

Partial Reporting: An Example from Charitable Giving*

M. Marit Rehavi[†]

Daniel Shack[‡]

November 2013

Abstract

Of necessity, many tax-price elasticities are calculated from tax return data. Survey data on families' charitable giving and reporting on their tax returns indicate that reporting is a significant part of tax-price elasticity estimates. Roughly a quarter of the tax-price elasticity estimated from tax returns represents changes in reporting as opposed to changes in actual donations. These results are consistent with a model in which individuals face unit costs of reporting in addition to any fixed cost of itemization.

JEL Codes: H2

Keywords: Charitable giving, itemization, reporting, tax-price elasticity

*Dan Feenberg generously modified TAXSIM to produce marginal tax rates with respect to charitable giving. This paper has benefited greatly from comments by and discussions with Alan Auerbach, Charlie Brown, David Green, Jim Hines, Kevin Milligan, Joel Slemrod, Jeff Smith, Kevin Stange and seminar participants at the University of Michigan, the University of British Columbia, the American Tax Association's Midyear Meeting, the Michigan Tax Invitational and the Tax Time Workshop.

[†]Department of Economics, University of British Columbia and CIFAR; marit.rehavi@ubc.ca

[‡]Department of Economics, University of British Columbia; daniel.shack@alumni.ubc.ca

I Introduction

The United States' tax code gives preferential tax treatment to charitable gifts made by those who forego the standard deduction and choose to itemize on their tax returns. Itemizers may deduct their charitable gifts from their income before assessing taxes. A dollar of charitable giving, therefore, only costs an itemizing individual $1 - \tau$ dollars of foregone consumption, where τ is the marginal tax rate the individual would have paid on the dollar had she not contributed it. The public finance literature pays particular attention to the role of charitable giving's tax advantage (relative to competing forms of consumption) in influencing donations. Of necessity, many of the existing elasticity estimates rely on federal tax returns for data on the price and level of households' charitable giving. However, the tax deduction available to itemizers for charitable giving creates incentives not only for one's charitable behavior, but also for how one completes one's tax return. Any correlation between the fraction of giving reported on tax returns and individuals' tax rates or income levels has the potential to confound price and income elasticity estimates. For example, those with higher marginal tax rates get a larger return to reporting their giving on their tax returns. If individuals with high marginal tax rates report a larger percentage of their giving to the IRS, then the tax-price elasticities calculated from tax return data will confound the effects of reporting and giving, thus overstating the tax-price elasticity of charitable giving.¹

While the empirical literature on tax-price elasticities has long been concerned with distinguishing the behavioral effect from tax minimization strategies (e.g. the strategic timing of activities, shifting income from more to less taxed forms of compensation and outright fraud), less attention has been paid to the estimation challenges posed by itemizers selectively declaring their allowed deductions. One notable exception is the literature on the compliance cost of itemization, which documents the expected tax savings needed to induce individuals to itemize (see, for

¹The estimates will still accurately measure the tax-price elasticity of reported charitable giving and are thus the correct elasticities for the government's fiscal planning.

example, Pitt and Slemrod (1989)). Itemization, however, is not a single binary decision. Once an individual decides to forego the standard deduction she must decide which deductions and credits to claim. For example, an individual may choose to itemize mortgage interest and state tax payments, but not expend the time and effort to learn about other deductions and credits. Even choosing which transactions to report within each category of deductions and credits is a series of decisions. After deciding to report charitable contributions, an individual must compile documentation, determine which donations (or portions of donations) are eligible for preferential treatment and go through her records to calculate the total sum of her eligible contributions. To the typical taxpayer each of these steps is potentially complex, stressful and time consuming.² An individual may only find it worth the effort to incur these transaction costs for her largest or most straightforward donations. This ability to partly report complicates inference based on tax return data. Further complicating inference, these decisions are unlikely to be independent of the individual's marginal tax rate. Using newly available data of charitable contributions we demonstrate that the systematic measurement error arising from partial reporting significantly inflates tax-price elasticities estimated from tax return data.

This paper takes advantage of the Panel Study of Income Dynamics' (PSID) recent addition of a charitable giving module. The PSID now contains information on both the giving itemizers report on their tax returns and their responses to a detailed giving and volunteering survey. These data make it possible to assess the extent to which changes in reporting affect estimates of charitable giving elasticities. Calculating elasticities from itemized giving produces tax-price elasticities that are significantly larger both statistically and economically, than those calculated for the same individuals based on responses to a survey about charitable contributions. The tax-price elasticities estimated for itemizers based on the giving survey data are approximately

²In a 2003 survey conducted by National Public Radio, the Kennedy School of Government and the Kaiser Foundation 83 percent of respondents stated that they found the tax code complex. When asked to choose the reasons they found it complex, 95 selected the number of deductions and rules and 63 percent selected the amount of record keeping.

20% smaller than those estimated based on respondents' reports of giving on their tax returns. These differences persist and are similar in magnitude even after the inclusion of family fixed effects. Additionally, the gap between survey and tax-return reports of giving is increasing in the diversity of the giving portfolio as proxied by the number of types of charities families report supporting. Taken together these results are consistent with a model in which reporting is a non-binary decision within itemizers and families have unit itemization costs, instead of a single fixed cost for itemizing (overall or for their giving).

II Existing Literature:

There is a large literature going back at least to Schwartz (1970) seeking to estimate how charitable giving responds to changes in the tax rate faced by those who itemize their gifts. The estimated elasticities in the literature vary widely and specifically with the income of the group being studied and the specifications employed.³ Tax-price elasticities are generally found to be negative and larger than 1 in magnitude, while income elasticities are typically positive and less than 1. Clotfelter (1997) provides an excellent overview of the literature. Recent work suggests, however, that a substantial portion of these elasticities may be intertemporal substitution (towards high tax years) rather than changes in the total amount of lifetime giving. In this vein, researchers have sought to separate inter-temporal substitution from permanent changes in income and giving (see, for example, Randolph (1995) and Auten, Sieg, and Clotfelter (2002) and Bakija and Heim (2011)).

Concerns about the behavior being captured in tax-price elasticities estimated from tax return

³For example, Clotfelter and Steuerle (1981) find price elasticities ranging from -0.9 to -2.2 depending on the specification and income group used. Others using tax return data have found elasticities ranging from -1.09 to -2.5 (Feldstein (1975), Feldstein and Clotfelter (1976), Feldstein and Boskin (1977), Feldstein and Taylor (1976)). Using various approaches to analyzing Consumer Expenditure Survey data from the early 1980s researchers have found elasticities ranging from -0.78 to -1.6 (Bradley, Holden, and McClelland (2005) and McClelland and Kokoski (1994)) with the larger estimates arising from models in which reported giving + \$10 is used to work around the $\log(0)$ being undefined. Fack and Landais (2010) estimate elasticities ranging from -0.2 to -0.6 using a change in how charitable contributions were taxed in France.

data date back to the inception of the literature. These concerns were bolstered when responses to major tax reforms (such as the Tax Reform Acts of 1981 and 1986) were more mild than the elasticities in the literature predicted (Auten, Cilke and Randolph (1992)). Schwartz (1970) among numerous others has noted the incentive the tax-advantaged status of giving creates for misreporting on tax returns. Using IRS audit data Slemrod (1989) concludes the effects from using charitable giving deductions as a means of tax evasion are likely small, but other biases have proven more empirically meaningful. For example, Fack and Landais (2012) find that giving by the wealthiest tax payers fell by 30% following the 1969 ban on "self-dealing."⁴

The concern that changes in reported deductions may not only represent changes in financial choices (as opposed to changes in reporting) is not unique to charitable giving. Saez, Slemrod and Giertz (2012) summarizes the existing literature on taxable income elasticities and discusses the opportunities to shift income to less taxable forms. The scope for such activities is even greater in the charitable giving context. When making one's giving decisions throughout the year (or before doing one's taxes), an individual may be uncertain of the exact tax-price she will face for the year. Any uncertainties about annual income, expenses and tax rates are resolved when an individual fills out her tax return. Unlike capital gains and labor income, there is no legal obligation to report charitable giving. Furthermore, outside of the tax code there are not any pecuniary costs to making a gift in a particular year, or obligations to make one at all. As long as individuals do not over-claim their giving, they are completely free to optimize the amount they give and report. Also, unlike labor and dividend income, individuals do not receive a summary of their annual activities in the form of a W-2 form or brokerage statement. Instead, individuals must refer to their own records to determine the extent of their giving for itemization.

The endogeneity of the decision to itemize deductions is well-established (see for example Andreoni (2006)). However, it is generally assumed that once an individual chooses to claim

⁴In this context, "self dealing" refers to claiming the charitable giving deduction for donations to one's own private foundation.

a deduction she claims all she is entitled to deduct. Yet, even among itemizers the deductions and amount reported may be endogenous. Those with higher marginal tax rates receive a higher return for every dollar of charitable contributions that they report to the IRS. Similarly, those with higher incomes may use professional accountants and record keepers or may give through more formal channels and may therefore face a lower cost of gathering the information to itemize all of their giving. If the probability of reporting giving (or the percent of giving reported) is decreasing in the tax-price, then the elasticity of itemized giving with respect to the tax-price will over state the true relationship between giving and the tax code. The reporting discrepancies are potentially large. In the PSID, 25 percent of itemizers who did not report charitable deductions on their tax returns claimed that they donated more than \$240 to charity in the PSID giving survey and 44 percent reported giving at least \$1.⁵ Even within itemizers the decision to report one's charitable contributions does not appear to be independent of the tax-advantage or income. The average disposable income and tax-price for the first dollar of giving for these itemizers who choose not to itemize their giving are \$24,800 (in 2002 dollars) and \$0.91 respectively compared to \$39,322 and \$0.84 for those who reported positive giving to the IRS.

