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ARE ESTIMATED TAX ELASTICITIES REALLY JUST
TAX EVASION ELASTICITIES?
THE CASE OF CHARITABLE CONTRIBUTIONS

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ABSTRACT

Tax return data, which has been a principal source for econometric investigations of the behavioral response to tax policy, is subject to misreporting that may bias estimates of tax responsiveness. The misreporting arises because understatement of taxable income may itself be a function of an individual's marginal tax rate, it being the return to a dollar of understated taxable income. To the extent that misreporting of income and deductions is a function of the same factors that determine the behavior under study, estimated relationships based on reported data will reveal a composite of the tax (and income) responsiveness of the actual behavior and of the misreporting of the behavior.

This paper used data from tax returns that have been subject to intensive audits to confront the quantitative importance of misreporting for the estimated tax responsiveness of charitable contributions. This has been the subject of numerous empirical studies using tax return data which use a common empirical framework. It concludes that the tax responsiveness of charitable giving that has been detected using tax return data cannot be ascribed to the tax responsiveness of overstating actual giving. In fact, overstatement is apparently less price responsive than actual giving, implying that the responsiveness of actual giving is higher than is suggested by studying reported contributions.

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1. Introduction

Cross-section data from tax returns has been a principal source for econometric investigations of the behavioral response to tax policy. Although all data is subject to error, there is special reason to suspect that tax return data is subject to misreporting that may bias estimates of tax responsiveness based on cross-sectional variation. The special reason is, of course, that understatement of taxable income reduces tax liability, and the incentive to understate taxable income may itself be a function of an individual's marginal tax rate, it being the return to a dollar of understated taxable income. To the extent that misreporting of income is a function of the same factors that determine the behavior under study, estimated relationships based on reported data will reveal a composite of the tax (and income) responsiveness of the actual behavior and of the misreporting of the behavior.

Although this issue has been recognized in the literature,¹ there has been no systematic attempt to assess its quantitative importance. This paper uses data from tax returns that have been subject to intensive audits to confront this issue. The tax responsiveness of charitable contributions is a natural

¹ Clotfelter and Steuerle (1981), after noting the relative advantage of tax return data over survey data (including the belief that charitable contributions are reported more accurately on tax returns, primarily because the taxpayer is required to keep some records for tax purposes), note:

"Contributions, of course, may be overstated by taxpayers. Furthermore, the incentive to overstate contributions is proportional to the marginal tax rate, making it virtually impossible to separate the true incentive effect on contributions from any systematic overstatement effect." (p. 424)

issue to investigate in this context because it has been the subject of numerous empirical studies using tax return data² which use a common empirical framework. In addition, evidence to be discussed below indicates that overstatement of charitable contributions is a quantitatively significant phenomenon.

2. Motivation

Most empirical studies of charitable contributions assume that the underlying demand may be expressed as a constant-elasticity function of the after-tax price of making a contribution (P), income (Y), and other factors. Subsuming factors other than price and income into a constant term, this relationship can be written as

$$(1) \quad C_R = \alpha_R P^{S_R} Y^{Y_R},$$

where the subscripts R are meant to stand for the amount reported on unaudited tax returns. The after-tax price of making a one dollar contribution is equal to one for taxpayers who do not itemize deductions, and is equal to $1-t$, where t is the marginal tax rate, for taxpayers who do itemize deductions.

Now suppose that reported contributions are the sum of two components, actual contributions and overstated contributions, so that $C_R = C_A + C_E$, where C_A is actual contributions and C_E is overstated contributions. Further suppose that overstated contributions are also a constant elasticity function of Y and P, so that

$$(2) \quad C_E = \alpha_E P^{B_E} Y^{Y_E}.$$

²An excellent survey of this literature is contained in Clotfelter and Steuerle (1981).

Here, P should be interpreted as one minus the return to successfully overstating charitable deductions by one dollar, also equal to $1-t$.

