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# **An Analysis of Potential Tax Incentives to Increase Charitable Giving in Puerto Rico**

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## Executive Summary

Improved incentives for private charitable donations would strengthen nonprofit organizations that provide a variety of public benefits in Puerto Rico. This study investigates options for stimulating additional charitable giving with enhanced tax incentives. We simulate the effects of proposed modifications of Puerto Rico's tax deduction on charitable giving and government revenues. Based on our assessment from the economic literature on how individuals respond to incentives for giving, we find that lifting the ceiling on contributions could increase contributions by more than the revenue loss to the Puerto Rico Treasury. Lifting the ceiling would therefore be a cost-effective way for taxpayers to pay for additional services of charitable organizations, compared with increasing direct grants. Reforms that modify or eliminate floors on contributions would add less to contributions than the revenue loss, but they would simplify tax filing and could lead to broader participation in charitable giving activities than our simulations imply.

Puerto Rico allows a full charitable deduction only for donations by itemizers in excess of 3 percent of adjusted gross income (AGI). As an alternative, itemizers may elect to deduct 33 percent of all donations. Those who give 4.5 percent of AGI or less are better off claiming deductions on a third of all contributions, while those who give more than 4.5 percent of AGI get a bigger tax benefit from deducting 100 percent of contributions over 3 percent of AGI. In addition to the 3 percent floor, there is no deduction allowed for contributions that exceed 15 percent of income.

The fraction of taxpayers in Puerto Rico who itemize deductions is small, compared with the United States, which is in part a result of the constrained incentives, but also may reflect social and cultural differences. Fewer than 10 percent of itemizing taxpayers in Puerto Rico claim charitable deductions, although the average deduction for those who claim is fairly large. In

comparison, in the United States, which allows a full deduction up to 50 percent of AGI for itemizers, more than 90 percent of itemizers claim charitable deductions.

Studies by economists of charitable giving strongly support the hypothesis that policies that subsidize additional giving increase contributions. Providing a tax deduction effectively lowers the price of giving so that, for example, it costs a taxpayer in the 33 percent marginal rate bracket only 67 cents to give an additional dollar to a charitable organization. Some studies find the price sensitivity of giving – especially for high-income givers – is so high that the additional contributions induced by the subsidy exceed the revenue loss to the government. This makes the subsidy “treasury efficient” in the sense that it costs the government less to induce private contributions through a tax deduction than it would to give the same amount to the charity with a direct grant.

Even if subsidies to giving cost slightly more than the amount of giving they stimulate, there are still reasons to encourage private giving. These include encouraging volunteering and promoting community engagement, as well as other benefits that flow from subsidies to nonprofit organizations, and allow individual donors to have a direct voice in how some taxpayer funds are spent.

We simulate four options for increasing charitable giving in Puerto Rico. All the changes apply only to taxpayers who itemize deductions:

1. Raise the 15 percent of AGI ceiling on charitable contributions to 50 percent.
2. Allow a full deduction for all contributions in excess of 1 percent of AGI, while eliminating the 1/3 partial deduction for contributions less than the 1 percent floor.
3. Combine options 1 and 2; that is, reducing the floor and increasing the ceiling.

4. Allow a full deduction for all contributions up to a ceiling of 50 percent of AGI (U.S. law).

We also simulate the effects on charitable contributions and revenue of removing the charitable deduction completely, in order to assess the efficiency of current Puerto Rico law. In all the simulations, we use what we consider the best estimates of behavioral responses from the economics literature, although we acknowledge the responses could be larger or smaller.

Table 1 summarizes the results of these simulations. We estimate that the current Puerto Rico deduction increases contributions by approximately \$15 million at a roughly equal cost to Hacienda of \$15.2 million. Raising the ceiling on deductions would cost an additional \$5.3 million, but would raise contributions by \$7.0 million – an increase of over \$1.30 in giving for each dollar of revenue sacrificed. Raising the ceiling is relatively efficient because it provides an incentive for very large donors to give more. In comparison, current law gives large donors a significant rebate for gifts up to 15 percent of AGI, but no additional incentive to give more. Lowering the floor to 1 percent and retaining the 15 percent ceiling, however, costs more (\$6.4 million) than the increase in giving (\$5.3 million) because it gives rebates for contributions between 1 and 3 percent of AGI by people already giving more than the 3 percent floor.

Shifting to a U.S.-style deduction has the largest impact on contributions (\$13.4 million of additional giving), but the largest revenue cost (\$12.1 million) of all the options. It would on balance improve the efficiency of the subsidy, but efficiency differences among all the options are not large and the revenue loss would increase. Still, Puerto Rico may want to fund a moderate expansion of its charitable sector. Moreover, by simplifying the calculation of deductions, removing the floors and partial deduction and raising the ceiling may induce more participation and thereby provide even larger net benefits than these calculations suggest.

In addition to changing the incentive structure of the deduction, other changes in the charitable provisions may be called for. In particular, many stakeholders in Puerto Rico expressed the view that it would be desirable to link any expansion of the deduction with measures to improve the accountability of nonprofit organizations in Puerto Rico. One option would be to require organization to register with the IRS as 501(c)(3) organizations as a condition of receiving either any deductible contributions or the enhanced deductions advanced in these options. This could be an important first step towards greater transparency and accountability and help ensure that the revenue loss as a result of enacting these options would go to pay for the activities the subsidy intends to promote.

**Table 1: Summary Effects of Options**

<b>Options</b>	<b>Charitable Giving \$ (Millions)</b>	<b>Revenue Cost \$ (Millions)</b>
<b>No Deduction</b>	\$ 88.3	--
<b>Current Puerto Rican law</b>	\$103.4	-\$15.2
Change in Giving and Revenue Compared with No Deduction	+ \$15.1	- \$15.2
<b>Lift the Deduction Ceiling</b>	\$110.4	-\$20.5
Change in Giving and Revenue Compared with Current Law	+ \$7.0	- \$5.3
<b>Deduction for 100 percent of contributions &gt; 1 percent of AGI up to 15 percent of AGI</b>	\$108.7	-\$21.6
Change in Giving and Revenue Compared with Current Law	+ \$5.3	- \$6.4
<b>Deduction of 100 percent of contributions in excess of 1 percent of AGI</b>	\$115.8	-\$25.8
Change in Giving and Revenue Compared with Current Law	+ \$12.3	- \$10.6
<b>Adopt a U.S.-Style Charitable Contribution</b>	\$116.8	-\$27.3
Change in Giving and Revenue Compared with Current Law	+ \$13.4	- \$12.1



## Introduction

As in the United States, the Commonwealth of Puerto Rico currently allows individuals to claim contributions to charitable organizations as an itemized deduction on their income tax return. This report assesses the efficiency of the current Puerto Rican charitable deduction and discusses potential options for modifying the deduction with an eye to increasing the incentive for charitable giving by Puerto Ricans at minimum cost to the Puerto Rico Treasury.

