

New Data on Charitable Giving in the *PSID*

Mark O. Wilhelm*
Department of Economics
Indiana University–Purdue University at Indianapolis (IUPUI)

Abstract. Charitable giving data from a new *Panel Study of Income Dynamics (PSID)* philanthropy module are introduced. Relative distribution methods are used to compare the data to *Internal Revenue Service (IRS)* charitable deductions. Results indicate the new data are high quality.

JEL Classification: C80, D64, H40.

Keywords: donations, contributions, relative distributions.

* Mark O. Wilhelm, Department of Economics, 425 University Boulevard, IUPUI, Indianapolis, Indiana 46202. Phone: 765-977-5221. Fax: 317-274-0097. E-mail: mowilhel@iupui.edu. I am grateful to the Center on Philanthropy Research Fund 54-921-02 for financial support and to Elliott Miller for excellent research assistance. Thanks go to Keith Hume for answering questions about *Giving and Volunteering in the U.S.*, to David Joulfaian for providing decile boundaries for itemized charitable deductions, and to Patrick Rooney, Rich Steinberg, and an anonymous referee for helpful comments. Thanks also go to the agencies that fund the *PSID* and to Atlantic Philanthropies who funded the collection of the *Center on Philanthropy Panel Study* (the name of the giving and volunteering data that are a module within the *PSID*). Full disclosure: I was a member of the team that designed the *Center Panel*. Others on the team were Patrick Rooney and Richard Steinberg (Indiana University–Purdue University at Indianapolis), Eleanor Brown (Pomona College), and Tom Gonzales, James Morgan, Robert Schoeni, and Frank Stafford (the University of Michigan Survey Research Center). However, the conclusions expressed in the paper, as well as any remaining errors, are my own.

New Data on Charitable Giving in the *PSID*

1. Introduction

There is considerable interest in the economics of charitable giving (see Clotfelter 1997 and Vesterlund 2003 for reviews), but household surveys containing giving data are rare. This has restricted empirical research. For instance, most empirical research about tax effects on giving use itemized charitable deductions from income tax data, and therefore results are restricted to tax effects on aggregate giving. A household survey can collect data permitting research about tax effects on giving to disaggregated purposes.

Although household survey data on giving are rare there have been a few surveys used in previous economic research. Most notable is the biennial survey *Giving and Volunteering in the U.S.*, used by: Andreoni, Brown and Rischall (2003), Andreoni, Gale and Scholz (1996), Clotfelter (1997), and the Council of Economic Advisors (2000). *Giving and Volunteering* is also a national standard, having been incorporated into the *Statistical Abstract* (U.S. Census Bureau 2001–Table 560).

This paper introduces new survey data on giving from the 2001 wave of the *Center on Philanthropy Panel Study*, a module within the *PSID*. The data describe giving toward purposes disaggregated according to their policy and social relevance: poverty relief, education, religion, health, combined funds (e.g., United Way), youth and family services, the arts, neighborhood improvement, the environment, international aid, and open-ended purposes. The quality of the giving data may be superior to that collected in other household surveys because of the *PSID* staff's experience in collecting a wide range of information measured in dollars and, perhaps more importantly, the respondents' experience in providing dollar information to the *PSID*.

Quality issues of concern to those designing giving surveys are social desirability and recall difficulty. Although social desirability may lead to some overreporting of donations, most survey researchers think that recall difficulty presents a more serious problem (e.g., see Hall 2001). Also, to the extent that financial incentives to overreport giving on tax returns are stronger than social incentives to make desirable responses to an unknown interviewer, Slemrod's (1989) finding that overreported giving on tax returns is only 7.2 percent sets an upper bound to social desirability effects.

Recalling giving can be difficult because charitable donations often are not salient events. Giving surveys may therefore produce unacceptable levels of item non-response (missing data) because respondents become frustrated trying to remember non-salient events. Similarly, amounts respondents do report to interviewers may be less than amounts reported as tax deductions because when reporting deductions there is a financial incentive to remember and document. Quality along these two dimensions—missing data and amounts reported to interviewers relative to *IRS* charitable deductions deciles—will be evaluated for the giving data from the *Center Panel* and *Giving and Volunteering* surveys.¹ When comparing amounts reported to interviewers to *IRS* charitable deductions deciles, I use *Center Panel* and *Giving and Volunteering* respondents who itemize deductions because there is no point in comparing non-itemizers to the *IRS* data.

2. Methods and Data Handling

I compare amounts reported to survey interviewers to charitable deductions data using relative distribution methods (Handcock and Morris 1999), methods not widely-known among economists. To provide an intuitive illustration: the histogram of the *Center Panel* giving data

relative to *IRS* charitable deductions is formed by placing the *Center Panel* data into histogram bins whose boundaries are the deciles of the charitable deduction distribution. If the underlying distributions are the same then aside from sampling variation the relative histogram will be uniform. Departures from uniform provide an easily interpretable, visual description of the differences between the two distributions.