II.I Itemizing Charitable Giving

To illustrate the potential bias created by partial reporting consider the following model of individuals' reporting decisions. Individuals donate multiple gifts of varying size over the course of the year with $G_i^* = \sum_{n=1}^N g_{in}$. Charitable giving reported on tax returns is the sum of those gifts individuals report to the IRS. Assume each reported gift incurs transaction cost, c . These costs could take the form of assembling records when filling out a tax return, figuring out which donations are eligible for deductions, or the costs of making gifts in a reportable manner throughout

⁵Some or all of these "unreported" gifts could be ineligible for preferential tax treatment. For example, they could be gifts to charities that are not registered with the IRS. If that is the case, then the tax-price elasticity estimated from tax data is a composite of the shifting across types of charities and changes in the amount donated, while the survey measure is the effect on the quantity of total donations.

the year (for example, writing a check to one's church instead of placing a small cash donation in the collection plate or only donating to charities registered with the IRS that provide receipts). The willingness to incur these costs will be a function of the return to reporting charitable giving. The return to a taxpayer to reporting her charitable giving to the IRS (R^I) is:⁶

$$R_i^I = \max \left[0, \left(\sum_{n=1}^{N_i} I [g_{in}\tau_i - c \geq 0] (g_{in}\tau_i - c) \right) \right] \quad (1)$$

Where, i indexes individuals, N_i is the total number of charitable donations the individual makes, g_{in} is the size of individual i 's n th contribution, τ_i is the taxpayer's marginal tax rate and c is the unit cost of reporting a charitable gift.⁷ $I[\]$ is an indicator function taking value of 1 if the return to itemizing gift i is greater than the reporting cost. The resulting giving that is reported on an itemizer's tax return (G_i^I) and observed in the IRS data is:

$$G_i^I = \sum_{n=1}^{N_i} I [g_{in}\tau_i - c \geq 0] g_{in} \quad (2)$$

G_i^I will only equal G_i^* (i.e. itemizers will report all of their contributions to the IRS) if the return to reporting the smallest gift is at least as large as the associated reporting costs

$$[\min(g_{in})] \tau_i - c \geq 0 \quad (3)$$

If condition (3) does not hold, G_i^I will be less than G_i^* in the absence of fraud. More importantly, $G_i^* - G_i^I$ is likely to systematically vary with the marginal tax rate. Therefore, estimates of the

⁶This can easily be adapted to include an additional fixed cost (F) of itemizing any giving on one's tax return. The return to reporting one's charitable contributions then becomes $\max \left[0, \left(\sum_{n=1}^N I [g_{in}\tau_i - c \geq 0] (g_{in}\tau_i - c) - F_i \right) \right]$. Now individuals who have gifts with $g_{in}\tau \geq c$ will only report those gifts to the IRS if $\sum_{n=1}^N I [g_{in}\tau_i - c \geq 0] (g_{in}\tau_i - c) \geq F_i$. Among those who still choose to report any giving to the IRS in the presence of an additional fixed cost the amount of giving reported will be unchanged. However, the fraction of itemizers reporting any giving to the IRS is likely to be lower.

⁷One can think of c as a cost incurred at the time the tax return is completed or as the cost of giving in a way that generates the necessary IRS documentation and of keeping a record of that gift more generally.

tax-price elasticity of charitable giving based on giving reported to the IRS will overstate the true effect of the tax-price of charitable giving due to the systematic measurement error induced by endogenous reporting.

The gap between an itemizers complete (G^*) and reported giving (G^I) is potentially a particularly pernicious form of systematic measurement error. In addition to covarying with the marginal tax rate, changes in G^I due to reporting could be large relative to the overall change in G^* . If individuals choose whether to report at the donation level (i.e. an individual includes all or none of in G^I), changes in G^I in response to changes in the marginal tax rate will be lumpy. However, individuals can smoothly change their actual donations to charity. Therefore, the share of tax induced changes in G^I that are due to reporting will depend on the percent of giving that is unreported, the distribution of gifts near the reporting threshold and the true tax-price elasticity of charitable giving. The bias induced by endogenous partial reporting is potentially large.⁸

III Empirical Framework

III.I Data

It is extremely difficult to find data sources that contain both individual charitable giving and detailed personal finance data. The Panel Study of Income Dynamics (PSID) is one such study. The PSID is a nationally representative biennial panel survey that has been following 5000 families since 1969. It contains detailed information on income and family composition. In 1999, the PSID added a question about the amount of charitable giving families itemized on their tax returns. In 2001 and subsequent rounds, the PSID also added a survey of families' charitable donations by category of charitable activity. The survey asks respondents about their

⁸Alternately, one could imagine individuals' total giving (G_i^*) distributed across individual gifts with some individually selected distribution $f_i(g)$ such that $G_i^* = \int_0^\infty f_i(g)gdg$ and $G_i^I = \int_{\frac{c}{\tau_i}}^\infty f_i(g)gdg$, which results in measurement error ($G_i^* - G_i^I$) equal to $\int_0^{\frac{c}{\tau_i}} f_i(g)gdg = F_i(\frac{c}{\tau_i})$.

donations to each category of giving. Specifically, family heads were asked to list the amount they remember donating to religious organizations, “combined purpose” organizations, cultural organizations, organizations concerned with health, education, youth, the environment, the needy, international/peace, and other groups.⁹ The giving survey was administered in a completely separate portion of the PSID survey from questions about the family’s tax return and itemization behavior. Wilhelm (2006) provides a detailed description of the new module and finds that its responses are on average comparable to those in other data sources.

The PSID’s data on itemized giving are also consistent with that found in the IRS tax files. For example, the average itemizer with between \$50,000 and \$100,000 of income reports itemized contributions equivalent to 3.3% of her income compared with 2.6% of income found for this group in the IRS tax return data (Auten, Sieg, and Clotfelter (2002), p. 377). The median contribution is 1.3 percent compared with 1.4 percent in the IRS data (Auten, Sieg, and Clotfelter (2002), p. 377).¹⁰

Approximately 42 percent of the PSID’s families report itemizing on their tax returns in each of the relevant survey years. Virtually all of those reporting itemized giving also completed the separate giving survey. The average itemizer reports donating \$2,420 to charity on the giving survey and under-reports her giving on her tax return by more than \$150 (Table 1).¹¹

III.II Tax Rates

The PSID contains sufficiently detailed finance information to estimate each family’s marginal tax rate with respect to charitable giving, and to calculate the tax-price of giving, $1 - I\tau$, where

⁹The categories used in the 2000 survey differ slightly from those used in the later surveys (see the Data Appendix). The estimates presented below are based on all the giving reported by the families.

¹⁰Columns 2 and 3 in Supplementary Appendix Table S2 contain the results of logit regressions where the dependent variable is a binary variable equal to one if a family itemized positive amounts to charity and indicated positive giving on the giving survey respectively.

¹¹Summary statistics in Table 1 are based on the sample used in the estimation. Appendix Table A1 contains summary statistics for the full PSID sample. Additional summary statistics can be found in Supplementary Appendix Table S1.

I is an itemization indicator and τ is the marginal tax rate with respect to charitable giving. The rate was estimated using the NBER’s TAXSIM program.¹² Unfortunately, the PSID contains limited information on capital gains. Individuals are asked about their portfolio and profits on various investments, but not whether the gains were realized or whether realized gains were short or long terms gains. Capital gains are therefore excluded from the tax rate estimation. The tax rates estimated using TAXSIM assume that the family filled out its “optimal” tax return (the tax return that minimized its tax liability).¹³ Two separate tax prices are created and are used throughout the paper. A tax price on an additional dollar of charitable giving (τ) and a tax price on the first dollar of charitable giving (τ^{first}). The tax price of an additional dollar of charitable giving is the marginal tax rate that family’s would face if they did not itemize any charitable contributions. The tax price of the first dollar charitable giving is the tax rate associated with a family whose level of giving is zero. (See the Data Appendix for additional details).

Given the complexity of the tax code and associated transaction costs (Pitt and Slemrod (1989)), many families may not complete their tax returns optimally and may therefore believe they face a different marginal price of giving than their optimal return suggests. To the extent that either of these phenomena exist, they will add measurement error to the tax-price estimates. However, of interest in this exercise is how the tax-price elasticity estimates differ when calculated using giving reported on surveys and tax returns.

¹²The standard TAXSIM program computes marginal tax rates with respect to various types of income, but not charitable giving. Dan Feenberg generously wrote an additional program to create federal marginal tax rates with respect to charitable giving.

¹³The number of individuals in the household excluding the survey respondent and their spouse is used as a proxy for the number of dependents while the number of children under 17 residing in the household is used as a proxy for the number of dependent children claimed on the tax return. The individual with the highest earnings in the household was designated the “primary earner” even if that individual was not the head of household. Earnings of the head of household were calculated from the following variables in the PSID: ER21929 (wages), ER21933 (bonus), ER21939 (tips), ER21936 (overtime), ER21942 (commissions), ER21945 (other labor income), ER21949 (income from professional practice), and ER21966 (garden income). The analogous variables in the PSID were used to calculate the earnings of the other earner.

IV Estimation

In the 5 rounds of the PSID for which charitable giving information is available, only taxpayers who itemize receive preferential tax treatment for their charitable gifts. Studies using tax return data only have access to information about itemizers' charitable giving. In the interests of comparability, the estimations that follow will also focus on itemizers. The decision to itemize is not necessarily independent of a family's charitable donation decision. A subset of families may only find itemizing financially advantageous because of their charitable gifts. However, these marginal itemizers represent a small percentage of itemizers.¹⁴

The marginal tax rate a particular family faces on its charitable giving is potentially endogenous to the giving decision. Charitable giving is deducted from taxable income, thus the total amount of charitable giving itemized could affect a family's tax bracket. While not independent of the family's financial decisions, the first dollar tax-price is independent of the family's donation decision. Following Auerbach and Siegel (2000), the marginal tax rate (or tax-price) on the first dollar of itemized giving is therefore used to instrument the family's actual tax-price of donating an extra dollar to charity.¹⁵ Also in keeping with the literature, "virtual income" (i.e. after-tax income) is included in all of the regressions to separate the income and substitution effects of changes in the tax rates individuals face.¹⁶

Ideally one would like to be able to estimate:

$$\ln G^* = \beta_\tau^* \ln(1 - \tau) + \beta_y^* \ln y + \varepsilon$$

where, G^* is an individuals' total charitable giving, τ is the marginal tax rate of itemized giving,

¹⁴Less than 10% of those in our sample are marginal itemizers (that is, they would not find it financially advantageous to itemize if they had no charitable giving). This calculation assumes the each filer fills out their optimal tax return.

¹⁵About a quarter of the sample have different tax-prices on the first and last dollar of charitable contributions. The reduced form results can be found in the Supplementary Appendix tables.

¹⁶Virtual income is defined as a household's disposable income less any state and federal taxes. See the Data Appendix for additional details.

and y is an individual's after-tax income. β_τ^* and β_y^* are then the tax-price and income elasticities of charitable giving, respectively. However, one does not directly observe G^* . Researchers observe families' self-reports of charitable giving through surveys (G^s) or tax returns (G^I). The difficulty of accurately recalling activities done over the preceding year, along with rounding and other standard reporting issues, make it unlikely that either measure is free from error. Furthermore, survey respondents lack any legal or financial incentives to accurately report their charitable giving. families' self-reported giving is therefore likely to be some fraction, f , of total giving.¹⁷

$$G^s = f_s G^*$$

So long as f is uncorrelated with an family's tax-price of donation or her after-tax income, such error will affect the precision of the point estimates in equation 4, but will not produce bias.

$$\ln G^s = \beta_\tau^s \ln(1 - \tau) + \beta_y^s \ln y + \varepsilon \quad (4)$$

In contrast, as discussed above, the fraction of total giving reported to the IRS, f_I , is likely to be correlated with the family's marginal tax rate resulting in bias. The amount of giving on a tax return is:

$$G^I = f_I G^*$$

The relationship between G^I and the individual's tax-price of charitable giving and virtual income can be expressed as:

$$\ln G^I = \beta_\tau^I \ln(1 - \tau) + \beta_y^I \ln y + \varepsilon \quad (5)$$

β_τ^I and β_y^I provide unbiased estimates of the elasticity of non-marginal itemizers' itemized giving with respect to the marginal tax rate and after-tax income, respectively. However, they are only

¹⁷ f is only constrained to be non-negative. If individuals round their giving or exaggerate for reasons of pride it is certainly possible that f could be greater than one.

equal to β_τ^* and β_y^* if the fraction of giving itemized, f_I , is independent of τ and y .

$$\ln G^* = \beta_\tau^I \ln(1 - \tau) + \beta_y^I \ln y + v$$

with,

$$v = \ln f_I + \varepsilon$$

If $cov(f_I, \tau) \neq 0$ or $cov(f_I, y) \neq 0$ then $cov(\ln(1 - \tau), v)$ or $cov(\ln(y), v)$ will not be 0 and will bias the estimated elasticities. The covariance will determine the sign and magnitude of the resulting bias. Since the return to itemizing one's giving is increasing in the marginal tax rate faced by the family, one would expect f_I to be increasing in the marginal tax rate of giving ($\frac{\partial f_I}{\partial(1-\tau)} \leq 0$). For income, the likely sign of the bias is unclear. If those who are wealthier employ tax planners for other reasons, keep better records or simply have a better understanding of the tax code, then one might expect $cov(f_I, y) > 0$. Alternately, if utility from income is concave, wealthier individuals may place a lower value on the marginal dollars saved by itemizing their giving and a higher value on their time resulting in $cov(f_I, y) < 0$.