We begin by describing the main features of the existing charitable deduction, with particular attention to its effects on the after-tax, or out-of-pocket, costs of charitable giving. We then summarize the public policy rationale for providing financial incentives for charitable contributions along with the basic economics of how such incentives operate and are evaluated. Data on the performance of the current Puerto Rican charitable incentive are then presented, followed by a discussion of reforms of the charitable deduction that have been proposed in the United States and among the 50 states. We conclude by identifying and offering a preliminary evaluation of policy options for reform.

## Puerto Rican Charitable Deduction

Under Puerto Rican tax law, taxpayers who itemize deductions are allowed to deduct contributions made to the following organizations and groups: “religious, charitable, scientific, literary, educational or musicological organizations, or to organizations for the prevention of cruelty to children or animals, or to organizations of war veterans in the United States or Puerto Rico.”<sup>1</sup> Prior to 2001, the amount that could be deducted equaled 100 percent of charitable contributions made in excess of 3 percent of the taxpayer’s adjusted gross income (AGI). In 2001, the deduction was modified to broaden the number of

taxpayers eligible to claim it. Under current law, a Puerto Rican who itemizes deductions and who contributes to charitable organizations is allowed to deduct from income the larger of: 1) 33 percent of all charitable contributions or 2) 100 percent of contributions in excess of 3 percent of adjusted gross income (AGI). The maximum allowable contribution is 15 percent of AGI. Only itemizers can deduct contributions.

In 2007, Puerto Rican taxpayers claimed \$58 million in deductions for charitable contributions. Based on the distribution of deductions by income group reported by Hacienda, and an assumption that the tax benefit received by the itemizer with the average income in each income equals the average tax benefit for taxpayers in that group, we estimate that the revenue cost of the Puerto Rican charitable deduction was about \$15.2 million.

## Policy Rationale and Basic Economics of Charitable Tax Incentives

Those who support the use of tax incentives to encourage private giving contend that society benefits from the existence of a large and vibrant nonprofit sector in several ways. Many nonprofits provide goods and services that would otherwise be provided by the public sector and/or complement publicly provided goods and services. A number of analysts have also identified numerous benefits to the government from partnering with nonprofit organizations in the provision of publicly-financed goods and services. When governments employ nonprofit organizations as service providers, private voluntary donations reduce the cost to taxpayers of providing these services. Finally, private voluntary organizations that must compete directly for donations by individuals may be more efficient and responsive than organizations that rely wholly on public funds and will provide a different mix of services than publicly-funded organizations, reflecting the preferences of donors. In effect, tax incentives for giving allow individual donors to have a direct voice in how some taxpayer funds are spent.

<sup>1</sup> Commonwealth of Puerto Rico, Department of the Treasury, 2006. (*Instructions for Completing the Individual Income Tax Return 2006*, p. 23.

### *How Charitable Tax Incentives Operate*

Tax incentives work by reducing the cost to taxpayers of making donations to eligible charitable organizations. To illustrate the basic point, suppose that a taxpayer is considering whether to give \$100 to a charity, but there is no financial incentive for charitable giving. In that case, the cost of the \$100 charitable gift is \$100. Now suppose that the taxpayer is in the 33 percent bracket, and is allowed to take a full income tax deduction for the \$100 gift. In that case, if the taxpayer continues to give the same \$100 to charity, she is able to reduce her taxable income by the amount of the gift (\$100), resulting in a tax savings to her of \$33. The net effect is that the actual cost of giving \$100 is \$67 – the \$100 gift minus the \$33 tax saving. If one views the taxpayer as getting satisfaction from transferring money to a charity in a way analogous to her satisfaction from buying other consumption goods (food, clothing recreation etc.), then the drop in the price of transferring a dollar to a charity to 67 cents should increase the amount she chooses to give to charities.

The fiscal effects of a financial incentive for charitable giving depend on how responsive individuals are to a price discount for giving. Consider the example above in which the individual would give \$100 to charity in the absence of any financial incentive and is able to deduct the \$100 gift at a 33 percent tax rate. If the individual's giving remained unchanged at \$100, the government would effectively pick-up \$33 of the \$100 gift (through the tax deduction), and the individual's cost of giving (or "spending" on gifts) would be \$67 dollars. But the charity would receive the same amount -- \$100 -- as it would if there were no deduction. In this extreme example, the tax deduction raises the giver's after-tax income available for other uses (consumption of other goods or saving), but leaves charitable contributions unchanged. Suppose, instead, that the 33 percent drop in the cost of giving causes the taxpayer to increase her gift to \$120. The cost to the Treasury in terms of foregone tax revenue would be just under \$40 (e.g.  $.33 \times \$120$ , or \$39.60),

while gifts would rise by just \$20. The taxpayer would spend \$20 of her almost \$40 tax benefit on increasing giving and have the remainder left over for other uses. Finally, suppose the taxpayer increased her giving to \$160. The cost to Treasury of \$52.80 ( $.33 \times \$160$ ) would now be less than the increase in giving. The taxpayer would be now be increasing her giving by more than her tax benefit, causing her to "spend" more on giving to charities and less on other uses.

