



Munich Personal RePEc Archive

**Earned, owned, or transferred: are
donations sensitive to the composition of
income and wealth?**

Steinberg, Richard and Zhang, Ye and Brown, Eleanor and
Rooney, Patrick

IUPUI

9 September 2010

Online at <https://mpra.ub.uni-muenchen.de/30082/>
MPRA Paper No. 30082, posted 11 Apr 2011 12:46 UTC

Earned, Owned, or Transferred: Are Donations Sensitive to the Composition of Income and Wealth?

by

Richard Steinberg

Ye Zhang

Eleanor Brown

and

Patrick Rooney*

RRH: STEINBERG ET AL.: DONATIONS

JEL Classification Codes: H41 – Public Goods;
D12 – Consumer Economics: Empirical Analysis

Earned, Owned, or Transferred: Are Donations Sensitive to the Composition of Income and Wealth?

Abstract

Using data from COPPS/PSID, we investigate the effects of different forms and sources of income (labor, asset, welfare, and other transfers) and wealth (home equity and other wealth) on household charitable donations (total, religious, secular, combined causes, and the needy). We find that it is important to disaggregate income and wealth and to distinguish the effect of an increase in the level of each component from the effect of the component's presence. We reject the fungibility hypothesis for income and, except for religious giving and gifts to the needy, for wealth. Past receipt of inheritances affects current giving.

Richard Steinberg, IUPUI

Ye Zhang, IUPUI

Eleanor Brown, Pomona College

Patrick Rooney, IUPUI

I. INTRODUCTION

Donations to nonprofit organizations are a form of demand for the private provision of collective goods. These goods serve as substitutes, complements, or even antagonists (for advocacy organizations) to governmentally provided goods, making the econometric study of donations of particular interest in an era of increasingly challenged government budgets. In this paper, we advance our understanding of donations by investigating econometrically whether the sources of household income and the ways in which household wealth is held affect donative behavior. We find that disaggregating income and wealth reveals differences in donative behavior due to the composition of both income and wealth.

We argue that disaggregating income and wealth provides useful information for three reasons. First, elaborations of baseline theory, in which consumption depends on income without regard to its source, suggest that permanent and transitory income, expected and unexpected income or wealth, and the liquidity of assets all matter. Non-welfare transfer payments (largely social security) are more stable and predictable than, say, asset income; wealth as home equity may be less or more liquid than other wealth. Because the economic properties of the various forms of income and wealth differ, the marginal propensities to donate out of each component are likely to differ as well. Second, findings in behavioral economics, psychology, and sociology suggest that different forms of income and wealth come with different social meanings and norms that may affect consumption behavior. Finally, receipt of each form of income or wealth is not randomly assigned to sample members. The typical recipient of welfare differs in many unmeasured ways from the typical earner of asset income, and this latent heterogeneity may be correlated with donative behavior.

Understanding the impact of the composition of income and wealth on donations is of

greatest interest when the compositions of income and wealth are in flux. Booms and busts in the stock market and the housing market alter the proportions of household wealth held in home equity and pension accounts; labor market conditions affect the share of household income that comes from earnings. Stock markets, housing markets, and labor markets have all been in flux in the past decade. Looking forward, inheritance is a source of income predicted to become increasingly important to many households. Havens and Schervish (1999) estimate that over the next 55 years there will be an enormous transfer of wealth from one generation to the next. Depending upon the assumed real growth rate of the economy, they project that the transfer will range from \$41 trillion to \$136 trillion.¹ Most of this sum will be transferred to heirs who will decide, among other things, how much of it to give away. As Avery (1994, p. 5) puts it, "the economic impact of these bequests will hinge on whether the behavior of those who receive the money is different from those who give it." One salient difference between those who receive the money and those who give it is that the recipients get the money as a gift; in this paper we explore whether the receipt of inheritances affects giving behavior.

We use data from the Panel Study on Income Dynamics (PSID) and the Center on Philanthropy Panel Study (COPPS), a module attached to the PSID since 2001. We estimate donations demand as a function of contemporaneous income disaggregated into labor, asset, welfare, and non-welfare transfer payments, and two kinds of wealth, home equity and other wealth. As described in greater detail below, the PSID allows us to identify households that have inherited money in the past and the size of those inheritances, in order to test whether having inherited money, controlling for current wealth, matters for donative behavior. The COPPS data allow us to study donations by all donors, regardless of itemization status, and to look separately

at total giving, religious vs. secular giving, and giving to combined causes and to people in need.²

Two papers by Wilhelm (2006; 2007) speak to the quality of the COPPS data, showing that COPPS has a far lower item-nonresponse rate than other surveys and that reported levels of giving track those in the "gold standard" cross-sectional study (The National Survey of Philanthropy) very well up to the 90th percentile of the income distribution. The linkage of COPPS to PSID data allows us to include a wide variety of control variables.

Our approach allows us to test whether the marginal propensities to donate are statistically and substantively different for different types of income and wealth. The literature contains many suggestions for estimating the structural coefficients in various elaborations of baseline economic theory, but that is not our goal for this paper. Rather, we are interested in estimating reduced-form Engel curves that are robust to violations of the assumptions embodied in structural estimation. The *mutatis mutandis* estimates we generate are appropriate for a variety of uses. Nonprofit managers and others interested in the health of the nonprofit sector want to be able to forecast the effects of changing income and wealth profiles on donations. They also want to know if the various rules they use for targeting groups for solicitation are valid. The estimates may also prove useful in policy applications, such as the effect of changes in the tax treatment of donations. Finally, we validate an approach to estimating Engel curves that may prove useful in other contexts.

We find significant differences in the marginal propensity to donate out of our income and wealth categories. Some of these differences, such as the higher marginal propensity to donate out of home equity than other wealth, are readily interpreted in light of existing literature; others are not. We find that it is important to include both dummy variables indicating the

presence and continuous variables for the levels of each component of income and wealth. These dummy variables are important and change conclusions about the marginal propensity to donate.

In the next section of the paper, we review the various literatures on income and wealth effects on consumption in general and donations in particular, with an emphasis on reasons why money is not entirely fungible. In section three we discuss the data. Section four presents our econometric specification. We present and discuss our results in section five. Although the main focus of the paper is on components of income and wealth, we have detailed data on religious affiliation and obtain some intriguing results on religion and giving. Concluding remarks are offered in section six.

II. LITERATURE

In the simplest of life-cycle models, charitable giving and other consumption choices depend on permanent income. In this view, stocks of assets have a wealth effect on consumption to the extent they represent accessible additions to permanent income. Consumers will have differing marginal propensities to consume from different assets depending on their confidence that each asset's value is not transitory and the ease of transforming asset value into purchasing power. The literature on the effects on consumption of stock market wealth is reviewed by Poterba (2000). Kishnor (2007), using data that stopped short of the housing market bubble, estimates that the percentage of wealth that was permanent rather than transitory was much higher for housing wealth than for financial wealth. Consistent with this view, Case et al. (2005) find higher marginal propensities to consume from housing wealth than from financial wealth. Innovations in credit markets that made second mortgages and home equity lines of credit readily available, coupled with the high proportion of most households' stock portfolios being tucked

away in retirement accounts, add further reasons to expect a higher MPC from housing wealth than from financial wealth; see Slacalek (2009) for evidence based in multi-country data. For a review of studies comparing the wealth effects on consumption of housing and financial wealth, see Bostic et al. (2009).

It is by now well documented that consumption in the US is more closely linked to current income than the permanent income hypothesis suggests. To the extent that this excess sensitivity signals liquidity constraints, the MPC from shocks to income will be high. Analyzing a survey of persons who played the Massachusetts lottery in the 1980s, Imbens et al. (2001) find that halfway through the receipt of their winnings, they had an MPC of leisure of about 11 percent and a saving rate of just 16 percent of their winnings to date. However, the proportion saved rose as more payments were received. Wilcox (1989) looks at Social Security benefit increases from 1965-1985 and finds that even though the increases are announced at least six weeks in advance, consumption increases only in the months after the increase goes into effect. By focusing on households in the PSID whose heads can be matched to long-term union contracts, Shea (1995) finds that predictable wage movements are significantly correlated with consumption changes, contrary to the implication of life-cycle/permanent-income hypothesis. Hori and Shimizutani (2009) examine Japanese households that receive large and predictable salary bonuses; they find positive and significant "instantaneous" MPCs from bonuses. They also find larger MPCs from smaller, less predictable tax refunds than they find for large, predictable bonuses, consistent with the view of Thaler (1990) that people may tend to treat small windfalls as income to be spent and large windfalls as assets to be saved.