The availability of two measures of giving in the PSID provides a rare opportunity to test for systematic measurement error. Specifically, we can directly estimate any systematic differences in reported and itemized giving and test whether those differences are correlated with the tax-price of giving and after-tax income. If both measures suffer only from classical measurement error, then any difference in the two measures should be noise and be uncorrelated with the tax-price of giving and disposable income. If this is not the case, it will indicate that at least one of the measures (either the survey or the reports of itemized giving) contains systematic measurement error and therefore bias the estimated coefficients.

$$\ln \frac{G_I}{G_s} = (\beta_\tau^I - \beta_\tau^s) \ln(1 - \tau) + (\beta_y^I - \beta_y^s) \ln(y) + e \quad (6)$$

IV.I Results

The primary estimate of interest for this analysis is the difference in the tax-price elasticities estimated using the two available measures of charitable giving. Table 2 contains the standard price and income elasticities from equations (4) and (5) based on PSID respondents' reports of their charitable contributions.¹⁸ Throughout the remainder of this paper, all results presented are limited to itemizers that completed the giving survey and have a non-missing value for their level of itemized charitable giving. In addition, all results are weighted using the longitudinal family sample weights provided by the PSID and all standard errors are clustered at the family level. Since $\ln(0)$ is undefined, we follow the convention of the charitable giving literature and add \$1 to each respondent's level of charitable giving (both for the survey giving total and for the itemized giving total). The sample in Table 2 is further restricted to heads of households and each regression includes controls for age, marital status, sex, education, race, household members over 65 years of age, number of dependents, number of children under 17, an indicator for whether the family owns their home as well as state and year fixed effects.

Columns 1 and 4 present estimates of the tax-price elasticity of itemized and survey giving for all itemizers (regardless of whether they reported any positive charitable giving). In columns 2 and 5 the sample is further restricted to itemizers who report positive giving in the giving survey (i.e. those who one would expect to have donations to report on their tax returns). These estimates are presented solely for comparability to data used in the existing literature. The tax-price elasticities estimated using the PSID's self-reports of itemized giving are high, but within the ranges of the estimates in the literature. Since those who do not itemize receive no tax-advantage for their gifts, in columns 4 and 5, a tax price of 1 is assigned to those who failed to report their giving to the IRS and an indicator variable is included for this group.¹⁹

¹⁸The parameters in equation (6) are equivalent to the difference in the coefficients from the linear regression equations of the two measures of giving.

¹⁹This assumes that these families are forward looking and know ahead of time that they will not itemize their charitable gifts. This would be the case if either people are aware of their type (i.e. they know that they never itemize charitable giving) or they are making contributions that they know to be ineligible for itemization. The

The estimates calculated for the same tax-payers using the survey of giving are substantially and significantly smaller than the estimates calculated using itemized giving. Columns 3 and 6 further restrict the sample to those who report positive contributions on both their tax returns and the giving survey. Columns 3 and 6 represent our preferred specification. Even though the sample has been limited to those who are aware of the ability to deduct their charitable contributions and find it worthwhile to deduct at least some of their donations, the tax-price elasticity based on the giving survey is still significantly smaller in absolute value.²⁰ Even when the analysis is limited to the subset of the sample where the differences in itemized and surveyed giving are likely to be smallest, there are still large differences in the estimated elasticities. A gap of 0.2 in the estimated elasticities implies that almost 20% of the tax-price elasticity based on tax return data may be reporting. This gap expands even further when one expands the sample to all itemizers with positive survey giving (columns 2 and 5) or all itemizers including those with zero survey giving (columns 1 and 4).

These changes are not driven purely by cross-sectional variation or by families' record keeping prowess being correlated with their tax brackets. Table 3 documents changes in families' itemized and survey giving as their income and tax-prices change over time by estimating models which include family fixed effects.²¹ Even after adding fixed effects to account for the average differences in families' itemization and giving behavior, one still finds that the fraction of giving itemized by

Supplementary Appendix shows the results of Tables 2 and 3 using the unadjusted tax prices.

²⁰The difference in the tax-price elasticity in columns 3 and 6 is -0.207 and significant at the 10% level.

²¹Unlike in Table 2, the unit of analysis in Table 3 is the family unit as opposed to individual heads of households. The sample in each specification is restricted to families with at least three complete observations in the panel. Each regression in Table 3 includes controls for the race and age of the family head, changes in marital status, household members over 65 years of age, changes in number of dependents, number of children under 17, an indicator for whether the family owns their home and year fixed effects. If the previous period's marital status and number of dependents is missing, the relevant control variables are set to 0 and a dummy variable is included for this group. Less than 5 percent of this sample reports having moved to a different state between the survey rounds; therefore, state fixed effects are omitted from these specifications and an indicator for not residing in the same state is included. A minority of families have changes in composition between survey years. We therefore use dummies for changes in the number of dependents and changes in marital status in lieu of including the level. Keeping these controls as in Table 2 affects the magnitude of the elasticities with tax-price elasticities for itemized and survey giving of -0.567 (p=0.006) and -0.440 (p=0.042), respectively (Table S6, columns 3 and 6). However, the difference between the itemized and survey elasticities remains approximately 25%.

families changes as the tax-price changes over time (Table 3, columns 3 and 6).²² In addition to demonstrating that the reporting effect is robust to the inclusion of family fixed effects and not simply the result of cross-sectional differences in record keeping, a comparison of the estimates in Columns 3 and 6 (2 and 5) demonstrate that up to a quarter (half) of the intertemporal effect documented in Randolph (1995) and Auten et al (2002) may be due to reporting rather than shifting giving to high tax years. Total giving varies far less with intertemporal variation in the tax rate than estimates based on itemized charitable contributions would lead one to believe.

The discussion above focused on how the share of giving reported by families fluctuates as one varies the return to reporting one's charitable contributions to the IRS. Families choose not only how much of their giving to report to the IRS, but also how many contributions to spread their gifts across. One might expect the fraction reported to covary with the cost of reporting one's gifts to the IRS. Families who spread their charitable contributions across multiple donations have more gifts to document. Mechanically, those families also have a larger degree of freedom to vary the percent of their giving that they report to the IRS.²³ In addition, those who strategically give for tax purposes (or time their gifts to take place in high tax years) should consolidate their giving into a smaller number of gifts to facilitate reporting and minimize reporting costs. Those giving for tax purposes are presumably also likely to report more of their giving to the IRS leading the fraction of giving reported to the IRS to be negatively correlated with a family's number of charitable donations.

Ideally one would be able to directly observe families' charitable contributions at the individual donation level. That is not possible in the PSID. However, one can observe the distribution of donations across giving categories. For example, the PSID provides information on the amount

²²The elasticities presented in Table 3 differ theoretically from the uncompensated elasticities presented in Table 2 and are therefore not directly comparable. Table 3 estimates Frisch elasticities if the family fixed effects isolate transitory fluctuations. Furthermore, the fixed effects are estimated off of a relatively short panel. Furthermore, without knowledge of future values the individuals may be uncertain about the permanence of any fluctuations they experience.

²³An family who makes 1 charitable donation can report 0 or 100% of their giving to the IRS. An family that spreads their giving across two gifts could report 0, $\frac{\theta_1}{\theta_1+\theta_2}$, $\frac{\theta_2}{\theta_1+\theta_2}$, or $\frac{\theta_1+\theta_2}{\theta_1+\theta_2}$.

families contributed to religious charities, education related charities or environmental charities. In addition, the PSID also includes a category for gifts to organizations with combined purposes. While not a direct measure of the number donations a family made, the diversity of the giving portfolio (the number of categories contributed to) may be a noisy proxy for the concentration of giving. Itemizers who report charitable giving to the IRS report donating to up to 10 types of organizations (the maximum possible in the survey). Both the mean and median family that itemizes its giving report donating to approximately 3 types of charities and 90% of such families donate to 6 or fewer. In years in which families report giving to more categories they give more overall (Table 3). However, in years families report more diverse giving portfolios they report a smaller fraction of their giving to the IRS. The difference in coefficients on "Giving Categories" in columns 3 and 6 imply that spreading one's gifts to an additional giving category decreases the fraction of giving reported to the IRS by 5.2%. This is consistent with a model in which there is a unit cost to reporting gifts and families choose how much of their giving to report to the IRS, not just whether to itemize.

This analysis has primarily concerned itself with the intensive margin of charitable giving itemization with a focus on those itemizers who chose to itemize at least \$1 of charitable giving and report at least \$1 of donations on the giving survey. That is likely the policy relevant group for thinking about how reporting varies with the tax-price of giving. However, if the decision to itemize any of one's charitable giving is not independent of the tax-price one faces or one's income these are biased estimates of the average effect of marginal tax rates on itemizers' charitable contributions. Those who choose to itemize their deductions on their tax returns, but reported no charitable contributions either did not make any contributions to charity or did not find it worth their while to keep track of and report their contributions. As discussed above, since $\ln(0)$ is undefined, in order to calculate the tax-price elasticities in tables 2 and 3, \$1 was added to each respondent's level of charitable giving (both for the survey giving total and for the itemized giving total). However, piling a large percent of the data up at arbitrarily chosen points

in the lower tail of the distribution (typically \$1 or \$10) is statistically undesirable in an OLS regression. In addition, if one believes the giving survey, just under half the itemizers who failed to report any giving on their tax returns claim to have made a charitable contribution in the preceding year. While it is possible that these individuals gave small gifts and simply failed to remember them in the survey, a less restrictive assumption would be more desirable. Similar in spirit to Angrist et al’s (2006) approach to systematically missing test scores, we employ quantile regressions to incorporate the itemizers who reported no charitable contributions to the IRS into the analysis and bound the bias created by ignoring the extensive margin in the preceding analysis. We estimate regressions of the form:

$$\min_{\beta \in R} \sum_{i=1} \rho_{\theta}(y_i - \xi(x_i, \beta))$$

Where, ρ_{θ} is a “tilted” (asymmetrically weighted) absolute value function whose solution is the θ^{th} percentile. So long as those with unreported charitable contributions have true values below the quantile of interest, the actual size of their gifts is unimportant.²⁴ For example, at the 70th quantile, one need only assume that the individuals who claimed no charitable giving donated an amount below the 70th percentile of the conditional giving distribution.²⁵ The tax-price elasticity of charitable giving and reported giving were then estimated at the 40th through 90th deciles of the charitable giving distribution.²⁶ In order to account for the endogeneity of the tax-price of charitable giving discussed above, we calculate quantile instrumental variable estimates using a control function approach.²⁷

²⁴Unlike in an OLS regression or other methods that minimize a function of the magnitude of the errors, in a quantile regression one need not specify any additional beliefs about the size of the contribution.