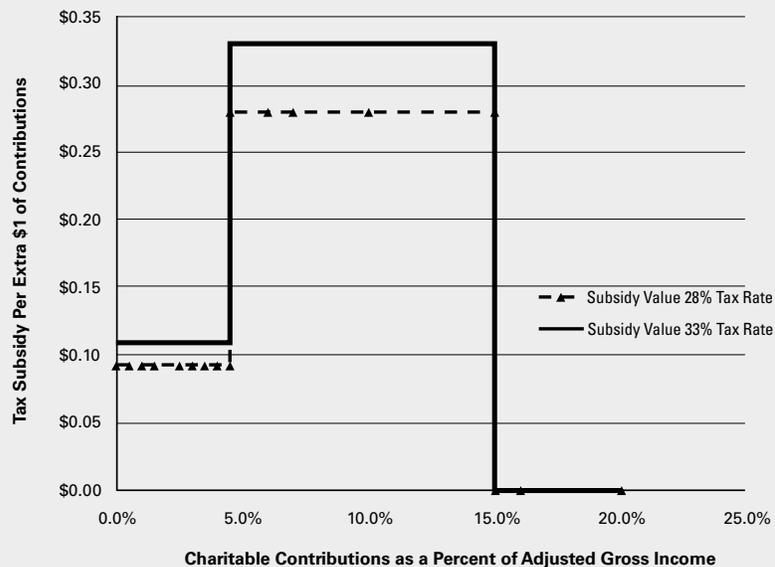
With an unlimited deduction, the price of giving an extra dollar is unrelated to the amount of giving for taxpayers within any tax rate bracket. But the effect of the Puerto Rican charitable deduction on the price of giving is more complex because of how the deduction is structured. The effects of Puerto Rico's tax law on the incentive to contribute are illustrated in Table 1 and Figure 1. Table 2 illustrates the tax and financial impact at different levels of contributions for a taxpayer with an adjusted gross income of \$70,000. It shows that it is financially advantageous for a taxpayer to elect to deduct 33 percent of all charitable contributions until contributions reach \$3,100 (4.5 percent of income). Above this threshold, the option to deduct 100 percent of all contributions in excess of 3 percent of adjusted gross income becomes more financially advantageous until contributions reach 15 percent of adjusted gross income, at which point no deductions for additional contributions are allowed. Thus, current provisions reduce the out-of-pocket cost of giving an extra \$1 by an amount equal to one third of the donor's tax rate for contributions that are less than or equal to 4.5 percent of adjusted gross income, by an amount equal to the tax rate for contributions between 4.5 percent and 15 percent of income, and not at all for amounts given in excess of 15 percent. Figure 1 shows the incentive effects of the current deduction for a taxpayer in top two Puerto Rican tax brackets of 33 percent and 28 percent.<sup>2</sup>

<sup>2</sup> The price of giving is simply one minus the subsidy rate so, for example, the price of giving one dollar is 89 cents in the top (33 percent) bracket for contributions equal to or less than 4.5 percent of adjusted gross income.

**Table 2: Structure of the Puerto Rican Charitable Tax Incentive**

Contributions as Percentage of AGI	Amount of Contribution (AGI = \$70,000)	3% of AGI	Tax Deduction = 33% of Contributions	Tax Deduction = 100% of Contributions > 3% of AGI	Most Favorable Option	Value of Tax Deduction (Next \$1 of Giving)				
						Tax Bracket				
						7%	10%	15%	28%	33%
1.0%	\$700	\$2,100	\$231	\$0	33% of Contributions	\$0.02	\$0.03	\$0.05	\$0.09	\$0.11
1.5%	\$1,050	\$2,100	\$347	\$0	33% of Contributions	\$0.02	\$0.03	\$0.05	\$0.09	\$0.11
2.5%	\$1,750	\$2,100	\$578	\$0	33% of Contributions	\$0.02	\$0.03	\$0.05	\$0.09	\$0.11
3.0%	\$2,100	\$2,100	\$693	\$0	33% of Contributions	\$0.02	\$0.03	\$0.05	\$0.09	\$0.11
3.5%	\$2,450	\$2,100	\$809	\$350	33% of Contributions	\$0.02	\$0.03	\$0.05	\$0.09	\$0.11
4.0%	\$2,800	\$2,100	\$924	\$700	33% of Contributions	\$0.02	\$0.03	\$0.05	\$0.09	\$0.11
4.5%	\$3,150	\$2,100	\$1,050	\$1,050	33% of all Contributions or 100% of Contributions > 3% of AGI	\$0.07	\$0.10	\$0.15	\$0.28	\$0.33
4.6%	\$3,220	\$2,100	\$1,063	\$1,120	100% of Contributions > 3% of AGI	\$0.07	\$0.10	\$0.15	\$0.28	\$0.33

**Figure 1: Tax Subsidy Per Extra \$1 Contributed**



## Evaluating the Efficacy of Public Subsidies

The argument that there are social benefits to fostering a healthy and growing nonprofit sector provides a rationale for public support of nonprofit organizations in some form. It does not provide a definitive rationale for encouraging greater individual giving to charities through tax incentives instead of providing subsidies directly to nonprofit organizations. The concept of *treasury efficiency* is commonly used to gauge the relative effectiveness of tax incentives: Does the tax deduction increase charitable contributions by more than the revenue loss to government? If it does, the estimated \$15 million revenue loss discussed above can be said to have leveraged more than \$15 million in increased financial resources for nonprofit organizations. If not, in theory, it would be possible to provide more financial support to nonprofit organizations by eliminating the deduction and using the tax revenue to provide direct government grants to charitable organizations. Thus, one benchmark that can be used to evaluate the effectiveness of allowing a charitable deduction is whether the ratio of additional charitable contributions to tax revenue foregone is greater than or equal to one.

A frequently asked question about the treasury efficiency measure is whether any macro-economic feedback effects are taken into account in assessing the fiscal efficiency of tax subsidies. The answer is that such effects are not included in the treasury efficiency calculation because they do not represent net changes in either output or tax revenue (see Text Box 1).

Even when charitable tax incentives are not treasury efficient, there may nonetheless be advantages to substituting private charitable gifts for direct government spending. Theoretical models of individual giving demonstrate that individuals have a stronger economic incentive to substitute government support of charities for their own giving when the government support takes the

form of direct government grants instead of indirect subsidies to private giving. In other words, there is a chance that more direct support of charities through direct government grants may simply crowd out private giving. A corollary of this argument is that indirect support of charitable activities through subsidies to individual givers would be a more effective and efficient means of fostering such activities than would direct government grants to charities.

