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THE EFFECT OF THE TREASURY  
PROPOSAL ON CHARITABLE GIVING:  
A COMPARISON OF CONSTANT AND  
VARIABLE ELASTICITY MODELS

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ABSTRACT

The recent proposal for tax reform developed by the Department of the Treasury suggests dramatic changes in the structure of the personal income tax. One likely side effect of the changes will be a significant adverse impact on the level of charitable contributions by individuals.

This paper evaluates the marginal effect on giving of various parts of the Treasury reform plan using the existing literature on the price and income elasticities of charitable behavior. Two explicit models are simulated for 1985 using the NBER TAXSIM model: one with constant price and income elasticities and one with the price and income elasticities varying with income.

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THE EFFECT OF THE TREASURY PROPOSAL

ON CHARITABLE GIVING:

A COMPARISON OF CONSTANT AND VARIABLE ELASTICITY MODELS

Lawrence B. Lindsey\*

The recent proposal for tax reform developed by the Department of the Treasury suggests dramatic changes in the structure of the personal income tax. In general, these changes improve the simplicity, fairness, and efficiency of the tax. However, one likely side effect of the changes will be a significant adverse impact on the level of charitable contributions made by individuals.

Numerous parts of the Treasury proposal affect the level of charitable giving. In general, these can be broken into two groups: proposals which affect the cost to taxpayers who itemize of making a charitable gift, and proposals which affect the number of itemizing taxpayers. In addition, the Treasury plan eliminates the partial "above-the-line" deduction for non-itemizers. This paper evaluates the marginal effect of each of these proposals on the level of charitable contributions expected in 1985.

The simulations contained in this text are made with the National Bureau of Economic Research TAXSIM model.

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This computerized model, like the one used by the Treasury Department, bases its computations on the Individual Tax Model File produced by the Internal Revenue Service. Currently, the model uses the 1979 Public Use Sample. Detailed programs adjust this raw data from the 1979 tax year to levels expected for tax year 1985. This procedure, known as aging, can be adjusted to put particular emphasis on the estimation of the parameters being studied. In this case, particular emphasis was placed on the number of itemizers, the level of their itemized deductions, and the level of charitable contributions made.

The TAXSIM model also contains a program to simulate the behavioral response of taxpayers to a change in the tax law. Thus, the likely effect of a tax law change on the level of giving can be estimated by comparing the impact of current tax law with the impact of the reform on individual taxpayers and estimating the behavioral response to the change in the law using parameters from the economics literature. A total of 25,443 individual tax returns are used to provide a highly disaggregated measure of behavioral response. Sample weights for each return are used to estimate the level of giving and taxes for the entire population.

This paper does not present any new econometric evidence on the price or income elasticities of charitable giving. The emphasis is on simulation methodology and on the evaluation of the effect of changes in public policy. However, Section 1 summarizes the previous econometric

evidence that forms the basis for the parameter values used in the simulations. Section 2 discusses the simulation methodology used in this paper. Section 3 examines the Treasury tax reform proposal in detail with emphasis on the likely effect of the various provisions on charitable giving. Section 4 presents the results of the simulations.

### 1. Econometric Evidence

As with most microeconomic studies of consumer or household behavior, evaluations of the parameters which determine charitable giving focus on two factors: the price of giving and the income of the giver. The price of making a charitable gift of one dollar is the foregone disposable income involved in making that gift. For taxpayers who itemize their giving, this price for gifts of cash is unity minus the individual taxpayer's marginal tax rate. Gifts of appreciated property face a lower price where the actual price of giving depends on the ratio of tax basis to current market value. Furthermore, in 1985, non-itemizers were allowed to reduce their taxable income by half their charitable contributions. Thus, their price is unity minus half their marginal tax rate.

The income term used to estimate the impact of differing incomes on charitable giving has tended to vary with the sample the researcher was working with. Survey data has tended to produce estimates based on reported household income while data from tax returns has focussed on definitions of income from the tax return such as AGI.

Whichever definition of income is involved, correct simulation procedure involves the use of virtual income<sup>1</sup>, rather than measured income. This will be discussed further in Section 2.

Feldstein used a constant elasticity specification in his 1975 National Tax Journal article which used data from alternate years from the Statistics of Income.<sup>2</sup> The mean level of charitable contributions by itemizers was regressed on the mean level of disposable income in various income cells, and an estimate of the mean price of giving for taxpayers in that cell. Simultaneity bias was eliminated by using tax rates and disposable income faced by taxpayers assuming no charitable contribution was made. In essence, the price of the "first dollar" of a taxpayer's charitable giving was used for the estimation. The basic estimate of the study was a price elasticity of -1.24 for taxpayers in the income classes between \$4000 and \$100,000 in terms of 1967 prices.

Feldstein and Clotfelter<sup>3</sup> used household data from the Federal Reserve Board's Survey of the Financial Characteristics of Consumers for 1963 and 1964. This data included information on the wealth and demographic characteristics of the households surveyed. However, it sacrificed the detailed data on taxes contained in data from the Statistics of Income. The basic result was a price elasticity of -1.15. Little sensitivity of the result to the exclusion of non-itemizers was found.

However, the authors did find some variation in the price elasticity of charitable giving. In this study, lower income households were found to have higher elasticities than upper income households. This echoed a finding in the earlier Feldstein paper as well.

Feldstein and Taylor used the 1970 Individual Tax Model File in their 1976 paper published in Econometrica.<sup>4</sup> This study used particular care in the evaluation of the price of gifts of appreciated property. The basic estimate of the price elasticity was -1.29. Feldstein and Taylor also reestimated the work of Taussig<sup>5</sup> on the price elasticity of giving in the 1962 Individual Tax Model File. They concluded that his initial estimate of -0.10 was in error, finding a price elasticity of -1.06. One possible explanation of the discrepancy was elimination of roughly one third of the sample during Taussig's study.