²⁵Underlying this approach is the assumption that those who give larger gifts (and therefore get a higher return to reporting) are more likely to report their gifts on their tax returns. If, for example, one believes that the these individuals are uniformly distributed across the distribution of donors then this method would not produce consistent estimates. Although under those assumptions the traditional method of adding \$1 would also be problematic.

²⁶As one moves to higher deciles, the allowable range of contributions of the non-reporters grows and the maintained assumptions become more innocuous.

²⁷Following Lee (2007), we use a control function approach to instrument for the tax-price elasticity in the

In addition to requiring more parsimonious assumptions about the itemizers that reported no charitable giving, quantile regressions allow one to explore potential heterogeneity in the tax-price elasticity of charitable contributions. The coefficients estimated at the θ percentile are the marginal effect of the tax-price on giving for those at the θ percentile in the conditional distribution of donations. If larger than expected donations are more (or less) responsive to the tax-price of charitable contributions, that will be reflected in the coefficients as one moves across the quantiles. Table 4 contains the estimated coefficients. The sample and controls included in Table 4 are identical to those seen in columns 1 and 4 in Table 2. Regardless of the measure of giving used, all else equal the tax-price appears to have a large effect on the levels of giving and reporting at top quantiles (the point estimates are larger in absolute value at the highest quantiles). Under the additional assumption of symmetry, the conditional median is a consistent estimator of the conditional mean and therefore we can compare the estimated itemized and survey elasticities. At the median, the estimated tax-price elasticities are 20% smaller when estimated with the survey data, a difference that is extremely close to the estimates in Tables 2 and 3. If one further assumes that individuals have similar ranks in the conditional distributions of itemized and survey giving one can directly compare all of the quantile estimates across survey and itemized giving.²⁸ Figure 1 plots the difference in quantile regression estimates of the tax-price elasticity for all itemizers using respondents reports of itemized giving and surveyed giving along with the (block) bootstrapped 95 percent confidence interval for the differences in the estimates. At each estimated decile the tax-price elasticities estimated with survey giving are smaller than those based on itemized giving (although this difference ceases to be statistically significant at the lowest quantiles).²⁹ This is what one would expect if those giving unusually large gifts were

quantile regressions. The first stage utilizes an OLS regression and all of our estimates are calculated using the Stata command CQIV described in Chernozhukov, Fernandez-Val and Kowalski (2010).

²⁸If this were true, for example, those who reported more giving on their tax returns than one would predict given their observed characteristics (where observed characteristics include marginal tax rates and virtual income) would also have reported more giving on the giving survey than one would predict based on their observed characteristics.

²⁹With the exception of the 60th decile, the estimated elasticity using the survey data is at least 19% smaller than the tax-price elasticity for all itemizers using respondents reports of itemized giving. In both Table 4 and

either inter-temporally shifting the donations to high tax years or otherwise making larger than expected gifts for strategic tax purposes.

V Conclusion

The results presented above document the role endogenous reporting plays in tax return based estimates of the tax-price elasticity of charitable giving. The fraction of survey giving individuals report itemizing on their tax returns systematically varies with the tax-price of charitable giving. Specifically, itemizers increase the amount of charitable gifts they report to the IRS as their financial incentive for doing so increases. In theory, the systematic changes in reporting could be coming from either measure of giving (the itemized giving or the giving survey). However, itemized giving, unlike the survey response, is decided when the individual is filling out her tax return and has the information about her tax-price in front of her. The amount of charitable giving reported on one's tax return is more likely to be correlated with the tax price than responses to questions about giving asked outside of any tax context.³⁰ The results suggest that partial reporting leads tax-price elasticities of charitable giving estimated from both cross-sectional and panel tax return data to overestimate the responsiveness of individuals' charitable activities to the price of charitable giving by at least 20 percent. Panel data estimates suggest that a fifth of the effect currently attributed to strategic shifting of contributions to high tax years may in fact be the result of strategic reporting.

figure 1, all bootstrapped standard errors/confidence intervals are calculated by taking 200 bootstrap replications.

³⁰Individuals may be reluctant to report giving that is less than that declared on their tax returns. While such a phenomena would produce correlated measurement error, it should bias the estimates towards 0.

References

- Andreoni, James**, “Impure Altruism and Donations to Public Goods: A Theory of Warm-Glow Giving,” *The Economic Journal*, 1990, 100 (401), 464–477.
- , “Philanthropy,” *Handbook of the economics of giving, altruism and reciprocity*, 2006, 2, 1201–1269.
- Angrist, Joshua, Eric Bettinger, and Michael Kremer**, “Long-Term Consequences of Secondary School Vouchers: Evidence from Administrative Records in Colombia,” *American Economic Review*, 2006, 96, 847–862.
- Auerbach, Alan and Jonathan Siegel**, “Capital Gains Realizations of the Rich and Sophisticated,” *American Economic Review*, 2000, 90, 276–282.
- Auten, Gerald, Holger Sieg, and Charles Clotfelter**, “Charitable Giving, Income, and Taxes: An Analysis of Panel Data,” *The American Economic Review*, 2002, 92, 371–382.
- , **James Cilke, and William Randolph**, “The Effects of Tax Reforms on Charitable Contributions,” *The National Tax Journal*, 1992, 45, 267–290.
- Bakija, Jon and Bradley T Heim**, “How does charitable giving respond to incentives and income? New estimates from panel data,” in “Economic Analysis of Tax Expenditures,” *National Tax Journal*, (National Tax Association), Vol. 64, no. 2, part 2, 2011.
- Boskin, Michael and Martin Feldstein**, “Effects of the Charitable Deduction on Contributions by Low Income and Middle Income Households: Evidence From the National Survey of Philanthropy,” *The Review of Economics and Statistics*, 1977, 59 (3), 351–354.
- Bradley, Ralph, Steven Holden, and Robert McClelland**, “A Robust Estimation of the Effects of Taxation on Charitable Contributions,” *Contemporary Economic Policy*, 2005, 23, 545–554.

- Chernozhukov, Victor, Iván Fernández-Val, and Amanda E Kowalski**, “Quantile regression with censoring and endogeneity,” Technical Report, National Bureau of Economic Research 2011.
- , **Ivan Fernandez-Val, Sukjin Han, and Amanda Kowalski**, “CQIV: Stata module to perform censored quantile instrumental variables regression,” *Statistical Software Components*, 2012.
- Clotfelter, Charles and Eugene Steuerle**, *Charitable Contributions*, Brookings Institution, 1981.
- and — , *Charitable Contributions*, The Brookings Institution,
- Clotfelter, Charles T.**, *The Economics of Giving*, National Commission on Philanthropy and Civic Renewal, 1997.
- Fack, Gabrielle and Camille Landais**, “Are tax incentives for charitable giving efficient? Evidence from France,” *American Economic Journal: Economic Policy*, 2010, pp. 117–141.
- and — , “Philanthropy, Tax Policy and Tax Cheating: A Long Run Perspective on US data,” *Charitable giving and tax policy: a historical and comparative perspective*, 2012, p. 63.
- Feenberg, Daniel and Elisabeth Coutts**, “An introduction to the TAXSIM model,” *Journal of Policy Analysis and Management*, 1993, 12 (1), 189–194.
- Feldman, Naomi E**, “Time is money: Choosing between charitable activities,” *American Economic Journal: Economic Policy*, 2010, pp. 103–130.
- Feldstein, Martin**, “The Income Tax and Charitable Contributions: Part I-Aggregate and Distributional Effects,” *National Tax Journal*, 1975, 28.

- and **Amy Taylor**, “The Income Tax and Charitable Contributions,” *Econometrica*, 1976, 44 (6), 1201–1222.
- and **Charles Clotfelter**, “Tax Incentives and Charitable Contributions in the United States: A Microeconomic Analysis,” *Journal of Public Economics*, 1976, 5, 1–26.
- Karlan, Dean and John A. List**, “Does Price Matter in Charitable Giving? Evidence from a Large-Scale Natural Field Experiment,” *The American Economic Review*, 2007, 97 (5), 1774–1793.
- KFF, KSG, and NPR**, “National Survey of Americans’ Views on Taxes,” 2003.
- Lee, Sokbae**, “Endogeneity in quantile regression models: A control function approach,” *Journal of Econometrics*, 2007, 141 (2), 1131–1158.
- McClelland, Robert and Mary Kokoski**, “Econometric Issues in the Analysis of Charitable Giving,” *Public Finance Review*, 1994, 22, 498–517.
- Pitt, Mark and Joel Slemrod**, “The Compliance Cost of Itemizing Deductions: Evidence from Individual Tax Returns,” *American Economic Review*, 1989, 79, 1224–1232.
- Poterba, James**, “Tax Evasion and Capital Gains Taxation,” *The American Economic Review*, 1987, 77, 234–239.
- Randolph, William**, “Dynamic Income, Progressive Taxes, and the Timing of Charitable Contributions,” *Journal of Political Economy*, 1995, 103, 709–738.
- Ribar, David and Mark Wilhelm**, “Altruistic and Joy-of-Giving Motivations in Charitable Behavior,” *The Journal of Political Economy*, 2002, 110 (2), 425–457.

Saez, Emmanuel, Joel Slemrod, and Seth H Giertz, “The elasticity of taxable income with respect to marginal tax rates: A critical review,” *Journal of Economic Literature*, 2012, 50 (1), 3–50.

Schwartz, Robert A., “Personal Philanthropic Contributions,” *The Journal of Political Economy*, 1970, 78, 1264–1291.

Slemrod, Joel, “Are Estimated Tax Elasticities Really Just Tax Evasion Elasticities? The Case of Charitable Contributions,” *Review of Economics and Statistics*, 1989, 71, 517–522.

Wilhelm, Mark O., “New Data on Charitable Giving in the PSID,” *Economic Letters*, 2006, 92, 26–31.

Appendix A - Data Appendix

Construction of the family panel

In the period of interest the Panel Study of Income Dynamics (PSID) was a biennial longitudinal survey. Each year (or wave), the PSID collects an extensive amount of data about respondents including detailed information on income sources, employment status, education, and family composition.³¹ Appendix Table A2 contains the means and standard deviations of all of the controls used in our regression sample as well as for itemized and survey giving.