External gains that extend beyond the cash amount of the gifts may also arise from a more “giving population.” For example, some studies have found that when people give money to charities they are also more likely to volunteer their time. Hence, financial incentives that encourage gifts of cash may also help charities expand and deepen their pool of volunteers in a way that direct government grants to charities would not. Increased volunteer participation in charitable activities not only provides a tangible benefit to charities, but also may help foster civic virtues that are needed to help maintain a civil society.<sup>3</sup>

## Assessing the Effectiveness of the Charitable Deduction

A convenient feature of the treasury efficiency benchmark is that its value is closely linked to the price elasticity of giving. As discussed above, people may spend more or less out-of-pocket on charitable giving in response to a lower price; they will give more, but each dollar they give will cost them less.<sup>4</sup> The price elasticity is generally expressed as the absolute value of the ratio of the percentage change in the amount given to the

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<sup>3</sup> In addition, some recent research, has found finds evidence that nonprofit organizations may relieve individual states of some of the fiscal costs of providing services. See Carroll (2008).

<sup>4</sup> Theoretically, contributions are expected to decrease with increases in prices, yielding a negative relationship between the percentage change in giving and the percentage change in the price of giving – that is, the price elasticity of charitable giving is negative.

### **Text Box 1: Why Macroeconomic Feedback Does Not Figure into the Assessment of Treasury Efficiency**

A simple example illustrates why feedback effects are not counted when determining the treasury efficiency of tax subsidies. Suppose that a charitable tax deduction is introduced and providing it costs \$100 million in foregone tax revenue. Taxpayers respond by increasing their contributions, stimulating additional charitable giving of \$90 million and spending the additional \$10 million on additional clothing purchases. The tax break expands nonprofit sector activity by \$90 million and clothing purchases by \$10 million. But the tax break must be financed somehow, whether by taxes or borrowing, which takes \$100 million out of some other sector of the economy. If people employed in charitable activities pay the same tax rate as people employed in the economic sectors that contract, then there is no additional effect on revenue collections. More revenue will be collected from employees of charitable organizations (which now generate more jobs) and less from employees in other sectors (which now generate fewer jobs). In a fully employed economy, the additional expansion in nonprofit activities would not be treated as an additional “benefit” of the subsidy because the \$100 million expansion of the nonprofit sector would represent a shift of resources from elsewhere in the economy.

In a less than fully employed economy, a tax break funded by borrowing might create additional jobs if the borrowed funds would otherwise have been saved instead of spent on domestic output or investment. If this happened, the tax base would rise and there would be a positive revenue feedback. But there is no evidence that such a revenue feedback from deficit financed tax cuts would be greater from tax cuts directed at the nonprofit sector than from any other tax cut (or government spending increase). Stimulus resulting from \$90 million of extra giving (in this case resulting from a \$100 million tax cut) would need to be compared with the stimulus that would result if the \$100 million in revenue foregone from the deduction were instead spent on providing \$100 million of direct grants to the nonprofit sector or for any other purpose.

percentage change in the price per \$1 of giving. When the (absolute value of) price elasticity of giving equals one, a given percentage change in the after tax cost of giving will result in a proportional change in the amount given. For example, a decrease (increase) in the cost of giving of 33 percent results in an increase (decrease) in giving of 33 percent. When the (absolute value of) the price elasticity of giving is greater than (less than) one, a given percentage change in the after-tax cost of giving will result in more than proportionate (less than proportionate) change in the amount given. In this (former) case, the treasury efficiency ratio will also be one or higher, meaning that the tax incentive encourages people to increase their giving by more than the revenue

loss to the Treasury.<sup>5</sup> Thus, to answer the question of whether the contribution deduction provides more “bang for the buck” than direct outlays for charitable purposes, researchers generally estimate the price elasticity of giving.

There have been numerous attempts to estimate the price elasticity of giving, using administrative tax return data, survey responses, and more recently, laboratory experimental methods.<sup>6</sup> The

<sup>5</sup> See Feldstein (1980) and Vesterlund (2006).

<sup>6</sup> For previous comprehensive literature reviews on the efficacy of tax deductions see Clotfelter (1985), Steinberg (1990), Randolph (1995), Pelozo and Steel (2005), and Vesterlund (2006).

estimates vary greatly among studies. While early research suggested that the absolute value of the price elasticity was greater than one, meaning that tax deductions were more “treasury efficient” than direct outlays, later research has challenged these findings. We cannot definitely conclude from this research that tax subsidies are “treasury efficient,” but a reasonable working hypothesis is an efficiency near one – that is, that induced charitable contributions are approximately equal to the foregone revenue. The technical details of these studies are summarized in Appendix 1.

### *Estimates from Administrative and Survey Data*

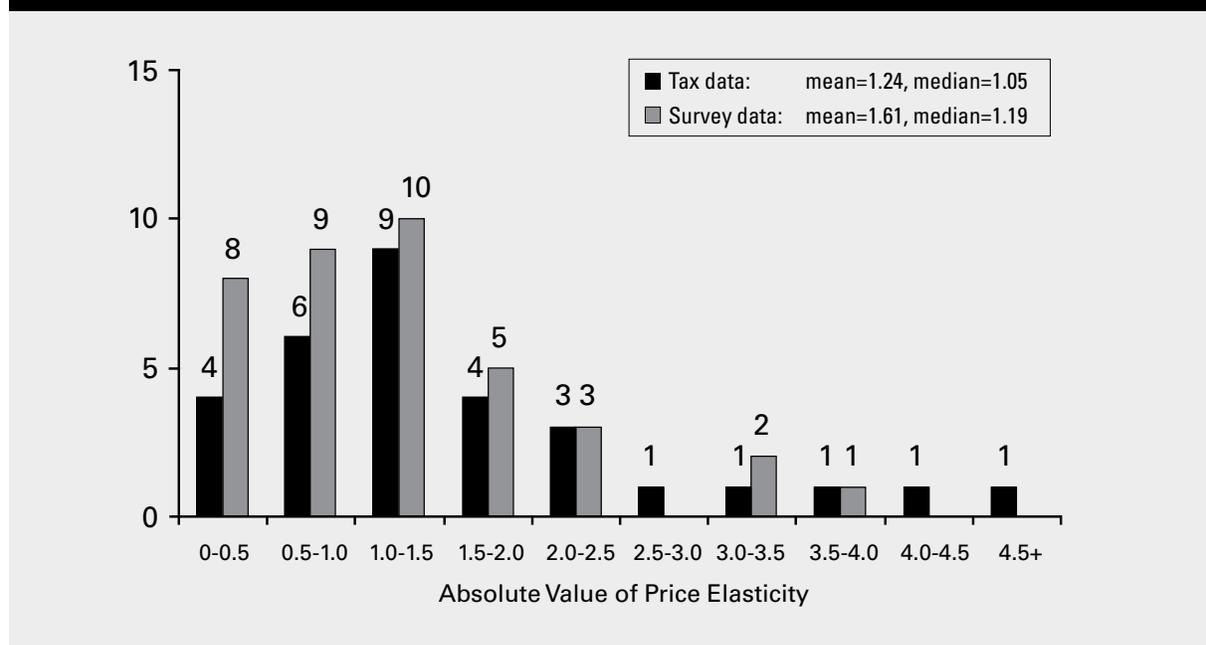
A summary of the elasticity estimates from 69 studies that used administrative or survey data produced between 1967 and 2004 are presented in Figure 2 (these data were collected by Pelozo and Steel, 2005). Three main conclusions emerge from these studies. First, the price elasticity estimates