All of the above studies used samples which tended to contain more taxpayers from the upper end of the income scale than would exist in a random sample of the population. However, a number of studies exist which correct this.

Boskin and Feldstein<sup>6</sup> used data from the 1974 University of Michigan Survey Research Center for households with incomes below \$30,000. Although such data is necessarily not as specific as tax data regarding tax price, it does contain a large number of non-itemizers.

Thus, the variation in price at each income level was large. The basic finding of the Boskin-Feldstein research was a price elasticity of -2.54.

Dye used the same 1974 survey, but incorporated a wealth variable in his regression equation. However, he found a similar price elasticity: -2.25.<sup>7</sup>

Reece also avoided the problem of oversampling well-to-do taxpayers by using the 1972-3 Consumer Expenditure Survey compiled by the Bureau of Labor Statistics. Reece used a Tobit procedure to take account of the large number of "zero" entries for contributions. His basic finding was a price elasticity of -1.19.<sup>8</sup>

Feenberg<sup>9</sup> incorporated the effect of state income taxes on charitable giving in a study performed using the National Bureau of Economic Research TAXSIM model which he augmented with detailed modelling of 50 state income tax systems. His basic estimate of a price elasticity of -1.23 highlights the importance of the proper specification of price in the estimation procedure.

Clotfelter and Steurle used the 1975 Individual Tax Model File to estimate a price elasticity of -1.27 for the population as a whole.<sup>10</sup> They also decomposed the population into 5 different income classes and estimated behavioral parameters using 4 different econometric specifications. The results showed a high degree of sensitivity to the regression specification. It may be that this sensitivity is the result of a high degree of



multicollinearity between price and income at low income levels.

The present paper uses a price elasticity estimate of -1.2 for the simulation of the effect of the Treasury tax reform proposal on charitable giving for a constant elasticity specification. An income elasticity of 0.7 is also used. These parameters fall well within the range of estimates provided above.

The assumption of a constant price elasticity greater than unity is a matter of some debate. As various provisions of the Treasury proposal are likely to affect different income groups differently, this is an important consideration. The econometric evidence is somewhat ambiguous, however.

Feldstein and Taylor<sup>11</sup> estimated constant elasticity equations separately for various income classes. Using the 1962 tax model file, they found an elasticity of -3.67 between \$4,000 and \$20,000, -0.97 between \$20,000 and \$50,000, -1.10 between \$50,000 and \$100,000 and -1.29 for incomes over \$100,000. On the other hand, their findings for the 1970 file showed a small (-0.35) and insignificant elasticity under \$20,000 rising monotonically in both magnitude and significance to -1.74 for the over \$100,000 group.

Feldstein's<sup>12</sup> earlier work using Statistics of Income data from alternate years showed a declining elasticity as

income rose. Taxpayer groups between \$4,000 and \$10,000 had a price elasticity of -1.8, while the elasticity declined to -1.04 and -1.13 for groups between \$10,000 and \$20,000 and between \$20,000 and \$100,000. Taxpayers over \$100,000 had an elasticity of -0.29. As noted earlier, Feldstein and Clotfelter found a similar declining elasticity.

Clotfelter and Stuerle<sup>13</sup> reported a generally rising price elasticity with income. Using data from the 1975 tax model, elasticities rose from a not significant -0.95 under \$10,000 to -1.35 between \$10,000 and \$20,000, -1.66 between \$20,000 and \$50,000, -1.36 between \$50,000 and \$100,000 and -1.78 over \$100,000. Clotfelter and Steurle also used a translog model to estimate parameters for different income classes and found a price elasticity rising with income from -0.42 to -1.51.

Dennis, Rudney, and Wyscarver<sup>14</sup> used a linear expenditure system to estimate elasticities for different income groups. This system permits differentiation for elasticities for discretionary giving, as opposed to total giving. However, their specification was unnecessarily rigid, requiring all price elasticities to be either greater than or less than unity.

The choice of a variable elasticity model is most appropriate if one feels that elasticities vary significantly across income classes. In that case, the

nature of the sample in the constant elasticity model might affect the results. For example, Auten and Rudney<sup>15</sup> claim that the finding of a price elasticity greater than unity by Feldstein depended crucially on the sample used. Specifically, they argue that the sample contains a higher proportion of high income individuals than is found in the population at large.

However, at least three studies which undersampled high income individuals found significant elasticities all well over unity: Boskin, Dye, and Reece. Furthermore, the early studies by Feldstein and Feldstein-Clotfelter both found higher elasticities among low income groups than among high income groups.

The case for selecting one model over another is unclear. Therefore, this paper shall simulate a variable elasticity model as well as a constant elasticity model. The elasticities are presented in Table 1. They are derived from estimates calculated by Charles Clotfelter<sup>16</sup> updated to 1985 income levels.

## 2. Simulation Technique

The basic proposal to be analyzed in this paper is the Treasury tax reform plan submitted to the President in November, 1984. The NBER TAXSIM model accomplishes this by examining a stratified random sample of 25,443 taxpayers and simulating the behavior of each under both the current

law and the Treasury proposal. Under the assumptions of this modelling procedure, a standard constant elasticity model of taxpayer demand for charitable giving is assumed for any given taxpayer. In the variable elasticity model, different taxpayers have different elasticities, however. Given a current level of charitable giving  $G_0$ , the taxpayer selects a new level of charitable giving  $G_1$  based on the changes in the price of giving and his income. Equation 1 expresses this behavior mathematically.

$$(1) \ln G_1 = \ln G_0 + \alpha \ln(Y_1/Y_0) + \beta \ln(P_1/P_0)$$

In this case,  $\alpha$  represents the income elasticity of the taxpayer while  $\beta$  represents the price elasticity.