The PSID surveys both individuals and family units. The charitable giving module is administered at the family level and that is therefore the primary unit of analysis in the paper. Because the composition of family units changes over time, the PSID assigns each family a unique ID variable for each wave.³² We constructed the family panel as follows: We created a list of every family ID assigned to an individual in the 1998 to 2008 survey years using the PSID's cross-year individual file. In order to avoid double-counting families we only kept individuals that were ever listed as being the "head" of a household, resulting in a sample of 12,262. Because the PSID defines a family head as the adult who answered the survey in a given year, it is possible for a stable family unit to have different heads across survey years. In order to avoid double counting such families we kept the individual identified as the 2008 family head when two or more individuals had identical non-zero family IDs in all survey years.³³ This further reduced the sample to 11,248 observations. When individuals had identical family IDs in all years except for years in which one of the individuals did not respond to the survey, we assumed they were part of the same family unit throughout the period and once again only kept the individual identified as the head in 2008

³¹All PSID data files are available online at <http://psidonline.isr.umich.edu>. The PSID is produced and distributed by the Institute for Social Research at the University of Michigan.

³²For example, if a husband and wife were paired a family unit in 2004 and then got divorced and each remarried in 2005, the PSID would consider them two separate family units (with two distinct family ID variables) in the subsequent years.

³³An individual in the cross-year individual file is assigned a family id of 0 if the survey is not able to reach any family member that year or if an individual moves out of the house and is no longer part of the survey family.

(assuming that individual had a non-zero family ID in that year) to avoid double counting the family. This excluded an additional 800 observations. When individuals had a family ID of zero in 2008 we used the 2006 family IDs and repeated the above process, and the same thing was done for the remaining years as well. This resulted in a final sample of 10,295 individuals, each of whom corresponds to a unique family unit (or more accurately family history) used in the paper. The results presented in the paper were robust to alternative methods of isolating families such as only keeping those listed as heads of households in 2008.

Construction of Key Variables

Estimation of Marginal Tax Rates

Each individual's marginal tax rate of charitable giving was calculated using a modified version of NBER's TAXSIM program³⁴. Using the PSID data as inputs, the program calculated the federal tax rate associated with an additional dollar of charitable giving (hereafter τ^f).³⁵ The tax rate produced by our program was further modified since it did not account for either the Alternative Minimum Tax (AMT)³⁶ or the fact that some states also allow individuals to deduct charitable giving when calculating total state taxes owed.³⁷ In order to account for the AMT, we replaced τ^f with the value of the AMT if the AMT is a binding constraint for a given family. Following Feldman (2010), each state's marginal tax rate of charitable giving was calculated in TAXSIM by subtracting a family's total state tax liabilities from an additional \$10 in charitable contributions from the family's current state tax liabilities and dividing the resulting difference

³⁴Details of the TAXSIM program can be found online at <http://users.nber.org/~taxsim/>.

³⁵See Appendix Table A3 for the list of PSID variables used as TAXSIM inputs.

³⁶The AMT is the minimum federal income tax rate that all tax filers must pay on their taxable income. For example, in 2013 the AMT is 28% for families with Federal Adjusted Gross Income (AGI) in excess of \$175,000 and 26% for families with AGI less than \$175,000. A single tax filer is exempted from paying the AMT if his or her income is \$50,600 as of 2012. The corresponding exemption for married tax filers is \$78,750.

³⁷The states that currently allow tax filers to deduct charitable contributions are: AL, AZ, AR, CA, CO, DE, GA, HI, ID, IA, KS, KY, LA, ME, MD, MI, MN, MT, NE, NM, NY, NC, ND, OK, OR, RI, UT, VT, VA and WI.

by 10. Given τ^f and τ^s , the family's total marginal tax rate is given by $\tau^f + \tau^s(1 - \tau^f)$.

Construction of Virtual Income

Virtual income is defined as a household's total disposable income less any state and federal taxes owed. Disposable income is defined as the sum of a household's income from wages, dividends, pensions, social security, as well as transfers and other sources of income such as interest income, alimony, rent received, gardening income and income from trusts.³⁸ State and federal taxes were calculated using the NBER's TAXSIM program.

Total Charitable Giving (based on the PSID Giving Survey)

Starting in 2001, the PSID included a survey of families' total charitable donations broken down by category of charitable activity. The categories included in the survey are: religious organizations, "combined purpose" organizations, cultural organizations, organizations concerned with health, education, youth, the environment, the needy, international/peace, and other groups.³⁹ The giving survey was administered in a completely separate portion of the PSID survey from questions about the family's tax return and itemization behavior.

We define total charitable giving as the sum of the charitable giving in each of the giving categories. In the event that a specific category had a missing value⁴⁰, we treated the donation in that category as zero. The survey also contains a separate question that asks respondents if their total charitable giving exceeded \$25. In 287 cases, a family indicated that they gave at least \$25 to charity, but their total charitable contributions from the individual categories was equal to zero.⁴¹ These observations were subsequently dropped from the sample.

³⁸See Appendix Table A3 for the corresponding PSID variables. All variables with missing values were treated as zeros.

³⁹These categories were slightly different in the 2001 release which only has categories for religious organizations, "combined purpose" organizations, and organizations concerned with health, youth, and the needy.

⁴⁰Missing values in this case consist of responses coded as, "I don't know", "Refused or NA" or "Inappropriate".

⁴¹This is based on a sample limited to itemizers only. Using the whole sample, that number increases to 846.

Table I: Summary Statistics (Regression Sample)

	Survey			Itemized		Differences		
	All Respondents	All Itemizers	Itemized $\geq \$1$	Itemized \$0	All Itemizers	Gave $\geq \$1$ on Giving Survey	All Itemizers	Gave and Itemized $\geq \$1$
Mean	1272	2356	2642	379	2206	2442	-150	-162
Percentile								
10th	0	0	165	0	0	120	-1066	-1139
25th	0	292	427	0	242	360	-322	-365
50th	250	920	1160	0	736	912	0	-28
75th	1168	2750	3160	270	2559	2872	44	50
90th	3400	5907	6381	960	5647	6000	512	574
Observations	45043	9861	8479	1382	9861	8662	9861	8053

Notes: Column 1 contains total charitable giving reported by all PSID respondents. Columns 2 through 9 are limited to individuals included in the regressions seen in columns 1 and 4 in Table 2. "Survey" indicates the family's giving as reported in the PSID giving survey. "Itemized" denotes the giving families reported they claimed on their tax returns. "Differences" refers to the within family difference in the two measure of charitable giving (Itemized Giving - Survey Giving). The final column restricts the sample to those who claimed positive amounts of contributions on their tax returns and in the giving survey. All values are expressed in terms of 2002 dollars.

Table 2: Tax Price Elasticities

	Log Itemized Giving			Log Survey Giving		
	(1) All Itemizers	(2) Gave \geq \$1 on Giving Survey	(3) Gave \geq \$1 on Both Surveys	(4) All Itemizers	(5) Gave \geq \$1 on Giving Survey	(6) Gave \geq \$1 on Both Surveys
$\ln(1-\tau)$	-3.078*** [0.381]	-2.140*** [0.353]	-1.139*** [0.244]	-1.138*** [0.325]	-0.890*** [0.228]	-0.932*** [0.240]
$\ln(Y-T)$	0.222*** [0.056]	0.179*** [0.051]	0.151*** [0.032]	0.173*** [0.041]	0.152*** [0.029]	0.143*** [0.031]
Married	1.075*** [0.144]	0.715*** [0.120]	0.469*** [0.085]	0.651*** [0.107]	0.479*** [0.080]	0.493*** [0.086]
Num. of Dependents	-0.018 [0.060]	0.016 [0.053]	0.087** [0.035]	0.040 [0.051]	0.077** [0.034]	0.078** [0.035]
Own House	0.200 [0.151]	-0.024 [0.137]	-0.341*** [0.083]	-0.071 [0.123]	-0.267*** [0.076]	-0.297*** [0.084]
Children under 17	0.133** [0.066]	0.080 [0.059]	-0.000 [0.039]	0.056 [0.058]	0.019 [0.038]	0.018 [0.039]
Age	0.057*** [0.004]	0.046*** [0.004]	0.032*** [0.002]	0.033*** [0.004]	0.031*** [0.002]	0.032*** [0.002]
Num. over 65	-0.091 [0.089]	-0.105 [0.081]	-0.020 [0.059]	-0.044 [0.079]	-0.065 [0.057]	-0.075 [0.059]
White	0.070 [0.116]	0.131 [0.099]	0.069 [0.072]	0.107 [0.101]	0.002 [0.068]	0.023 [0.072]
Male	-0.269 [0.166]	-0.009 [0.140]	0.028 [0.097]	-0.141 [0.128]	-0.021 [0.092]	-0.007 [0.100]
College	0.806*** [0.079]	0.541*** [0.069]	0.401*** [0.048]	0.685*** [0.067]	0.374*** [0.047]	0.393*** [0.049]
Constant	-2.799*** [1.006]	-0.825 [1.026]	2.138*** [0.462]	2.057*** [0.728]	2.700*** [0.432]	2.609*** [0.453]
Observations	9861	8662	8053	9861	8662	8053
R-squared	0.235	0.182	0.218	0.384	0.242	0.206
First Stage Coefficient & Partial R-Squared on Excluded Instrument						
$\ln(1-\tau^{first})$	0.731*** [0.012]	0.698*** [0.013]	0.672*** [0.014]	0.717*** [0.012]	0.690*** [0.013]	0.672*** [0.014]
Partial R-squared	0.613	0.574	0.546	0.607	0.571	0.546

Notes: All regressions are limited to family heads that itemized, do not have missing values for their itemized charitable giving and regressions are weighted using the longitudinal family sample weights provided by the PSID. \$1 is added to each family's charitable giving to account for people that did not itemize their charitable giving or reported they gave \$0 on the giving survey. Columns 1 and 4 are limited to all itemizers. Columns 2 and 5 are estimated for those who reported positive amount of giving on the giving survey. In columns 4 and 5, a price of 1 is assigned to those who failed to report their giving to the IRS and an indicator variable is included for this group. Columns 3 and 6 are estimated for families that reported positive giving to the IRS and on the giving survey. In the bottom panel, τ^{first} is what the tax price of charitable giving would be if the family's charitable giving was zero. The first-dollar tax price is used as an instrument for the marginal after-tax price of giving the family faces. All estimates include state and year fixed effects. Standard errors clustered by family are in brackets. 1, 2 and 3 stars indicate statistical significance at the 10, 5 and 1 percent levels, respectively.