Combining (1) and (2), we see that

$$(3) \quad C_A = C_R - C_E = \alpha_R P^{\beta_R} Y_R - \alpha_E P^{\beta_E} Y_E .$$

The relationship between the price elasticity of reported charitable contributions, equal to β_R , and the price elasticity of actual contributions, β_A , can be calculated from (3) to be

$$(4) \quad \beta_A = \frac{\beta_R C_R - \beta_E C_E}{C_A} .$$

The ratio of the price elasticity of actual contributions to the price elasticity of reported contributions can also be written, using the fact that $C_R = C_A + C_E$, as

$$(5) \quad \frac{\beta_A}{\beta_R} = 1 + \left(\frac{\beta_R - \beta_E}{\beta_R} \right) \left(\frac{C_E}{C_A} \right) .$$

Expression (5) indicates that the absolute value of β_A will be less than $|\beta_R|$ as long as $|\beta_E| > |\beta_R|$. Here and below we assume that β_E and β_R are less than zero. The degree by which β_R will misrepresent β_A depends on both the divergence of β_E and β_R and the relative magnitude of overstated contributions compared to actual contributions.

Ignoring the distinction between reported and actual charitable contributions may also bias estimates of the responsiveness of reported contributions, which are important in their own right because it is the response of reported and not actual contributions that determines the revenue implications of changes

in the tax treatment of charitable contributions.³ For example, one criterion for judging the appropriateness of allowing a deduction for charitable contributions is whether the increase in contributions is greater than the loss in government revenues from the policy. The standard reasoning that ignores misreporting finds that this occurs if the price elasticity of contributions (assumed to be constant) is greater than one in absolute value, or if $|\beta| > 1$. When the possibility of overreporting is considered, the condition becomes

$$(6) \quad |\beta_R| > 1 + s|\beta_E| \quad s = \frac{C_E}{(1-t)C_R}.$$

According to (6), if there is any price responsiveness of overstatement, a value of $|\beta_R|$ higher than one is required for the increase in contributions to exceed the revenue cost. Furthermore, the estimate of β_R remains a critical factor in the determination of the effectiveness of the deduction. If estimates of β_R based on tax return data are too high, then this criterion of effectiveness may be accepted when it in fact does not hold.

The goal of what follows is to assess the quantitative significance of recognizing the difference between reported and actual contributions. A theoretical framework for this investigation is presented next.

3. A Simple Model of Individual Behavior

Assume that the representative individual derives utility from two goods, a composite good and actual charitable contributions (C_A), which must be financed from an exogenous level of income, Y . The individual must make three decisions--what level of C_A to choose, what level of contributions to report

³This statement, and the condition derived below, do not consider the revenue obtained from fines and assessments, which is small relative to total revenue collected.

to the tax authorities (C_R), and what level of non-charity income understate-
ment to attempt (G). There is a probability p that the individual's tax return
will be audited, in which case all evasion is uncovered. Detected evasion is
subject to a fine, denoted F , which depends on the amount of income understate-
ment. The probability of detection is presumed to be positively related to the
amount of charity evasion that is attempted and on the amount of non-charity
evasion. The precise relationship between evasion and p may involve C_A , for
reasons discussed below, and other factors, represented by Z . This maximiza-
tion problem can be written as

$$(7) \quad \underset{C_R, G, C_A}{\text{Maximize}} [1-p(C_R, C_A, G, Z)]U[Y-t(Y-G-C_R)-C_A, C_A] + \\ p(C_R, C_A, G, Z)U[Y-t(Y-C_A)-C_A-F(G+C_R-C_A), C_A]$$

subject to $C_A, C_R > 0$.

Expression (7) presumes a proportional income tax system where actual charit-
able contributions are fully deductible, and recognizes no difference between
real income and taxable income, except that contributions are a deductible item.

Assuming that the inequality constraints are not binding, the first-order
conditions for C_R , G , and C_A are, respectively,

$$(8) \quad (1-p) tU_1^n - pF' U_1^d - pR'(U^n-U^d) = 0,$$

$$(9) \quad (1-p)tU_1^n - pF'U_1^d - p_G'(U^n-U^d) = 0$$

and

$$(10) \quad (1-p)[-U_1^n(1-t)+U_2^n] + p[-U_1^d(1-t) + U_2^d] - p_A'(U^n-U^d) = 0$$

where superscripts n and d refer to utility (marginal or total) evaluated at
the levels appropriate to the state of the world in which the taxpayer is not

audited and audited, respectively, and p'_R , p'_G , and p'_A are $\partial p/\partial C_R$, $\partial p/\partial G$, and $\partial p/\partial C_A$, respectively. F' is $\partial F/\partial(G+C_R - C_A)$.