In the PSID, one shock to wealth investigated for its effects on consumption is the receipt

of a bequest. Joulfaian and Wilhelm (1994) find minimal labor supply responses to the receipt of a bequest. They further find that food consumption rises in the year in which a bequest is received, with no evidence of a future attenuation or earlier increase in anticipation of the bequest. Weil (1994) also uses the 1984 PSID to estimate the effect of inheritance on consumption. In regressions that do not include measures of stocks of wealth, Weil finds statistically significant positive effects on consumption of two dummy variables marking respectively the receipt of a bequest and the expectation of a bequest within the next ten years. The positive effect on consumption of an anticipated bequest is about half as large as the effect of an inheritance in hand, and is present only for households that have not previously received a bequest. When stocks of wealth are controlled for, the coefficients on the inheritance dummy variables are no longer significantly different from zero. Exploring the impact of anticipated inheritance on consumption, Hrung (2002) investigates whether adult children's consumption increases with their parents' per-offspring housing value, and finds a significantly positive effect on consumption that is roughly half as large as the effect of own house value.

Charitable giving is a particularly interesting component of consumption for the study of wealth effects. One set of considerations comes from the special status of charitable giving in the personal income tax. The tax code treats charitable gifts as an itemizable deduction, and the value of the favorable tax treatment of charitable gifts varies with both the timing of gifts and the forms in which they are given. Barrett et al. (1997) use panel data on middle-income taxpayers and find that charitable giving responds to both the timing and level of taxes. Bakija and Heim (2008) find that the timing of charitable gifts by high-income households is especially sensitive to their tax consequences. Auten et al. (2002) and Randolph (1995) decompose income and tax

prices into permanent and temporary components, and find greater responsiveness of charitable donations to permanent income than to transitory income. The volatility of income from risky assets also affects the level and timing of charitable giving. Hughes and Luksetich (2008) note that while the personal income tax code creates special incentives for charitable giving linked to capital gains and losses, income volatility itself creates uncertainty that may depress giving. Avoiding taxes on capital gains by donating appreciated assets gives owners of assets whose value fluctuates a reason for gifts to move with capital markets. They find that giving increases with wealth but decreases with volatility in household income.

Besides the linkages via the tax code between wealth and charitable giving, there are reasons to suspect that particular forms of wealth and income play distinct roles in household dynamics that can affect levels of charitable giving. Brooks (2002) finds that income from welfare is negatively associated with charitable giving. Daneshvary and Luksetich (1997) find that donations increase with the proportion of disposable income derived from wages and dividends rather than from capital gains, interest, or pensions. Hughes and Luksetich (2008) find that husbands' and wives' human capital represent forms of household wealth that differentially impact charitable giving. The elasticity of charitable giving with respect to husband's income is significantly larger than the elasticity associated with wife's earnings. Volatility in the husband's earnings is positively associated with giving while volatility in wife's earnings has a negative association with charitable giving. Husbands' and wives' human capital may have differential impacts on charitable giving through differences in their permanent and transitory components, or indirectly through their effects on bargaining power within households in which husband and wife have different preferences toward charitable giving, as in Andreoni et al. (2003) or Yoruk

(2010).

Inheritance represents another source of wealth that may have a special role in household dynamics beyond those captured in the windfall nature of a bequest. Heirs and charitable solicitors may frame inherited wealth as somehow different from earned income or as accompanied by social constraints. Heirs may feel that the income is theirs to spend on their own well-being, or may feel entrusted as stewards to devote that wealth to public purposes or the family dynasty. Two papers by Cherry, Frykblom, and Shogren (2002a, b) examine the impact of framing income as earned or unearned using laboratory experiments. In the first, subjects play a standard dictator game in which they are asked to divide a sum of money between themselves and another subject. One group received the money as endowment, and this group behaved in the usual way, with 81-85% of dictators giving some money to the subject. Another group "earned" the money by answering challenging questions correctly. Subjects in this treatment group kept the entire sum for themselves in 70-79% of the cases, where the word "earnings" is used to frame dictator decisions. The difference in outcomes is highly statistically significant, and the authors conclude that self-regarding behavior arises when "the legitimacy of assets in a bargain [is] sufficient." In their second paper, subjects contribute toward a public good. Unlike their first study, they find no difference between contributions from earned and windfall income in this setup.

Sociologist Francie Ostrower conducted extensive interviews with ninety-eight wealthy donors from the New York City area, lending support to these conjectures. She concludes (1995, p. 170) that:

"Some donors distinguished between the freedom one has to use inherited wealth as

opposed to earned wealth. One person said that someone who earns money is “much more free to do whatever he or she wants,” but “money inherited should stay in the family.” Another said she would have “no business” leaving all her money to charity, because it was her husband’s money and he expected it to go to their children. One donor felt that “if it came from someone else, you kind of owe it to that person to think about what they would have liked you to do with it.” These comments also indicate that for some donors, inheritors’ wealth is not viewed as being theirs in the same way as wealth that is earned . . . [M]oney assumes meanings for these donors that go beyond the economic.”

The propensity to give to charity might be higher when assets derive from the generous acts of others. Absent data on decedents’ expectations regarding the eventual disposition of the money they bequeath, inherited money has two attributes that may be sources of conflicting social meaning. A bequest to a family member is a generous act, but that generosity is aimed at family rather than charity. Although transferring resources at death to children is more generous than consuming them while alive, it may appear less generous than reaching beyond family to bequeath money to charitable activities. Arrondel, Masson and Pestieau (1997) conclude that the marginal propensity to bequeath out of an inheritance received is greater than the marginal propensity to bequeath out of “human resources” (earnings). Overall, they find that children adopt similar behaviors as did their parents when they decide whether to leave a bequest, make a will, or loan money to their own children. Because this increased propensity to bequeath must come out of a fixed total budget, it is possible it will come at the expense of charitable donations. Avery (1994), reporting on work with Michael Rendall, used the 1989 Survey of Consumer Finances to estimate the effects of income, inherited wealth, and non-inherited wealth on giving to all causes. He reports that “[W]e predict that the average person would give \$4.56 to charity each year for every \$1,000 in non-inherited wealth, but only \$0.76 out of inherited wealthiness.”

A further characteristic of inheritances, in contrast to the relatively smooth and constant

flows of wages, dividends, or social security checks, is that they accrue in lumps. A large gift or inheritance may attract the attention of prospect researchers, professional fundraisers who specialize in finding candidate donors towards whom special efforts should be targeted. The “ask” is a major determinant of contributions. For example, Independent Sector’s Giving and Volunteering in the U.S. survey (1996, p. 4–107) found that “respondents were nearly twice as likely to give if they were asked to contribute than if they were not asked. In addition, receipt of a lump sum reduces the transactions costs of major gifts. The donor does not have to incur the planning costs of intentional savings, and charitable fundraisers will give donors all the information they need to decide the merits of particular causes and tax-wise vehicles for supporting those causes. Lump sum income may become particularly important for those donors motivated by status competitions such as those provided by “giving clubs” (where donations exceeding some threshold confer special recognition upon the giver) or naming opportunities, as in Glazer and Konrad (1996) or Harbaugh (1998).

Auten and Rudney’s (2000) analysis of a five-year panel of donors revealed that many donors, particularly the richest ones, make large occasional gifts rather than smaller gifts every year as a way to gain public recognition and influence over the recipient. Receipt of an substantial inheritance, as a large shock to wealth, provides this sort of opportunity for donors. Note that this argument stands in contrast to the usual conclusion that rational consumers would want to smooth their consumption over time. The difference comes about because a large one-time gift creates increasing marginal benefits for the donor.

III. DATA

The PSID contains detailed longitudinal information on components of household income

and wealth, making it particularly suitable for this study. We use data from the 2005 wave of PSID/COPPS for measures of income and wealth, demographics, and measures of giving. We track families back to the 1984 wave, the first year PSID collected retrospective inheritance data, in order to construct a complete history of inheritances received by the respondents' households. In most cases, data gathered in one wave refer to the previous calendar year,³ so our measure of giving is total family donations during 2004. We adjust dollar amounts to the 2004 price level using the CPI-U deflator.