A test that the *Center Panel* giving distribution equals the charitable deductions distribution is conducted by testing the uniformity of the relative distribution $G(r) = F(Y \leq y_r)$, where Y is a random variable representing giving in the *Center Panel* and y_r is the r -th decile of charitable deductions. The null hypothesis of equality at a k -vector of percentiles γ is $H_0: \mathbf{G}(\gamma) = \gamma$, where $\mathbf{G}(\gamma)$ represents a k -vector whose i -th element is $G(\gamma_i)$. The test statistic $(\mathbf{G}(\gamma) - \gamma)' \Sigma^{-1} (\mathbf{G}(\gamma) - \gamma)$ is asymptotically chi-square with k degrees of freedom under the null. The i, j th element of the covariance matrix Σ is: $m^{-1} G(\gamma_i) (1 - G(\gamma_j))$ where γ_i and γ_j are the i -th and j -th elements of γ and m is the number of observations from the *Center Panel* (see Handcock and Morris Chapter 2 and pp. 122-123 for further details).

Data from *Giving and Volunteering* are used only from respondents who are household heads or spouses of heads (89 percent of the total sample; final $n = 2,424$). Statistics from *Giving and Volunteering* are calculated using survey weights because high-income geographical areas were over-sampled; the *Center Panel* is unweighted because I use only the *PSID*'s nationally representative sample ($n = 4,887$). The 1995 data from *Giving and Volunteering* are scaled to 2000 dollars using average household nominal income growth to account for inflation and real income growth (the scale factor is 1.27). The wave 2001 *Center Panel* describes giving in calendar year 2000; these data and the year 2000 *IRS* deciles are in 2000 dollars.

3. Results

Thirty-five percent of the *Giving and Volunteering* respondents have missing data in one or more of the questions about giving toward disaggregated purposes. In contrast, only one percent of the *Center Panel* respondents have any missing giving data. One way to assess the effect of missing data is to calculate lower and upper bounds on percentiles due to the missing data (Manski 1995). For example: among respondents who are donors, the lower and upper bounds on the median donation in *Giving and Volunteering* are \$508 and indeterminate (the upper bound is indeterminate because just over one-half of the donors have missing amount data). The scarce missing data in the *Center Panel* produces a much narrower lower-to-upper-bound interval: \$750 to \$800.

Figures 1 and 2 present the histograms of the *Center Panel* and *Giving and Volunteering* relative to *IRS* charitable deductions. The relative histograms use data only from respondents who donate (the percentage who donate in each survey is very close: 69 and 70 percent) and who itemize deductions; the resulting sample sizes are 1,920 and 783. Distributions from the *Center Panel* and *Giving and Volunteering* are lower bound distributions: missing amounts are set to zero. Setting missings to zero is common in charitable giving research, but for those interested in an alternative imputation the present examination of lower bound distributions serves as a benchmark.

The relative distribution in Figure 1 appears fairly uniform, suggesting that the *Center Panel* distribution of giving and the *IRS* distribution of charitable deductions are very similar. However, the distributions do have some differences that are easily discernable from the figure: the distribution of giving in the *Center Panel* contains somewhat more gifts at the bottom of the distribution than in the *IRS* data (e.g., 12 percent of the *Center Panel* gifts fall within the first *IRS*

decile), similar numbers of gifts in the middle and top parts of the distribution (28 percent of the *Center Panel* gifts fall within the top three *IRS* deciles), but somewhat fewer gifts in the very top decile (eight percent). Table 1, column 1 presents tests of the differences at each decile: the differences are statistically significant in the lower half of the distribution, not significant at the 60th, 70th, and 80th percentiles, and again significant at the 90th percentile.

In contrast, the relative distribution of *Giving and Volunteering* to the *IRS* data in Figure 2 is noticeably more left-skewed: almost 20 percent of the *Giving and Volunteering* gifts fall within the first *IRS* decile and only 18 percent of the gifts fall in the top three *IRS* deciles. Table 1, column 2 indicates that all differences are statistically significant with very large test statistics.

4. Discussion and Conclusions

The paper finds that item non-response can be a serious problem in survey data on giving, but it is scarce in the *Center Panel*. Relative distribution methods indicate that the empirical distribution of giving from the *Center Panel* matches the distribution of charitable deductions fairly well, and much better than *Giving and Volunteering*.

The results are consistent with recall difficulty, rather than social desirability, being the more serious problem in querying respondents about giving. Recall difficulty, but not social desirability, can explain the extensive item non-response in *Giving and Volunteering*. The relative distribution results showing lower giving reported to *Giving and Volunteering* cannot rule out the existence of social desirability but do suggest that recall difficulty is the stronger force.