Note that the first-order condition for C_R is no different from the one that would apply if the problem was posed as a choice of C_E instead of C_R ; that is, given C_A the choice of C_R is equivalent to choosing C_E . Expression (8) indicates that a lower probability of detection and a higher marginal tax rate⁴ make the expected payoff from charity overstatement higher. A higher value of $U^a - U^d$, the utility cost of detection, lowers the expected payoff from charity overstatement, ceteris paribus. The utility cost of detection depends positively on the total amount of evasion attempted, the fine rate, and the degree of risk aversion. A higher value of $|p'_R|$, which may depend on actual contributions and non-charity evasion, also reduces the attractiveness of charity overstatement.

The first-order condition for non-charity evasion is of similar form to the condition for charity reporting (overstatement), except that p'_R is replaced by p'_G . This implies that the mix of evasion attempted will depend on the relative impact on the likelihood of detection of charity overstatement versus non-charity evasion. This will vary depending on the opportunities for evasion available to the individual and, in a more general model, the resources expended to camouflage the evasion so as to escape detection.

Note that, although total evasion will never be negative, either C_E or G may be negative. To see this, consider a taxpayer who has an excellent

⁴Although note that if the penalty for evasion is a fixed percentage of tax liability understated, as is often the case in the U.S., a change in the marginal tax rate affects the return to successful evasion proportionally to the cost of unsuccessful evasion. As Yitzhaki (1974) has argued, this implies that when p is fixed a change in t causes no substitution effect. In this model where p depends on C_R and G , a change in t would in general change the form of (8) and (9).

opportunity ($|p_G|$ is low) to do a large amount of non-charity evasion. Thus the utility cost of detection, $U^n - U^d$, is high. As long as p'_R is positive, it may be optimal to understate charitable contributions so as to reduce the probability of an audit that would uncover the non-charity evasion.⁵

Now consider the first-order condition for actual contributions, expression (10). Ignoring the final term on the left-hand side, this is a slightly modified version of the standard first-order condition for desired charitable contributions, stating that the ratio of expected marginal utility from the composite good and charitable contributions should equal their relative price, $1-t$. The extent that the amount of actual contributions influences the probability of detection (p'_A) also enters the first-order condition. This may be important in the case of overvaluation of noncash contributions, where the existence of some actual contributions may facilitate the act of overstatement ($p_A < 0$). Thus, an individual who is inclined to evade taxes by overstating charitable deductions may also do more actual contributions than otherwise.⁶

4. Description of Data

The data used in this study were collected by the Internal Revenue Service as part of their Taxpayer Compliance Measurement Program (TCMP). The data contains information about the tax return filed and the result of an intensive audit of a stratified⁷ random sample of the taxpaying population in 1982. For

⁵ It is assumed that, upon audit, the understatement of charitable contributions will be revealed and rectified.

⁶ Pitt (1981) has studied this phenomenon in connection with smuggling, where legal imports facilitate underinvoicing, allowing other imports to escape input tariffs.

⁷ Returns are randomly selected within each of twelve examination classes.

each line on the tax return, the data contains the figure reported by the taxpayer and the amount deemed by the auditor to be "correct."⁸

According to the IRS Manual, an auditor may adjust the amount reported for the deduction for charitable contributions for any of twenty-six different reasons.⁹ For example, the auditor may judge that some or all of the reported contributions were not actually made, that some donated property was overvalued by the contributor, or that the recipient was not a qualified charitable organization. It is also possible that the auditor may disallow the deduction for some contributions that were actually made because of inadequate documentation. Because of this possibility and more generally because the auditing process is an imperfect one,¹⁰ there is no presumption that the auditor-adjusted figure for charitable contributions represents the actual value of contributions. Nor should it be assumed that the difference between reported contributions and auditor-adjusted contributions represents willful tax evasion.