It is impossible for us to accurately trace inheritance received by families experiencing disruptions resulting from divorce or separation because inheritance variables are measured at the family level since 1984. As a result, we exclude families that experienced disruptions between 1984 and 2007 due to divorce or separation and include new families formed between 1984 and 2005 if they remained intact throughout that period. Table 1 displays summary statistics for the 4790 families in our sample after imposing our sample inclusion criterion and deleting families with missing information in key variables.⁴

Table 1 about here

Among the 4790 families in our sample, 3091 of them (about 65%) donated in 2004. Average donations by these families were \$2196; over the full sample average family donations were \$1,417. One advantage of the COPPS module is that it queries a respondent about her family's donations to different purposes. Donations specifically for religious purposes or spiritual development, for example to a church, synagogue, mosque, TV or radio ministry, form our religious giving variable. Respondents were told to exclude donations to schools, hospitals, and other charities run by religious organizations from this measure. Instead, such donations are

combined with the amounts given to all other purposes to form our secular giving variable.

Within our sample, people were less likely to give to religious than to secular purposes (46% vs. 54%) but despite that average donations to religious purposes (\$919) were higher than average donations to secular purposes (\$498).^{5,6}

We break total family income into four different components: labor, asset, welfare, and other transfer income. Labor income combines Head's, Wife's and other family unit member's earned income components including wages and salaries, bonuses, overtime, tips, commissions, income from professional practice or trade or market gardening, additional job income, and the labor portion of business income and farm income. Asset income, which includes rent, dividends, interests, trusts/royalties, *etc.*, is computed by subtracting labor earnings from family taxable income. Our welfare income measure combines income of the Head, Wife, and other family unit members from TANF, SSI, and other welfare programs. Other transfer income, including social security, unemployment compensation, worker's compensation, child support, *etc.*, is calculated as the difference between the PSID-constructed total transfer income measure and the welfare income variable.

PSID queried about inheritances received prior to 1984, inheritances received in the past five years in 1989, 1994, and 1999, and last two years for the 2001, 2003, and 2005 waves. About twenty percent of sample members received an inheritance, comparable to reports from other cross-sectional surveys.⁷ We convert past inheritances to current values by appreciating them at a real rate of 0.025 and sum across years. The average appreciated inheritance is \$35,104. Looking only at heirs, this average rises to \$176,812.

The PSID asked about the current stock of wealth in eight broad categories in 2005: 1)

equity in real estate; 2) equity in business; 3) equity in vehicle; 4) equity in stock; 5) balances in transaction accounts; 6) cash value of other assets; 7) equity in annuities and retirement accounts; and 8) value of debt aside from mortgage on the main home or vehicle loans.⁸ Because of the large empirical literature distinguishing spending from housing versus financial wealth, we separate home equity from other wealth holdings, which we aggregate into a single other-wealth variable.

Most of the other variables are self-explanatory, but some need elaboration. Religious affiliation is surveyed when a family first enters PSID and occasionally refreshed - we bring forward the most recent classification. Then, the large number of religious denominations distinguished by PSID are recoded according to Steensland et al.'s (2000) RELTRAD taxonomy.⁹ The dummy variable `Mixed_Rel_Married` equals one for married couples where Head and Wife fit in different RELTRAD categories other than Missing. The regressions employed `Mixed_Rel_Married` and the dummies for Head's religion and omitted the dummies for Wife's religion.

IV. SPECIFICATION

Our basic model is

$$\text{DON} = f(\text{INCOME}, \text{INCOME?}, \text{WEALTH}, \text{WEALTH?}, \text{INHERIT?}, \text{Controls})$$

where:

DON is Household Donations.

INCOME is a vector of labor income (LABOR), asset income (ASSET), welfare payments (WELFARE), and other transfer payments (OTH_TFR).

INCOME? is a vector of dummy variables equaling 1 if the corresponding component of

income is non-zero, whether positive or negative.

WEALTH is a vector of wealth in the form of home equity (HOME) and other wealth (OTH_WLTH).

INHERIT? is a dummy variable equaling 1 if the household head or wife/ “wife” received at least one inheritance before 2005.

We went through the following steps to settle on our baseline set of results. First, we accounted for negative income and wealth values, then we compared the double log and linear functional forms, then we pared down the set of dummies. Specifically, although most components of income and wealth are non-negative throughout the sample, ASSET, HOME, and OTH_WLTH sometimes take negative values. Rather than omitting these observations, which might lead to selectivity bias, we include both dummy variables such as NASSET, which equals 1 if ASSET is strictly negative, and interactions between the dummy and the level of the corresponding component (e.g.. NASSET*ASSET). In effect, this divides the Engel curve into three parts. One part covers negative values for the component, with its own slope and limit intercept as the component approaches zero from below. Another is the intercept estimated for the strictly zero observations, and the third covers strictly positive values, with its own slope and limit intercept as the component approaches zero from above. This allows inframarginal effects and asymmetry in the marginal response to, say, negative home equity and positive home equity.

We estimated the model with the full set of dummies and interaction terms by tobit¹⁰ with errors clustered by extended family¹¹ in two functional forms – linear, and double log.¹² We applied a heuristic goodness of fit test to choose between these non-nested forms¹³ and also adapted the Ramsey RESET test for neglected nonlinearity to the tobit setting.¹⁴ The linear form

had the better fit and passed the Ramsey test, which the double-log failed so we dropped double log from subsequent analysis.

Next we tested the dummy variables for negative income and wealth, individually, jointly, and jointly with the interaction terms. By every test, we could not reject equality of the slopes on the positive and negative portions of each Engel curve. We were also unable to reject the equality of the limit intercepts on the positive and negative portions, but the presence dummies were often significant. Thus we settled on the simpler formulation with a uniform slope and a single discontinuity at zero as our baseline specification.

It is well known that Tobit estimates are biased and inconsistent when the error term is heteroskedastic and not censored-normal. However, Wilhelm (2008) developed a Hausman test with bootstrapped standard errors for determining whether the formal rejection of normality and homoskedasticity has substantive impact on parameter estimates. After validating the properties of this test through Monte Carlo simulations, he applied the test to COPPS data (and one other data set), both of which passed the test. He found that Tobit estimates using COPPS data closely approximate those produced by CLAD (Censored Least Absolute Deviation), a procedure that is robust to heteroskedasticity and non-normality. So we feel safe employing Tobit for our estimates,¹⁵ which facilitates comparison with the bulk of charitable giving studies. Next we present our baseline results, compare them with results from more traditional specifications, and check them for robustness.

V. RESULTS

Baseline Estimates

Table 2 presents our baseline results for the income and wealth variables. All the

parameter values in this and subsequent tables are converted and reported as marginal or incremental impacts on observable donations averaged over sample members. The levels of income generally have small and statistically insignificant effects on giving. Labor income has a borderline significant positive effect on total giving and significant positive effects on giving to secular causes and giving to the needy. The point estimates are surprisingly small – a marginal dollar of labor income appears to increase total giving by less than half a cent. In comparison, the sample average propensity to give, calculated as total donations divided by total family income is about 2.4% (omitting those with zero or negative income). Asset income has a significant positive effect on giving to secular causes and to combined funds, with an anomalous borderline-significant negative effect on giving to religion. Welfare payments have uniformly negative effects that are not statistically significant, and other transfer payments have a borderline-significant positive effect on giving to secular causes and a significant positive effect on giving to the needy. Given the general insignificance of the income coefficients, it is not surprising that we cannot reject the hypothesis that all the marginal propensities to give out of income are equal to each other except, barely, for giving to the needy.

Table 2 About Here

The picture is very different when we look at the combined impact of the presence and level variables for each income component. Asset income is now highly significant in every case. The point estimate suggests that those with asset income give \$338.84 more to religion than those without, which is enough to counterbalance the anomalous result regarding the level of asset income. The mildly significant effect of other transfer payments on giving to secular causes vanishes when we test jointly for presence and level, whereas the joint effect of other

transfer payments becomes significant for giving to combined funds. What is more important, we can confidently reject the fungibility hypothesis (that the income level effects are jointly equal to each other and the income presence effects are jointly equal to each other) for every kind of giving. This rejection appears to be due to the presence and level of asset-income variables. We cannot reject the equality of income level joint with income presence effects when we compare the other three kinds of income.