The income and price relevant for simulating a taxpayer's behavioral response to a tax law change is the taxpayer's virtual income and last dollar price. Economists maintain that taxpayer behavior is based on the marginal incentive faced by the individual. This marginal incentive is the price of giving one additional dollar, or alternatively one less dollar. In either event, the relevant price is the price faced on the last dollar of charitable contribution made.

Figure 1 illustrates the budget constraint of a taxpayer. Disposable income is on the horizontal axis while charitable giving is on the vertical axis. The price of giving is given by the reciprocal of the slope of the budget constraint.

The budget constraint in Figure 1 exhibits decreasing slope because as the taxpayer contributes increasing amounts to charity, his taxable income falls, thereby reducing the marginal tax rate he faces. As the taxpayer's marginal tax rate falls, the price of giving rises, eventually approaching unity when the taxpayer has no more taxable income, or his taxable income has reached the zero bracket amount.

The actual price of giving can be represented as a weighted average of the cash price and the price of giving appreciated property. This latter price traditionally has been calculated using the convention established by Feldstein and Taylor<sup>17</sup>. Mathematically, the price is expressed by equation 2.

$$(2) P = c(1-\text{rate}) + (1-c)(1-\text{rate}-0.5 * \text{cgrate})$$

In this expression,  $c$  represents the proportion of the gifts made by the taxpayer's income class in the form of cash, while  $1-c$  represents the fraction of gifts in the form of appreciated property. The taxpayer's marginal tax rate, denoted "rate", represents the change in tax liability for the receipt of another dollar of taxable income. As such, this rate represents the rate applicable to the last dollar of a taxpayer's charitable contribution.

The term "cgrate" represents the effective tax rate on

the receipt of another dollar of capital gains income. By making a gift of appreciated property, the taxpayer forgoes capital gains tax on the gift as well as receiving a tax deduction at the ordinary rate. Feldstein and Taylor estimated that the proportion of gifts of appreciated property that represented capital gain was one half if one includes the potential benefits of delaying realization.

However, other evidence suggests that the proportion of appreciation to fair market value in gifts of appreciated property may well vary with income. Auten and Rudney<sup>18</sup> have reported the ratio of appreciation to fair market value of assets sold by taxpayers in the 1971-75 period and reported on Schedule D in the sample on which their study is based. This data shows a monotonic rise in appreciation as a percent of sales price as income rises.

Moreover, it is reasonable to expect that gifts of appreciated property have a higher appreciation share than assets sold for ordinary consumption uses. Tax minimizing behavior would dictate such a result. This study therefore adjusts the Auten-Rudney numbers to produce the weighted average 50 percent appreciation produced by Feldstein and Taylor. The resulting appreciation percentages are shown in Table 2. The weighted average price of giving therefore represents a combination of appreciation and tax rate. This weighted average price, evaluated at the last dollar given is the price used in the simulations.

As Figure 1 illustrates, however, inframarginal dollars of charitable giving may well have cost the taxpayer less than the last dollar contributed. The low cost dollars given inframarginally do not affect the marginal cost of making a contribution. However, they do increase the income of the taxpayer. The amount of the increase in income is the difference between the marginal price of giving and the inframarginal price.

In order to show the taxpayer's virtual income graphically, the segment of the taxpayer's budget constraint on which he is operating is extended to the horizontal axis. In effect, because the taxpayer is acting on the assumption that the price of giving is that reflected by the segment of the budget constraint on which his utility is maximized, the relevant income must correspond to that assumption. That relevant income is the taxpayer's virtual income.<sup>19</sup>

It should be noted that a floor follows the same procedure but with the opposite sign. If the taxpayer is contributing an amount in excess of the floor, economists would argue that his relevant price is unaffected by the floor. However, the floor does impose an income effect. The taxpayer's income is reduced by the difference between the actual price of giving those inframarginal dollars and the price of the marginal dollar of contributions. Thus, a floor reduces the taxpayer's virtual income by his marginal

tax rate (unity minus the price of giving) times the amount of the floor.

The imposition of a floor, as in the Treasury proposal, creates another simulation complexity. When confronted with one price of giving and corresponding virtual income, the taxpayer chooses one segment of the budget set, but when confronted with another price and virtual income, chooses another segment. In the case of the floor, the budget set is concave to the origin and therefore there is no a priori means of choosing between the two possibilities.

Instead, an explicit indirect utility format must be used which compares the utility of the taxpayer at each point on the budget set. The relevant indirect utility for a log linear demand equation was developed by Hausman.<sup>20</sup> The indirect utility for the taxpayer in question is compared at each of the two possible utility maximizing points, and the higher utility is chosen. A key advantage of the NBER TAXSIM model is its ability to simulate changes in the law at the level of the individual taxpayer. Thus special cases such as a floor can be simulated directly.

Floors also create the possibility of bunching of charitable gifts. If for example, the taxpayer faces a floor of \$300 and makes annual contributions of \$200, he may benefit from making gifts of \$400 every second year. However, in a recent study of the possible magnitudes of



such an effect, Feldstein and Lindsey<sup>21</sup> found the likely effect to be small.

The simulation procedure therefore evaluates the price and virtual income of each taxpayer under both current law and under the Treasury proposal. The utility maximizing choice of charitable contributions is selected.

This simulation estimates the response of taxpayers for the 1985 tax year. As mentioned earlier, the basic data used was from the 1979 individual tax model file. In order to create the 1985 model, an aging routine was created which increased the individual income amounts and the sample weights for taxpayers to reflect 1985 income and population levels. Changes in the functional distribution of income between 1979 and 1985 were included by raising each component of income for each taxpayer by an amount reflecting the growth of that type of income in the overall economy.