Table 1 presents some summary statistics from the 1982 TCMP about reported charitable contributions and auditor-adjusted charitable contributions by income class. In addition, the ratio of the difference between reported and auditor-adjusted contributions to reported amounts is given, both including and not including upward adjustments to the reported amount. Table 1 indicates that total downward adjustments in reported charitable contributions amounted

⁸The micro-unit data from the 1969 TCMP survey has been used by Clotfelter (1983) in a study of the effect of tax rates on the extent of tax evasion, and TCMP data aggregated by zip code has been used by Witte and Woodward (1985) and Dubin and Wilde (1986) to study the determinants of taxpayer noncompliance.

⁹Information about the reason given by the auditor for adjusting a given reported contribution was not available for this study.

¹⁰Alexander and Feinstein (1986) control for differential auditor effectiveness in their study of the determinants of tax evasion.

to 8.9% of reported contributions. This is offset by upward adjustments of 1.7% of reported contributions, so that the net adjustment is 7.2% downward. The other important aspect of Table 1 is that the relative extent of downward adjustment is, for the most part, sharply decreasing with income. The downward adjustments amount to more than 10% of reported contributions for taxpayers with income between \$20,000 and \$50,000, between 4% and 10% for taxpayers with income between \$50,000 and \$1,000,000 and is only 1.1% for taxpayers with income over \$1,000,000. Ignoring variations in the price of giving, this finding suggests that the income elasticity of reported contributions understates the income elasticity of auditor-adjusted contributions. Because the price of giving tends to decrease with higher income, the data suggests that the sum of the income elasticity and the (absolute value) of the price elasticity is higher for auditor-adjusted contributions than for reported contributions.

5. Empirical Models and Results

As a first step I attempt to replicate the standard log linear ordinary least-squares regression analysis of charitable contributions using reported data. Because the focus of this study is the empirical importance of noncompliance on standard estimation results, I will not discuss in detail alternatives to the standard econometric approach of which Clotfelter and Steuerle (1981) is an excellent example.¹¹

Following Clotfelter and Steuerle, the dependent variable is $\ln(C + 10)$. The first independent variable is the natural logarithm of the after-tax price of one dollar of contribution (LNP), equal to one minus the marginal federal

¹¹ See Reece and Zieschang (1985) for an econometric technique that takes into account the progressive step function nature of the marginal price of contributions.

TABLE 1

Summary Statistics on Reported and Auditor-Adjusted Contributions, by Income Class, 1982.*

Adjusted Gross Income** Class	Number of Returns with Reported Contributions (millions)	Fraction of Returns with Adjustment	Fraction of Returns with Downward Adjustment	Total Reported Contributions (\$billion)	Total Auditor-Adjusted Contributions (\$billion)	Ratio of Total Adjustments to Total Reported Contributions	Ratio of Total Downward Adjustments to Total Reported Contributions
Under 10,000	1.34	.24	.15	0.83	0.83	-.004	.083
10,000-20,000	4.93	.30	.22	3.67	3.47	.053	.076
20,000-30,000	7.83	.38	.29	5.93	5.11	.088	.106
30,000-40,000	6.76	.39	.29	5.96	5.36	.101	.117
40,000-50,000	3.83	.39	.29	4.11	3.75	.090	.105
50,000-75,000	2.76	.37	.28	4.19	3.90	.068	.079
75,000-100,000	0.63	.33	.22	1.58	1.48	.066	.067
100,000-200,000	0.54	.34	.23	2.24	2.15	.041	.053
200,000-500,000	0.13	.33	.22	1.50	1.44	.042	.047
500,000-1,000,000	0.017	.31	.22	0.56	0.53	.058	.059
Over 1,000,000	0.0073	.18	.13	0.67	0.66	.011	.011
TOTAL	28.8	.36	.27	31.2	29.0	.072	.089

*Figures do not include reported contributions of itemizing taxpayers who, upon audit, were deemed not to have enough deductions to qualify for itemization.