clearly indicate that contributions are affected by the price of giving in the expected direction – individuals contribute more when the price of contributing goes down. Second, on average, survey data produce higher elasticity estimates than tax data. Both the mean and median estimates of price elasticity using survey data are larger than the estimates from administrative data.<sup>7</sup> Third, data from both administrative records and surveys indicate that, on average, the price elasticity of contributions is above one, which suggests that the tax incentive for charitable contributions is treasury efficient. The consensus that emerged from the early literature was that the price elasticity was greater than one (Clotfelter 1990).<sup>8</sup> Note, however, that about 40 percent of the studies reported shown in Figure 2 report an elasticity of less than one.

<sup>7</sup> The difference between the mean elasticities calculated by survey data vs. administrative data is statistically significant (Pelozo and Steel 2005).

<sup>8</sup> Clotfelter (1990) writes “typical estimates for the price elasticity are greater than one in absolute value”.

**Figure 2. Estimates of Price Elasticity of Giving using Tax Return Data and Surveys**



### *Estimates from Experiments and Field Studies*

Over the past 10 years, researchers have also tried to estimate the price elasticity of giving using laboratory and field experimental methods. In the case of laboratory experiments, the researcher randomly divides subject individuals into groups, provides each group with a different incentive to give to charity, and compares the behavior of the groups. Researchers then estimate the relationship between charitable contributions and prices faced by each group.

More recently, researchers have started to use field experiments to evaluate the effects of prices on charitable giving.<sup>9</sup> These experiments apply the methodologies from lab research – random assignment of treatments to different groups – at a much larger scale on real-life fundraising efforts from specific charitable organizations.<sup>10</sup> To introduce changes to the price of giving, these studies use external funds from a research grant or from a donor who agrees to be part of the experiment.

Like studies based on administrative records and survey data, the experimental methods literature finds that charitable giving responds to prices in the expected direction – lower prices cause increases in the level of contributions. On balance, however, estimates of the price elasticity from experimental and field studies are lower than estimates from administrative and survey data. One important result that has emerged from experimental and field studies is that the structure of the tax incentives matter and, in particular, that a matching grant might be more effective than a tax rebate. The experimental literature, however, is in its early stages and more research is needed to validate these findings.

<sup>9</sup> For a review of field experiments, see Harrison and List (2004)

<sup>10</sup> See Karlan and List (2007)

### **Tax Treatment of Charitable Contributions in the U.S. and in Individual States**

For decades, the linchpin of federal policies in the United States toward charitable giving has been the federal income tax deduction for charitable contributions.<sup>11</sup> Current U.S. tax law allows taxpayers to claim an itemized deduction for contributions to qualifying charitable organizations, but taxpayers who take the standard deduction, which includes most low and middle income households, cannot use this benefit. Current law also limits the deductible amount to 50 percent of adjusted gross income and restricts the kinds of organizations that qualify to receive deductible contributions.<sup>12</sup>

#### *Tax Treatment of Charitable Contributions by Individual States*

In the United States, tax policies towards charitable giving in individual states generally mirror those of the federal government. Most (43) states and the District of Columbia have individual income taxes. Of these, only 32 states and the District of Columbia allow deductions for charitable contributions, nearly all of them following federal provisions (Table 3).<sup>13</sup>

<sup>11</sup> The deduction for charitable contributions was adopted in 1917. See Clotfelter (1985).

<sup>12</sup> The amount is limited to 30 percent of AGI for gifts to certain types of organizations (for example, private foundations). Gifts of appreciated property also have lower limits – 30 percent for gifts to charitable organizations, 20 percent for gifts to private foundations (IRS 2009). To be eligible to receive deductible contributions, organizations must apply to the IRS to be certified as charitable organizations under Section 501(c)(3) of the U.S. Internal Revenue Code.

<sup>13</sup> The exception is Louisiana, where the tax rules are slightly different, with only 65 percent of the difference between itemized deductions (including charitable deductions) and the standard deduction deductible for state tax purposes.