An alternative explanation to recall difficulty as to why the *Center Panel* has somewhat fewer gifts in the top deductions decile is the low probability of selecting big givers in any

random sample taken without a high-income oversample. Supporting this explanation is evidence (available upon request) that the *Center Panel* and the 1974 *National Study of Philanthropy* are indistinguishable through the 92nd percentile. The main difference between the two surveys is that the *National Study* obtained an IRS-generated high-income oversample.

Regardless of the explanation, the results suggest that researchers using giving data from surveys consider how the difficulty in measuring giving at the very top of distribution might affect their results. With this caution in mind, the results indicate that the *Center Panel* does a fairly good job in producing a giving distribution similar to tax data. Based on its quality along this dimension, as well as its scarce missing data, the *Center Panel* offers a useful tool for empirical research in the economics of giving.

Finally, the *Center Panel* questions asking about giving to youth and family services, the arts, neighborhood improvement, the environment, international aid, and open-ended purposes changed from the 2001 to the 2003 wave: in 2001 the combined amount given to all six purposes was queried using one question, but in 2003 the amount given to each separate purpose was queried with six separate questions. Because this change likely resulted in an improvement in respondent recall I conjecture that the quality of the 2003 data would be as good, if not slightly better than, the quality of the 2001 data. Nevertheless, researchers should be aware of the question change when analyzing giving to these six purposes across the 2001 and 2003 waves.

Endnote

1. When fielded by the same survey research organization the questionnaires used in the *Center Panel* and *Giving and Volunteering* produce similar giving data (Rooney et al. 2005). The present paper compares the data collected by the separate organizations that field the *Center Panel* and *Giving and Volunteering*, and (in the *Center Panel*) collected from experienced *PSID* respondents.

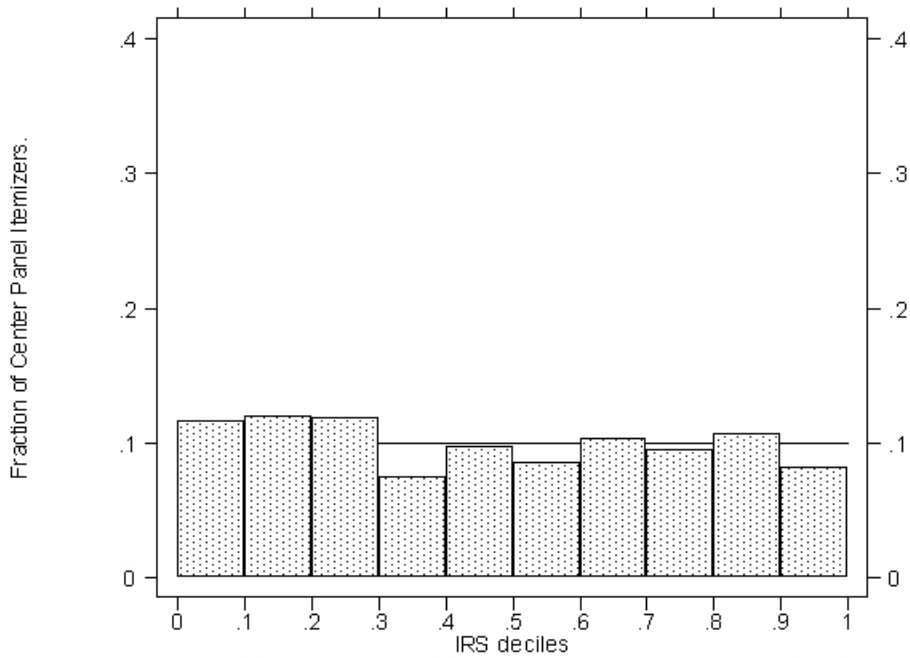


Figure 1. Center Panel Itemizers Relative to the IRS.

