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THE CHARITABLE CONTRIBUTION DEDUCTION:  
A POLITICO-ECONOMIC ANALYSIS

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## ABSTRACT

Policy analysis of the charitable contribution deduction has focused on two aspects. First, the deduction gives a larger subsidy to high-income individuals. Second, the activities subsidized are often public goods or create positive externalities. The focus on those two traits has led some economists to test the deduction using traditional cost allocation criteria for public goods such as Lindahl equilibrium. A leading paper finds that a tax credit better approximates the Lindahl criteria than a deduction. This paper shows that the opposite may be true if the taxes raised to fund the revenue loss from the deduction are even slightly progressive.

This finding suggests that the deduction may be a political bargain outcome that benefits a wide range of groups. The second part of this paper discusses qualitatively how a political bargain theory can explain the role chosen for the deduction in conjunction with other methods of subsidy and direct government provision.

## I. Introduction

Tax policy analysis of the charitable contribution deduction traditionally has focused on two traits of the deduction as a way to fund charitable activities. First, and most prominent, is the fact that use of a deduction (rather than devices like a refundable tax credit or a government matching grant) favors high-income individuals by granting them a larger subsidy per dollar contributed.<sup>1</sup> For a high-income taxpayer in the .50 bracket, the government in effect pays half the taxpayer's charitable contributions while for a low-income taxpayer in the .10 bracket the government in effect pays only one-tenth. This disparity is accentuated if the charitable contribution deduction is an itemized deduction.<sup>2</sup> Taxpayers whose itemized deductions are less than the zero bracket amount will not itemize and thus will get no tax benefit from making charitable contributions. A large proportion of low-income taxpayers have been non-itemizers while most high-income taxpayers itemize.<sup>3</sup>

The second trait is that charitable contributions substantially benefit parties other than the contributors. This trait leads to arguments that the deduction may be defensible although it apparently favors high-income individuals. Suppose, for example, that the contributions go to an organization that distributes them to the poor. To remove the deduction in that case may be seen as a "tax" on the poor.

This type of argument is too limited to justify the deduction. Many of the charitable services that are made possible by donations

primarily or at least partially benefit high-income taxpayers. For example, higher education, symphonies and art museums are organizations that are supported at least in part by deductible donations, and the services provided by these organizations substantially benefit high-income individuals.

An additional argument, however, applies to many such services. These services tend to have "public good" aspects that lead them to be undersupplied absent some form of government intervention. In the pure case of a public good, the good can be consumed by one person without diminishing consumption by another, and it is hard to fund production of the good by charging each person for the benefits that he or she receives from it.

Much of the recent work on the charitable contribution deduction has focused on whether the benefits created by the deduction in the form of helping the poor or producing public goods make the deduction a desirable policy despite the fact that it provides a larger subsidy to high-income individuals than to low-income individuals.<sup>4</sup> Perhaps the most comprehensive effort in this direction is an article by Professor John Simon. Professor Simon points out that charitable organizations produce public goods and notes that the poor consume some of these goods.<sup>5</sup> To determine whether the deduction is good policy he proposes a four-branch fairness test.<sup>6</sup> Three of the branches of his test weigh the added public goods output and added aid to the poor against the favoritism to high-income individuals that inheres in a deduction.

The last branch of Professor Simon's test asks whether the groups apparently disadvantaged by the charitable contribution deduction, *i.e.*, all but a few people in the upper income brackets, could overturn the deduction if they wished. Professor Simon notes that the vast majority of people get little or no tax benefit from the deduction but that in a 1976 Gallup poll 75% of those questioned favored the deduction.<sup>7</sup> He speculates that this may be due either to ignorance of the fact that the deduction gives the rich a larger subsidy or to an acceptance of inequality.<sup>8</sup> A more positive view would be that there is awareness of the inequity of the subsidy but that low-income and middle-income voters also are well aware of the additional public goods output induced by the deduction. Those voters may feel that the benefits to them from the activities generated by the deduction exceed any costs paid by them in the form of additional taxes to make up for the revenue loss caused by the deduction. Alternatively, even if the deduction primarily subsidizes public goods desired by high-income classes, it may be that any revenue loss from the deduction is made up by additional taxes paid by those classes.

This possibility that the charitable contribution deduction is a political bargain that is Pareto improving (*i.e.*, benefits some members of society and hurts no one) has important implications for the entire current debate about the deduction. If the deduction plays that sort of role, then the concern about favoritism toward high-income individuals is blunted if not eliminated. Low-income and middle-income individuals would be no worse off as a result of the

deduction and might experience substantial benefits.

In Part II I explore the possibility that the deduction is part of a political bargain that meets the norm of not making low-income and middle-income individuals any worse-off. Section II-A gives a qualitative example of how that possibility might come about. Two economists, Harold Hochman and James Rodgers, argue that a political bargain meeting a closely related norm would result in a tax credit rather than a deduction. In section II-B and the Appendix I take issue with that viewpoint and conclude that it is plausible (but not certain) that a deduction would be the result under their norm.

In light of that conclusion it is important to ask whether it is likely that the political process produces legislative packages that meet the norm postulated in this article or Hochman and Rodgers' related norm. In particular, if groups that ostensibly are harmed by the deduction can protect themselves via the political process, then survival of the deduction suggests that the apparent favoritism toward high-income individuals inherent in a deduction should not be a concern. Conversely, if the political process systematically disfavors those who ostensibly are disfavored by the deduction, then the "inequity" inherent in the deduction cannot be fixed unless the political process is reformed or replaced by some other method of governance.

After developing those arguments further, section II-C goes on to examine evidence about how the political process does function. Unfortunately, no clear answer emerges. One cannot tell for sure

whether or not the charitable contribution deduction is acceptable under the posited norms. Part II as a whole, however, shows that viewing the charitable contribution deduction as a political bargain may blunt or eliminate the conventional concern about favoritism of high-income individuals. That favoritism is probably the major tax policy issue concerning the deduction.

Taking a political bargain view of the deduction also affects many other issues surrounding the deduction. Part III starts from the presumption that the deduction is a political bargain in the interest of many different groups and studies the effects of that presumption on two major issues. I first consider whether there is a serious misallocation of resources arising from donors who give for reasons unconnected with the substantive value of the output of donee organizations. Section III-B argues that this "nonsubstantive giving" may not be as serious a problem as commonly imagined.

The second major issue concerns which government mechanisms (such as direct production, tax benefits, or consumer subsidies) should be used to satisfy public goods demand. Part III addresses this issue by focusing on a variety of motivations for supporting "170(c) activities." (Contributions to an organization will be deductible as charitable contributions only if the organization is among the organizations specified in section 170(c) of the Internal Revenue Code. It is convenient to refer to these organizations as "170(c) organizations" or as part of the "170(c) sector" and to refer to the activities of the organizations as "170(c) activities"). Some

of the suggested connections between motivations and "policy mix" are speculative. But one can conclude that viewing the deduction as a political bargain has important implications for the optimal policy mix.

## II. The Crucial Role of the Political Process

### A. A Political Equilibrium Approach

#### 1. A Normative Structure

This subsection uses a simple norm to express the concern about favoritism toward high-income individuals. If it can be demonstrated that the norm is satisfied by the charitable contribution deduction, then the concern about favoritism in the literature is unwarranted.

Before stating the norm, it is important to make clear the set of legislative policies that must be evaluated under the norm. Viewing the charitable contribution deduction as the result of a political bargain means that other legislation may be passed because of the deduction. This other legislation might include increases in tax rates for those who benefit directly from the deduction or expenditures in favor of those who are not so benefited. The deduction cannot be evaluated in isolation. Evaluation must include the entire package of adjustments made to accompany the deduction. This package is referred to as "legislation accompanying the deduction."

The norm is the following: the charitable contribution deduction, combined with any tax adjustment or other legislation accompanying it, is objectionable if and only if it results in net losses for low-income or middle-income people. This norm would be violated, for example, if those income classes must pay more in taxes

to fund the revenue loss from the deduction than they receive in benefits from the additional charitable activity induced by the deduction.

At first glance this norm ignores the fair distribution of the surplus from public goods production. That surplus is the value to individuals of the goods in excess of the social cost of production. Certain groups may receive disproportionately large amounts of the surplus, and an additional tax adjustment might be used to transfer some of the surplus experienced by those groups to others.

I do not specify how the surplus from public goods production ought to be distributed. Instead, distributional considerations enter at the level of preferences. In other words, preferences for or against provision of any public good include preferences concerning the distributional impacts of such provision. When provision of a public good combined with an allocation of the cost of producing it is unobjectionable under the norm, then low-income and middle-income people experience no net loss where "loss" includes any offense to their distributional sensibilities.<sup>9</sup>

#### 2. The Charitable Contribution Deduction as a Political Bargain

Is it possible that the charitable contribution deduction and accompanying legislation reflect a political bargain that is in accord with the norm? This subsection shows in a qualitative way that the answer may be yes. In making this argument, I generally assume that

all parties to any bargain have reasonably complete information about the effects of the deduction. Those effects include the amount of additional contributions that the deduction induces and the breakdown of those additional contributions between different 170(c) activities. Given this information assumption, the charitable deduction must serve more than a redistributive purpose. Since the value of subsidized goods to a recipient may be less than their market value, cash transfers would be a more efficient redistributive device. This argument does not follow if information is incomplete. Suppose, as is the case, that there is uncertainty about the extra contributions stimulated per dollar of tax revenues lost from the deduction.<sup>10</sup> High-income taxpayers may know that they do not expand their giving much in response to the deduction, while low-income taxpayers believe the opposite. In this case, if taxes paid by low-income individuals partially fund the deduction, then the deduction serves primarily as an income transfer to high-income taxpayers. The information asymmetry may allow high-income taxpayers to fool low-income taxpayers into supporting the income transfer. Although there is a great deal of public information about the incentive effects of the charitable contribution deduction and about the nature of the additional 170(c) activities that tax-induced contributions fund,<sup>11</sup> it is still possible that there is an exploitable information asymmetry.<sup>12</sup> Thus, incomplete information may lead the political process to function in derogation of the norm set out above.