Considered alone, the level of home equity had insignificant effects on each kind of giving. The point estimates suggest that \$1000 in additional home equity causes a 37-cent increase in total giving of which 22 cents goes to secular causes. Wealth held in other forms generally has an insignificant positive effect on giving, with the borderline exceptions of giving to secular causes and combined funds. We can never reject the hypothesis that the coefficients on level of home equity and other wealth are equal to each other.

Yet the presence-of-wealth variables are highly significant in every case. For example, the point estimate is that a homeowner gives about \$415 in total, regardless of whether home equity is positive or negative. This large effect plausibly occurs because homeowners are more attached to their community, and so are more likely to contribute to their communities.¹⁶ The presence of other wealth has an even larger positive effect on giving – more than \$1000 for total giving. The level and presence of home equity are jointly significant, as is the level and presence of other wealth. Considered jointly, we reject the fungibility hypothesis for wealth when explaining overall giving, giving to secular causes, and giving to combined causes, but not giving to religion and gifts to the needy.

Heirs give more than others, about \$202 more according to point estimates for total

giving.¹⁷ This effect is most pronounced for secular giving (\$103, significant at the .01 level), with smaller and mostly insignificant impacts on other kinds of giving. We do not include the level of inheritances in 2004 in our baseline model, but including future inheritances as a regressor is clearly appropriate, and we do so in results available from the authors. If we include unrealized components to total wealth, those expecting to receive an inheritance with certainty will have higher total wealth than shown by current home equity and other financial wealth. Therefore, we expect that inheritances received in 2005 and 2006 will have a positive effect on giving in 2004. Whether because of violations of the permanent income hypothesis, misspecification of information sets, or some other reason, we were unable to confirm this expectation, as the coefficient on future inheritance is small and statistically insignificant. In any case, results for current income and realized wealth are robust, changing by trivial amounts when 2005-2006 inheritances are omitted.

Control Variables in the Baseline Estimates

Table 3 reports the estimated average marginal or incremental impact of the respective control variables. Many of our results are qualitatively consistent with those found by other studies, as summarized in Bekkers and Wiepking (2007). Giving is increasing in the age and education of the family head, and is higher if the head is married. We focus here on those variables that have rarely or never been included elsewhere and those cases where the sign of the effect depends on the type of giving.

Table 3 about here

Few studies account for the education of the wife separately from that of the family head. We find that all kinds of giving are increasing in the wife's educational attainment. The

relationship is monotonic – as it is for head’s education – except for gifts to secular causes (which drop from college to graduate education) and to combined funds.

Studies that look at the impact of religious denomination use varying classification schemes that make them less comparable to ours, and some come from samples effectively restricted to Christian denominations. Like others, we find large and significant effects of religious denomination. Families headed by affiliates of Christian conservative nontraditional denominations make the largest total donations, with Evangelical Christians second and affiliates of Black Protestant churches third. These three groups are the only ones to give significantly more in total than the excluded category (no religion), although the point estimate for Jews is very large. When we look at giving specific to religion, we have the same top three, followed by Mainline Protestants and Catholics. Only Jews give significantly more than the excluded group to secular causes. Jews are the biggest givers to combined causes, followed by Christian conservative nontraditional, Catholics, Evangelical Christians, and, with borderline statistical significance, Black Protestants and Mainline Protestants. No denomination differs from the excluded group in a statistically significant way for gifts to the needy. We depart from previous studies by also including a dummy variable equaling one if respondent is married and the head and wife have different religious affiliations. Religiously-mixed couples give substantially less in total and to religion than other respondents, and are a bit more generous to secular and combined funds.

One should be cautious about interpreting any of these religious effects literally. Denominations differ in what is considered a donation as opposed to a membership fee (perhaps explaining the relatively low reported religious giving by Jews, who typically pay a large fee to

their temple to cover attendance on the high holy days). Unknown and varying portions of religious donations are dedicated or forwarded to secular causes. Some combined funds are religiously affiliated but donations to these funds are reported as gifts to combined funds. Of these, some are primarily or exclusively for secular causes (e.g., Catholic Charities) and some are more mixed (e.g., United Jewish Appeal local federations).

Working heads of households give significantly more overall, to religious causes, and to combined funds (compared with the excluded categories of unemployed/out of labor force). In contrast, gifts from households with working wives were generally insignificantly different from the excluded category except for gifts to combined funds. This exception may reflect the impact of workplace giving programs, which are generally restricted to combined funds like local United Way organizations. Households with retired heads also appear to be more generous, with borderline significance overall and clear significance for gifts to religion. This is surprising, as we control for head's age. In contrast, households with retired wives give less to religion. If the household head is disabled, it has no significant impact, but giving overall and to religion are significantly and substantively lower if the wife is disabled.

We find, like Steinberg and Wilhelm (2005) that when wealth is included, there is no statistically-significant difference attributable to race between total giving by black- and white-headed households, although blacks give significantly more to religion. Looking at racially-mixed households, there are a few instances in which giving is significantly lower than it would be if the wife were of the husband's ethnicity. We also find that households where both spouses report Hispanic ethnicity give significantly less than all-Anglo households in all categories but religion. When the Head does not report an ethnicity, the household gives significantly less

except for combined funds. Finally, the giving behavior of mixed-ethnicity households and those with wife's ethnicity missing are generally indistinguishable from that of all-white households, unless the head is Anglo and we are looking at gifts to combined funds.¹⁸

Baseline vs. Traditional Specifications

Here we consider three alternatives to our baseline estimates for total giving, displayed as table 4. First, we omit the dummy variables showing the presence of each component of income and wealth. This causes our estimate of the marginal propensity to donate out of welfare payments to become significantly negative, as in Brooks (2002). When the presence variable is omitted, the estimated marginal effect of home equity more than doubles and becomes borderline significant. Our analysis suggests that this size and significance of home equity in this more traditional specification are exaggerated as the inframarginal effect of home ownership loads onto the included home equity variable. Finally, we cannot reject the fungibility hypotheses for income and wealth in this more traditional setting, but can reject it with our approach.

Table 4 about here.

Next, we aggregate the four income categories into one total and replace the two wealth measures with total wealth. Finally, because many other data sources lack information on household wealth, we estimate the model with a single income and no wealth variables. This increases the size of the income effect by about 50%. This is still small compared with the average share of individual giving in total income, but the difference between estimated marginal effects and the sample average of 2.4% is reduced. For every traditional alternative, the effects of the control variables were qualitatively the same as they are in the baseline estimate for total giving.

Sample Splits

We divided the sample in half, looking separately at those households with below and above median total income, and then at samples with below and above median total wealth, reporting results in Table 5. This provides another check on functional form and allows us to focus separately on the higher income and wealth groups that have disproportionate effects on total giving. Some significant differences appear in each. There are no significant differences across the two income samples in how the level of each component affects giving, but the presence of labor income for those with above-average total income resulted in significantly more giving than it did for the lower income sample (at the 10% level), as did the presence of home equity (at the 1% level) and the presence of other wealth (at the 5% level). When the sample is split by wealth, the level of non-welfare transfer income affects the giving of those with above median wealth significantly less than it affects those with below median wealth (at the 5% level), and the presence of asset income has a larger effect on giving by the wealthy than by others (at the 10% level). Not surprisingly, there is a large difference in the effect of the presence of other wealth, with the wealthy giving \$1451 more (significant at the 5% level). Finally, although neither split shows statistically significant cross-sample differences resulting from the presence of inheritances, the effect was nearly significant and larger for the wealthy sample.

Table 5 about here

Subsamples Receiving Income and Wealth

Our baseline model allows the intercept to vary with presence of each income and wealth component, but imposes the restriction that the presence or absence of any one component does

not affect the slopes of the other components. But the typical welfare recipients differs in many unmeasured ways from the typical earner of asset income, so we also explored a more flexible alternative that allows such unmeasured variables to affect the various slopes as well as intercepts of the regression line. Trading off flexibility against loss of sample variation and degrees of freedom, we chose to estimate the model separately for seven subsamples consisting of all who received nonzero amounts of each component respectively.