Particular attention was paid to the number of itemizers and their level of charitable contributions for the tax year 1985. First, the number of itemizers was targetted for each income bracket based on the total number of taxpayers in that bracket and the proportion of taxpayers in that bracket who itemized in 1979. Then the level of itemized deductions for each taxpayer in each income bracket was adjusted to, again, reflect the average level of itemized deductions for taxpayers in the same nominal income bracket in 1979.

The result of this procedure is the creation of a hypothetical 1985 sample of tax returns reflecting the demographic, economic, and tax conditions for that year. The tax laws were also adjusted to reflect 1985 conditions. In the case of current law, the provisions of the Deficit Reduction Act of 1984 were incorporated into the law.

It was also necessary to impute a level of giving for non-itemizers. The Tax Model File used for the simulations was based on 1979 tax returns. The level of charitable giving for non-itemizers was not given by the taxpayer and therefore does not appear on the file.

In order to estimate giving by non-itemizers, the distribution of giving as a percent of AGI for itemizers was computed for each of 24 income classes. Separate distributions were computed for married taxpayers filing jointly and for all other taxpayers. Although the actual distribution of giving as a percent of AGI is continuous, computational tractability required an approximation using 15 discrete brackets. These brackets provided the basis for computing a cumulative distribution for each income group and marital status.

For each non-itemizer in the sample, a random number between zero and unity was selected. This random number was used to select the percentile of giving for the taxpayer in his income and marital status group. The non-itemizer was assigned a level of giving as a share of

AGI which corresponded to the giving of an itemizing taxpayer in the selected percentile.

However, the non-itemizer faced a different price of giving than the itemizer to whom he was matched. The implied price of giving had the taxpayer itemized in the model year (1979) was computed and giving adjusted downward to reflect an actual price of giving of unity.

The non-itemizer was then "aged" along with the rest of sample to reflect 1985 income and giving levels. In 1985, non-itemizers were allowed an "above-the-line" deduction equal to one half of charitable contributions. A new, 1985, price of giving was computed and actual charitable giving for that year adjusted upward to reflect that price.

In modelling the effect of a change in the law, the Treasury tax plan was assumed to be fully implemented. That is, provisions such as the capital gains rules changes, which are phased in over a period of years, were assumed to be fully in place. In those situations, such as fringe benefits, where no tax data was available, imputations were made based on other sources of data. Although some of these imputations are rough, any effect of them on charitable giving is likely to be small. The next section describes those aspects of the Treasury proposal which are likely to have a significant impact on the level of charitable giving.

### 3. The Treasury Proposal

The Treasury proposal contains six changes with direct impact on the level of charitable giving by itemizers:

- o Reduction in marginal tax rates
- o Changes in the tax treatment of capital gains and appreciated property
- o Increase in the zero bracket amount and reduction of allowable deductions
- o A 2 percent of AGI floor on deductibility of charitable contributions
- o The elimination of the "above the line deduction" for non-itemizers
- o Removal of the ceiling on deductibility of charitable gifts of 50 percent of AGI

The first two of these changes affect charitable contributions by raising the net-of-tax price of giving for those who itemize their charitable contributions. The next three changes alter the number of taxpayers eligible for some tax reduction due to their contributions. The final proposal affects only extremely large donors and is modelled explicitly through the use of a "last dollar" price.

The simulations estimate that there will be 104.4 million total tax filers in 1985, up 9 percent from the recession depressed level of 1982. Of these, an estimated

42.7 million, or 41 percent, will itemize their deductions in 1985. This latter figure is up substantially from the 35 percent who itemized in 1982 largely due to the growth of nominal income over the period while the zero bracket stayed roughly constant.

The effect of the first two provisions discussed above is an increase of about 10 percent in the average price of giving for these itemizers assuming all continue to itemize under the Treasury plan. Under the Treasury proposal, the distinction between gifts of cash and gifts of appreciated property is in principle eliminated. Gifts of property are allowed a deduction equal to the lesser of indexed basis or fair market value. If a particular piece of property has an indexed basis in excess of fair market value, the taxpayer may contribute the property to a charitable organization and receive a reduction in taxes equal to his marginal tax rate times the current value of the gift. The appropriate price would be unity minus the taxpayer's marginal rate.

However, if the indexed basis does exceed the fair market value of the property, it would be in the taxpayer's interest not to give the property to a charity, but to realize the implied capital loss through sale of the property. The price implied by the discussion above must therefore be described as artificial.

Feldstein, Slemrod and Yitzhaki's<sup>22</sup> work on the

taxation of capital gains highlights the importance of this consideration. They found that the capital gains realized in 1973 actually represented real losses. That is, had the basis been indexed as the Treasury proposal suggests, there would have been no net capital gains. On net, asset holders would be in the situation described above, with property that it is illogical to contribute to charity. If this represents a binding constraint, it must be concluded that the effect on the contribution of appreciated property would be more dramatic than the simple price effect.

On the other hand, if the taxpayer has a property with an indexed basis below fair market value, the taxpayer could make a gift of the property and receive a reduction in taxable income equal to the property's indexed basis. It should be noted that in many cases this basis is only a very small fraction of the fair market value of the property.

But, in addition, a gift of that property eliminates the capital gains tax liability on the appreciation. However, this liability is only hypothetical. If the taxpayer would not have otherwise realized the gain in the current tax year, the present value of the foregone tax liability would be lower. Indeed, if the taxpayer would otherwise have held the property until death, there would have been no capital gains tax liability at all. The price

of giving such property therefore depends on the alternative use of the property.