Although the charitable contribution deduction is not a good

device for pure redistribution when there is complete information, the deduction may be a good way to encourage provision of public goods by the 170(c) sector. Suppose, for example, that a large number of high-income individuals are interested in increasing the amount of cancer research. Middle-income and low-income individuals would benefit from such an increase and thus might go along with a subsidy to induce high-income people to increase their contributions. Although such groups would block a direct redistribution of income to the high-income group, they might favor a subsidy that on the surface of things seems to benefit high-income people disproportionately. The public good aspect of cancer research is critical to this political interaction: although one income group funds the research, other groups benefit from it.

B. Can A Deduction be an Appropriate Subsidy for Charitable Contributions?

1. A Basic Public Good Analysis: Hochman and Rodgers' Model

Beginning with the presumption that the desire to encourage the production of public goods motivates a subsidy to 170(c) organizations,<sup>13</sup> it is important to ask whether a deduction is an appropriate form of subsidy. The previous subsection raises the possibility that the deduction might be justified as a normatively acceptable political bargain. In pursuing that kind of political analysis, individual motivations for contributing to an organization

or for supporting a subsidy for contributions to it are the elementary building blocks.

It is analytically useful to consider a particularly simple motivation first: each donor contributes to the purchase of a good not because of any concern for others or for their consumption pattern and not because of a desire to give for the sake of giving itself but only because the donor values the good for his or her own "private consumption." For example, each person may support cancer research because of the possibility that he or she will be afflicted with cancer in the future. The implications of more complex motivations for the form of the subsidy and for whether the 170(c) sector is the best provider of the services are considered in Section III.

Hochman and Rodgers have developed a model, applicable to the "private consumption" case just defined, to determine the optimal structure of subsidies for 170(c) organizations that satisfy public good demand.<sup>14</sup> For simplicity the model assumes there is only one public good being produced by the 170(c) sector. Call this one good "the 170(c) good."

The normative structure of Hochman & Rodgers' model is congruent enough with the norm set out above that their result needs to be taken seriously. Consequently, a substantial effort is made in explaining their result (in this subsection) and in showing (in the next subsection and the Appendix) that the result is flawed.

The normative ideal in Hochman & Rodgers' model is to achieve a "Lindahl equilibrium." Each individual in the economy pays for the

170(c) good in two ways. First, there is the net charitable contribution the individual makes. "Net" means that the part that effectively is paid by the government as a subsidy is subtracted. Second, the individual may have to pay additional taxes to help fund the subsidy. In the model the entire funding for the subsidy is in the form of additional taxes. That is just a conceptual simplification that can stand for the impact on the individual of budget cutbacks, of an increase in national debt or of other nontax devices for funding the revenue loss from subsidizing contributions.

A Lindahl equilibrium obtains if an optimal quantity of 170(c) good is produced, and each individual's payment (in the form of net charitable contribution and taxes) equals the individual's marginal valuation of the final unit of the 170(c) good produced multiplied by the amount provided. Thus, when a Lindahl equilibrium obtains, it is as if each individual purchases all he or she wants at a price set at the individual's marginal valuation of the final unit purchased. Unlike a private goods market, however, this price may differ for different individuals, and all individuals "buy" the same quantity. The optimal quantity of public good will be such that the sum of everyone's marginal valuations of the final unit equals the social cost of producing that unit.

Hochman and Rodgers see two normatively desirable traits in a Lindahl equilibrium. The equilibrium results in an efficient (*i.e.*, Pareto optimal) quantity of public good and is "distributionally neutral"<sup>15</sup> in the sense that each person simply buys the quantity she

or he wants at a price equal to the individual's marginal valuation of the last unit purchased. However, even when this marginal condition holds it may be true that the surplus generated by public production is distributed very unequally. Thus, it may not be appropriate to call the equilibrium distributionally neutral. Furthermore, including preferences about the distribution of consumer surplus in marginal valuations creates technical problems that in some cases make Lindahl equilibrium an inappropriate equilibrium concept.<sup>16</sup>

It follows from this discussion about consumer surplus that there are at least two instances where a Lindahl equilibrium satisfies the norm set out above. First, the norm is satisfied when the marginal valuations used to compute an equilibrium incorporate distributional preferences about consumer surplus and there is no technical problem. Second, when such distributional preferences are excluded from marginal valuations, a Lindahl equilibrium will still satisfy the norm if low-income and middle-income individuals do not find the resulting distribution of consumer surplus objectionable.<sup>17</sup> In each case no low-income or middle-income individual is worse-off because of provision of a public good through a Lindahl equilibrium. These two instances are significant enough that Hochman & Rodgers' model cannot be dismissed on the basis of the norm set out above.

Hochman and Rodgers argue that a flat-rate tax credit is a stronger candidate than a deduction for establishing a Lindahl equilibrium. Their technical arguments are detailed in the Appendix, while the core intuition is presented here. Their model has two

individuals in it: individual A has a high income while individual B has a low income. For both individuals the "payment" side of the Lindahl equilibrium consists of net charitable contributions plus any tax payments that go toward funding the revenue loss caused by subsidizing the contributions. The net charitable contribution for each individual is the contribution the individual would make without any subsidy multiplied by two factors. The first factor captures the "price effect" of the deduction. Applying this first factor to the no-subsidy contribution yields the gross contribution in the world with subsidies. The second factor is one minus the subsidy rate. This factor reduces the gross contribution to a net amount that the individual actually "pays" after subtracting the subsidy portion provided by the government. Finally, individual A's no-subsidy contribution is larger by a particular "income elasticity" factor than B's no-subsidy contribution.

Hochman and Rodgers make a crucial assumption about the tax portion of each individual's payment. They assume that this portion can be ignored because it will be small in any event, and much of it may be shifted to other taxpayers who are not contributors and who may have little or no demand for the public good.<sup>18</sup> This means that for each individual the payment side consists only of that individual's net charitable contribution.

If the rate of subsidy is the same for each individual, then more can be said about the relation between their net charitable contributions. Under the assumption that each person responds to the

subsidy with the same intensity, each person will increase his or her gross contributions by the same proportion. ("Responding with the same intensity" means in economic terminology that the two individuals have the same "price elasticity" for charitable giving). Furthermore, the term converting gross contributions into net contributions will be the same for both individuals. As a result, their net charitable contributions will differ only by the "income elasticity" term: individual A's no-subsidy contribution is higher than individual B's by some proportion due to the fact that A has higher income.

On the "benefits" side, Hochman and Rodgers show that the marginal valuations (the value of the last unit of public good) of A and B are related by the same "income elasticity" term that relates their no-subsidy contribution levels.<sup>19</sup> Thus, individual A's marginal valuation is larger than individual B's by the same proportion that individual A's net contribution exceeds individual B's. As a result, a subsidy with equal rates for each individual such as a tax credit enables both individuals to satisfy the Lindahl conditions simultaneously. Hochman and Rodgers conclude that under their assumption neglecting the tax terms "or virtually any other assumption that is at all realistic, a flat-rate tax credit is likely to provide a good approximation to the Lindahl requirements."<sup>20</sup>

## 2. An Extension of the Basic Public Goods Analysis: An Alternative Model

The Appendix to this article develops a model similar to that

of Hochman & Rodgers: it has two income classes, and the central normative requirement is achieving a Lindahl equilibrium. Rather than adopt Hochman & Rodgers' assumption that the tax part of each individual's payment in Lindahl equilibrium can be ignored, the model considers a range of possible tax structures for funding the revenue loss caused by the charitable contribution deduction. All of these tax structures are "progressive" in the sense that larger increases in percentage rates are imposed on the high-income individuals than on the low-income individuals who contribute.

The striking result that emerges from this model is that when the tax shares used to fund a subsidy for charitable contributions are even slightly progressive, very high subsidy rates for A and very low subsidy rates for B may be a Lindahl equilibrium. This type of discrepancy in subsidy rates resembles the discrepancy inherent in a deduction.

Intuitively these results emerge because high subsidy rates lower the net contribution of the high-income individual. This offsets the progressive tax rate increase so that the high-income individual makes the correct total payment in a Lindahl equilibrium for the benefits he or she receives from the increase in the 170(c) good.<sup>21</sup>

These results that favor a deduction over a flat-rate subsidy such as a tax credit depend on assumptions about whether the tax part of the payment in Lindahl equilibrium can be ignored and, if not, what the rate structure of that tax part is. Hochman & Rodgers' main

justification for their decision to ignore the tax part of each individual's payment is that the tax cost of the subsidy may be diverted to non-contributors outside of their model.<sup>22</sup> In fact, Hochman and Rodgers view it as "reasonable to think of a small across-the-board differential in marginal tax rates . . . as the means through which the costs of the subsidy are offset."<sup>23</sup> If this is what is going on, it is hard to believe in Hochman & Rodgers' conclusion quoted above that a flat subsidy would "provide a good approximation to the Lindahl requirements." Those who had no particular desire for the activities supported by the subsidy would be taxed to fund the subsidy but would not receive benefits that they consider worth the tax costs. That certainly is not a Lindahl equilibrium where each person pays taxes and contributions according to his or her valuation of the activities that are generated thereby.<sup>24</sup>

Moving away from a Lindahl equilibrium in this way does more than block the application of a particular kind of economic analysis. If a substantial proportion of voters were taxed more than the benefits they receive on account of a subsidy for charitable contributions, the political viability of the subsidy would be impaired. A more complex view of the political process, however, suggests that the tax revenue cost of a subsidy may be shifted onto those who benefit from the additional 170(c) output it induces. Logrolling might serve such a function. Those who do not favor a subsidy for contributions may gain other favorable government expenditures or tax reductions in exchange for supporting the subsidy.

The tax revenue cost of those government expenditures or tax reductions will fall partly on those who want the subsidy for charitable contributions. As a result, individuals or groups that do not favor the subsidy may effectively pay a lower tax share to fund the subsidy because they can use their unimpaired political capital to get other government benefits.

This possibility suggests another way to model the question of optimal subsidy structure. The tax cost to individuals who benefit from the 170(c) good will not be neglected, and together they will bear the entire increase in taxes needed to fund the subsidy. This captures the idea that the political process might shift the costs of government programs onto those who benefit from them. There will be no unidentified third parties who will absorb part of the tax revenue cost without a fuss.