More often than not, results from this experiment were consistent with baseline estimates. We report a few highlights here, with full results available from the authors. When we restrict the sample to those receiving labor income ($n=4184$), the level of asset income became borderline significant, the negative effect of the level of welfare grew and reached borderline significance, and the coefficient on presence of inheritance fell and lost statistical significance. When we restrict attention to recipients of asset income ($n=2055$), results are more puzzling. The level of labor income and presence of other wealth variables lost statistical significance, presence of income from other transfer payments switched signs and became significantly negative, and the point estimate for presence of inheritance roughly doubled. When we restrict attention to households receiving other transfer payments ($n=2434$), results are very much like baseline estimates. Welfare recipients ($n=317$) rarely received asset income or inheritances; in spite of the small numbers of observations, the presence of asset income has a statistically significant and very large positive effect on the donative behavior of welfare recipients. The point estimate for presence of other transfer payments nearly quadrupled and became borderline significant, which makes sense for this group. Finally, the presence of other wealth retained its positive sign but shrank in size and significance.

Homeowners (n=2972) do not differ notably from baseline results for the full sample. The only distinction is the emergence of a borderline significant negative impact of other transfer payments, for which we have no explanation. Result for the subsample possessing wealth in other forms (n=951) are even more similar to baseline estimates. Finally, results for heirs (n=951) are broadly similar to baseline results, but the level of labor income has a smaller and insignificant effect on total giving. Presence of asset income has a larger effect on heirs, and the presence of wealth in other forms had a much larger (although noisier) effect on heir giving than evident in the full sample. Presence of home equity lost statistical significance, but as the point estimate did not change by much this may be an artifact of the smaller sample size. Overall, we conclude that our baseline estimates are reasonably but not entirely robust to these sample restrictions.

VI. CONCLUSIONS

In this paper, we investigate the effects of different forms and sources of income and wealth on charitable donations. We find that it is important to disaggregate income and wealth and to distinguish the effect of an increase in the level of each component from the effect of the component's presence. We can confidently reject the fungibility hypothesis for income, that the income level effects are jointly equal and that the income presence effects are jointly equal, largely because asset income has very different effects than other components of income. We can reject the fungibility hypothesis for wealth when explaining overall giving, giving to secular causes, and giving to combined causes but cannot reject fungibility for gifts to religion or the needy.

Those receiving an inheritance increased their total giving by about \$200, but the effect

on religious giving is smaller and statistically indistinguishable from zero. Thus, the coming intergenerational transfer of wealth will likely have greater effects on secular than religious giving. There are also distributional differences in giving by heirs. Heirs from the bottom half of our sample in income gave \$217 more than non-heirs in this group (significant at the .05 level), a point estimate close to that for the top half of the sample income distribution (\$190, not significant). However, the point estimate for heirs in the bottom half of the sample wealth distribution (\$67, not significant) is much lower than that for the top half (\$330, significant at the .05 level).

Home ownership appears to increase family giving by about \$415, whereas the point estimate is that each \$100,000 in home equity increases giving by only \$37, insignificantly different from zero. Thus, the recent decrease in home ownership rates (from a peak of 69% in the fourth quarter of 2005 to 66.9% in the second quarter of 2010) appears to be a factor in the recent decline in aggregate giving (Census Bureau, 2010; Center on Philanthropy, 2010).

Our finding that giving is generally more sensitive to the presence of various income and wealth measures than to the level of these variables has one comforting implication for charitable nonprofit organizations. Business cycle fluctuations in giving are somewhat smoothed, not because of the permanent income hypothesis, but because the presence of the income and wealth components varies less than the levels of each component.

REFERENCES

- Andreoni, J., Brown, E., & Rischall, I. (2003). Charitable Giving by Married Couples: Who Decides and Why Does It Matter? *Journal of Human Resources*. v38(n1), 111-33.
- Auten, Gerald E. and Rudney, Gabriel. 1990. The Variability of Individual Charitable Giving in

- the U.S. *Voluntas*, 1, pp. 80-97.
- Auten, G. E., Sieg, H., & Clotfelter, C. T. (2002). Charitable Giving, Income, and Taxes: An Analysis of Panel Data. *American Economic Review*. v92(n1), 371-82.
- Avery, Robert. 1994. The Pending Intergenerational Transfer. *Philanthropy*, VIII#1, a publication of The Philanthropic Roundtable. p. 5, 28-29.
- Bakija, J., & Heim, B. (2008). *How Does Charitable Giving Respond to Incentives and Income? Dynamic Panel Estimates Accounting for Predictable Changes in Taxation*. National Bureau of Economic Research, Inc, NBER Working Papers: 14237.
- Barrett, K. S., McGuirk, A. M., & Steinberg, R. (1997). Further Evidence on the Dynamic Impact of Taxes on Charitable Giving. *National Tax Journal*. v50(n2), 321-34.
- Bekkers, René and Pamala Wiepking. (2007) Generosity and Philanthropy: A Literature Review. Available at SSRN: <http://ssrn.com/abstract=1015507>
- Bostic, R., Gabriel, S., & Painter, G. (2009). Housing Wealth, Financial Wealth, and Consumption: New Evidence from Micro Data. *Regional Science and Urban Economics*. v39(n1), 79-89.
- Brooks, A. C. (2002). Welfare Receipt and Private Charity. *Public Budgeting and Finance*. v22(n3), 101-14.
- Case, K. E., Quigley, J. M., & Shiller, R. J. (2005). Comparing Wealth Effects: The Stock Market versus the Housing Market. *B.E. Journal of Macroeconomics: Advances in Macroeconomics*. v5(n1), 1-32.
- Census Bureau, U.S. (2010). Housing Vacancies and Ownership (CPS/HVS). Accessed 8/28/2010 from <http://www.census.gov/hhes/www/housing/hvs/qtr210/q210ind.html>.

- Center on Philanthropy at Indiana University. (2010). *Giving USA 2010: The Annual Report on Philanthropy for 2009*. Online: Giving USA Foundation.
- Cherry, Todd L., Peter Frykblom, and Jason F. Shogren. 2002a. Hardnose the Dictator. *American Economic Review*.
- Cherry, Todd L., Peter Frykblom, and Jason F. Shogren. 2002b. Does the Origin of Endowments Impact Contributions in Public Good Games? Working paper.
- Daneshvary, N., & Luksetich, W. (1997). Income sources and declared charitable tax deductions. *Applied Economics Letters*, 1466-4291. v.4(n5), 271 – 274
- DiPasquali, Denise and Edward L. Glaeser. (1999). Incentives and Social Capital: Are Homeowners Better Citizens? *Journal of Urban Economics* 45: 354-384.
- Glazer, Amihai and Kai A. Konrad. 1996. A Signalling Explanation for Private Charity *American Economic Review*, 86#4, pp. 1019-1028.
- Harbaugh, W. 1998. What do Donations Buy? *Journal of Public Economics*, 67, pp. 269-284.
- Havens, John J. and Paul Schervish. 1999. Millionaires and the Millennium: New Estimates of the Forthcoming Wealth Transfer and Prospects for a Golden Age of Philanthropy. Chestnut Hill, MA: Boston College Social Welfare Research Institute Working Paper.
- Havens, John J. and Paul G. Schervish. 2003. Why the \$41 Trillion Wealth Transfer Estimate is Still Valid: A Review of Challenges and Comments.” *The Journal of Gift Planning*, 7(1)
- Hori, Masahiro & Satoshi Shimizutani, 2009. The Response of Household Expenditure to Anticipated Income Changes: Bonus Payments and the Seasonality of Consumption in Japan. *The B.E. Journal of Macroeconomics*, 9(1).
- Hrung, W. B. (2002). Parental Housing Values and Children's Consumption. *Regional Science*

- and Urban Economics*. v32(n4), 521-29.
- Hughes, P., & Luksetich, W. (2008). Income Volatility and Wealth: The Effect on Charitable Giving. *Nonprofit and Voluntary Sector Quarterly*. v37(n2), 264-80.
- Imbens, G. W., Rubin, D. B., & Sacerdote, B. I. (2001). Estimating the Effect of Unearned Income on Labor Earnings, Savings, and Consumption: Evidence from a Survey of Lottery Players. *American Economic Review*. v91(n4), 778-94.
- Independent Sector. 1996. *Giving and Volunteering in the United States: Findings from a National Survey, 1996 Edition*. Washington, D.C.: Independent Sector.
- Johnson, Tanya Howe. 2006. National Influence, Local Connection. *The Journal of Gift Planning* 10(3): 41-45.
- Joulfaian, D., & Wilhelm, M. O. (1994). Inheritance and Labor Supply. *Journal of Human Resources*. v29(n4), 1205-34.
- Kishor, N. K. (2007). Does Consumption Respond More to Housing Wealth Than to Financial Market Wealth? If So, Why? *Journal of Real Estate Finance and Economics*. v35(n4), 427-48.
- Morgan, James N., Martin N. David, Wilbur J. Cohen, and Harvey Brazer (1962). *Income and Welfare in the United States*. New York: McGraw-Hill.
- Osili, U. and D. Du (2005). Immigrant Assimilation and Charitable Giving. In P. Rooney and L. Sherman, eds., *Exploring Black Philanthropy: New Directions for Philanthropic Fundraising* (Vol. 48: 89-104 in *New Directions for Philanthropic Fundraising, a Quarterly Sourcebook*).
- Ostrower, Francie. 1995. *Why the Wealthy Give: The Culture of Elite Philanthropy*. Princeton,

NJ: Princeton University Press.