Current taxpayer behavior is not a reliable guide to the alternatives, however. Presently, taxpayer gifts of appreciated property are treated as if held to death regarding capital gains tax liability. Feldstein and Taylor assumed some degree of delay in the alternative realization of this property in their paper identifying this effect. The magnitude of this effect is incalculable from existing data, but the direction is clear: to elevate the price of giving above unity minus the taxpayer's marginal rate. In the limiting case of greatly appreciated property which would otherwise be bequeathed, the price would be unity.

A final possibility exists under the Treasury proposal. If the indexed basis exactly equals the fair market value, then the price of giving the property exactly equals the cash price. This is the limiting case on the other extreme. Under no circumstances could the price of giving appreciated property be lower, and, in the vast majority of likely cases of gifts, the price of giving would be likely to be higher. The simulations done in this paper in general assume this latter limiting case which tends to minimize the effect of the Treasury proposal. A final simulation is performed which assumes the former limiting case as well, however.

The above discussion of price assumed that there would be no change in the itemizer status of taxpayers. However, the Treasury proposal makes dramatic changes in the number of allowed deductions, and reduces others. For any current itemizer who loses this status, the price of giving under the Treasury proposal rises to unity. Under the Treasury proposal, the zero bracket amount, or itemizing threshold, is increased from \$3400 to \$3800 for married couples filing jointly. The deduction for state and local taxes paid is eliminated. A ceiling on the deductibility of non-mortgage interest is imposed. Finally, the floor on charitable contributions effectively raises the threshold for attaining itemizer status.

As a result of these changes, less than half of all current itemizers will have the same status under the Treasury proposal. The simulations show that for tax year 1985 only 43 percent of all current itemizers will remain itemizers and take a charitable deduction. However, these remaining itemizers currently make 62 percent of all itemizer gifts.

In addition to restricting the number of itemizers, the Treasury proposal allows only those itemizers who gave at least 2 percent of their AGI to charity to receive a charitable deduction. In 1979, about 60 percent of all itemizers made charitable gifts of less than 2 percent of their income. Because of the dramatic rise in the number



of itemizing taxpayers just above the zero-bracket threshold, the sample of itemizers for 1985 contains a higher proportion of these relatively small givers -- 65 percent. The Treasury proposal will lower the expected level of giving with the reduction in marginal tax rates. The simulations suggest that in 1985, under the proposed set of tax rates, only 32 percent of the remaining itemizers would give more than 2 percent of their incomes to charity. However, those taxpayers give 71 percent of all charitable gifts by the remaining itemizers.

Combining the effect of the reduced number of itemizers and the 2 percent floor shows that only a small fraction of current itemizers will still receive a tax incentive for charitable giving. Given an itemizer population of over 41 million under current rules, only about 5.6 million, or 14 percent will still be receiving a tax reduction due to charitable contributions under the Treasury proposal. This is a dramatic reduction in the number of eligible taxpayers by any measure. However, these simulations suggest that these taxpayers make roughly 44 percent of all charitable contributions currently. Thus, the effect of the complete loss of a price incentive for charitable contributions will be borne by only about half of all current gifts.

In addition, the estimated 63.4 million non-itemizers will lose their "above the line deduction" for half of their charitable contributions under the Treasury proposal. A significant portion of these non-itemizers made no charitable contribution at all. However, a clear increase in price will occur for all current non-itemizers under the Treasury proposal.

Partially offsetting these changes is the reduction in overall personal income tax liabilities of about 8.5 percent. This amounts to an increase in disposable personal income of about 1 percent. However, within any income group, taxpayers contributing relatively little will receive larger tax reductions, on average, than large contributors. The net effect of the 8.5 percent reduction in personal tax liabilities is an increase in giving of about 0.4 percent.

In summary therefore, the Treasury proposal will mean a loss of deductibility for all non-itemizers as well as 85 percent of current itemizers. The remaining itemizers will confront an average price of giving which is at least 10 percent higher than the current price of giving. Partially offsetting this is an increase in disposable income due to a net reduction in tax liabilities. The next section discusses the impact of these changes on the level of charitable giving.

#### 4. Effect on Giving

The preceding section outlined the effect of the Treasury proposal on the price of charitable giving and the number of itemizers who will retain a price incentive under the proposal. Table 3 summarizes these price effects by examining the average price of giving for current itemizers under different assumptions about the Treasury proposal.

The first column of the table presents the average price of giving faced by current itemizers. The second column weights this price of giving by the number of dollars given. The first row presents these measures of the average price of giving under current law. Row 2 presents the average prices if the proposed rates were in place but no other changes were made. Row 3 presents the average price for current itemizers if the proposed changes in the definition of itemized deductions were made as well as the rate reductions. The fourth row also includes the effect of the floor on the average price of giving for current itemizers. The final row presents the average price of giving for current itemizers if we assume that the effect of the changes in the treatment of appreciated property will remove the tax incentive to make gifts of this property.

The first column in Table 3 is a measure of the breadth of the effect of the Treasury proposal among taxpayers. The second column better represents the effect of the proposal of the level of giving. The proposed Treasury rates will raise the average price faced by current itemizers by 6 cents, or about 8 percent, but will raise the average price of giving by almost 8 cents or over 11 percent. This suggests that the rate reduction will have more of an effect on big givers than small givers.

On the other hand, the proposed changes in deduction rules will raise the average price faced by itemizers an additional 10 cents or 13 percent, but raise the average price of giving by only 8 cents or 10.5 percent. This is, of course, because big givers will still be itemizers under the proposed Treasury rules. Similarly, the 2 percent floor raises the average price facing itemizers by 6 cents -- 7 percent -- but raises the average price of giving only 3 cents. It should be noted that many small givers were already facing a price of one due to the deduction rules and therefore had no increase in price when the floor was added.