**Table 3. Tax Treatment of Charitable Contributions by Individual States**

Tax System	State
<b>With income tax</b>	
<b>Allow itemized deductions</b>	
<b>Follow Federal provisions</b>	Alabama, Arkansas, Arizona, California, Colorado, Delaware, District of Columbia, Georgia, Hawaii, Idaho, Iowa, Kansas, Kentucky, Maine, Maryland, Minnesota, Mississippi, Missouri, Montana, Nebraska, New Mexico, New York, North Carolina, North Dakota, Oklahoma, Oregon, Rhode Island, South Carolina, Utah, Vermont, Virginia, Wisconsin.
<b>Special provisions for charitable contributions</b>	Louisiana: taxpayers might deduct 65 percent of the excess of the federal itemized deduction over the federal standard deduction on top of the state standard deduction.
<b>Allows itemization, but does not allow deductions for charitable contributions</b>	Massachusetts
<b>Do not allow itemized deductions (no deductions for charitable contributions)</b>	
	Connecticut, Illinois, Indiana, Michigan, New Hampshire, New Jersey, Ohio, Pennsylvania, Tennessee, and West Virginia
<b>Offer tax credits</b>	Arizona (contributions to organizations that assist the working poor or scholarship organizations); Colorado (contributions to qualified child care organizations); Idaho (contributions to educational entities and youth or rehabilitation facilities); Michigan (contributions to educational entities and other certified Michigan community foundations); Montana (contributions to colleges); and North Carolina (charitable contributions for nonitemizers).
<b>Without individual income tax</b>	
	Alaska, Florida, Nevada, South Dakota, Texas, Washington, and Wyoming

Source: Reinhardt (2009) and States' Departments of Revenue.

This relative uniformity in charitable deduction provisions among states, however, allows for substantial inter-state variation in the price of giving because of differences in state income tax rates. Top marginal tax rates vary from 3 percent in Illinois to 9.5 percent in Vermont. An additional 18 states either do not offer a charitable deduction or do not have a state income tax. The literature on the impact of state income tax provisions on charitable contributions is limited.

Some states also offer incentives in the form of tax credits for charitable contributions. These credits generally are capped at a maximum amount per taxpayer. For example, Idaho limits the credit to \$100 per tax payer, Arizona to \$200, and Montana to \$500. In addition, these credits

are limited to particular types of organizations such as those that help the poor or educational entities. Only North Carolina provides a credit for contributions to all qualifying charitable organizations.

To summarize, a large number of states follow federal provisions for charitable contributions and only 10 states do not provide a deduction incentive in their individual state income tax. Interestingly, some states offer tax credits for charitable contributions. The experiences from two of those states, Arizona and North Carolina, suggest a positive effect of tax credits on charitable contributions (see Appendix 1). However, more research on these experiences is needed to validate these results.

## Performance of the Puerto Rican Charitable Deduction

Data on the current Puerto Rican charitable deduction paint a somewhat mixed picture of its performance as a tax incentive for charitable giving. On the one hand, the “take-up rate” is much lower for the Puerto Rican charitable deduction than it is for the U.S. federal charitable deduction. Fewer than one out of ten Puerto Rican taxpayers who itemize deductions claimed deductions for charitable contributions compared with almost nine out ten taxpayers who itemize deductions on the U.S. federal return. On the other hand, among taxpayers who reported charitable deductions, the average amount of contributions reported by Puerto Rican filers, approximately \$4,500 per return, is comparable to the average amount per tax return of \$4,200 claimed on the federal income tax return. Once one accounts for the fact that the average AGI of Puerto Ricans who claimed itemized charitable deductions is roughly three-quarters as large as the average AGI of income tax filers taking the U.S. federal charitable deduction, it would appear that Puerto Ricans who claim the Puerto Rican charitable deduction are more generous than their counterparts on the U.S. mainland. But the higher average deduction by Puerto Ricans who contribute compared with U.S. contributors may instead reflect the much weaker incentive that the 33 percent deduction below the contribution floor in Puerto Rico provides for gifts by small contributors.

The policy question is whether modifications in the current Puerto Rican charitable deduction might encourage greater giving in a fiscally effective manner. It seems at least plausible that the incentive effects of the current charitable deduction are blunted by its current complicated structure, which attenuates financial incentives both by making it more complicated to claim the deduction, and by limiting the marginal tax incentive for those who take the time to claim it. Accordingly, we explore ways in which the current

deduction might be modified to expand financial incentives for giving.

## Modifying the Current Deduction

In this section we identify several broad alternatives for modifying the current Puerto Rican charitable deduction.

- Alternative 1: Retain the principle of allowing deductions to be taken above a floor, but simplify the structure of the current deduction.
- Alternative 2: Adopt the basic structure of the U.S. federal charitable deduction, in which all contributions are deductible from the first dollar.
- Alternative 3: Replace the current deduction with a charitable tax credit (with or without a floor).

Although we do not discuss it in the text, Appendix 2 describes another alternative – that of providing a matching grant to contributors instead of either a deduction or a credit. As noted in Appendix 2, this option has some potential attractive features. However, the potential complexities associated with administering a matching grant program make it an unrealistic alternative.

### *Alternative 1: Modify the Current Puerto Rican Charitable Deduction*

As described above, in its current form, the Puerto Rican tax law effectively provides a partial charitable deduction for contributions that are less than 4.5 percent of AGI, a full deduction for contributions between 4.5 percent and 15 percent of AGI, and no deduction for contributions greater than 15 percent of AGI. An advantage of such a structure is that in a world in which individuals would normally contribute at least 4.5 percent of AGI to charities in the absence of a tax incentive, the 4.5 percent floor would maintain incentives

for contributions at a lower revenue cost by eliminating the subsidy for contributions up to the 4.5 percent. Two important disadvantages of the deduction as currently structured, however, are that it provides only a modest financial incentive to give for many taxpayers and is also difficult for the average taxpayer to understand, thereby deterring some contributors.

As shown in Table 4, data from U.S. tax returns indicate that approximately 70 percent of those who claim charitable deductions contribute less than 4.5 percent of AGI, 22 percent contribute between 4.5 percent and 15 percent of AGI, and 8 percent contribute 15 percent or more.<sup>14</sup>

**Table 4: Charitable Deductions as a Percent of AGI**  
2002 Federal Income Tax Returns

0 to 1	15,981	35.4%
1 to 3	12,440	27.5%
3 to 4.5	4,542	10.0%
4.5 to 15	10,199	22.6%
15 or greater	2,044	4.5%
	45,206	100.0%

Source: The Urban Institute-Brookings Tax Policy Center Microsimulation Model Version 0304.