Some of the parties who benefit from the 170(c) good may be non-contributors. These individuals should be taxed in a Lindahl equilibrium. My model handles this by splitting the low-income class into two parts. A proportion  $P$  of that class contribute, and the rest experience the same benefits as the contributors but make no contributions. The contributors all contribute the same amount. Since non-contributors and contributors experience the same benefits, in a Lindahl equilibrium, the tax increase for non-contributors must be larger than that of the contributors by the amount of the contribution. It is assumed that this tax result within the low-income class is achieved by logrolling or some other political

device.<sup>25</sup>

The next issue is how to model the distribution of tax revenues between the high-income class and the low-income class. My model leaves this question partially open. The tax rate increase for each high-income individual is taken to be  $1 + \delta$  as large as the tax rate increase for each contributing low-income individual. If  $\delta = 0$ , then both taxpayers' rates increase by the same amount. This is an increase that is neither progressive nor regressive; in this model it is the analog of the "across-the-board differential in marginal tax rates" that Hochman and Rodgers consider to be a reasonable assumption.<sup>26</sup> If  $\delta$  is greater than 0, then the rate increases used to fund the subsidy are progressive with respect to contributors in the sense that the contributor with greater income must pay a greater added percentage of his or her income.

It is plausible to use positive values of  $\delta$ . Establishing or deciding to continue the charitable contribution deduction is an easier decision taking as given that there will be a later overall decision on tax rates. Separating the decision on tax rates means that legislators can focus on the effect of income tax rates both on incentives to work and on the distribution of income without considering devices such as the charitable contribution deduction for funding public goods. Given the small number of high-income individuals and the egalitarian sentiments in American society, it is not at all unreasonable to anticipate  $\delta > 0$  when additional revenues must be raised through the tax system and when raising revenue is the

sole focus of legislators.

Using the equations derived in the Appendix, I calculate a subsidy rate for high-income individuals that is consistent with a Lindahl equilibrium if low-income individuals are not subsidized at all. This corresponds to a situation where low-income individuals are not subsidized because the subsidy is an itemized deduction and each low-income individual's total itemized deductions are less than the zero bracket amount. In the numerical simulations presented in this subsection each high-income individual has six times the income of a low-income individual and there are three times as many low-income individuals as high-income individuals.<sup>27</sup>

The subsidy rates that emerge depend on four more parameters. One is the tax share parameter  $\delta$  that has already been discussed. The second is the proportion  $P$  of low-income individuals who contribute. The third is  $\alpha$ , the "income elasticity" of charitable contributions. This parameter determines how such contributions increase with increases in income. The two values that are used are .75 and 1.0. These values are at the lower and upper ends of the empirical estimates in the literature. The value .75 means that for each one percent increase in income charitable contributions increase three-quarters of one percent. The value 1.0 means that charitable contributions increase by the same percentage as income does. Finally, a fourth parameter indicating the responsiveness of giving to a subsidy is set for all individuals at the value estimated "for all income classes" in the empirical literature. In other words, the

possibility that high-income taxpayers might be more responsive to subsidies for giving is ignored even though, as the next subsection demonstrates, this possibility may increase the attractiveness of a deduction versus a flat subsidy.

The following two tables report the subsidy rates for high-income individuals required under a Lindahl equilibrium when low-income individuals are not subsidized. If we assume that the high-income individuals face the current highest marginal rate of .50, then an itemized deduction under current law consists of a .50 subsidy for high-income individuals and a zero subsidy for low-income individuals who presumably do not itemize. Thus, if the numbers in the tables are large (around .50 or greater), then the disparities in subsidy rates caused by an itemized deduction do not appear to be unreasonable on the basis of Lindahl criteria.

Table 1  
Lindahl Subsidy Rate for High-income Individuals  
When All Low-income Individuals Contribute (P = 1)

		Income Elasticity	
		0.75	1.0
Tax	$\delta = .1$	.44	.27
Share	$\delta = .25$	.55	.37
Parameter	$\delta = .5$	.75	.53

Table 2  
Lindahl Subsidy Rate for High-income Individuals  
When Half of Low-income Individuals Contribute (P = .5)

		Income Elasticity	
		0.75	1.0
Tax	$\delta = .1$	.80	.45
Share	$\delta = .25$	.99	.67
Parameter	$\delta = .5$	> 1	.95

The first entry in the first table, .44, is the subsidy rate that must be provided to high-income individuals under the Lindahl criteria if low-income individuals are not subsidized, if  $\delta = .1$  and if the income elasticity is .75, a figure in the lower range of the available econometric estimates. The value of .1 for  $\delta$  indicates that the tax increases used to fund the subsidy are not very progressive: high-income individuals experience a tax rate increase only 10% larger than the increase for individuals with one-sixth the income.

The tables indicate that when the tax increases used to fund a subsidy for charitable contributions are even slightly progressive, the high-income individual should be heavily subsidized when the low-income individual is not subsidized at all. The size of the numbers suggests that the disparities in subsidy rates inherent in a deduction may not be unreasonable on the basis of Lindahl criteria.<sup>28</sup> Furthermore, comparing the two tables indicates that a higher subsidy rate for high-income individuals is required when a smaller proportion of low-income individuals contribute. This makes sense. In place of contributions, the non-contributors pay taxes used to induce more contributions from high-income individuals via a higher subsidy

rate.<sup>29</sup>

3. Some Additional Arguments for a Deduction as an Appropriate Subsidy

Hochman and Rodgers' central argument for a flat-rate subsidy such as a tax credit is the one discussed above: they believe that that type of subsidy is more likely to approximate a Lindahl equilibrium than a deduction. They also discuss two other potential justifications for use of a deduction. First, they consider and reject as unlikely the possibility that giving by high-income groups involves greater positive externalities than giving by others. A second possible justification for a deduction is that high-income individuals have a larger price elasticity for contributions so that subsidizing them more would increase activities that low-income and middle-income individuals favor at a lower cost to those individuals. Hochman and Rodgers dismiss this possibility by noting that the evidence for a strong positive correlation between the absolute value of the price elasticity for contributions and income is weak and that, in any event, providing a greater subsidy to high-income individuals will shift the composition of giving in the direction that that group favors.<sup>30</sup>

Hochman & Rodgers may have been too quick to dismiss the second potential justification. Although the evidence (some of which postdates their article) is not conclusive, the possibility that the absolute value of the price elasticity of giving increases

significantly with income must be taken quite seriously.<sup>31</sup> If such an effect exists and if low-income taxpayers want the same 170(c) goods that high-income taxpayers support by contributions, then low-income taxpayers would be better off paying higher taxes to subsidize the contributions of high-income taxpayers than to subsidize the contributions of their own income class. This possibility is enhanced by the fact that there is strong (but not conclusive) evidence that for high-income taxpayers the revenue loss from subsidizing contributions is more than made up for by the induced increase in contributions. The same cannot be said about subsidies for the contributions of other taxpayers.<sup>32</sup>

Furthermore, it is not clear how much significance there is in the fact that providing high-income individuals with a high subsidy shifts giving in the direction of organizations traditionally favored by that group's contributions. Those organizations (including primarily educational institutions and hospitals) may provide significant benefits for individuals in other income classes. In addition, the optimal subsidy rate is probably not the same for all activities, and some activities are supported by government benefits other than subsidized contributions. It would not be surprising, for example, if contributions to religious organizations are currently adequate despite the fact that contributors to religion generally are subsidized at a lower rate based on having less income. Exploring that possibility would be a difficult empirical task.<sup>33</sup>

### C. The Functioning of the Political Process

The previous section discusses several ways in which the charitable contribution deduction might be an unobjectionable political bargain. The discussion is fairly simple and involves some drastic assumptions. Nonetheless, there is an important conclusion that follows from the discussion: the deduction's higher subsidy rate for high-income individuals may be just a way of insuring both economic efficiency and an allocative mechanism that accords with the preferences of all voters including lower-income and middle-income people who are not the apparent or immediate beneficiaries of the deduction. This possibility raises an important issue: does the political process function in such a way that the charitable contribution deduction plausibly is an efficient and distributionally neutral device that results in an outcome like Lindahl equilibrium?

This section shows that the two extreme views on this issue are hard to swallow given current knowledge. Under one view the political process produces a result close to Lindahl equilibrium or a related concept. Under the opposite view, the political process systematically ignores the preferences and welfare of low-income and middle-income groups. The deduction is largely a boon for high-income individuals financed by other people's tax payments. The other people, who comprise a rather substantial majority, do not have sufficient political power or political awareness to correct the situation.

Pessimism about the first, "positive" view comes from many sources. First, over the past two decades economists have attempted to design theoretical mechanisms to attain the proper level of public good production and the proper allocation of costs. There appear to be no mechanisms without theoretical problems.<sup>34</sup> Furthermore, experiments using various mechanisms do not provide reason to be optimistic. Some of the mechanisms seem to result in close to the optimal quantity of public good but with an inappropriate distribution of costs. Other mechanisms fail to come near the optimal overall quantity.<sup>35</sup>

If economists have failed to produce good allocation mechanisms that stand up theoretically or experimentally, it seems unlikely that actual political processes will do any better. In fact, existing knowledge about these processes suggests greater pessimism. Theoretical studies of majority rule and representative democracy reveal that such systems have deep problems. For example, a well-known result for majority rule is that unless voter preferences display certain patterns the voting process may "cycle" over various alternatives. "Cycling" over three alternatives A, B and C occurs if A is chosen over B, B is chosen over C, but C is chosen over A. Any of the three alternatives may be chosen in a series of pairwise eliminations depending on which alternatives are run against each other first. This result is a simple example of the outcome depending solely on the "agenda." The existing literature reveals many other theoretical problems both with majority rule and with representative

democracy.<sup>36</sup> At the same time, empirical studies are at an early stage, and good tests of even the most simple models of the workings of the political process do not exist at present.<sup>37</sup> Finally, there are studies that are more "institutional." These studies focus on the impact of the interests of politicians and bureaucrats on public output, and the studies identify various forces that lead to too much, too little or the wrong kind of public output.<sup>38</sup>

Given the results of all this work, the assertion that the political process produces a Lindahl equilibrium or an outcome close to it is too bold. Such an outcome cannot even be assured theoretically or in a laboratory where the vagaries of real world processes can be avoided or ignored. In the actual political process a Lindahl equilibrium may be buried by agenda manipulation or may be distorted to serve the interests of politicians or bureaucrats. Thus, it is hard to accept the "positive" extreme view.