Finally, Table 3 presents the effect of assuming that the change in capital gains rules would effectively raise the price of giving appreciated property to unity. As noted in the previous section, this represents a limiting case. As is clear from the table, only relatively large

donors would be affected by this proposal, with an increase of 2.5 percent in the average price of giving.

Alternatively, this increase may be viewed as a 22 percent reduction in the price incentive remaining after the other provisions are in place. The actual effect of the appreciated property rules should be viewed as a weighted average of the .89 price and the .914 price.

As noted in the previous section, the proposed tax rules will also increase the disposable income of taxpayers. The resulting income effect is combined with the price effect described above and the overall effect on giving is presented in Table 4. Estimates using both the constant elasticity model and the variable elasticity model, discussed previously, are presented.

Under either model of taxpayer response, the decline in giving is in excess of 20 percent. The constant elasticity model predicts a 23 percent decline in giving without counting the capital gains rules changes while the variable elasticity model predicts a 21 percent decline. Including the limiting case on capital gains, the predicted declines are 28 percent and 25 percent respectively.

The effect of different elasticity assumptions can be seen by comparing the step-by-step effects of the Treasury bill. The variable elasticity model, with higher elasticities for upper income groups, predicts a bigger decline in giving due to the rate reduction, which affects

those groups more. On the other hand, the change in the rules for itemizers and the 2 percent floor, both of which have a more dramatic impact on middle income groups, have a bigger impact using the constant elasticity model. The effect of the proposed elimination of the "above the line" deduction for non-itemizers is shown in part b of Table 4. Here the different models show dramatically different effects. The average price of giving in 1985 for non-itemizers is 92 cents. The constant elasticity assumption of -1.2 for price would convert this into a 9.5 percent decline in giving which is partially offset by the income effect resulting from the tax reduction. A net decline of 9.1 percent is predicted. On the other hand, the variable elasticity model assumes price elasticities for low income taxpayers which are only about half as great. Thus, the overall decline in the predicted level of non-itemizer giving is only half as great.

The effect of different elasticity assumptions also shows up in the percent decline in itemizer giving when analyzed by income class. Table 5 presents these results. The constant elasticity model shows much higher predicted declines for giving in lower income groups and much lower declines in upper income groups. The minimum declines presented exclude any effect of the changed treatment of capital gains while the maximum declines represent the limiting case discussed earlier.

In summary, the primary difference caused by the assumption of the variable elasticity model shown earlier instead of a constant elasticity model is in the distribution of the effects of the Treasury proposal. Either model shows a significant decline in the overall level of giving. To the extent that different income groups contribute to different charities, a test of the relative validity of the competing models would be provided by the effects on different charities resulting from implementation of the Treasury proposal.

TABLE 1

Elasticities Used in the Variable Elasticity Model

<u>1985 Income</u>	<u>Price Elasticity</u>	<u>Income Elasticity</u>
under 5685	0	0.50
5,685-11,370	-0.29	0.47
11,370-17,055	-0.46	0.54
17,055-22,740	-0.61	0.54
22,740-28,425	-0.73	0.55
28,425-34,110	-0.78	0.59
34,110-45,480	-0.87	0.61
45,480-56,580	-0.95	0.65
56,580-85,275	-1.04	0.68
85,275-113,700	-1.18	0.71
113,700-227,400	-1.32	0.78
227,400-565,800	-1.66	0.79
565,800-1,137,000	-2.08	0.78
over 1,137,000	-2.71	0.75



TABLE 2

<u>1985 Income</u>	<u>Appreciation Percent</u>
under 40,000	41
40,000-200,000	45
200,000-400,000	53
400,000-1,000,000	63
Over 1,000,000	70

TABLE 3

Average Price of Giving for Current Itemizers

<u>Proposal</u>	<u>Itemizers Weighted Equally</u>	<u>Weighted by Dollars Given</u>
Current Law	.747	.700
Treasury Rates	.807	.779
With New Deduction Rules	.910	.861
With 2 Percent Floor	.971	.890
With Capital Gains Rules (Maximum effect)	.974	.914

TABLE 4a

Effect of Treasury Proposal on Giving  
by Current Itemizers

<u>Proposal</u>	<u>Constant Elasticity Model</u> (billions)	<u>Variable Elasticity Model</u> (billions)
Current Law	\$42.405	\$42.405
Treasury Rates	37.634	37.415
With New Deduction Rules	33.954	34.678
With 2 Percent Floor	32.688	33.598
With Capital Gains Rules (Maximum effect)	30.514	31.647

Table 4b

Effect of Treasury Proposal on Giving  
by Current Non-Itemizers

Current Tax Law	14.823	14.823
Treasury Proposal	13.468	14.184

TABLE 5

<u>Class</u>	<u>Variable Elasticity Model</u>		<u>Constant Elasticity Model</u>	
	<u>Minimum</u>	<u>Maximum</u>	<u>Minimum</u>	<u>Maximum</u>
under 10	3	7	7	13
10-15	3	7	9	15
15-20	6	9	12	16
20-25	9	12	16	19
25-30	11	14	17	21
30-40	14	17	20	23
40-50	18	20	23	26
50-75	23	27	27	31
75-100	22	27	24	29
100-200	31	40	30	39
200-500	44	57	36	48
500-1000	57	73	39	55
over 1000	77	87	50	62
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TOTAL	21	25	23	28
=====				