If these percentages are indicative of giving patterns in Puerto Rico, the data suggest that only about one-fifth of Puerto Rican taxpayers are currently eligible to receive the maximum marginal tax subsidy for additional giving up to 15 percent

<sup>14</sup> Because the percentage contribution ranges in Table 3 are on whole percents, it was necessary to interpolate to arrive at approximate percentages. Thus, the estimate of the percentage of taxpayers who contribute less than 4.5 percent of AGI equals the sum:  $(27.4 + 20.1 + 12.0 + 7.8 + \frac{1}{2} * 5.5 = 70.05)$ ; the estimated percentage of taxpayers who contribute between 4.5 percent and 15 percent of income equals the sum:  $\frac{1}{2} * 5.5 + 14.8 + \frac{1}{2} * 8.9 = 22$ ; and the estimated percentage of taxpayers who contribute 15 percent equals the sum:  $\frac{1}{2} * 8.9 + 3.5 = 7.95$ .

and just under one in twenty taxpayers would receive no marginal subsidy to give.

Moreover, unlike a simpler deduction (such as the U.S. federal charitable deduction) which only requires the taxpayer to report a dollar amount, the Puerto Rican charitable deduction requires a set of calculations to be completed on Schedule J. Arguably, it may be hard for the typical taxpayer to gauge the size of the tax incentive provided for the marginal dollar of giving.

In the analysis below we explore in more detail the several options for improving incentives to give and/or simplification while retaining certain features of the current Puerto Rican charitable deduction:

- Lifting the contribution ceiling of 15 percent of AGI in the current Puerto Rican charitable deduction;
- Retaining the concept of allowing deductions only above a floor, but replacing the existing 3 percent contribution floor with the option to deduct one-third of all contributions with a contribution floor of 1 percent of AGI and no deduction for contributions less than 1 percent of AGI.

### *Alternative 2: Adopt a U.S.-style Charitable Deduction*

Another option for change would be to allow contributions to be deductible from the first dollar given. Compared with limiting full deductibility to contributions above a floor, this approach would provide the simplest signal to all itemizers – “all your contributions are deductible (up to 50 percent of income)” and would provide the maximum tax subsidy per dollar contributed. The main disadvantage is that a larger portion of the revenue cost of such a deduction would be “wasted” on contributions that would have been made without a tax benefit.

### ***Alternative 3: Replace Tax Deductions with Tax Credits***

In addition to the question of whether incentives for charitable giving should be limited to contributions above a minimum floor, another issue is how the incentive itself should be structured. The current version of the Puerto Rican charitable contributions incentives, like the incentive in the U.S. tax law and most U.S. states, allows taxpayers who itemize their deductions to deduct their contributions (either wholly or in part) from taxable income.

As may be seen in Table 2, one consequence of providing charitable tax incentives in the form of tax deductions is that the tax subsidy, and hence the financial incentive to give, is larger for charitable contributions made by higher income taxpayers in higher marginal rate brackets than it is for low-income taxpayers (e.g. the financial incentive provided by the Puerto Rican charitable deduction is greater for a taxpayer in the 33 percent bracket than one in the 15 percent bracket). In addition, taxpayers who contribute to charity, but who do not itemize deductions, receive no tax incentive at all.

An alternative tax incentive is to substitute a flat-rate tax credit for a tax deduction. For example, taxpayers could be allowed to claim a credit against taxes due equal to a flat T percent of charitable contributions. The amount of such a credit could be capped at a fixed dollar amount or the credit rate could be applied to contributions up to a ceiling amount based on the percentage of AGI (e.g. 15 percent as under current Puerto Rican law).

The proper standard of comparison between tax credits vs. tax deductions is between a tax credit and a tax deduction of equal budgetary cost. For example, in the analysis below, we estimate that under a U.S.-style charitable deduction Puerto Rican charitable contributions would equal just over \$116 million, and tax subsidies per dollar of

giving ranging from 7 to 33 percent would have a revenue cost of roughly \$27 million. Based on these estimates, instead of a tax deduction, one could provide each taxpayer with a flat rate credit of roughly 23 percent (27/116).

The consequence of substituting a 23 percent tax credit for tax deductions ranging from 7 to 33 percent would be to reduce the tax subsidy for taxpayers in the 28 and 33 percent brackets, and raise it for taxpayers in the 7, 10, and 15 percent tax brackets. If higher income taxpayers are more sensitive to changes in the after-tax cost of giving, a potential effect of substituting a credit for a deduction would be to reduce private contributions of those in the higher tax brackets more than it would increase charitable giving among those in the lower tax brackets, with the net effect of potentially lowering total contributions. This comparison suggests that tax deductions may be more cost efficient than tax credits as a means of encouraging giving.

At the same time, critics of structuring the charitable tax incentive as a deduction instead of a credit have questioned the fairness of providing a higher subsidy rate for high income than for low income donors; and also note that providing more generous subsidies for charitable giving to higher income taxpayers favors some charitable causes over others because patterns of giving vary with income. Several studies, for example, indicate that in the U.S. higher income donors allocate proportionately more of their total contributions to charities in the arts and, particularly, higher education than do lower income donors. (See generally Clotfelter, ed.1992; Havens, O'Herlihy, and Schervish 2006.). Thus, compared with a flat rate credit, charitable tax deductions tilt the public tax subsidy toward charities such as arts and education favored by higher income givers, and away from charities favored by lower income donors, such as churches and social service organizations.

If the objective is to expand resources for all charities, the impact of structuring a tax incentive as a credit instead of as a deduction will be mixed, and assessing the desirability of retaining a tax deduction vs. replacing it with a tax credit requires weighing the two offsetting effects. Does targeting more of the tax subsidy on higher income taxpayers increase total giving by enough to outweigh the fact that higher income donors prefer certain charities over others? If it does, then compared to a tax credit, for a given revenue cost, a tax deduction can encourage the same amount of giving to charities traditionally favored by lower income givers, while significantly increasing giving to other charities, with the result that no charities are made worse off, while others receive more resources. The effect of substituting a tax credit for a tax deduction depends on (a) the relative price sensitivity of giving of higher income and lower income donors, and (b) the relative patterns of giving to different types of charities by different income groups. While we do have data on (a), we do not have empirical data on patterns of giving by income among Puerto Ricans. Hence we do not attempt to simulate the effects of substituting a charitable tax credit for charitable deductions.