But it is also hard to accept the "negative" extreme view that since passage of the charitable contribution deduction in 1917 it has served the interest of high-income individuals at the expense of middle-income and low-income individuals. High-income groups do not comprise a large proportion of the total population, and it is hard to imagine that the other groups do not have considerable political power.<sup>39</sup> Furthermore, the availability of devices such as logrolling suggest that it is possible to shift the costs of the deduction onto those who benefit from it.<sup>40</sup>

Despite the importance of knowing how well the political

process works for judging the charitable contribution deduction, it appears that current knowledge does not offer a definitive answer. There are some elements such as logrolling in the process that make it possible that the deduction is at least roughly an efficiency-enhancing political bargain. But there is no assurance that a result as normatively pleasing as a Lindahl equilibrium emerges from the process.

### III. Donor Motivations and the Choice of Policy Instrument

There are two groups that have an interest in a charitable enterprise: the donors who support the enterprise financially and its nondonor-beneficiaries. In Part II both groups are assumed to be satisfying their own "private consumption" demand for public goods -- they are not concerned with the tastes, happiness, or consumption of others. The main goal in that Part is to determine whether the charitable contribution deduction and accompanying legislation achieve a Lindahl equilibrium outcome or result from a political bargain that is normatively unobjectionable in the sense that middle-income and low-income individuals are not made worse-off. The conclusion is indeterminate on that point: it is possible but by no means assured that the deduction and accompanying legislation have those qualities.

Despite this indeterminacy, I assume in this Part that the deduction and accompanying legislation provide public goods through a political bargain that is in the interest of many groups. The first section describes reasons for using the deduction rather than other methods of government provision to satisfy "private consumption" demand for public goods. The remaining sections consider the policy mix that would best serve as a political bargain when public good demand and the desire to make contributions arise from more complex motivations. For analytic ease each of these five sections considers a single type of motivation that may give rise to charitable giving: non-substantive motivations, desires for alternatives to government, utility externalities, consumption externalities, and desires to

influence the tastes of others.

The discussion for each motivation is meant to be suggestive and speculative rather than definitive and rigorous. In addition, the set of motivations studied is not meant to be exhaustive. I wish to show that viewing the charitable contribution deduction as the result of a political bargain in the interest of many groups has important implications for setting the mix of government policies. Many of the implications go beyond or even contradict the conventional wisdom on the subject. Thus, if the political bargain view is correct, then important changes in and additions to the traditional approach to policy mix issues are in order.

#### A. Instrumental Efficiency Justifications in the "Private Consumption" Case

Examining the "private consumption" case allows us to address a basic question. When is the charitable contribution deduction a more efficient instrument for providing public goods than direct government provision?

Suppose, for example, that there is considerable uncertainty about the public's preferences or that tastes fluctuate frequently. In that situation, the charitable contribution deduction serves a "preference revelation" function by allowing contributors to determine the mix of activities while the government retains at least some control over the overall quantity by setting the price of contributions to 170(c) organizations. The uncertainties about what goods to provide may be the very reason why direct government

provision of the goods is not feasible. A related rationale for provision through a contribution-funded private sector is "pluralism for efficiency reasons." Efficient provision of the goods may require a diversified, internally competitive private sector unhindered by the bureaucratic and institutional distortions that may affect government provision.

The charitable contribution deduction subsidizes contributions to all eligible activities at the same rate. Generally however, different activities will have different price elasticities and income elasticities for contributions,<sup>41</sup> different non-subsidy levels of contributions and different optimal levels of contributions. This suggests that the optimal subsidy rate structure for contributions may vary substantially across activities. An efficiency problem will therefore exist with a deduction, a tax credit or any other tax incentive that is the same for all activities.

Any efficiency costs of that sort, however, must be balanced against the low administrative costs of a tax deduction. A deduction is a familiar tax device that requires no new government apparatus to administer it. Furthermore, use of a deduction means that the bulk of contributions will come from a relatively small group, high-income taxpayers, and this group will experience the greatest tax incentive to report contributions. It may be easier to monitor such a small group to control practices such as claiming non-existent contributions or inflating the value of contributions actually made.<sup>42</sup> Finally, activities that are seriously "undersubsidized" by the deduction may

be given additional government benefits to correct the situation.

There also may be cases where a deduction works best as a complement to direct government provision. For example, it may be cheaper to provide the bulk of some good such as primary education by direct government provision but to use subsidized contributions to fund a variety of special kinds of primary education that the government cannot provide efficiently. Alternatively, subsidized contributions may reveal residual demand for more of the kind of education that the government provides.

The next five sections will consider situations where the mix of government policies is dictated by particular donor motivation patterns as well as by instrumental efficiency. For purposes of exposition, instrumental efficiency considerations will be ignored except to the extent that they interact with the particular motivations under examination.

#### B. Nonsubstantive Motivations

A donor may be motivated to give for reasons other than an interest in the substantive output of the donee 170(c) organization. This "nonsubstantive giving" may arise in response to pressure from friends, pressure from 501(c)(3) solicitors, and pressure from employers or society generally. Alternatively, the donor may simply enjoy the act of giving itself or may derive prestige from the act of giving. Professor Simon has cautioned that the justification for the charitable contribution deduction would be considerably weakened if

giving is "mindless," "sentimentally" motivated, or the result of pressure from family, employer or 170(c) organizations.<sup>43</sup>

It is not clear, however, that nonsubstantive giving is socially unproductive. "Nonsubstantive donors" may be giving in response to what some other person or institution thinks is desirable. The degree to which nonsubstantive giving will be socially productive depends on how nonsubstantive donors choose one cause rather than another. At least three types of institutional or personal catalysts may influence such donors. First, they may be influenced directly by "substantive donors." This type of influence is probably positive -- the substantive donor in effect contributes not only his or her own resources but also those of the nonsubstantive donor. In addition, substantive donors and nondonor-beneficiaries who benefit from the 170(c) activity supported by nonsubstantive donors may favor making those donors eligible for any contribution subsidy since the goal of such a subsidy is to increase support for the activity regardless of how the increase comes about.

A second catalyst for giving is solicitation by 170(c) organizations. This vehicle raises the spectre of self-perpetuating 170(c) organizations surviving on tax-deductible contributions from nonsubstantive donors when substantive demand for the organization's activities is almost zero. Leaving aside the desires of those who run the organization, this condition is not Pareto optimal because nonsubstantive donors could satisfy their desires by giving to 170(c) organizations providing goods and services for which there is

substantial substantive demand. Despite these concerns, in the long run the effectiveness of solicitation by 170(c) organizations probably rests to a large extent on social perceptions that ultimately derive from substantive demand for public goods. In addition, solicitation by 170(c) organizations may serve valuable purposes. Solicitation may inform potential contributors and nondonor political supporters about the value of a 170(c) organization's goods and services and thereby generate substantive demand for its output.

A third catalyst is general social pressure that is not imposed specifically by donors or 501(c)(3)s. For example, a person may give to his or her alma mater out of a sense that it is proper to do so without specific pressure from the institution or other donors. Individuals themselves ultimately generate these general social pressures by initiating or perpetuating ideas about which institutions should be supported. However, these pressures may operate with a lag. The potential misdirection of resources while nonsubstantive donors adjust to new social perceptions is a potential cost that must be counted in evaluating certain changes in government policy. Suppose, for example, that direct government provision of a 170(c) activity is added to supplement contribution subsidies. The direct government provision lowers the need for provision by 170(c) organizations. But nonsubstantive donors may delay reducing their contributions until new social perceptions have time to lower the social approbation associated with such contributions. As a result, there may be a temporary oversupply of the activity in question.

How does subsidizing nonsubstantive donors fit into the view of the charitable contribution deduction as a political bargain? Substantive donors and nondonor-beneficiaries may have to pay additional taxes to fund the subsidy to nonsubstantive donors. But if the nonsubstantive donors direct their contributions to 170(c) organizations in such a way as to raise the value of the output of such organizations to the substantive donors and nondonor-beneficiaries more than the additional taxes, those groups will benefit from the subsidy. In addition, as long as part of the subsidy is funded by other parties, nonsubstantive donors will be better off. Although nondonor-beneficiaries and substantive donors may benefit from the donations of nonsubstantive donors this way, there is an additional issue. Suppose that nonsubstantive donors' contribution patterns differ substantially from those which would result if nondonor-beneficiaries or substantive donors donated the same money. Might it then be a good idea to disallow subsidies for nonsubstantive donors and at the same time to increase subsidies for substantive donors?

There are several answers to that question. First, it is probably impossible to distinguish between substantive donors and nonsubstantive donors. For many donors substantive concerns blend with pressures from others to dictate choice among potential 170(c) organization donees. Second, even if it were possible to draw such a distinction, it may be desirable to continue subsidizing nonsubstantive donors. Those donors may be more responsive to

subsidies than substantive donors. Thus, the "bang" per tax dollar paid by nondonor-beneficiaries and substantive donors to fund contribution subsidies may be greater if nonsubstantive donors are subsidized instead of extending greater subsidies to substantive donors. This effect may outweigh the fact that nonsubstantive donors' patterns of giving are "distorted" in the eyes of substantive donors and nondonor-beneficiaries. Third, if substantive donors know what the pattern of 170(c) organization receipts are, they can redirect their own pattern of contributions to "correct" for the "distortion" caused by the contributions of nonsubstantive donors.<sup>44</sup>

#### C. Desire for Alternatives to Government

Where the donor's motivation is a desire to establish alternative institutions that overlap or preempt government functions regardless of the efficiency of those institutions compared with government, pluralism is desired for "preference" as opposed to "efficiency" reasons. Preference pluralism has strong public good aspects -- one person's efforts to set up a private alternative to government will satisfy another's desire for such an alternative even though that other contributes nothing to its creation.