FIGURE 2

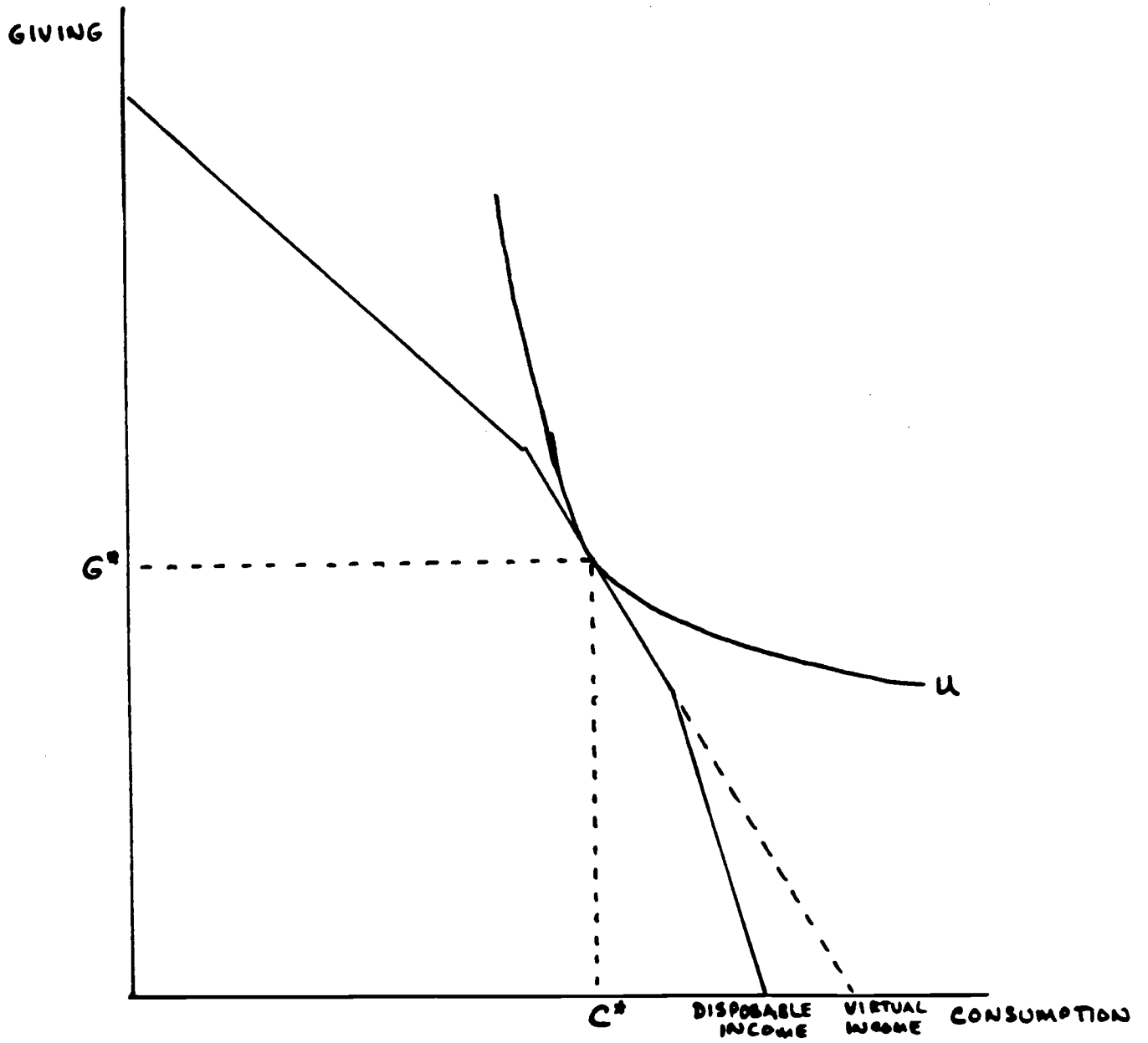
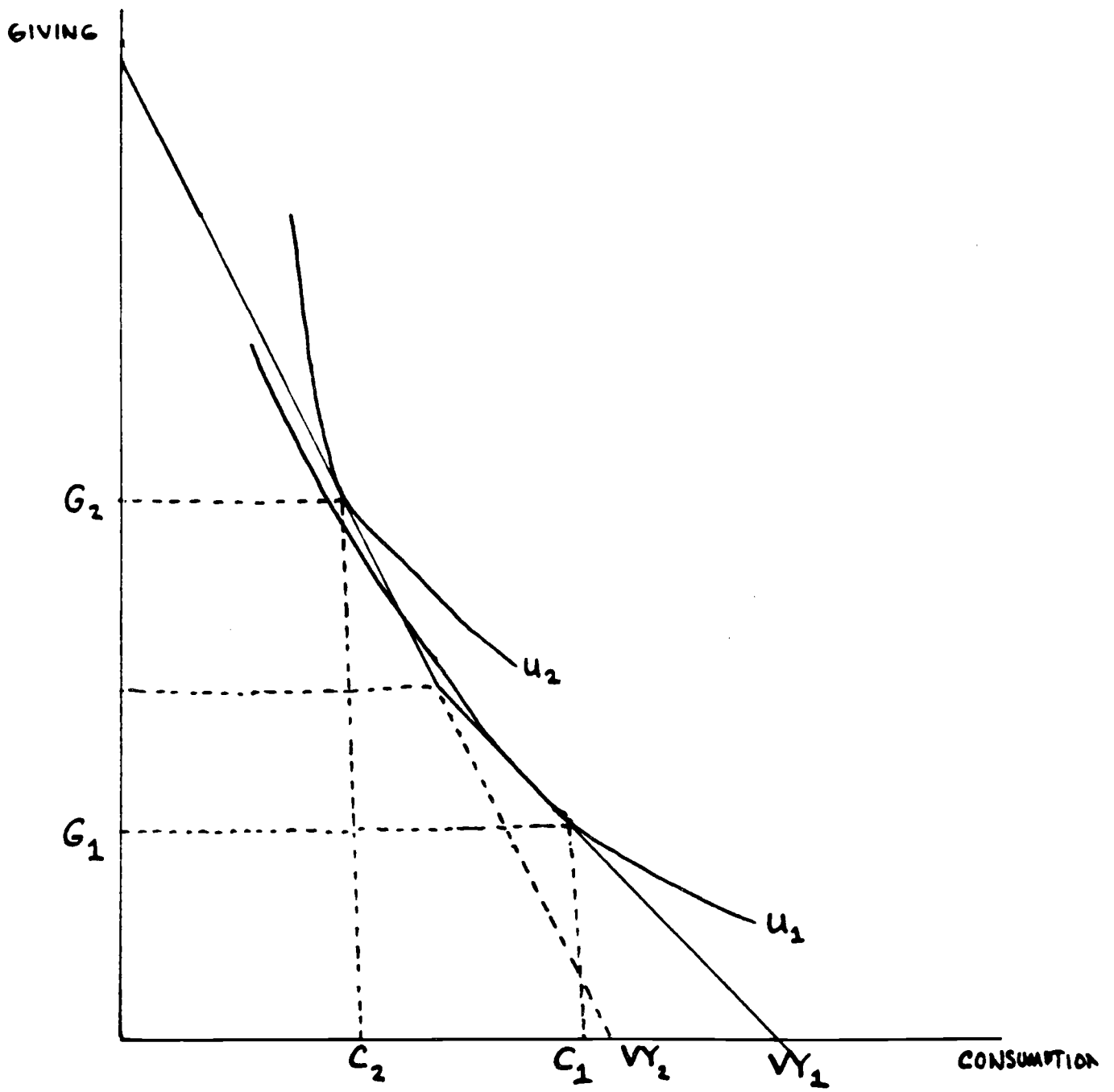


