0.025	(0.023)	-0.008	(0.026)		-0.038 (0.020)
race unknown_03 (05, 05)	0.015	(0.050)	0.054	(0.122)		0.054 (0.114)
religiously affiliated_03 (05, 05)	0.035	(0.011)	**	-0.009 (0.014)		0.018 (0.013)
health better_0103 (0305, 0105)	0.004	(0.021)	-0.018	(0.021)		-0.039 (0.015) *
health worse_0103 (0305, 0105)	0.024	(0.022)	0.012	(0.018)		0.003 (0.017)
gets job_0103 (0305, 0105)	-0.008	(0.021)	-0.009	(0.020)		-0.000 (0.021)
loses job_0103 (0305, 0105)	-0.008	(0.020)	-0.025	(0.018)		-0.001 (0.019)
disability recovers_0103 (0305, 0105)	0.072	(0.061)	0.067	(0.063)		0.049 (0.058)
becomes disabled_0103 (0305, 0105)	0.009	(0.037)	-0.023	(0.026)		-0.014 (0.028)
constant	-1.543	(0.168)	***	-1.601 (0.138)	***	-1.500 (0.140) ***
Sample size	4940		5728		5728	
Pseudo R-squared	0.0133		0.0142		0.0095	

Standard errors are in parentheses. Marginal Effects reported.

Note: \* p < 0.05 \*\* p < 0.01 \*\*\* p < 0.001

**Table 4**

**Probit First-Difference Model for Secular Donor**

Independent Variables	Dependent Variable: Secular Donor becomes Non-donor					
	2000-2002		2002-2004		2000-2004	
log income change_0002 (0204, 0004)	-0.001	(0.001)	-0.001	(0.001)	-0.002	(0.001) ***
log wealth change_0103 (0305, 0105)	-0.000	(0.001)	-0.001	(0.000)	-0.000	(0.000)
age_03 (05, 05)	-0.000	(0.000)	0.000	(0.000)	0.000	(0.000)
male_03 (05, 05)	-0.005	(0.013)	-0.013	(0.012)	-0.008	(0.012)
gets married_0103 (0305, 0105)	0.017	(0.032)	0.013	(0.029)	0.001	(0.023)
becomes divorced_0103 (0305, 0105)	0.150	(0.068) **	0.060	(0.048)	0.035	(0.033)
change # of kids_0103 (0305, 0105)	-0.005	(0.008)	-0.002	(0.008)	0.000	(0.006)
college attendee_03 (05, 05)	0.030	(0.014) *	-0.024	(0.010) *	-0.008	(0.011)
bachelor or higher_03 (05, 05)	-0.011	(0.017)	-0.046	(0.010) ***	-0.050	(0.010) ***
Black_03 (05, 05)	-0.013	(0.013)	-0.001	(0.015)	-0.007	(0.013)
Latino_03 (05, 05)	0.072	(0.032) **	-0.009	(0.016)	-0.014	(0.017)
race other3_03 (05, 05)	0.073	(0.039) *	-0.013	(0.023)	-0.027	(0.023)
race unknown_03 (05, 05)	0.011	(0.046)	0.034	(0.112)	0.034	(0.110)
religiously affiliated_03 (05, 05)	0.007	(0.016)	-0.010	(0.014)	0.015	(0.013)
health better_0103 (0305, 0105)	-0.040	(0.018)	-0.023	(0.019)	-0.020	(0.018)
health worse_0103 (0305, 0105)	0.026	(0.025)	-0.016	(0.016)	0.002	(0.017)
gets job_0103 (0305, 0105)	-0.010	(0.022)	-0.003	(0.023)	0.005	(0.021)
loses job_0103 (0305, 0105)	0.012	(0.024)	0.008	(0.021)	0.017	(0.018)
disability recovers_0103 (0305, 0105)	-0.040	(0.037)	0.066	(0.064)	0.012	(0.053)
becomes disabled_0103 (0305, 0105)	-0.011	(0.036)	0.029	(0.038)	-0.021	(0.023)
constant	-1.329	(0.161) ***	-0.990	(0.141) ***	-1.393	(0.151) ***
Sample size	4940		5728		5728	
Pseudo R-squared	0.0186		0.0171		0.0218	

Standard errors are in parentheses. Marginal Effects reported.

Note: \* p < 0.05 \*\* p < 0.01 \*\*\* p < 0.001

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