**Returns as classified by reported adjusted gross income.

tax rate on the first dollar of charitable contribution.¹² A standard correction for the tax advantage of giving appreciated assets is taken.¹³ The second independent variable (LNY) is the natural logarithm of adjusted gross income plus IRA contributions minus the taxes that would be due in the absence of charitable contributions.¹⁴ The other three independent variables are dummy variables for the demographic indicators available in the data set: marital status (MAR), the presence of any over-65 exemptions (AGE), and the presence of dependent children (DEP). In order to minimize sample selection bias, the sample is restricted to include only those households who would have itemized deductions even in the absence of any charitable contributions.¹⁵

In the absence of evasion, this equation can be interpreted as a structural equation relating the demand for charitable contributions to characteristics of the taxpayer's environment and preferences. When evasion is considered, a structural equation explaining reported (actual) contributions would include as explanatory variables actual (reported) contributions and non-charity evasion. The first four equations estimated in this paper are thus

¹²The marginal federal tax rate is calculated by applying taxable income to the tax table appropriate for the taxpayer's filing status. Thus it does not correctly account for some features of the tax law such as the minimum tax and income averaging. Redoing the regression analyses with interactive dummy variables for taxpayers subject to these provisions did not reveal any substantive differences from the results reported here.

¹³The price variable used is equal to $C(1-t) + (1-C)((1-t) - (0.5 \cdot 0.4t))$, where C is the proportion of gifts given in cash given by the taxpayer's adjusted gross income group, $1-t$ is the price of giving cash, 0.5 is the assumed ratio of appreciation to value, and $0.4t$ is the capital gains tax rate.

¹⁴For comparability with earlier studies, I use reported rather than auditor-corrected adjusted gross income both in the calculation of price and in the construction of the income variable.

¹⁵The sample also excludes taxpayers who, upon audit, are deemed to have insufficient deductions to qualify for itemization and married taxpayers who file separate returns.

reduced-form relationships. The estimated coefficient of an independent variable represents not only the direct effect on the dependent variable but also the indirect effect due to the induced change in the other endogenous variables.

The results of this estimation are presented in the first column of Table 2. The estimated coefficients on the demographic variables are of the same sign and of comparable magnitude to those estimated by others. The partial effects of being married, having one household member over 65, and of having dependent children are all positive and significant. The estimated price elasticity of -2.04 is in the upper range of findings of other researchers. The estimated income elasticity of 0.35 is near the bottom of the range of previous estimates.¹⁶

The second column of Table 2 displays the results of redoing the estimation replacing reported contributions with auditor-adjusted contributions. The estimated coefficients do not change drastically, although there is a statistically significant change in the estimated coefficients of each of the variables except DEP. Of principal interest is that the estimated price elasticity increases in absolute value from 2.04 to 2.34, while the estimated income elasticity falls from 0.35 to 0.27. This result strongly suggests that the estimated price elasticity of reported contributions is not principally an evasion elasticity. On the contrary, purging the reported statistics of data overstatement increases the estimated price responsiveness of charitable giving.

¹⁶See Clotfelter and Steuerle's Table 1 for a summary of the earlier findings.

¹⁷I also experimented with using as a dependent variable auditor-adjusted contributions, as long as they did not exceed reported contributions. This excludes from consideration upward adjustments of charitable contributions. The results were not significantly different from those reported here.