Poterba, J. M. (2000). Stock Market Wealth and Consumption. *Journal of Economic Perspectives*. v14(n2), 99-118.

Randolph, W. C. (1995). Dynamic Income, Progressive Taxes, and the Timing of Charitable Contributions. *Journal of Political Economy*. v103(n4), 709-38.

Shea, John. (1995). Union Contracts and Life-Cycle/Permanent-Income Hypothesis. *American Economic Review*, 85(1), 186-200.

Slacalek, Jiri (2009), What Drives Personal Consumption? The Role of Housing and Financial Wealth. *The B.E. Journal of Macroeconomics*, 9(1), article 37.

Steensland, Brian, Jerry Z. Park, Mark D. Regnerus, Lynn D. Robinson, W. Bradford Wilcox & Robert D. Woodberry. 2000. "The measure of American religion: Toward improving the state of the art." *Social Forces* 79(1): 291-318.

Steinberg, R. and M. O. Wilhelm (2005). Religious and Secular Giving, by Race and Ethnicity. In P. Rooney and L. Sherman, eds., *Exploring Black Philanthropy: New Directions for Philanthropic Fundraising* (Vol. 48:57-66 in *New Directions for Philanthropic Fundraising, a Quarterly Sourcebook*).

Thaler, R. H. (1990). Saving, Fungibility, and Mental Accounts. *Journal of Economic Perspectives*. v4(n1), 193-205.

Various authors. 2006. Wealth Transfer: A Digest of Opinion and Advice. *The Journal of Gift*

Planning, 10(1): 16-23.

Weil, D., 1994. The saving of the elderly in micro and macro data. *The Quarterly Journal of Economics*. v109, 55–81.

Wilcox, David W., 1989. Social Security Benefits, Consumption Expenditure, and the Life Cycle Hypothesis. *Journal of Political Economy*. v97, 288-304.

Wilhelm, Mark O. 2006. New Data on Charitable Giving in the PSID. *Economics Letters* 92(1), 26-31.

Wilhelm, Mark O. 2007. “The Quality and Comparability of Survey Data on Charitable Giving.” *Nonprofit and Voluntary Sector Quarterly*, 36:65-84.

Wilhelm, Mark O. (2008). Practical Considerations for Choosing Between Tobit and SCLS or CLAD Estimators for Censored Regression Models with an Application to Charitable Giving. *Oxford Bulletin of Economics and Statistics* 70 (4), 559-582.

Yoruk, B. (2010). Charitable Giving by Married Couples Revisited. *Journal of Human Resources*. v45(n2), 497-516.

NOTES

* We wish to thank Mark Wilhelm for his extensive contributions, to René Bekkers, John Havens, Rob McClelland, and Robert Sandy, and Patricia Wittberg for helpful suggestions, Amir Hayat for able and timely research assistance, and the Center on Philanthropy at Indiana University for grants to support this research.

Authors: Steinberg: Professor of Economics, Philanthropic Studies, and Public Affairs, IUPUI, Indianapolis, IN 46202. Phone 317-278-7221, Email rsteinbe@iupui.edu.

Zhang: Assistant Professor of Economics and Philanthropic Studies, IUPUI, Indianapolis, IN

46202. Phone 317-274-0822, Email zhang65@iupui.edu

Brown: James Irvine Professor of Economics, Pomona College, Claremont, CA. Phone 909-607-2810, Email ebrown@pomona.edu

Rooney: Executive Director, The Center on Philanthropy at Indiana University and Professor of Economics and Philanthropic Studies, IUPUI, Indianapolis, IN 46202. Phone 317-278-8917, Email rooney@iupui.edu

1. Since that article was published, there has been a debate with Havens and Schervish (2003) arguing that despite a slow start, their estimates are still on target. A panel of respondents contest the issue in various authors (2006), and Havens rebuts some points in an interview reported by Johnson (2006).

2. COPPS 2005 divides secular giving into additional categories of health or medical research; education; youth or family services; the arts; culture or ethnic awareness; neighborhoods; environment, international, other, and tsunami-related. We chose not to include these types of giving separately due to lower cell counts (e.g., the number of welfare recipients giving to international is quite small).

3. Respondents were asked to report the wealth variables at the point in time when they were surveyed, rather than for the previous year.

4. We used a different approach for education, religion, and ethnicity. Rather than omit observations with missing values for these variables, we set the values to zero and created a series of dummy variables taking the value of 1 when the corresponding continuous variable had a missing value.

5. Looking only at those making positive donations of each type, the average religious donation is

\$2014 and the average secular donation is \$925.

6. A few respondents reported their donations as belonging to a bracketed range rather than an exact amount. We set their donations to the bottom of the appropriate bracket to make our results comparable with other studies using COPPS data. However, we used the middle of the bracket range for income and wealth data.

7. Morgan et al. (1962) report that 18 percent of their sample received an inheritance.

8. Although the PSID contains extensive questions about pension wealth, the wealth measure they construct omits pension wealth due to the difficulty in computing expected present value for a variety of pension vehicles. Following their example, we omit the present value of private defined-contribution and defined-benefit plans and the present value of rights to Social Security payments.

9. Dummy variables for the family Head and Wife are created for the RELTRAD categories of Black Protestant, Evangelical Protestant, Mainline Protestant, Conservative Nontraditional (which includes, among others, Mormons, Christian Scientists, and Jehovah's Witnesses), Liberal Nontraditional (e.g., New Age, Unitarian), Catholic, Jewish, Eastern/Other (e.g., Buddhist, Hindu, Muslim, Eastern Orthodox, Native American), No/Non Denominational who does not attend services, and Missing (the excluded category is no affiliation/atheist). Because the thirteen observations where Head or Wife was Liberal Nontraditional could not be easily merged with any other category, these observations were deleted from the final sample.

10. Total Donations are censored at \$24.99 because the variable is only collected if respondent first says that household donations total at least \$25. When we estimate the model for specific types of donation, we set the censoring threshold at zero because there is no minimum for

reporting specific types of donation.

11. The PSID uses genealogical sampling, which means that if an original sample member family has children that later split off to form their own families, the latter are permanently added to the sample as a distinct family. We cluster errors for all 2005 wave observations that stem from the original 1968 sample family because genetics, common environments and socialization, and parental efforts to transmit generosity may affect giving.

12. For the double log formulation, we created variables such as LN_LABOR equaling $\ln(\text{LABOR} + \$1)$ for the nonnegative components of income. For ASSET, HOME, and OTH_WLTH we created variables like LN_ASSET equaling $\ln(\text{ASSET} + \$1)$ if $\text{ASSET} \geq 0$, zero otherwise. We also created variables like LN_NEG_ASSET equaling $\ln(-\text{ASSET} + \$1)$ if $\text{ASSET} < 0$, zero otherwise. We also added \$1 to our dependent variable before taking the log.

13. First, we antilogged the predicted values from the double log specification, correcting for bias by generating:

$$\hat{y} = \exp(\text{predicted} + \text{var}(\text{error}))$$

and then computed the squared correlation between \hat{y} and actual donations (this R^2 -like measure seems more meaningful than the McFadden's pseudo- R^2 reported by Stata for tobit estimates). We then compared this value to the squared correlation between actual and predicted levels of donations from the linear specification. For both, we used the predicted value for the observable donations, rather than the latent tobit variable. By this measure, the linear specification was substantially superior – with a squared correlation of 0.2592 vs. 0.1881 for logs.

14. We added covariates representing the square and cube of the predicted observable donation

and tested for their joint significance. By this measure, we can reject linearity for the double log (at the 0.0001 level) but cannot reject linearity for the linear specification ($p = 0.29$).