Table 3: Within Family Differences

	Log Itemized Giving			Log Survey Giving		
	(1) All Itemizers	(2) Gave > \$1 on Giving Survey	(3) Gave > \$1 on Both Surveys	(4) All Itemizers	(5) Gave > \$1 on Giving Survey	(6) Gave > \$1 on Both Surveys
$\ln(1-\tau)$	-0.757** [0.334]	-0.683** [0.306]	-0.503** [0.207]	-0.051 [0.354]	-0.365* [0.200]	-0.372* [0.217]
$\ln(Y-T)$	0.099* [0.053]	0.101** [0.050]	0.072*** [0.026]	0.069* [0.039]	0.082*** [0.023]	0.074*** [0.024]
Giving Categories	0.198*** [0.019]	0.108*** [0.017]	0.066*** [0.009]	0.438*** [0.024]	0.125*** [0.009]	0.118*** [0.009]
Observations	8364	7345	6888	8364	7345	6888
R-squared	0.110	0.076	0.085	0.270	0.138	0.112
First Stage Coefficient & Partial R-Squared on Excluded Instrument						
$\ln(1-\tau^{first})$	0.631*** [0.017]	0.599*** [0.019]	0.580*** [0.019]	0.631*** [0.017]	0.601*** [0.018]	0.580*** [0.019]
Partial R-squared	0.471	0.433	0.412	0.473	0.438	0.412

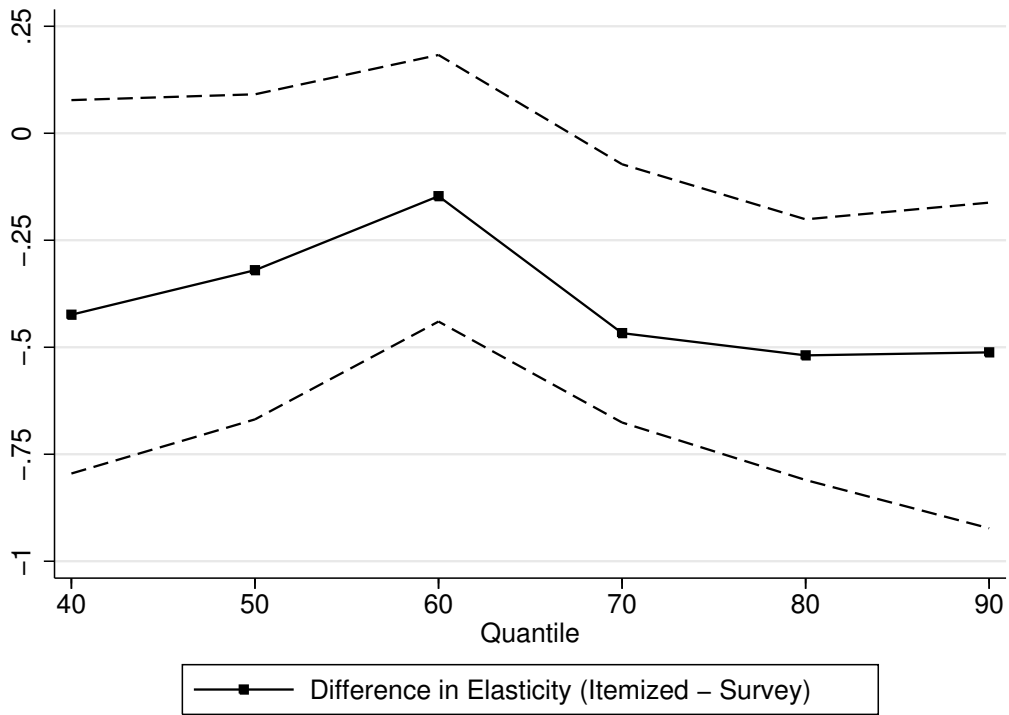
Notes: All regressions are limited to itemizers who do not have missing values for their itemized charitable giving and who have at least three non-missing observations in the given specification. All regressions are weighted using the longitudinal family sample weights provided by the PSID. \$1 is added to each family's charitable giving to account for people that itemized no charitable giving or reported they gave \$0 on the giving survey. Columns 1 and 4 include itemizers who reported charitable giving on their tax returns. Columns 2 and 5 are estimated for those who reported positive amount of giving on the giving survey. In columns 4 and 5, a price of 1 is assigned to those who failed to report their giving to the IRS and an indicator variable is included for this group. Columns 3 and 6 are estimated for families that reported positive giving to the IRS and on the giving survey. In the bottom panel, τ^{first} is the tax price of charitable giving would be if the family's charitable giving was zero. The first-dollar tax price is used as an instrument for the marginal after-tax price of giving the family faces. All estimates include controls for: race and age of the family head, changes in marital status, household members over 65 years of age, changes in number of dependents, an indicator for whether the family owns their own home, total number of children under 17 in the household and a dummy for having switched states between survey rounds. If the previous period's marital status is missing, the variable is set to 0 and a dummy variable is included for this group. All estimates include year fixed effects. Standard errors clustered by family are in brackets. 1, 2 and 3 stars indicate statistical significance at the 10, 5 and 1 percent levels, respectively.

Table 4: Quantile IV Regressions

	Q40	Q50	Q60	Q70	Q80	Q90
Panel A: Log Itemized Giving						
ln(1- τ)	-1.571*** [0.372]	-1.659*** [0.329]	-1.806*** [0.302]	-2.273*** [0.322]	-2.794*** [0.311]	-2.767*** [0.296]
ln(Y-T)	0.353*** [0.093]	0.215*** [0.062]	0.178*** [0.043]	0.122** [0.050]	0.0205 [0.042]	0.0104 [0.037]
Panel B: Log Survey Giving						
ln(1- τ)	-1.147*** [0.380]	-1.339*** [0.317]	-1.659*** [0.274]	-1.806*** [0.307]	-2.275*** [0.299]	-2.255*** [0.298]
ln(Y-T)	0.274*** [0.078]	0.191*** [0.047]	0.159*** [0.042]	0.127*** [0.048]	0.0623 [0.041]	0.0302 [0.042]
Observations	9861	9861	9861	9861	9861	9861
Difference	-0.424	-0.320	-0.147	-0.467**	-0.519***	-0.512**
P-Value	0.123	0.188	0.429	0.015	0.007	0.026

Notes: Quantile IV estimates are calculated using the uncensored option in the CQIV Stata command using a parametric version of the estimator proposed by Lee (2007) and an OLS first stage. All regressions are limited to family heads that itemized and do not have missing values for their itemized giving and regressions are weighted using the longitudinal family sample weights provided by the PSID. All estimates include controls for: state, year, age, marital status, sex, education, race of head, household members over 65 years of age, number of dependents, number of children under 17 and an indicator for whether the family owns their home. All estimates contain state and year fixed effects. The first-dollar tax price is used as an instrument for the marginal after-tax price of giving the family faces. "Difference" corresponds to the difference in the tax price elasticities (Itemized - Survey). "P-Value" corresponds to the p-value of the test of equality for the tax price elasticities (the null is that the difference is zero). Block bootstrapped standard errors clustered at the family level based on 200 draws are in brackets. The P-Value in the bottom panel is also calculated using block-bootstrapped standard errors of the difference in elasticities. 1, 2 and 3 stars indicate statistical significance at the 10, 5 and 1 percent levels, respectively.

Figure 1: Differences in Tax Price Elasticities



The dashed line represents the 95% confidence interval calculated from 200 bootstrapped draws (clustered at the family level). See the note in Table 4 for precise details of the quantile IV estimation.

Table A1: Summary Statistics (All Respondents)

	Survey				Itemized		Differences	
	All Respondents	All Itemizers	Itemized \geq \$1	Itemized \$0	All Itemizers	Gave \geq \$1 on Giving Survey	All Itemizers	Gave and Itemized \geq \$1
Mean	1272	2420	2718	408	2266	2521	-154	-162
Percentile								
10th	0	0	160	0	0	120	-1100	-1185
25th	0	287	427	0	240	365	-342	-388
50th	250	933	1196	0	750	957	0	-30
75th	1168	2800	3199	240	2562	2872	46	50
90th	3400	5935	6398	960	5743	6000	522	574
Observations	45043	14328	12244	2084	14328	12500	14328	11594

Notes: Column 1 contains total charitable giving reported by all PSID respondents. Columns 2 through 9 are limited to individuals included in the regressions seen in tables 2,3 and 4. "Survey" indicates the family's giving as reported in the PSID giving survey. "Itemized" denotes the giving families reported they claimed on their tax returns. "Differences" refers to the within family difference in the two measure of charitable giving. The final column restricts the sample to those who claimed positive amounts of contributions on their tax returns and in the giving survey. All values are expressed in terms of 2002 dollars.

Table A2: Summary Statistics for Regression Variables

	Mean	SD
Survey Giving	2355.84	4444.84
Itemized Giving	2206.06	4421.98
Virtual Income	38024.23	39025.06
$1 - \tau$	0.86	0.13
Married	0.68	0.47
Number of dependents in HH	0.85	1.12
Own House	0.90	0.31
Children under 17	0.63	1.01
Age	50.88	14.31
Number over 65 in HH	0.23	0.56
White	0.89	0.32
Male	0.82	0.39
College	0.41	0.49
Moved since last survey	0.04	0.20

The sample is based on the one seen in columns 1 and 4 in Table 2 (individuals with complete data and itemized on their tax return and identified by the PSID as being the head of a household). The total number of observations is 9,861. Total number of dependents excludes the head of the household and their spouse. All estimates are weighted using the longitudinal family sample weights provided by the PSID. “Survey giving”, “Itemized giving” and “Virtual Income” are all in 2002 dollars.

Table A3: TAXSIM and PSID Variables (Based on 2003 Variable Names)

TAXSIM Variable	Taxsim Description	Description of PSID Variable	PSID Variable Names
year	Tax year	Survey Year	21014
state	State (SOI codes. These run from 1 for Alabama to 51 for Wyoming and are not the Census or PSID codes.	FIPS code	21004
mstat	Marital Status (1. single 2. joint 3. head of household 8. Dependent taxpayer)	marital status / children	21023 / 21020
depex	Dependent Exemptions (including children)	# in family unit (ex. respondent and spouse)	21016
agex	Number of taxpayers over 65 years of age		21017, 21019
pwages	Wage and salary income of Taxpayer (include self-employment)	wages head	21929
		bonus head	21933
		tips head	21939
		overtime head	21936
		commission head	21942
		other labor income	21945
	professional income	21949, 21950, 21952-21963	
	gardening income	21966, 21967, 21969-21980	

Table A3: Continued

TAXSIM Variable	Taxsim Description	Description of PSID Variable	PSID Variable Names
swages	Wage and salary income of Spouse (include self-employment)	wages spouse bonus head tips head	22300 21933 21939
dividends	Dividend income (corporate dividends only for 2003 on) Other property income, including interest, rent, alimony, fellowships non-corporate dividends and other income or loss not otherwise enumerated here. Adjustments such as Keogh and IRA can be entered here as negative income.(+/-)	dividends head dividends spouse interest income head interest income spouse trust income head trust income spouse room and board head rent income head alimony received alimony paid other income head other income spouse	22019-22021, 22024-22035 22353, 22354, 22356-22368 22037, 22038, 22041-22052 22370-22371, 22373-22385 22054, 22055, 22057-22068 22386-22388, 22390-22401 21982- 21984, 21986-21997 22002-22004, 22007-22018 22233, 22234, 22236-22247 22548 22280-22282, 22284-22295 22515-22517, 22519-22530
pensions		VA pension head nonVA retirement head annuities head other pension head pensions/annuities spouse	22119-22121, 22123-22134 22135-22137, 22139-22150 22151-22153, 22155-22166 22168, 22169, 22171-22182 22467-22469, 22471-22482
gssi	Gross Social Security Income		24104 (20455 in wealth file for earlier years)