FIGURE 2



Footnotes

<sup>1</sup>Hausman, J.A. (1979) "Exact Consumer Surplus". MIT Mimeo.

<sup>2</sup>Feldstein, M. (1975) "The Income Tax and Charitable Contributions: Tax Effects and Other Motives", Proceeding of the National Tax Association, pp. 311-18.

<sup>3</sup>Feldstein M. and C. Clotfelter (1976) "Tax Incentives and Charitable Contributions in the United States" Journal of Public Economics 5:1-26.

<sup>4</sup>Feldstein M. and A. Taylor (1976) "The Income Tax and Charitable Contributions" Econometrica 44:1201-22.

<sup>5</sup>Taussig, M. (1967) "Economic Aspects of the Personal Income Tax Treatment of Charitable Contributions" National Tax Journal 20:1-19.

<sup>6</sup>Boskin M. and M. Feldstein (1977) "Effects of the Charitable Deduction on Contributions by Low-Income and Middle-Income Households: Evidence from a National Survey of Philanthropy" Review of Economics and Statistics 59:351-54.

<sup>7</sup>Dye, R. (1977) "Personal Charitable Contributions: Tax Effects and Other Motives" Proceedings of the National Tax Association, pp. 311-18.

<sup>8</sup>Reece, W. (1979) "Charitable Contributions: New Evidence on Household Behavior" American Economic Review: 69:142-51.

<sup>9</sup>Feenberg, D. "Identification in Tax-Price Regression Models: The Case of Charitable Giving", NBER Working Paper No. 988, National Bureau of Economic Research, Cambridge

<sup>10</sup>Clotfelter C. and E. Steurle (1981) "Charitable Contributions" in Aaron and Pechman, eds. How Taxes Affect Economic Behavior, Washington, Brookings Institute.

<sup>11</sup>Feldstein and Taylor, op.cit.

<sup>12</sup>Feldstein (1975) op.cit.

Footnotes

<sup>13</sup>Clotfelter and Stuerle (1981), op. cit.

<sup>14</sup>Dennis, B., Rudney, G. Wycarver, R. (1983) "Charitable Contributions: The Discretionary Income Hypothesis," Institution for Social and Policy Studies, Working Paper No. 63, Yale University.

<sup>15</sup>Auten G., and G. Rudney (1983) "Charitable Deductions and Tax Reform: New Evidence on Giving Behavior", Mimeo.

<sup>16</sup>Clotfelter, C. "Tax Reform and Charitable Giving in 1985", Tax Notes, February 1985.

<sup>17</sup>Feldstein and Taylor (1976) op.cit.

<sup>18</sup>Auten G., and G. Rudney (1985) "Charitable Giving and Tax Reform: Discussion Tables, The Brookings Institution, Mimeo.

<sup>19</sup>Estimation procedures using virtual income are complicated. Reece, W. and K. Zerchang (1984) "Consistent Estimation of the impact of Tax Deductibility on the Level of Charitable Contributions" NTIA and BLS, Washington. Their estimates for a median itemizer are slightly higher than the variable elasticity model and slightly lower than the constant elasticity model.

<sup>20</sup>Hausman (1979) op. cit.

<sup>21</sup>Feldstein, M. and L. Lindsey (1983) "Simulating Nonlinear Tax Rules and Nonstandard Behavior: An Application to the Tax Treatment of Charitable Contributions" in Feldstein, M., ed. Behavioral Simulation Methods in Tax Policy Analysis, Cambridge: National Bureau of Economic Research.

<sup>22</sup>Feldstein, M., J. Slemrod, and S. Yitzhaki, "The Effects of Taxation on the Selling of Corporate Stock and the Realization of Capital Gains", Quarterly Journal of Economics, June 1980, pp. 777-91.



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