15. We experimented with a double-hurdle model to distinguish censored donations resulting from latent heterogeneity from those resulting from covariate values that lead to corner solutions. Unfortunately, the double-hurdle specification closest to our baseline tobit specification failed to converge. We obtained convergence by dropping some of the dummies for presence of income and wealth components, and results looked a little different from our baseline estimates. But when we dropped the same dummies from the tobit, there were no qualitative differences in results between the two estimators. These results are available from the authors on request.

16. Similarly, DiPasquali and Glaeser (1999) found that homeowners invested more in several social capital measures; in particular, homeowners belong to more nonprofit organizations than renters.

17. We explored an alternative specification for inheritance, in which the ratio of inheritance to total wealth was constructed (replacing negative values and undefined values by zero) and included as an additional regressor. The ratio variable was statistically insignificant, with an uninformative confidence interval, whereas the presence of inheritance became a little more significant ($p=0.01$). Full results are available from the authors.

18. It is premature, at best, to interpret these results as indicating that Hispanics are less generous than others. Hispanics may think of their gifts as helping rather than donating, under-reporting their giving. Hispanic generosity may be directed to remittances and informal giving, which are not included in our data. Finally, the category Hispanic confounds the effect of immigration with that of ethnicity. Osili and Du (2005) find that Hispanic differences in giving behavior wash out

quickly with duration in the U.S.A.

TABLE 1**Summary Statistics**

Variable	Mean	Standard Deviation	Min	Max
Income from				
Labor	\$54,530	\$84,430	\$0	\$2,810,000
Assets	\$3,485	\$22,747	\$-46,500	\$1,104,797
Welfare	\$348	\$1,847	\$0	\$46,704
Other Transfers	\$6,371	\$13,671	\$0	\$303,000
Wealth				
Home Equity	\$83,529	\$164,465	\$-146,052	\$4,014,004
Other Wealth	\$162,939	\$958,853	\$-221,786	\$36,700,000
Appreciated Inheritance	\$35,104	\$347,343	\$0	\$22,100,000
Family Demographics				
Any Children?	0.43	0.49		
Number of Children?	0.81	1.13	0	8
Age Youngest Child	2.77	4.65	0	17
Married?	0.58	0.49		
Married, Mixed Religion?	0.18	0.38		
Married, Head Black, Wife White?	0.01	0.09		
Married, Head White, Wife Black?	0.003	0.06		
Married, Head Hispanic, Wife not?	0.01	0.10		
Married, Wife Hispanic, Head not?	0.01	0.10		
Characteristics of Family Head				
Age	44	17	16	95
Female?	0.25	0.44		
Health Poor or Fair?	0.15	0.36		
High School Grad?	0.31	0.46		
Some College?	0.22	0.41		
College Graduate?	0.16	0.36		
Graduate Education?	0.09	0.28		
Education Missing?	0.05	0.21		
Working?	0.76	0.43		
Retired?	0.13	0.33		
Disabled?	0.03	0.18		

African American?	0.30	0.46		
Hispanic?	0.07	0.26		
Missing Hispanicity?	0.08	0.27		
Evangelistic Religion?	0.24	0.43		
Mainline Protestant?	0.13	0.34		
Black Protestant?	0.18	0.39		
Conservative Nontraditional (e.g. Mormon, Christian Science)?	0.02	0.13		
Christian, No/Non Denominational?	0.03	0.18		
Catholic?	0.20	0.40		
Jewish?	0.02	0.15		
Buddhist, Hindu, Muslim, E. Orthodox, Nat. Amer, Other?	0.01	0.12		
Religion Missing?	0.03	0.17		
Characteristics of Wife				
Age	27	24	0	92
Health Poor or Fair?	0.10	0.30		
High School Grad?	0.20	0.40		
Some College?	0.15	0.36		
College Grad?	0.11	0.31		
Grad School?	0.05	0.23		
Education Missing?	0.04	0.20		
Working?	0.42	0.49		
Retired?	0.05	0.22		
Disabled?	0.01	0.11		
Community Characteristics				
Big Metro? (County or Metro. population >1 million)	0.43	0.50		
Giving				
Total	\$1,417	\$3,579	\$0	\$100,000
To Religion	\$919	\$2,774	\$0	\$100,000
To Secular	\$498	\$1,769	\$0	\$50,200
To Combined Funds	\$130	\$624	\$0	\$20,000
To Needy	\$134	\$595	\$0	\$15,000

N=4790

TABLE 2
Baseline Marginal Propensities to Give

	Total Giving	Giving to Religion	Giving to Secular Causes	Giving to Combined Funds	Giving to Needy
Levels of Income from					
Labor	0.0034 [#] (0.0019)	0.0006 (0.0009)	0.0022** (0.0008)	0.0003 (0.0002)	0.0005* (0.0002)
Assets	0.0042 (0.0052)	-0.0048 [#] (0.0029)	0.0070* (0.0029)	0.0019** (0.0007)	-0.0005 (0.0004)
Welfare	-0.0202 (.0269)	-0.0207 (0.0222)	-0.0058 (0.0130)	-0.0003 (0.0044)	-0.0034 (0.005)
Other Transfers	-0.0004 (0.0043)	0.0000 (0.0031)	0.00254 [#] (0.0014)	0.0004 (0.0005)	0.0012* (0.0005)
Presence of Income from					
Labor	305.23 (242.26)	297.12 (202.50)	-25.08 (63.03)	7.49 (23.50)	-32.96 (27.48)
Assets	411.68*** (78.76)	338.84*** (64.96)	146.92*** (31.77)	47.59*** (12.27)	72.93*** (14.30)
Welfare	-27.79 (236.87)	-35.37 (194.44)	-103.26 (87.35)	-12.05 (35.83)	-44.16 (40.86)
Other Transfers	-76.76 (70.23)	-39.05 (58.98)	-37.45 (30.55)	-24.48* (12.42)	0.26 (12.77)
Level of Wealth in					
Home Equity (in \$1000s)	0.3659 (0.4424)	-0.0098 (0.2717)	0.2236 (0.2112)	-0.0786 (0.0674)	0.0641 (0.0657)
Other Forms (in \$1000s)	0.2973 (0.1879)	0.1239 (0.1164)	0.1355 [#] (0.0697)	0.0255 [#] (0.0143)	-0.0077 (0.0122)
Presence of Wealth in					
Home Equity	414.61*** (84.42)	359.68*** (70.41)	133.44*** (41.16)	55.99*** (16.47)	67.99*** (16.41)
Other Forms	1027.64*** (186.66)	600.42*** (152.74)	407.18*** (85.58)	151.09*** (38.92)	141.34*** (36.82)
Any Inheritance?	202.26* (92.60)	74.16 (70.61)	102.57** (37.59)	20.99 (14.66)	27.57 [#] (15.35)
Reject H ₀ that:					
Individual Sources					
Labor income level and presence = 0	#	NS	*	NS	#
Asset income level and presence = 0	***	***	***	***	***

Welfare level and presence = 0	NS	NS	NS	NS	NS
Other transfer level and presence = 0	NS	NS	NS	*	#
Home equity level and presence = 0	***	***	***	**	***
Other wealth level and presence = 0	***	***	***	***	***
Equality across components					
Income level effects equal each other	NS	NS	NS	NS	#
Income level effects equal and presence effects equal	***	***	***	**	***
Wealth level effects equal each other	NS	NS	NS	NS	NS
Wealth level effects equal and presence effects equal	**	NS	**	*	NS
Pseudo- R ²	0.0290	0.0297	0.0405	0.0387	0.0268

For variables representing levels, this is the estimated average marginal effect on observable donations (rather than the latent variable). For variables representing presence, this is the estimated average incremental effect of going from zero to a positive level of income or wealth from this component.