Table A3: Continued

TAXSIM Variable	Taxsim Description	Description of PSID Variable	PSID Variable Names
transfers	Other non-taxable transfer income such as welfare, municipal bond interest, and child support that would affect eligibility for state property tax rebates but would not be taxable at the federal level.	child support head child support spouse TANF/AFDC head TANF/AFDC spouse Supplemental SSI head Supplemental SSI spouse other welfare head other welfare spouse	22216-22218, 22220-22231 22435-22437, 22439-22450 22069-22071, 22073-22084 22419-22421, 22423-22434 22085, 22087-22088, 22090-22101 22402, 22-22405, 22407-22418 22102-22104, 22106-22117 22451-22453, 22455-22466
proptax	Property and other taxes paid (except state income)		21045
rentpaid	Rent Paid (used only for calculating state property tax rebates)		21072, 21073
otheritem	Itemized deductions other than mortgage, state income tax and local property tax. Medical expenses only include those over 3%, 5% or 7.5% of AGI (for years 60-82, 83-86 and 87+).	itemized medical exp.	22536
childcare	Child care expenses.	child care expenses	21628
ui	Unemployment compensation received	unemployment head unemployment spouse workers comp head workers comp spouse	22184-22186, 22188-22199 22303-22305, 22307-22318 22200-22202, 22204-22215 22319-22321, 22323-22334

Table A3: Continued

TAXSIM Variable	Taxsim Description	Description of PSID Variable	PSID Variable Names
depchild	Number of dependents under age 17 (for child credit, not more than item 5).	# children in hhold	21020
mortgage	Mortgage Interest and other deductions not a preference for the AMT.	first mortgage second mortgage	21051, 21055 21062, 21066
steg	Sort Term Capital Gains or losses	Not available	Not available
ltcg	Long Term Capital Gains or losses.	Not available	Not available

Notes: All PSID variable names begin with "ER" unless stated otherwise.

Supplementary Tables - Not For Publication

Table S1: Additional Summary Statistics (All Respondents)

	Survey						Differences	
	All Respondents	All Itemizers	Gave \geq \$1 on Giving Survey	Gave and Itemized \geq \$1	All Itemizers	Itemized \geq \$1	Gave and Itemized \geq \$1	Gave \geq \$1 on Giving Survey
Mean	1272	2420	2732	2854	2266	2602	2691	-211
10th	0	0	200	238	0	200	200	-1204
25th	0	287	455	480	240	400	427	-412
50th	250	933	1200	1300	750	1000	1053	-48
75th	1168	2800	3191	3373	2562	2990	3000	28
90th	3400	5935	6381	6662	5743	6000	6290	512
Observations	45043	14328	12500	11594	14328	12244	11594	12500

Notes: Column 1 contains total charitable giving reported by all PSID respondents. "Survey" indicates the family's giving as reported in the PSID giving survey. "Itemized" denotes the giving families reported they claimed on their tax returns. "Differences" refers to the within family difference in the two measure of charitable giving. The final column restricts the sample to those who claimed positive amounts of contributions on their tax returns and in the giving survey. All values are expressed in terms of 2002 dollars.

Table S2: Characteristics of Itemizers and Charitable Givers

Dependent Var.	(1) Family Itemized	(2) Itemized ≥ \$1 to Charity	(3) Gave ≥ \$1 on Giving Survey
$\ln(1-\tau^{first})$	0.004*** [0.001]	0.060*** [0.023]	0.286*** [0.136]
$\ln(Y-T)$	1.303*** [0.061]	1.153*** [0.048]	1.084* [0.049]
Married	1.996*** [0.173]	2.432*** [0.349]	1.664*** [0.240]
Num. of Dependents	0.807*** [0.038]	0.896 [0.067]	0.964 [0.084]
Own House	4.000*** [0.286]	1.336** [0.197]	1.145 [0.178]
Children under 17	1.147** [0.064]	1.161* [0.097]	1.101 [0.113]
Age	1.018*** [0.003]	1.042*** [0.005]	1.015*** [0.006]
Num. over 65	0.623*** [0.045]	0.911 [0.122]	1.032 [0.154]
White	1.582*** [0.131]	1.024 [0.137]	1.219 [0.168]
Male	0.870 [0.084]	0.736* [0.118]	0.769 [0.129]
College	1.914*** [0.122]	2.052*** [0.222]	2.393*** [0.302]
Observations	28351	9830	9832

Notes: All columns show the odds ratios from a logistic regression. Standard errors clustered by family are in brackets. All regressions are limited to family heads and regressions are weighted using the longitudinal family sample weights provided by the PSID. Columns 2 and 3 are restricted to itemizers. All estimates include state and year fixed effects. Standard errors clustered by family are in brackets. 1, 2 and 3 stars indicate statistical significance at the 10, 5 and 1 percent levels, respectively.

Table S3: Tax Price Elasticities - Reduced Form Regressions

	Log Itemized Giving			Log Survey Giving		
	(1) All Itemizers	(2) Gave > \$1 on Giving Survey	(3) Gave > \$1 on Both Surveys	(4) All Itemizers	(5) Gave > \$1 on Giving Survey	(6) Gave > \$1 on Both Surveys
$\ln(1-\tau^{first})$	-2.249*** [0.289]	-1.493*** [0.255]	-0.766*** [0.170]	-0.816*** [0.237]	-0.615*** [0.161]	-0.626*** [0.166]
$\ln(Y-T)$	0.300*** [0.053]	0.242*** [0.048]	0.187*** [0.030]	0.199*** [0.038]	0.176*** [0.027]	0.173*** [0.028]
Married	1.067*** [0.147]	0.705*** [0.123]	0.461*** [0.086]	0.649*** [0.108]	0.475*** [0.081]	0.486*** [0.087]
Own House	0.235 [0.155]	-0.005 [0.141]	-0.333*** [0.085]	-0.069 [0.124]	-0.264*** [0.078]	-0.290*** [0.086]
Children under 17	0.122* [0.068]	0.071 [0.060]	-0.006 [0.040]	0.052 [0.058]	0.015 [0.038]	0.013 [0.040]
Num. of Dependents	-0.019 [0.062]	0.016 [0.054]	0.088** [0.036]	0.041 [0.052]	0.078** [0.035]	0.079** [0.036]
Age	0.058*** [0.004]	0.046*** [0.004]	0.033*** [0.002]	0.034*** [0.004]	0.032*** [0.002]	0.032*** [0.002]
Num. over 65	-0.166* [0.090]	-0.159** [0.081]	-0.051 [0.060]	-0.071 [0.078]	-0.088 [0.057]	-0.100* [0.059]
White	0.080 [0.118]	0.140 [0.102]	0.074 [0.074]	0.110 [0.102]	0.006 [0.069]	0.027 [0.073]
Male	-0.253 [0.170]	0.004 [0.143]	0.034 [0.098]	-0.137 [0.129]	-0.018 [0.093]	-0.001 [0.101]
College	0.855*** [0.080]	0.572*** [0.070]	0.417*** [0.049]	0.700*** [0.067]	0.385*** [0.047]	0.406*** [0.049]
Constant	-3.000*** [1.042]	-1.190 [1.057]	2.030*** [0.478]	2.281*** [0.718]	2.572*** [0.435]	2.440*** [0.463]
Observations	9861	8662	8053	9861	8662	8053
R-squared	0.207	0.157	0.194	0.378	0.227	0.189

Notes: All regressions are limited to family heads that itemized, do not have missing values for their itemized charitable giving and regressions are weighted using the longitudinal family sample weights provided by the PSID. \$1 is added to each family's charitable giving to account for people that did not itemize their charitable giving or reported they gave \$0 on the giving survey. Columns 1 and 4 include itemizers who reported charitable giving on their tax returns. Columns 2 and 5 are estimated for those who reported positive amount of giving on the giving survey. In columns 4 and 5, a price of 1 is assigned to those who failed to report their giving to the IRS and an indicator variable is included for this group. Columns 3 and 6 are estimated for families that reported positive giving to the IRS and on the giving survey. All estimates include state and year fixed effects. Standard errors clustered by family are in brackets. 1, 2 and 3 stars indicate statistical significance at the 10, 5 and 1 percent levels, respectively.

Table S4: Tax Price Elasticities - Unadjusted Tax Prices

	Log Itemized Giving			Log Survey Giving		
	(1) All Itemizers	(2) Gave \geq \$1 on Giving Survey	(3) Gave \geq \$1 on Both Surveys	(4) All Itemizers	(5) Gave \geq \$1 on Giving Survey	(6) Gave \geq \$1 on Both Surveys
$\ln(1-\tau)$	-3.078*** [0.381]	-2.140*** [0.353]	-1.139*** [0.244]	-2.374*** [0.372]	-1.044*** [0.225]	-0.932*** [0.240]
$\ln(Y-T)$	0.222*** [0.056]	0.179*** [0.051]	0.151*** [0.032]	0.207*** [0.054]	0.152*** [0.030]	0.143*** [0.031]
Married	1.075*** [0.144]	0.715*** [0.120]	0.469*** [0.085]	1.029*** [0.138]	0.523*** [0.081]	0.493*** [0.086]
Num. of Dependents	-0.018 [0.060]	0.016 [0.053]	0.087** [0.035]	-0.009 [0.057]	0.069** [0.035]	0.078** [0.035]
Own House	0.200 [0.151]	-0.024 [0.137]	-0.341*** [0.083]	0.138 [0.154]	-0.240*** [0.080]	-0.297*** [0.084]
Children under 17	0.133** [0.066]	0.080 [0.059]	-0.000 [0.039]	0.133** [0.063]	0.030 [0.038]	0.018 [0.039]
Age	0.057*** [0.004]	0.046*** [0.004]	0.032*** [0.002]	0.050*** [0.004]	0.034*** [0.002]	0.032*** [0.002]
Num. over 65	-0.091 [0.089]	-0.105 [0.081]	-0.020 [0.059]	-0.100 [0.088]	-0.079 [0.058]	-0.075 [0.059]
White	0.070 [0.116]	0.131 [0.099]	0.069 [0.072]	0.099 [0.118]	0.010 [0.068]	0.023 [0.072]
Male	-0.269 [0.166]	-0.009 [0.140]	0.028 [0.097]	-0.336** [0.162]	-0.034 [0.094]	-0.007 [0.100]
College	0.806*** [0.079]	0.541*** [0.069]	0.401*** [0.048]	0.895*** [0.077]	0.394*** [0.048]	0.393*** [0.049]
Constant	-2.799*** [1.006]	-0.825 [1.026]	2.138*** [0.462]	-0.777 [0.833]	2.303*** [0.441]	2.609*** [0.453]
Observations	9861	8662	8053	9861	8662	8053
R-squared	0.236	0.184	0.210	0.199	0.214	0.199
First Stage Coefficient & Partial R-Squared on Excluded Instrument						
$\ln(1-\tau^{first})$	0.731*** [0.012]	0.698*** [0.013]	0.672*** [0.014]	0.731*** [0.012]	0.698*** [0.013]	0.672*** [0.014]
Partial R-squared	0.613	0.574	0.546	0.613	0.574	0.546

Notes: All regressions are limited to family heads that itemized, do not have missing values for their itemized charitable giving and regressions are weighted using the longitudinal family sample weights provided by the PSID. \$1 is added to each family's charitable giving to account for people that did not itemize their charitable giving or reported they gave \$0 on the giving survey. Columns 1 and 4 include itemizers who reported charitable giving on their tax returns. Columns 2 and 5 are estimated for those who reported positive amount of giving on the giving survey. Columns 3 and 6 are estimated for families that reported positive giving to the IRS and on the giving survey. In the bottom panel, τ^{first} is the tax price of charitable giving would be if the family's charitable giving was zero. The first-dollar tax price is used as an instrument for the marginal after-tax price of giving the family faces. All estimates include state and year fixed effects. Standard errors clustered by family are in brackets. 1, 2 and 3 stars indicate statistical significance at the 10, 5 and 1 percent levels, respectively.