Those who desire alternatives to government will oppose replacing provision by 170(c) organizations with government provision. Viewing provision by 170(c) organizations as a political bargain, the existence of this group would tend to delay the shift of 170(c) activities to the public sector until the efficiency gains or other

possible gains from doing so were substantial. Those who are interested in the activities as nondonor-beneficiaries or as substantive donors would face paying extra taxes to make up for losing part or all of the net payments of the preference pluralism group to the activities if such a shift were made.

#### D. Utility Externalities

Utility externalities exist when one person's utility depends on another's utility. Utility externalities present a traditional public good situation. Where persons A and B both desire C to be happier, transfers to C will benefit both A and B regardless of the source of the transfers, and neither A nor B can be excluded from benefiting if either makes a transfer. Where utility externalities are implemented by donations, the donor is best off making a cash transfer since the recipient will use that additional income to maximize his or her own utility. A striking feature of the 170(c) sector, however, is that it almost exclusively provides specific goods as opposed to income transfers.

There are many reasons to believe that 170(c) organizations are extremely inefficient vehicles compared to governments for providing income redistribution even at the margin. Most of these reasons stem from the fact that an income transfer program requires immense administrative resources. It is vital to be able to determine what each individual's income is so that transfers are directed only to those who are truly needy. In addition, if the redistribution

program covers a large region or the entire nation, millions of transfers will be involved and the composition of the class of transferees will constantly shift. On the other hand, limiting the program to a small area may be impossible if the benefits are at all significant. Significant benefits may result in migration of poor people to the area with consequences that include financial drain but also extend to straining the area's capacity to place its poor in productive, well-paying jobs as a permanent solution to their plight. That migration would threaten to make the nation poorer by exacerbating inefficiency in labor markets as well as by diminishing the chance of self-sufficiency for some of the poor.

Federal and state governments are uniquely placed to redistribute income. They have a great deal of detailed information about incomes that they must collect to run the tax and welfare systems, and they can ensure at least some degree of national or state uniformity in transfers. It is no surprise that governments have little competition from 170(c) organizations even for residual demand for income transfers. The sheer size of administrative economies of scale in redistribution programs suggests that a single supplier, government, will most likely provide almost all redistribution.<sup>45</sup>

#### E. Consumption Externalities

If person A is concerned not with person B's happiness as evaluated by person B but with what particular mixture of goods B consumes, then there is a "consumption externality" as opposed to a

"utility externality" between the two of them. When there is a positive utility externality between groups, i.e., members of group A are happier if people in group B feel happier, then there is a basis for legislation setting up transfers between group A and group B since both groups can be made better off by such transfers if the utility externality is strong enough.<sup>46</sup> But the case of a consumption externality offers much less scope for smooth political interactions. Suppose group A prefers that an individual B consumes more of good X and less of all other goods. Group A will be satisfied by legislation that lowers B's income and utility so long as consumption of good X is increased. In fact, group A will want to shift B's consumption by means that minimize the transfer of resources from group A to B. For example, group A might desire legislation that taxes B's consumption of goods other than X and reduces B's income taxes by the amount of the revenue from the tax on the goods. This should result in consumption by B of more X.<sup>47</sup> At the same time, ignoring administrative expenses, there is no cost to anyone else since the tax and refund scheme has no net revenue consequences.

There may be several situations in which a contribution subsidy like the charitable contribution deduction might emerge as a political bargain to implement consumption externalities. Consider first use of a contribution subsidy as an exclusive way to implement consumption externalities. If the As are limited to "donative" instruments (such as subsidies, direct grants of good X, and "rewards" for consuming more X than a fixed quantity) to shift the consumption

of the Bs, then the Bs cannot be made worse-off by the As' actions. Gifts and positive incentives can always be refused. So limiting As to donative instruments is valuable to Bs who otherwise face the prospect of the use of sticks such as taxation or government sanctions that may make them worse-off. The Bs therefore might favor allowing As to implement their consumption externality tastes through the 170(c) sector and the charitable contribution deduction. The Bs might even pay part of the tax cost of the deduction as applied to these activities in order to steer the As away from using other more direct government devices.

There is one problem with using direct provision of goods to satisfy consumption externalities. If the recipient already buys some of the good, normally the recipient will not increase the total amount of good consumed by the amount provided directly for free. Instead the recipient will cut back on his or her market purchases of the good and use the extra money to buy other goods. This suggests a possible synergy between government and the 170(c) sector with respect to consumption externalities. The government might provide large quantities of a good X for free to a particular group while taxing the group an amount equal to the total cost of the good so provided. Given this "base" level of provision, additional direct provision might be effective in increasing consumption of X. Contribution-funded 170(c) organizations could then satisfy residual consumption externality demand.

This possibility of valuable coordination of government and

170(c) activity suggests the central role of interactions between the two. Where the government and the 170(c) sector provide the same goods or close substitutes and donors are aware of the government programs, the size and scope of the 170(c) sector depends on donor expectations about government activity. If the government is expected to maintain a particular policy such as a given user subsidy or level of provision regardless of 170(c) activity, then added donor contributions will help implement consumption externalities. But it may be the case that additional 170(c) activity will result in a reduction in government activity, and at the extreme it may result in a one-for-one reduction. In such a situation additional giving will be diminished or eliminated. The synergistic use of 170(c) organizations to sop up residual consumption externality demand given a base of government provision will only succeed if the government does not exploit additional giving by changing its provision level.<sup>48</sup>

#### F. Desire to Influence the Tastes of Others

In some situations group A wants to change the tastes of another group, B. For example, an environmental group might want people to be more conscious of the environment or the old might want the young to adopt certain political beliefs. Taste-changing desired by groups is a public good. If a member of group A spends to change the tastes of group B, all the members of A benefit from whatever changes occur.

At first glance there appears to be no particular reason to distinguish activities aimed at changing tastes from other activities that satisfy public good demand. There is, however, at least one important practical difference between taste-changing and other public goods.<sup>49</sup> Successful taste-changing measures may result in policy choices with irreversible consequences. Suppose a country goes to war after certain groups in the country engage in a massive campaign to stir up pro-war sentiment. There may be no low-cost method of getting out of the war even if the effects of the taste-changing campaign wear off and the political basis for going to war evaporates.

The case for the existing restrictions on political activity by 170(c) organizations may be partially justified by the political dangers of large short-run fluctuations in tastes. The main restrictions are on overt activity aimed directly at the political process: grassroots lobbying is restricted and support of political candidates is banned.<sup>50</sup> These activities have public good aspects, but such restrictions lessen the danger of a "preemptive" strike by pockets of wealth through a massive campaign to change tastes. Subsidies are aimed at activities that work toward taste-changing more indirectly and slowly by providing information and research. Use of these activities to change tastes allows opponents a fairer opportunity to strike back and allows people time to reflect before agreeing to new leadership or new legislation that may irreversibly affect the course of events. Present restrictions, therefore, allow some forms of taste-changing to be subsidized but at the same time

discourage taste-changing that short circuits the gradualism of politics. This position is likely to command wide support, and therefore it is not surprising that the position has emerged as legislative policy from the current political process.

There is at least one subtle way in which the current system of contribution funding may satisfy demand for taste-changing as a public good. This involves overt and covert donor influence on 170(c) organizations that provide educational services. Educational institutions probably play a significant role in molding the future attitudes and beliefs of students. Donors may attempt to control this belief-shaping process by explicitly tying their contributions to the adoption of particular curricular approaches. Educational institutions may hesitate to teach doctrines that are unpopular with actual or potential donors.<sup>51</sup>

The potential problem with a deduction as a form of contribution subsidy in this instance is similar to the potential problems in other instances. A deduction encourages the contributions of high-income individuals more than the contributions of other individuals so that it increases high-income group "donor influence" over educational institutions disproportionately. If the high-income group wants to instill beliefs that are not supported by other income groups, the public good aspect satisfied by the deduction does not extend to those other income groups who may even see encouragement of such beliefs as a "public bad."

There are a range of "political bargain" responses if this

situation of conflict between groups occurs. First, the non-high-income groups may demand compensation in the form of lower taxes or higher expenditures on their behalf. This will effectively shift the tax revenue cost of the deduction to the high-income group. Second, groups other than the high-income group can shift the funding of education more towards direct subsidies for students or other forms of direct government support that are alternatives to donor subsidies. Such a move might reduce the efficiency-motivated pluralism in education because of the greater government role, but it would also dilute the influence of high-income donors over educational institutions.<sup>52</sup> In any event, this is another instance where the role of the charitable contribution deduction in the overall government policy mix may depend critically on the existing pattern of individual motivations.

#### IV. Conclusions

Much of the literature on the charitable contribution deduction focuses on the concern that the deduction unduly favors high-income taxpayers. The method of approaching that concern often includes an attempt to directly assess the fairness of the deduction in terms of its costs and benefits for various groups. This article suggests that both the concern and that way of approaching it may be misguided. In particular, the article shows that the deduction and the legislation accompanying it may be a political bargain that benefits all groups including low-income and middle-income groups. This possibility suggests that in assessing the deduction it is important to focus on the functioning of the political process. If that process allows low-income and middle-income individuals to protect their interests, it seems unlikely that they are harmed by the deduction.

This article also shows that if the deduction is part of a political bargain that benefits a wide range of groups, then the appropriate role of the deduction in conjunction with other government policies depends heavily on the particular motivations of donors and of nondonors who benefit from or are harmed by the activities that the donors support. For example, in the case of education, student subsidies may be an attractive alternative to a deduction for contributions to educational organizations if low-income and middle-income individuals are opposed to the added overt or covert influence of high-income contributors on curriculum that is a by-product of the deduction.

#### Footnotes

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1. This concern has dominated much of the literature concerning the charitable contribution deduction. See, e.g., Andrews, *Personal Deductions in an Ideal Income Tax*, 86 HARV. L. REV. 309 (1972) at 310-12, 314-15 (higher subsidy to high-income taxpayers makes charitable contribution deduction indefensible as tax expenditure but tax theory arguments may justify it as way of measuring income); Simon, *Charity and Dynasty Under the Federal Tax System*, THE PROBATE LAWYER, Summer 1978 at 20-24 (dismissing Andrews' tax theory argument and finding high subsidy to high-income taxpayers "a prima facie violation of progressivity").
  2. Traditionally, the deduction has been an itemized deduction, but this is changing. For 1982 and 1983 only 25% of the first \$100 in charitable contributions may be taken "above the line" as a

non-itemized deduction. In 1984 this limit is raised to 25% of the first \$300 in contributions. In 1985 half of all charitable contributions can be taken as "above the line" deductions, and in 1986 all charitable contributions can be so deducted. But after 1986 the law reverts to its pre-1982 state where the charitable deduction is available only as an itemized deduction. See, I.R.C. § 170(i).