Significance of Average Marginal Effects: # = sig. at 0.10; * = sig. at 0.05; ** = sig. at 0.01; *** = sig. at 0.001

TABLE 3
Effects of Control Variables on Giving, Baseline Specification

	Total Giving	Giving to Religion	Giving to Secular Nonprofits	Giving to Combined Funds	Giving to Needy
Age H	21.29***	21.09***	6.34***	13.91***	0.52
AgeW	4.12	4.92	-1.39	0.10	0.42
FemaleH	103.50	75.31	58.82	105.48	44.10*
Kids?	-84.92	45.54	-32.29	90.29	5.74
Numkids	70.79	53.45	17.58	1.88	-0.84
Age Youngest Kid	-0.29	-4.66	2.19	-7.05	1.04
Married H	501.38***	538.53***	102.55 [#]	9.68	39.58
Health Poor/Fair H	-88.64	-24.57	-52.51	49.43	-24.08
Health Poor/Fair W	-121.88	-126.36	-34.39	-90.10	22.19
Evangelical H ^a	977.72***	1302.87***	11.76	222.77*	-20.44
Mainline H ^a	185.50	588.52***	-49.91	161.41 [#]	-16.62
Black Protestant H ^a	287.93*	668.95***	-71.84	183.22 [#]	-38.10
Conservative Nontraditional H ^a	1611.10***	1577.41***	50.36	389.53**	3.97
No/Non Denomination H ^a	-102.55	-206.53	21.04	164.98	39.57
Catholic H ^a	-27.02	507.37***	-48.63	279.49**	-12.63
Jewish H ^a	714.73	318.85	377.79*	678.14**	54.84
Eastern Rel. H ^a	69.73	184.93	180.80	411.84	30.20
Missing Rel. H ^a	31.69	280.99	-60.92	-77.57	1.25
Relig. Mixed Marriage	-323.57***	-476.40***	69.56 [#]	132.19*	13.44
Big Metro	143.62*	96.76	59.35*	70.38	29.01*
High School Grad H ^b	199.02 [#]	137.12 [#]	100.71**	372.55***	26.26 [#]
Some College H ^b	544.77***	284.07*	224.60***	523.70***	70.15***
College Grad H ^b	682.76***	408.93***	318.11***	591.36***	76.14***
Grad School H ^b	1035.50***	615.67***	353.35***	724.59***	102.13***
Missing Ed. H ^b	686.76***	367.06*	227.06**	708.18***	56.73 [#]
High School Grad W ^b	88.45	71.42	16.98	-9.15	5.29
Some College W ^b	276.79*	238.05*	23.08	-24.07	9.85
College Grad W ^b	626.98**	365.04**	215.57**	154.76	45.98
Grad School W ^b	936.09*	655.00**	161.50 [#]	-116.25	44.65
Missing Ed. W ^b	324.11 [#]	286.50 [#]	71.23	18.34	58.17 [#]
Working H ^c	301.36**	305.55**	72.68	219.82*	-0.96

Retired H ^c	559.62 [#]	586.45**	-71.45	-173.47	-40.10
Disabled H ^c	-89.91	-97.13	-68.31	-165.23	-47.14
Working W ^c	-78.41	-12.32	-20.94	182.57**	-9.61
Retired W ^c	301.12	-385.49*	39.27	132.44	-27.19
Disabled W ^c	-542.58**	-552.62**	62.20	34.84	-53.78
Afr/Am. H	198.08	393.23***	-2.06	110.32	18.97
H Afr/Am, W White	-466.80 [#]	-434.08	-300.13 [#]	3.25	-108.14
H White, W Afr.Am.	-365.94	-318.61	-69.28	113.53	35.55
Hispanic H	-229.17*	-7.20	-262.86***	-510.16***	-127.11***
Hisp. H, Anglo W	393.38	65.61	217.42	276.96	73.18
Anglo H, Hisp. W	229.55	172.80	-84.36	-497.03*	14.20
Hisp. Missing, H	-405.30***	-303.81**	-164.11***	-108.12	-44.57*
Hisp. Missing, W	164.70	138.76	26.12	-47.75	21.78

Table notes:

^aNo religion/atheist is the excluded category

^bLess than high school grad is the excluded category

^cOut of the labor force is the excluded category

For continuous and count variables, we report the estimated average marginal effect on observable donations (rather than the latent variable). For dichotomous variables representing, this is the average incremental effect of moving from zero to one.

Significance of Average Marginal Effects: # = sig. at 0.10; * = sig. at 0.05; ** = sig. at 0.01; *** = sig. at 0.001

TABLE 4
Baseline vs. Traditional Specifications

	Baseline	Omit Presence Dummies	Total Income & Wealth Only	Total Income Only
Levels of Income from				
Labor	0.0034 [#] (0.0019)	0.0037* (0.0018)		
Assets	0.0042 (0.0052)	0.0053 (0.0052)		
Welfare	-0.0202 (.0269)	-0.0428* (0.0198)		
Other Transfers	-0.0004 (0.0043)	0.0006 (0.0038)		
Total Income			0.0039* (0.0019)	0.0063*** (0.0014)
Presence of Income from				
Labor	305.23			
Assets	411.68***			
Welfare	27.79			
Other Transfers	76.76			
Level of Wealth in				
Home Equity (in \$1000s)	0.3659 (0.4424)	0.8027 [#] (0.4447)		
Other Forms (in \$1000s)	0.2973 (0.1879)	0.2594 (0.1923)		
Total Wealth (in \$1000s)			0.3104 [#] (0.1634)	
Presence of Wealth in				
Home Equity	414.61***			
Other Forms	1027.64***			
Reject H ₀ that				
Income effects equal each other ^a	***	NS		
Wealth effects equal each other ^a	**	NS		
Pseudo- R ²	0.0290	0.0272	0.0270	0.0270

Table Note

^athis is the joint test on presence and levels for the baseline model, and just a test on level for the omit presence dummies model

Significance of Average Marginal Effects: # = sig. at 0.10; * = sig. at 0.05; ** = sig. at 0.01; *** = sig. at 0.001

TABLE 5
Marginal Propensities to Give for Subsamples of High and Low Income, Wealth

	Baseline (Full Sample)	Below Median Income	Above Median Income	Below Median Wealth	Above Median Wealth
Levels of Income from					
Labor	0.0034 [#] (0.0019)	0.0075*** (0.0022)	0.0042 [#] (0.0023)	0.0067*** (0.0011)	0.0036 (0.0024)
Assets	0.0042 (0.0052)	-0.0045 (0.0121)	0.0080 (0.0051)	-0.0054 (0.0045)	0.0065 (0.0065)
Welfare	-0.0202 (.0269)	0.0104 (0.0127)	-0.3762 (0.2881)	0.0049 (0.0119)	-0.1770 (0.1283)
Other Transfers	-0.0004 (0.0043)	0.0029 (0.0040)	-0.0068 (0.0087)	0.0073* (0.0034)	-0.0006 (0.0006)
Presence of Income from					
Labor	305.23 (242.26)	-69.39 (84.61)	1285.12 [#] (750.16)	-90.34 (104.37)	598.16 (446.36)
Assets	411.68*** (78.76)	257.26*** (57.93)	364.79** (135.16)	218.49*** (50.79)	482.85*** (145.02)
Welfare	27.79 (236.87)	-44.59 (94.15)	1946.17 (2280.31)	-17.77 (81.23)	656.82 (1104.35)
Other Transfers	76.76 (70.23)	107.16 [#] (63.89)	-203.92 (130.96)	11.01 (44.20)	-275.30* (131.92)
Level of Wealth in					
Home Equity (in \$1000s)	0.3659 (0.4424)	0.7823 [#] (0.4749)	0.4537 (0.6152)	1.9168 (1.8399)	0.5668 (0.5835)
Other Forms (in \$1000s)	0.2973 (0.1879)	0.4460 (0.4120)	0.2882 [#] (0.1738)	-0.4023 (0.9079)	0.3754 (0.2380)
Presence of Wealth in					
Home Equity	414.61*** (84.42)	99.61 [#] (55.09)	555.07*** (154.07)	108.28 [#] (57.02)	43.72 (266.85)
Other Forms	1027.64*** (186.66)	456.49*** (126.84)	2244.73** (714.80)	356.10*** (81.48)	1806.79** (629.56)
Any Inheritance?	202.26* (92.60)	217.41* (95.42)	190.84 (137.78)	67.48 (68.52)	330.13* (147.85)
Pseudo- R ²	0.0290	0.0295	0.0187	0.0348	0.0168

For the full sample, median total income is \$47,760 and median total wealth is \$52,820

For variables representing levels, cells contain the estimated average marginal effect on observable donations (rather than the latent variable). For variables representing presence, cells contain the estimated average incremental effect of going from zero to a positive level of income or wealth from this component.

Significance of Average Marginal Effects: # = sig. at 0.10; * = sig. at 0.05; ** = sig. at 0.01; *** = sig. at 0.001