Table S5: Within Family Differences - Reduced Form

	Log Itemized Giving			Log Survey Giving		
	(1) All Itemizers	(2) Gave > \$1 on Giving Survey	(3) Gave > \$1 on Both Surveys	(4) All Itemizers	(5) Gave > \$1 on Giving Survey	(6) Gave > \$1 on Both Surveys
$\ln(1-\tau^{first})$	-0.477** [0.212]	-0.409** [0.185]	-0.292** [0.121]	-0.032 [0.223]	-0.219* [0.120]	-0.216* [0.126]
$\ln(Y-T)$	0.123** [0.048]	0.124*** [0.045]	0.090*** [0.023]	0.071** [0.033]	0.094*** [0.020]	0.088*** [0.020]
Giving Categories	0.200*** [0.019]	0.110*** [0.017]	0.067*** [0.009]	0.438*** [0.024]	0.126*** [0.009]	0.119*** [0.009]
Observations	8364	7345	6888	8364	7345	6888
R squared	0.105	0.069	0.075	0.270	0.135	0.108

Notes: All regressions are limited to itemizers who do not have missing values for their itemized charitable giving and who have at least three non-missing observations in the given specification. All regressions are weighted using the longitudinal family sample weights provided by the PSID. \$1 is added to each family's charitable giving to account for people that itemized no charitable giving or reported they gave \$0 on the giving survey. Columns 1 and 4 include itemizers who reported charitable giving on their tax returns. Columns 2 and 5 are estimated for those who reported positive amount of giving on the giving survey. In columns 4 and 5, a price of 1 is assigned to those who failed to report their giving to the IRS and an indicator variable is included for this group. Columns 3 and 6 are estimated for families that reported positive giving to the IRS and on the giving survey. All estimates include controls for: race and age of the family head, changes in marital status, household members over 65 years of age, changes in number of dependents, an indicator for whether the family owns their own home, total number of children under 17 in the household and a dummy for having switched states between survey rounds. If the previous period's marital status is missing, the variable is set to 0 and a dummy variable is included for this group. All estimates include year fixed effects. Standard errors clustered by family are in brackets. 1, 2 and 3 stars indicate statistical significance at the 10, 5 and 1 percent levels, respectively.

Table S6: Within Family Differences - Alternate Controls

	Log Itemized Giving			Log Survey Giving		
	(1) All Itemizers	(2) Gave > \$1 on Giving Survey	(3) Gave > \$1 on Both Surveys	(4) All Itemizers	(5) Gave > \$1 on Giving Survey	(6) Gave > \$1 on Both Surveys
$\ln(1-\tau)$	-0.867*** [0.334]	-0.773** [0.305]	-0.567*** [0.207]	-0.120 [0.355]	-0.427** [0.200]	-0.440** [0.216]
$\ln(Y-T)$	0.071 [0.053]	0.076 [0.049]	0.058** [0.026]	0.057 [0.038]	0.068*** [0.023]	0.060** [0.024]
Giving Categories	0.194*** [0.019]	0.105*** [0.017]	0.064*** [0.009]	0.436*** [0.024]	0.124*** [0.009]	0.116*** [0.009]
Observations	8364	7345	6888	8364	7345	6888
R-squared	0.113	0.080	0.087	0.270	0.142	0.116
First Stage Coefficient & Partial R-Squared on Excluded Instrument						
$\ln(1-\tau^{first})$	0.629*** [0.017]	0.598*** [0.019]	0.578*** [0.020]	0.629*** [0.017]	0.599*** [0.019]	0.578*** [0.020]
Partial R-squared	0.469	0.432	0.409	0.471	0.436	0.409

Notes: All regressions are limited to itemizers who do not have missing values for their itemized charitable giving and who have at least three non-missing observations in the given specification. All regressions are weighted using the longitudinal family sample weights provided by the PSID. \$1 is added to each family's charitable giving to account for people that itemized no charitable giving or reported they gave \$0 on the giving survey. Columns 1 and 4 include itemizers who reported charitable giving on their tax returns. Columns 2 and 5 are estimated for those who reported positive amount of giving on the giving survey. In columns 4 and 5, a price of 1 is assigned to those who failed to report their giving to the IRS and an indicator variable is included for this group. Columns 3 and 6 are estimated for families that reported positive giving to the IRS and on the giving survey. In the bottom panel, τ^{first} is the tax price of charitable giving would be if the family's charitable giving was zero. The first-dollar tax price is used as an instrument for the marginal after-tax price of giving the family faces. All estimates include controls for: race and age of the family head, marital status, household members over 65 years of age, number of dependents, an indicator for whether the family owns their own home, total number of children under 17 in the household and a dummy for having switched states between survey rounds. All estimates include year fixed effects. Standard errors clustered by family are in brackets. 1, 2 and 3 stars indicate statistical significance at the 10, 5 and 1 percent levels, respectively.

Table S7: Within Family Differences - Unadjusted Tax Prices

	Log Itemized Giving			Log Survey Giving		
	(1) All Itemizers	(2) Gave > \$1 on Giving Survey	(3) Gave > \$1 on Both Surveys	(4) All Itemizers	(5) Gave > \$1 on Giving Survey	(6) Gave > \$1 on Both Surveys
$\ln(1-\tau)$	-0.757** [0.334]	-0.683** [0.306]	-0.503** [0.207]	0.102 [0.366]	-0.212 [0.204]	-0.372* [0.217]
$\ln(Y-T)$	0.099* [0.053]	0.101** [0.050]	0.072*** [0.026]	0.099** [0.042]	0.095*** [0.024]	0.074*** [0.024]
Giving Categories	0.198*** [0.019]	0.108*** [0.017]	0.066*** [0.009]	0.476*** [0.024]	0.128*** [0.009]	0.118*** [0.009]
Observations	8364	7345	6888	8364	7345	6888
R squared	0.110	0.076	0.085	0.213	0.128	0.112
First Stage Coefficient & Partial R-Squared on Excluded Instrument						
$\ln(1-\tau^{first})$	0.631*** [0.017]	0.599*** [0.019]	0.580*** [0.019]	0.631*** [0.017]	0.599*** [0.019]	0.580*** [0.019]
Partial R-squared	0.471	0.433	0.412	0.471	0.433	0.412

Notes: All regressions are limited to itemizers who do not have missing values for their itemized charitable giving and who have at least three non-missing observations in the given specification. All regressions are weighted using the longitudinal family sample weights provided by the PSID. \$1 is added to each family's charitable giving to account for people that itemized no charitable giving or reported they gave \$0 on the giving survey. Columns 1 and 4 include itemizers who reported charitable giving on their tax returns. Columns 2 and 5 are estimated for those who reported positive amount of giving on the giving survey. Columns 3 and 6 are estimated for families that reported positive giving to the IRS and on the giving survey. In the bottom panel, τ^{first} is what the tax price of charitable giving would be if the family's charitable giving was zero. The first-dollar tax price is used as an instrument for the marginal after-tax price of giving the family faces. All estimates include controls for: race and age of the family head, changes in marital status, household members over 65 years of age, changes in number of dependents, an indicator for whether the family owns their own home, total number of children under 17 in the household and a dummy for having switched states between survey rounds. If the previous period's marital status is missing, the variable is set to 0 and a dummy variable is included for this group. All estimates include year fixed effects. Standard errors clustered by family are in brackets. 1, 2 and 3 stars indicate statistical significance at the 10, 5 and 1 percent levels, respectively.

Table S8: Quantile IV Regressions - Including Itemizers with Missing Itemized Giving Values

	Q40	Q50	Q60	Q70	Q80	Q90
Panel A: Log Itemized Giving						
ln(1- τ)	-1.614*** [0.413]	-1.617*** [0.380]	-1.806*** [0.324]	-2.237*** [0.319]	-2.765*** [0.324]	-2.811*** [0.293]
ln(Y-T)	0.417*** [0.102]	0.265*** [0.083]	0.182*** [0.044]	0.123*** [0.046]	0.0411 [0.046]	0.0126 [0.041]
Panel B: Log Survey Giving						
ln(1- τ)	-1.145*** [0.380]	-1.282*** [0.318]	-1.555*** [0.249]	-1.660*** [0.301]	-2.151*** [0.302]	-2.158*** [0.294]
ln(Y-T)	0.283*** [0.086]	0.200*** [0.0485]	0.161*** [0.039]	0.132*** [0.040]	0.078* [0.041]	0.032 [0.040]
Observations	10394	10394	10394	10394	10394	10394
Difference	-0.469	-0.334	-0.252	-0.577***	-0.614***	-0.653**
P-Value	0.200	0.232	0.190	0.009	0.009	0.011

Notes: Quantile IV estimates are calculated using the CQIV Stata command using a parametric version of the estimator proposed by Lee (2007) and a OLS first stage. All regressions are limited to family heads that itemized. Regressions are weighted using the longitudinal family sample weights provided by the PSID. All individuals with a missing value for their total itemized giving have been assigned a value of \$0. All estimates include controls for: state, year, age, marital status, sex, education, race, household members over 65 years of age, number of dependents, number of children under 17 and an indicator for whether the family owns their home. All estimates contain state and year fixed effects. The first-dollar tax price is used as an instrument for the marginal after-tax price of giving the family faces. “Difference” corresponds to the difference in the tax price elasticities (Itemized - Survey). “P-Value” corresponds to the p-value of the test of equality for the tax price elasticities (the null is that the difference equals 0). Block bootstrapped standard errors clustered at the family level based on 200 draws are in brackets. The P-Value in the bottom panel is also calculated using block-bootstrapped standard errors of the difference in elasticities. 1, 2 and 3 stars indicate statistical significance at the 10, 5 and 1 percent levels, respectively.