TABLE 2

Regression Equations Explaining Reported and Auditor-Adjusted Contributions

Dependent Variable	Log of Reported Contributions	Log of Auditor-Adjusted Contributions	Log of Reported Contributions	Log of Auditor-Adjusted Contributions	Log of Reported Contributions	Log of Auditor-Adjusted Contributions
LNP	-2.04 (0.060)	-2.34 (0.063)	-1.73 (0.069)	-1.96 (0.072)	-1.53 (0.133)	-1.70 (0.166)
LNK	0.35 (0.009)	0.27 (0.009)	0.36 (0.009)	0.28 (0.009)	0.34 (0.017)	0.26 (0.021)
MAR	0.64 (0.029)	0.72 (0.030)	0.57 (0.029)	0.65 (0.031)	0.53 (0.056)	0.59 (0.070)
AGE	0.45 (0.034)	.54 (0.036)	0.47 (0.034)	0.56 (0.036)	0.50 (0.064)	0.60 (0.081)
DEP	0.13 (0.023)	0.14 (0.023)	0.12 (0.023)	0.13 (0.023)	0.16 (0.043)	0.18 (0.054)
PROB			4.96 (0.54)	5.97 (0.56)	4.58 (1.02)	6.46 (1.28)
PCOST*					0.071 (0.008)	0.094 (0.010)
Constant	1.14 (0.077)	1.62 (0.080)	0.98 (0.079)	1.42 (0.082)	1.12 (0.150)	1.61 (0.188)
No. of Observations	23894	23894	23894	23894	23894	23894
Standard error of estimate	1.53	1.60	1.53	1.59	1.52	1.58
R ²	0.307	0.276	0.309	0.280	0.318	0.293

NOTE: Standard errors are in parentheses.

*Measured in thousands of dollars.

I next investigate expanding the set of independent variables to include proxies for the additional influences on charitable contributions and their overstatement suggested by the first-order conditions of the individual's maximization problem. One such factor identified was the probability of detection of evasion.

The probability that a given tax return will be subjected to audit¹⁸ clearly is not constant and depends on certain characteristics of the return. The IRS develops formulas for identifying particularly likely candidates for audit; the TCMP survey is one input into developing these formulas. For obvious reasons, the formulas themselves are a secret closely guarded by the IRS. However, it is public information how the fraction of returns audited differs for different subgroups, called examination classes, of the taxpaying population.

The results of including as an explanatory variable the appropriate fraction of returns audited in the taxpayer's examination class (PROB) are presented in the third and fourth columns of Table 2.¹⁹ The estimated coefficient on PROB is positive and significant for both reported contributions and auditor-adjusted contributions, although the estimate is significantly higher for auditor-adjusted contributions, 5.97 compared to 4.96. This implies that

¹⁸ This refers to a standard audit, not a TCMP audit, for which the selection procedure is different.

¹⁹ Note that the amount of reported charitable contributions cannot affect which examination class a return is placed in, which depends on the sum of the positive elements of income, the presence of self-employment income, and the presence of farm income. One's examination class does, though, depend on the taxpayer's report of other components of income, and therefore PROB may depend on the extent of non-charity evasion. If the disturbance term in the non-charity evasion equation is correlated with the disturbance term in a charity equation, then PROB and the latter disturbance term will be correlated, so that the OLS estimator will be inconsistent.

a higher value of p tends to decrease charity overstatement, as the theory would suggest.²⁰

According to the behavioral model of Section 3, another influence on charitable contributions and their overstatement is the utility cost of detection, which depends on the total amount of evasion attempted, the pecuniary penalty likely to be charged, and any psychic costs to being audited. To the extent that psychic costs can be proxied by demographic variables such as age, they are already accounted for in the vector of independent variables. The expected penalty to be charged for any given amount of evasion probably does not vary systematically by individual. The data does, though, contain a proxy for the dollar cost of detected non-charity evasion--the auditor's suggested change in the taxpayer's total tax liability, net of the change due to any adjustment in charitable contributions. Because non-charity evasion is endogenous, it is an inappropriate right-hand side variable.

Columns 5 and 6 of Table 2 report the results of an instrumental-variables estimation procedure. The instruments for the dollar cost of detected non-charity evasion are dummy variables for the presence of total income, rental income, Schedule C income, and capital gains income. These are presumed to influence the opportunities for non-charity evasion, but not the attractiveness of charity overstatement. Including the predicted value of the dollar cost of

²⁰To a first approximation, estimated charity overstatement will increase with an explanatory variable if $\left(\frac{C_R}{C_A}\right)\hat{\beta}_R - \hat{\beta}_A$ is positive, where $\hat{\beta}_R$ and $\hat{\beta}_A$ are the estimated responses to the variable of reported and auditor-adjusted contributions, respectively. Because $\left(\frac{C_R}{C_A}\right)$ is approximately 1.07 in the aggregate, $\left(\frac{C_R}{C_A}\right)\hat{\beta}_R - \hat{\beta}_A$ is negative for PROB, suggesting that overstatement declines with a higher probability of detection.

detected non-charity evasion (PCOST) does not substantially affect the estimated coefficients of the other variables. It does slightly reduce the estimated price responsiveness of reported and actual contributions. As the theory suggests, a higher value of PCOST reduces the amount of charity overstatement. Both reported and auditor-adjusted contributions increase with PCOST, but the increase in reported contributions falls short of the increase in auditor-adjusted contributions.