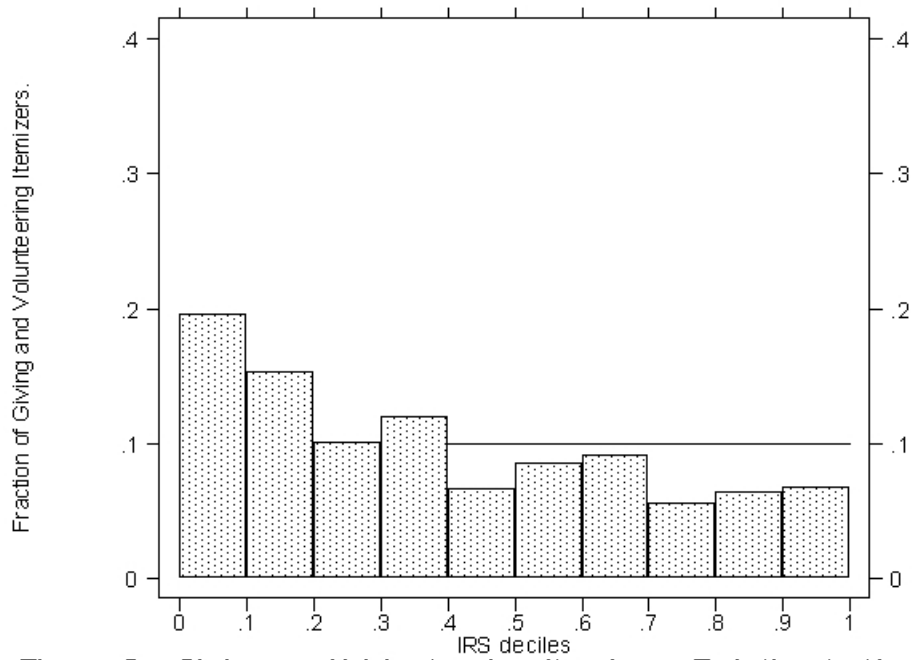


Figure 2. Giving and Volunteering Itemizers Relative to the IRS.

Table 1. Tests of Equality of Distributions of Giving from Surveys with the Distribution of Itemized Charitable Deductions from Tax Returns.

Percentile	<i>Center Panel</i>	<i>Giving and Volunteering</i>
10 th	4.9 (.03)	37.8 (.00)
20 th	13.8 (.00)	70.1 (.00)
30 th	25.1 (.00)	54.6 (.00)
40 th	6.7 (.01)	73.7 (.00)
50 th	5.4 (.01)	60.8 (.00)
60 th	1.3 (.26)	46.2 (.00)
70 th	2.5 (.12)	27.4 (.00)
80 th	1.4 (.24)	37.6 (.00)
90 th	7.5 (.01)	14.6 (.00)
<i>n</i>	1,920	783

Notes: The table presents chi-square test statistics (p-values in parentheses) for the hypothesis that a percentile of the giving distribution from the *Center Panel* (column 1) is equal to the percentile of the distribution of itemized charitable deductions. Test statistics for equality of percentiles from the *Giving and Volunteering* and itemized charitable deductions distributions are in column 2. The *Center Panel* and *Giving and Volunteering* distributions contain only those respondents who itemized deductions and who made charitable gifts.

References

- Andreoni, James, Eleanor Brown and Isaac Rischall. 2003. "Charitable Giving by Married Couples: Who Decides and Why Does It Matter?" *Journal of Human Resources* 38(1): 111-133.
- Andreoni, James, William G. Gale and John Karl Scholtz. 1996. "Charitable Contributions of Time and Money." Mimeo, University of Wisconsin-Madison.
- Center on Philanthropy Panel Study. 2001. In the *Panel Study of Income Dynamics Wave XXXII* Computer File. Ann Arbor, MI: ICPSR
See <http://www.philanthropy.iupui.edu/COPPS.html>
- Clotfelter, Charles T. 1997. "The Economics of Giving." In John W. Barry and Bruno V. Manno (eds.), *Giving Better, Giving Smarter: Working Papers of the National Commission of Philanthropy and Civic Renewal*. Washington, DC: National Commission on Philanthropy and Civic Renewal.
- Council of Economic Advisors. 2000. "Philanthropy in the American Economy." Mimeo, Council of Economic Advisors.
- Hall, Michael. 2001. "Measurement Issues in Surveys of Giving and Volunteering and Strategies Applied in the Design of Canada's National Survey of Giving, Volunteering and Participating." *Nonprofit and Voluntary Sector Quarterly* 30 (3): 515-526.
- Handcock, Mark S. and Martina Morris. 1999. *Relative Distribution Methods in the Social Sciences*. New York: Springer-Verlag.
- Manski, Charles F. 1995. *Identification Problems in the Social Sciences*. Cambridge: Harvard University Press.
- Rooney, Patrick M., Debra J. Mesch, William Chin and Kathryn S. Steinberg. 2005. "The Effects of Race, Gender, and Survey Methodologies on Giving in the US." *Economics Letters* 86: 173-180.
- Slemrod, Joel. 1989. "Are Estimated Tax Elasticities Really Just Tax Evasion Elasticities? The Case of Charitable Contributions." *Review of Economics and Statistics* 71(3): 517-522.
- U.S. Census Bureau. 2001. *Statistical Abstract of the United States, 2001*. Washington, D.C.: U.S. Government Printing Office.
- Vesterlund, Lise. 2003. "Why Do People Give?" Mimeo, University of Pittsburgh. Forthcoming in R. Steinberg and W.W. Powell (eds.) *The Nonprofit Sector: A Research Handbook*. New Haven: Yale University Press.