3. The following table for 1980 is based on data in INTERNAL REVENUE SERVICE, STATISTICS OF INCOME -- 1980, INDIVIDUAL INCOME TAX RETURNS (1982):

Adjusted Gross Income (thousands of \$)	Percentage in Class Versus All Returns	Percentage of Itemized Returns In Class
< 5	21.38%	2.27%
5 - 10	19.56%	7.30%
10 - 15	15.23%	17.99%
15 - 20	11.82%	32.36%
> 20	32.03%	69.79%
all classes	100.00%	30.83%

4. This recent work includes Hochman and Rodgers, The Optimal Tax Treatment of Charitable Contributions, 30 NATIONAL TAX J. 1 (1977) and Simon, supra note 1. Those two articles receive extensive attention in the rest of this article.
5. See Simon, supra note 1, at 66.
6. See id. at 62.
7. See id. at 82, 84.

8. See id. at 84.
9. This approach gives heavy weight to the concern about favoritism. The preferences and beliefs of the favored group are ignored, and everyone else must be satisfied that the favoritism is acceptable.

There is one significant way in which the norm might not fully capture concerns in the literature. Some high-income individuals may believe that the deduction and accompanying legislation do not provide enough benefits for low-income and middle-income individuals even though these individuals are satisfied with the distributional consequences in light of the benefits they receive. The norm gives no weight to this type of preference on the part of high-income individuals. Nonetheless, this article considers the role that this type of preference may play in a political bargain producing the deduction and accompanying legislation. See TAN 44-48 infra.

10. For a good summary of the work to date on the price elasticity for charitable contributions see Clotfelter & Steuerle, Charitable Contributions, in H. AARON & J. PECHMAN, eds., HOW TAXES AFFECT ECONOMIC BEHAVIOR 403 (1981) and the associated comments.
11. For example, volumes III and IV of Research Papers sponsored by the Commission on Private Philanthropy and Public Needs (U.S. Dept. of Treasury, 1977) contain over 30 papers on the effects of

- the tax system on the amount and composition of 170(c) activities. Many of these papers focus primarily on the charitable contribution deduction. For a discussion of the massive amount of empirical work on the incentive effects of the deduction see Clotfelter & Steuerle, supra note 10.
12. Clotfelter & Steuerle after comprehensively reviewing all the empirical work in the area and presenting their own findings note that the exact econometric specification used has a big impact on the findings so that "caution should be used in making policy prescriptions on the basis of such findings." See Clotfelter & Steuerle, supra note 10, at 437. Some of the problems with the findings may result in systematic bias. For example, there is the possibility that taxpayers in high brackets tend to overstate their contributions so that empirical studies using tax return data would find such taxpayers more responsive to the deduction than they actually are. See id. at 424 n.38 and id. at 446 (comments by John A. Brittain).
  13. Some of the nonprofit organizations that are eligible to receive deductible contributions under § 170(c) may "correct" market failures other than public good problems. See Hansmann, The Role of Nonprofit Enterprise, 89 YALE L.J. 835, 843-73 (1980) (discussing various corrective roles). Nonetheless, the public good rationale for a subsidy applies to many if not to substantially all of the organizations.
  14. See Hochman & Rodgers, supra note 4.
  15. See id. at 8.
  16. This situation can occur because taxes in a Lindahl equilibrium cannot result in a redistribution of consumer surplus. Each person is taxed at a rate per unit that reflects only his or her valuation of the last unit of output. The fact that the person may value earlier units more highly than the last unit has no tax consequences. It is easy to construct examples where Lindahl equilibria exist only at zero public good production but some positive level of public good provision is a Pareto improvement over no provision if the consumer surplus from production of the public good is redistributed.
  17. At first glance it is not implausible to assume that people ignore the distributional effects of consumer surplus. Concern about the distribution of consumer surplus either for private goods or public goods is rarely voiced at the individual or societal level. This may be the result of a general feeling that each individual's consumer surplus depends on his or her capacity to enjoy and that having a higher capacity to enjoy should not trigger distributional concern. On the other hand, silence about the distribution of consumer surplus may reflect the difficulties inherent in ascertaining that surplus for each individual or even for broad classes of individuals. It makes little sense to talk about redistributing consumer surplus if it cannot be observed.

18. See Hochman & Rodgers, supra note 4, at 9-10 and note 26.
19. This showing requires an assumption that the income elasticity of marginal valuation is independent of the quantity of public good produced. This point is discussed in the Appendix infra at note A2.
20. Hochman & Rodgers, supra note 4, at 10.
21. This intuitive explanation is worked out more rigorously in the Appendix. See TAN A5 and note A5 infra. The Appendix also shows that under current empirical beliefs about charitable giving a flat-rate tax credit would require regressive tax rate changes to be a Lindahl equilibrium. See TAN A6 infra.
22. A second justification that Hochman & Rodgers use is that the changes in tax rates would be small since "charitable giving is less than two percent of personal income." Hochman & Rodgers, supra note 4, at 9. Presumably, this is meant to suggest that such changes are so small that they will be ignored by the individuals concerned. This argument ignores the political visibility of the deduction. Each taxpayer may be unaware of exactly how much he or she pays to fund the deduction each year, but information about the deduction itself is readily available to taxpayers and their political representatives. The 1983 tax expenditure budget estimates the revenue loss from the deduction at over 10 billion dollars for fiscal 1983. See The Budget of

- the United States Government, Fiscal Year 1983, Special Analysis G, "Tax Expenditures" (February 1982) (Table G-2). It is hard to imagine that political representatives are unaware that someone must pay for this revenue loss through higher taxes (or through increased deficits, reduced expenditures or some other device that is modelled as a tax increase in this article and in Hochman & Rodgers' article).
23. Hochman & Rodgers, supra note 4, at 9-10.
24. Hochman & Rodgers are aware of this problem. They note that under Lindahl equilibrium an individual who makes no contribution and places no value on the final unit of public good produced should pay no extra taxes to fund a subsidy for contributions. See id. at 17 n.26. They then point out that in their model the valuation of the final unit of public good production increases positively with income. If rates are increased by the same percentage for each person, the tax payments required to fund the revenue loss from the deduction will also increase with income. See id. Presumably, the idea is that there is not much deviation from a Lindahl equilibrium. Aside from the vagueness of this reasoning, it depends on including the tax part of each individual's payment in the analysis. This article does that in a rigorous way, and the result is that Hochman & Rodgers' conclusions become doubtful.
25. This is a much stronger assumption than the one that will follow

for the relation between tax increases for high-income contributors versus low-income contributors. This assumption is necessary, however, if there is to be a Lindahl equilibrium where a given income class has both contributors and non-contributors who benefit equally from the 170(c) output. The alternatives are to abandon the Lindahl equilibrium norm or to leave the nondonor-beneficiaries out of the formal model as Hochman and Rodgers do.

The reader who is troubled by the strength of the political assumption here can always consider the case  $P = 1$  (set out separately below) where all beneficiaries are contributors. That case has some theoretical appeal: if demand for the 170(c) good is considered to be strictly a function of income, it makes sense to model contribution behavior that way too. An additional interesting point is that the results for the case  $P = 1$  correspond to at least one Lindahl equilibrium where all members of the low-income class are taxed the same amount. That is true when the contribution of low-income individuals who do contribute is the amount of extra value that those individuals place on the 170(c) good at the margin compared to low-income non-contributors. This is a special case but may be a good approximation: those who contribute may do so because they value the 170(c) good more. In any event, the goal here is not to prove that the charitable deduction is a Lindahl equilibrium but to show that under a political bargain view it is at least as

plausible a candidate as a flat-rate tax credit.

26. It is only strictly the analog in the case where all the low-income individuals are contributors or where contributing low-income individuals are modelled to have higher marginal valuations of the 170(c) good than non-contributors by exactly the amount of the contributions. Otherwise, when  $\delta = 0$ , low-income non-contributors will suffer a higher tax rate increase than high-income individuals and low-income contributors.
27. The Appendix shows that these exact numbers are not critical to the results. Reducing the income gap tends to make the results less like a deduction. But even if the gap is reduced from six times to two times, the results are roughly the same. Changes in size of the low-income class relative to the high-income class also have little effect. See TAN A4-A5 infra.
28. Of course, these results do not prove that a deduction provides a good approximation to the optimal subsidy rates under Lindahl criteria. The model is much too simple to have the strength of a proof. But the results indicate that the possibility that a deduction approximates the Lindahl requirements must be taken seriously.
29. In Table 2 when  $\delta = .5$  and the income elasticity is 0.75, no positive subsidy rate for the high-income taxpayer less than one will suffice for a Lindahl equilibrium to exist. This is

indicated by the entry ">1" rather than an actual number because subsidy rates greater than one are inconsistent with the empirical assumptions about the responsiveness of giving to a subsidy used in the calculations. A subsidy greater than one means that the taxpayer gets more back from the government than he or she contributes. A rational taxpayer would then give all of his or her wealth plus whatever he or she could borrow.

30. See id. at 13.

It is well known that high-income individuals tend to give more to educational organizations and hospitals while low-income individuals tend to give more to religion. See Clotfelter & Salamon, The Impact of the 1981 Tax Act on Individual Charitable Giving, 35 NATIONAL TAX J. 171, 179 (1982); Clotfelter & Steuerle, supra note 10, at 421.

31. See Clotfelter & Steuerle, supra note 10, at 426-31.

32. The general conclusion of the econometric work is that the price elasticity is significantly less than zero, but only for the highest income brackets is it fairly certain that the elasticity is less than minus one. See id. The additional induced contributions will exceed the tax revenues lost if and only if the elasticity is less than minus one.