Finally, the dependence of the probability of detection on the amount of charitable contribution overstatement is likely to affect taxpayer behavior. Unfortunately, no appropriate proxy for this is available. If this is proportional to the probability of detection itself, then the PROB variable is already picking up the effect of this variable on behavior.

The procedures reported in Table 2 were repeated separately for cash and non-cash contributions. The results for cash contributions, which accounted for 87% of the value of all contributions by itemizers in 1982, are quite similar to the aggregated results--price elasticities in excess of two, which rise slightly when reported contributions are replaced by auditor-adjusted contributions. For non-cash contributions, the estimated price elasticity is approximately minus one and the estimated income elasticity is approximately 0.1. Neither of these estimated coefficients changes much when auditor-adjusted contributions are substituted for reported contributions.

6. Conclusions

These preliminary results suggest that the answer to the question posed in the title--are estimated tax elasticities really just tax evasion elasticities?--is no in the case of charitable contributions. The tax responsiveness of charitable giving that has been detected using tax return data cannot be

ascribed to the tax responsiveness of overstating actual giving. In fact, overstatement is apparently less price responsive than actual giving, implying that the responsiveness of actual giving is higher than is suggested by studying reported contributions.

Estimates of all types of behavioral response, based on tax reports, inevitably reflect both an evasion elasticity and an underlying behavioral elasticity. Poterba (1987), using aggregate time-series data on reported capital gains realizations and compliance rates, concludes that at least one-quarter of the observed capital gain realization response to changes in marginal tax rates is due to changes in reporting behavior, rather than portfolio behavior. Thus, the answer to the question posed in the title of this paper may be "to some extent, yes" for activities other than charitable giving. This is a subject worth pursuing because the policy implications of observed responsiveness to taxation depend on how much of this response is in the reporting of behavior rather than the behavior itself.

REFERENCES

- Alexander, C. and Feinstein, J., "A Microeconomic Analysis of Individual Income Tax Evasion Behavior," mimeo, M.I.T. (August 1986).
- Allingham, M. G. and Sandmo, A., "Income Tax Evasion: A Theoretical Analysis." Journal of Public Economics 1 (1972): 323-338.
- Clotfelter, C., "Tax Evasion and Tax Rates: An Analysis of Individual Returns." Review of Economics and Statistics 45 (1983): 363-373.
- Clotfelter, C. and Steuerle, C. E., "Charitable Contributions." In H. Aaron and J. Pechman, eds., How Taxes Affect Economic Behavior. Washington, D.C.: The Brookings Institution, 1981.
- Dubin, Jeffrey A. and Wilde, Louis L., "An Empirical Analysis of Federal Income Tax Auditing and Compliance." California Institute of Technology Social Science Working Paper 615. October 1986.
- Internal Revenue Service, Taxpayer Compliance Measurement Program Handbook, January 1984.
- Pitt, M., "Smuggling and Price Disparity." Journal of International Economics 11 (1981): 447-458.
- Poterba, J., "Tax Evasion and Capital Gains Taxation," American Economic Review 77 (1987).
- Reece, W. and Zieschang, K., "Consistent Estimation of the Impact of Tax Deductibility on the Level of Charitable Contributions," Econometrica 53 (1985): 271-293.
- Witte, A. and Woodward S., "The Effect of Tax Laws and Tax Administration on Tax Compliance: The Case of the U.S. Individual Income Tax," National Tax Journal 38 (March 1985): 1-14.
- Yitzhaki, S., "A Note on 'Income Tax Evasion: A Theoretical Analysis'." Journal of Public Economics 3 (1974): 201-202.