33. Religious organizations receive the lion's share (around 60%) of all individual charitable contributions. See Clotfelter &

Salamon, supra note 30, at 181 (Table 5). But this does not resolve the real issue: whether subsidies expand contributions sufficiently so that religion is provided at an optimal level. Furthermore, determining the optimal subsidy level for contributions is complicated by the fact that religion receives other benefits from government.

34. Many of the mechanisms aim at inducing individuals to reveal their demand for public goods. The mechanisms that succeed at doing this succeed only under limited assumptions, and generally speaking systematic cheating by coalitions can undermine the revelation properties of such mechanisms. For an elementary discussion, see A. ATKINSON & J. STIGLITZ, LECTURES ON PUBLIC ECONOMICS 513-15 (1980); R. TRESCH, PUBLIC FINANCE: A NORMATIVE THEORY 119-21 (1981).

35. For a discussion of various experimental results see Smith, An Experimental Comparison of Three Public Good Decision Mechanisms, 81 SCAND. J. ECON. 198 (1979).

36. For an elementary and short discussion that includes a more detailed analysis of "cycling," see A. ATKINSON & J. STIGLITZ, supra note 34, at 299-310. Good comprehensive surveys are A. SEN, COLLECTIVE CHOICE AND SOCIAL WELFARE (1970); Mueller, Public Choice: A Survey, 14 J. ECON. LIT. 395 (1976); Plott, Axiomatic Social Choice Theory: An Overview and Interpretation, 20 AM. J. POLITICAL SCIENCE 511 (1976).

37. See A. ATKINSON & J. STIGLITZ, supra note 34, at 322-26.
38. See, e.g., id. at 310-15, 328 (analyzing impact of bureaucratic interests); M. FIORINA, CONGRESS: KEYSTONE OF THE WASHINGTON ESTABLISHMENT (1977) (arguing that governments tend to overprovide services due to the interests of politicians).
39. A fact that supports this assertion is that traditionally the charitable contribution deduction has been available only to those who itemize their deductions but the vast majority of taxpayers do not itemize. See note 3 supra (30.8% itemize in 1980); Clotfelter & Salamon, supra note 30, at 180 (70% do not itemize as of 1981); Simon, supra note 1, at 82 (75% do not itemize as of 1978).
40. See TAN 24 supra.  
 Logrolling is no panacea, however. It does not eliminate "cycling," it can lead to overprovision of goods by the government, and it is subject to strategic manipulation. For a good general discussion, see Mueller, supra note 36, at 406-407.
41. See Clotfelter & Steuerle, supra note 10, at 419-22.
42. High-income individuals already are audited much more frequently than low-income individuals. See COMMISSIONER OF INTERNAL REVENUE AND THE CHIEF COUNSEL FOR THE INTERNAL REVENUE SERVICE, ANNUAL REPORT (1982) at 44 (in 1981 government audited 7.83% of returns of individuals with total positive income over \$50,000

versus 1.77% of all returns of individuals).

43. See Simon, supra note 1, at 90-91. Professor Simon is not alone in his concern. For example, considerable scholarly and Congressional attention has been devoted to the fear that the allocation of contribution dollars among health charities hinges much more on the success of competing public relations campaigns than on the substantive role of each charity. See Brannon & Strnad, Alternative Approaches to Encouraging Philanthropic Activities, IV Research Papers Sponsored by the Commission on Private Philanthropy and Public Needs 2361, 2374-77 (1977).
44. The only problem with this third answer is that nonsubstantive donors may have so favored certain 170(c) organizations that the organizations are funded at or above the optimal level even if contributions from substantive donors have fallen to zero in an attempt to correct this situation.
45. For a related discussion, see Brannon & Strnad, supra note 43, at 2378-79. See also Roberts, A Positive Model of Private Charity and Public Transfers, 92 J. POLIT. ECON. 136 (1984) (assuming private organizations are less efficient than government at providing public goods, political equilibrium model predicts zero direct aid to poor by private charity).
46. See Hochman & Rodgers, Pareto Optimal Redistribution, 59 AM. ECON. REV. 542 (1969); Polinsky, Shortsightedness and Nonmarginal

Pareto Optimal Redistribution, 61 AM. ECON. REV. 972 (1971).

47. Using an income tax reduction to return the revenues from the tax on the goods essentially eliminates any "income effect."

Individual B faces a lower price for good X and higher prices for all other goods. The result should be larger purchases of X and lower purchases of other goods.

48. For further discussion of "crowding out" effects and their implications for policy, see Abrams & Schitz, The "Crowding-Out" Effect of Governmental Transfers on Private Charitable Contributions, 33 PUBLIC CHOICE 29 (1978); Roberts, supra note 45; Rose-Ackerman, Do Government Grants to Charity Reduce Private Donations, in M. WHITE, ed., NONPROFIT FIRMS IN A THREE SECTOR ECONOMY 95 (Urban Institute, COUPE #6, 1981); Steinberg, Voluntary Donations and Public Expenditures, Virginia Polytechnic Institute and State University Working Paper E84-07-01 (July 1984); Weiss, Donations: Can They Reduce a Donor's Welfare?, in Susan Rose-Ackerman, ed., THE NON-PROFIT SECTOR: ECONOMIC THEORY AND PUBLIC POLICY, forthcoming, 1985.

49. At the theoretical level, there is also at least one important difference. It may be hard to apply a Pareto optimality norm when the public good at issue is taste-changing. See, e.g., Marschak, On the Study of Taste Changing Policies, 68 AM. ECON. REV. 386 (1978); Weisbrod, Comparing Utility Functions in Efficiency Terms, or What Kind of Utility Functions Do We Want?,

67 AM. ECON. REV. 991 (1977).

50. See I.R.C. §§ 170(c)(2)(D), 501(c)(3) and 501(h) (denying tax-exempt status and ability to receive deductible contributions if organization attempts to influence legislation or participate in or intervene in any political campaign as a substantial part of organization's activities).
51. Overt and covert influences on educational institutions that arise from contribution funding are documented and discussed in Brannon & Strnad, supra note 43, at 2368-72.
52. For a discussion of the pros and cons of direct subsidies for students as an alternative to contribution-funding of educational institutions, see Brannon & Strnad, supra note 43, at 2373.

## Appendix

This Appendix formalizes Hochman & Rodgers' model and presents the alternative model that is the basis for the critique in the text of their conclusions. Suppose there is a single, contribution-funded 170(c) activity that produces a quantity  $Q$  of a public good. Consider two people, A and B, who are interested in the public good. Suppose that person A has income  $Y_A$ , pays additional income taxes to fund subsidies for contributions to the activity through an increase in rates by  $t'(Y_A)$ , voluntarily contributes  $C_A$  toward purchase of the good, and is subsidized by the proportion  $S_A$  of contributions. When  $Q$  of the public good is produced, suppose person A values the last unit provided at  $ME_A(Q)$ . If an optimal amount  $Q^*$  of the public good is provided, then for Lindahl equilibrium to obtain the following relation must hold:

$$\frac{C_A(1 - S_A) + t'(Y_A)Y_A}{Q^*} = ME_A(Q^*). \quad (1)$$

This relation states that for A the price of the good, the sum of total net contributions and extra taxes paid divided by quantity, is equal to his or her marginal valuation of it. For person B there is a similar Lindahl condition:

$$\frac{C_B(1 - S_B) + t'(Y_B)Y_B}{Q^*} = ME_B(Q^*). \quad (2)$$

Hochman & Rodgers assume that A has an income that is higher than B's by the factor  $(1 + \lambda)$  and that contributions are strictly a

function of income when there is no subsidy:

$$Y_A = (1 + \lambda)Y_B \quad (3)$$

$$C_A = (1 + \alpha\lambda)C_B \text{ when } S_A = S_B = 0 \quad (4)$$

where  $\alpha$  is the income elasticity of charitable contributions. This income elasticity is assumed to be independent of income. Although this model with constant income elasticity is fairly simple, it does roughly reflect a reality where there is a positive income elasticity for giving.<sup>A1</sup> Using the assumption that the income elasticity of marginal valuation is equal to the income elasticity of charitable contributions,<sup>A2</sup> the following equality must hold:

$$ME_A = (1 + \alpha\lambda)ME_B \quad (5)$$

so that

$$\frac{C_A(1 - S_A) + t'(Y_A)Y_A}{(1 + \alpha\lambda)[C_B(1 - S_B) + t'(Y_B)Y_B]} = \quad (6)$$

Hochman & Rodgers assume that the tax terms in equation (6) can be neglected so that it simplifies to:

$$C_A(1 - S_A) = (1 + \alpha\lambda)C_B(1 - S_B). \quad (7)$$

Now if  $S_A = S_B$  and A and B have the same price elasticity for charitable contributions, then  $C_A = (1 + \alpha\lambda)C_B$  and equation (7) is satisfied since differences between A's and B's gross contributions arise solely from the fact that they have different incomes. This is the mathematical basis for Hochman & Rodgers' conclusion quoted in the

text that "a flat-rate tax credit is likely to provide a good approximation to the Lindahl requirements."

The text argues that Hochman & Rodgers' assumption about the tax terms is not a particularly reasonable one. In the rest of this Appendix I construct a model that specifies the subsidy structure corresponding to a Lindahl equilibrium for any given pattern of tax increases that fund the revenue loss from the deduction. My model begins with the Hochman and Rodgers framework set up so far, but adds three important features:

- (1) the tax terms in equation (6) are not neglected;
- (2) the model includes a constraint requiring that the tax increases fund the revenue loss from the deduction;
- (3) a third class of persons is added who benefit from the 170(c) good but make no contributions.

For convenience, I assume that this third class of persons have incomes equal to  $Y_B$  and that their demand for the 170(c) good is the same as others with that income. Suppose that the tax rate increases for this third group are  $t''(Y_B)Y_B$ . It follows that in Lindahl equilibrium

$$t''(Y_B)Y_B = C_B(1 - S_B) + t'(Y_B)Y_B. \quad (8)$$

I.e., since contributors and non-contributors value the 170(c) good the same at the margin, their total payments must be equal.

The model now consists of two income groups with the low-income group divided between contributors and non-contributors.

Suppose that the low-income group has  $N$  times as many people as the high-income group and that the proportion  $P$  of the low-income group are contributors. If we set  $S_B = 0$  and choose  $N$  appropriately large, we have a rough approximation to the historically typical situation where a large number of non-itemizers receive no subsidy while a class of itemizers consisting primarily of high-income taxpayers do receive a subsidy.

Now reconsider equation (6).  $Y_A$  is  $(1 + \lambda)$  as large as  $Y_B$ . Assume that the tax rate increase  $t'(Y_A)$  for taxpayer A is  $(1 + \delta)$  times the tax rate increase  $t'(Y_B)$  for taxpayer B. The parameter  $\delta$  is a measure of the progressivity of the income tax increases that will fund the deduction. Now assume that with no deduction B would make  $C_B$  in contributions and that  $\eta$  is the absolute value of the price elasticity of charitable contributions for both A and B. Because the income elasticity of giving is  $\alpha$ ,

$$C_A = C_B(1 + \alpha\lambda)(1 + S_A\eta). \quad (9)$$

Using equation (9), expressing all tax rate and income variables in terms of  $t'(Y_B)Y_B$  and dividing through by  $(1 + \alpha\lambda)$ , (6) becomes:

$$C_B(1 + S_A\eta)(1 - S_A) + \frac{(1 + \delta)(1 + \lambda)}{(1 + \alpha\lambda)}t'(Y_B)Y_B = C_B + t'(Y_B)Y_B. \quad (10)$$

In order for tax increases to exactly cover the revenue loss of a deduction, it must be true that

$$C_A S_A = (1 + \delta)t'(Y_B)(1 + \lambda)Y_B + N[(1 - P)C_B + t'(Y_B)Y_B]. \quad (11)$$

Here  $(1 - P)C_B + t'(Y_B)Y_B$  is the average tax share of people with income  $Y_B$ . The proportion  $(1 - P)$  do not contribute and thus pay  $C_B + t'(Y_B)Y_B$  in taxes while the rest pay  $t'(Y_B)Y_B$ .

Using (9), equation (11) yields an expression for  $t'(Y_B)Y_B$ :

$$t'(Y_B)Y_B = \frac{C_B[(1 + S_A\eta)(1 + \alpha\lambda)S_A - N(1 - P)]}{[N + (1 + \delta)(1 + \lambda)]}. \quad (12)$$

Define the parameter  $\gamma$  as

$$\gamma = \frac{(1 + \delta)(1 + \lambda) - (1 + \alpha\lambda)}{(1 + \alpha\lambda)[N + (1 + \delta)(1 + \lambda)]}. \quad (13)$$

Substituting for  $t'(Y_B)Y_B$  in (10) using (12) and rearranging we obtain:

$$[\gamma(1 + \alpha\lambda) - 1]\eta S_A^2 + [\gamma(1 + \alpha\lambda) + \eta - 1]S_A - \gamma(1 + \alpha\lambda)N(1 - P) = 0. \quad (14)$$

The tables in the text are generated using equation (14) to compute  $S_A$  for various values of  $\delta$  and  $P$ . In those computations  $N$  is set at 3,  $\eta$  at 1.25,  $\lambda$  at 5, and .75 and 1 are alternative assumptions for  $\alpha$ . The values for  $\alpha$  are in the lower and upper range of the values found in the econometric literature while the value for  $\eta$  is close to the price elasticities found in studies that pool all income groups together.<sup>A3</sup>

When a real solution exists, equation (14) generally produces

two solutions for  $S_A$ . In all the simulations in this paper,  $\alpha \leq 1$ ,  $\delta \geq 0$ , and  $\lambda \geq 0$ . When those inequalities hold, one of the solutions for  $S_A$  will be negative. This solution is rejected on the ground that the goal is to stimulate charitable donations and a subsidy structure with  $S_A < 0$  and  $S_B = 0$  will reduce them.<sup>A4</sup>

The tables in the text take  $N = 3$  and  $\lambda = 5$ . The result reported in the text is that a high subsidy rate for high-income taxpayers generally is required to meet the Lindahl conditions. Table 3 indicates that this result is not very sensitive to the choice of  $N$  and  $\lambda$ . This table is calculated for the case  $\delta = .1$ ,  $\alpha = 1$  and  $\lambda = 2$  (except for the "Text" column which reports the values for the set of parameters used in the text tables:  $\delta = .1$ ,  $\alpha = 1$ ,  $\lambda = 5$  and  $N = 3$ ). The case  $\delta = .1$  and  $\alpha = 1$  results in the lowest subsidy rate for high-income taxpayers among the values  $\delta = (.1, .25, .5)$  and  $\alpha = (.75, 1)$ . Furthermore, when  $\lambda$  is reduced, the optimal subsidy rate falls. As a result, Table 3 represents a situation where we have chosen values of  $\delta$ ,  $\alpha$ , and  $\lambda$  that minimize the required  $S_A$  but are still plausible.

Table 4

Required  $S_A$  for  $\delta = .1$ ,  $\alpha = 1$  and  $\lambda = 2$   
(Text column:  $\delta = .1$ ,  $\alpha = 1$ ,  $\lambda = 5$ , and  $N = 3$ )

	N = 1	N = 3	N = 4	N = 10	Text
P = 0	.42	.49	.51	.56	.55
P = .1	.41	.48	.49	.53	.54
P = .25	.39	.45	.46	.50	.50
P = .5	.36	.40	.41	.44	.45
P = 1	.28	.25	.24	.22	.27

The intuition behind the result that a high  $S_A$  is required when  $S_B = 0$  is apparent from equation (10). For  $\delta > 0$  and values of  $\alpha$  less than one, as the tax variable  $t'(Y_B)Y_B$  increases in order to fund a subsidy for giving, the left-hand side of (10) increases more quickly than the right-hand side. This reflects a "progressive" tax increase falling heavily on A. The result is that A's net payment becomes too large relative to B's net payment. In order to reduce A's net payment, the first term in equation (10), a term proportional to A's net charitable contributions, must fall. As  $S_A$  is increased from 0, this term initially rises. When  $S_A$  becomes large enough (greater than .10 for  $\eta = 1.25$ ),<sup>A5</sup> the increase in the subsidy effect of the  $(1 - S_A)$  term outweighs A's tendency to increase gross contributions. As a result A's net contribution falls. As  $S_A$  tends toward 1, the net contribution tends toward 0. Thus, in order to offset the "progressive" nature of the tax increase,  $S_A$  may have to be set quite high in order to decrease A's net charitable contribution sufficiently.

Another issue is what tax shares would be required if a flat-rate subsidy of the sort Hochman & Rodgers advocate is desired. Consider persons A and B who are both contributors. When  $S_A = S_B$  (7) implies  $C_A = (1 + \alpha\lambda)C_B$  and using that result in (6) implies that

$$t'(Y_A)Y_A = (1 + \alpha\lambda)t'(Y_B)Y_B. \quad (15)$$

But  $t'(Y_A)Y_A = (1 + \delta)(1 + \lambda)t'(Y_B)Y_B$  so that

$$\delta = \frac{1 + \alpha\lambda}{1 + \lambda} - 1. \quad (16)$$

This implies that  $\delta$  must be negative if the income elasticity for charitable contributions is less than one as appears likely from the empirical literature.<sup>A6</sup> If  $\delta$  is negative, a greater increase in tax rate must be imposed on the contributing low-income taxpayer than on the taxpayer with higher income. Furthermore, equation (8) indicates that low-income taxpayers who do not contribute must suffer an even greater increase in tax percentage rate than either class of contributing taxpayers.

## Appendix Footnotes

- A1. Empirical studies consistently have found that the income elasticity for contributions is positive. See Clotfelter & Steuerle, supra note 10, at 410-11, 420-21, 425 and 428. Moreover, those studies suggest that that income elasticity may not be constant with income. See id. at 410-11 and 428. This is not a problem for the model here since  $\alpha$  can be interpreted as the average income elasticity for incomes between  $Y_B$  and  $(1 + \lambda)Y_B$ .
- A2. Hochman & Rodgers "prove" this assumption. See Hochman & Rodgers, supra note 4, at 16 n.22. Since the goal is to measure the difference between  $ME_A(Q^*)$  and  $ME_B(Q^*)$ , the evaluation is done with  $Q^*$  fixed. If  $N_1$  is the total net payment (including additional taxes) for person 1, then Lindahl equilibrium requires  $N_1 = ME_1(Q^*)Q^*$ . Thus, where  $Y_1$  is 1's income,  $\delta N_1 / \delta Y_1 = Q^* \delta ME_1 / \delta Y_1$  and it follows that the income elasticity of  $N_1$  is equal to the income elasticity of  $ME_1$ .
- This same analysis can be carried out for  $Q_0$  instead of  $Q^*$  where  $Q_0$  is the level of output when no subsidy for charitable contributions is provided. In that case  $N_1 = C_1$  where  $C_1$  is 1's contribution with no subsidy. But then the income elasticity of  $N_1$  is just  $\alpha$ . Assuming that the income elasticity of marginal evaluation is independent of  $Q$ ,  $\alpha$  is also the income elasticity of marginal evaluation at  $Q^*$ . I make that assumption, so that  $\alpha$

- is used as the income elasticity of marginal evaluation at  $Q^*$ . Use of the assumption considerably simplifies the algebra without substantially changing the results.
- A3. See Clotfelter & Steuerle, supra note 10, at 410-11, 425 and 428.
- A4. A more complete model would specify an optimal quantity of contributions and require that the subsidy structure  $(S_A, S_B)$  produce that quantity. For simplicity, the optimal quantity aspect of the Lindahl equilibrium calculation is ignored here. But in an earlier version of this paper I show that in a target quantity model a deduction-like result (a high  $S_A$  and a low, but not necessarily 0,  $S_B$ ) can easily emerge as a Lindahl equilibrium.
- A5. More formally, the first derivative of A's net charitable contribution with respect to  $S_A$  has the same sign as  $(1 - 2S_A)\eta - 1$ . The derivative is zero when  $S_A = (\eta - 1)/2\eta$ . For increases in  $S_A$  above that level, A's net charitable contribution falls.
- A6. Almost all of the recent estimates of the income elasticity of charitable contributions find values less than one, and in most cases the value is significantly less than one (at the 95% confidence level). See Clotfelter & Steuerle, supra note 10, at 410-11, 425 and 428.