### **The Role of Increased Accountability of Nonprofits and Federal 501(c)(3) Status**

Many who were interviewed in San Juan by the Urban Institute study team expressed the concern that broadening the scope of the Puerto Rican charitable deduction would run the risk of providing subsidies for contributions to organizations whose status as “true” nonprofits might be questionable. This suggests that it may be desirable to combine any broadening of the charitable deduction with measures to increase the public accountability of Puerto Rican nonprofits. The most obvious and straightforward step would be to limit enhanced deductibility of charitable deductions to Puerto Rican nonprofits certified

as 501(c)(3) organizations under the U.S. Internal Revenue Code.

Transparency and accountability are enhanced in nonprofit organizations that have 501(c)(3) charitable status, assisting donors in making decisions and regulators in overseeing activities. For these reasons, efforts to increase the size and impact of the charitable sector in Puerto Rico should seriously consider charitable giving incentives that also encourage nonprofits to attain 501(c)(3) status.

Nonprofits that apply for 501(c)(3) status must provide evidence of their charitable purposes to the IRS. The IRS reviews that information in making its determination. Once an organization receives 501(c)(3) charitable status, in any year when its revenues (technically, adjusted gross receipts) are more than \$25,000, it must complete and file with the IRS the Form 990 or 990EZ. The Form 990 requires public disclosure of financial information, program and governing board information. The only information that is not public is information on donors. The IRS (and many states) uses the Form 990 information to oversee charities.<sup>15</sup>

Registration and annual reporting of financial data provide the basic ongoing transparency and accountability of the nonprofit sector. Since the Forms 990 are public documents, the IRS makes them available to the public (except for donor information). Forms 990 can be viewed on-line by potential donors and the public at the websites of the National Center for Charitable Statistics at the Urban Institute, GuideStar, and the Foundation Center. (Forms 990-PF filed by foundations also are available on those websites.)

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<sup>15</sup> Based on tabulations done with the database maintained by the National Center on Charitable Statistics, in 2006 there were 1,380 nonprofit organizations in Puerto Rico that were registered and/or filing as 501(c)(3) organizations.

In the more than a decade that the Forms 990 have been on-line, knowledge of and interest in the nonprofit sector have exploded. There has been increased public and media attention and more information for donors to consider before making contributions. The data are also used by nonprofit rating agencies such as the BBB Wise Giving Alliance and as a part of descriptions of organizations on the GuideStar website. The Form 990 data are the basis for much of the research on the size and scope of the nonprofit sector summarized in the *Nonprofit Almanac 2008* by the National Center for Charitable Statistics at the Urban Institute. Many studies are based on the Form 990 data, including a recently released Urban Institute study that found a significant shortage of operating reserves in over half of nonprofits in the Washington D.C. area.

## Summary

The main implications of the above analysis may be summarized as follows:

- Empirical studies of charitable giving strongly support the hypothesis that giving is affected by the out-of-pocket cost of giving, which can be reduced by charitable tax incentives.
- Especially among higher income givers, the price sensitivity of giving is high enough so that charitable tax incentives can be structured to be reasonably treasury efficient.
- Even if subsidies to individual givers are not 100 percent treasury efficient, there are additional benefits that flow from subsidizing nonprofit organizations that provide a justification for encouraging private giving.
- Notwithstanding efforts in the early 2000's to expand the scope of the Puerto Rican charitable deduction, a relatively small number of Puerto Rican taxpayers who itemize deductions actually claim charitable deductions.
- The incentive effects of the current Puerto Rican charitable deduction appear to be attenuated both by its somewhat complex structure, and the interaction of its various provisions, which limit the number of taxpayers who are eligible for the maximum tax incentive.
- There was near unanimity among those interviewed in San Juan that it would be desirable to link expansion of the Puerto Rican charitable deduction to measures to improve the accountability of Puerto Rican nonprofits. Requiring organizations to register with the IRS as 501(c)(3) organizations as a condition of being able to receive (more generous) charitable deductions would be an important first step in this direction.
- Especially in view of the severe fiscal constraints facing the Puerto Rican government, it is important to craft an expanded charitable deduction that is treasury efficient. The effects of some options are estimated in the next section of this report.

## Options for Increasing Incentives for Charitable Deductions

Puerto Rico allows a full charitable deduction only for amounts donated in excess of 3 percent of income up to a ceiling of 15 percent of Adjusted Gross Income (AGI). Legislation in the early 2000s expanded deductibility by allowing all itemizing taxpayers to deduct 33 percent of all donations, as an alternative to the 100 percent deduction.

Tables 5 and 6 below present data on use of the charitable deduction for tax year 2007 compiled by the Departamento de Hacienda de Puerto Rico (Department of the Treasury of Puerto Rico) from Schedule J of Income Tax Form 482.

In 2007, fewer than 23,000 Puerto Rican tax returns, representing fewer than 7 percent of all returns with itemized deductions, reported deductions for charitable contributions.

- Total reported charitable contributions equaled \$103.4 million. (See table 5, column 4)
- The average amount of charitable contributions reported equaled \$4,517, ranging from approximately \$2,000 in the lower AGI classes to \$12,788 in the highest AGI class. (See table 5, column 5)
- Reported contributions averaged 6.1 percent of AGI overall. (See table 5, column 6)
- \$73.1 million or 71 percent of all contributions were reported on line 7 of schedule J as potentially deductible, before application of the deduction ceiling of 15 percent of AGI. (See table 5, column 7)
- \$17 million of deductions reported on line 7 of schedule J were limited by a ceiling on deductions exceeding 15 percent of AGI. (See table 6, column 6)

- After applying the deduction ceiling total charitable deductions actually claimed equaled \$55 million. (See table 6, column 8)

## Options for Change

Improved incentives for private charitable donations would strengthen nonprofit organizations that provide a variety of public benefits in Puerto Rico. Our analysis of the Puerto Rican charitable deduction revealed that its current structure has some advantages, but also important disadvantages in providing incentives for charitable giving.

Limiting full deductibility to contributions in excess of 3 percent of AGI limits the extent to which a taxpayer can receive the full tax subsidy for charitable contributions that would be made anyway (without a financial incentive). This has the effect of leveraging the amount of additional giving that is encouraged per dollar of foregone tax revenue.

At the same time, the participation, or take-up rate of the Puerto Rican charitable deduction, is quite low both in comparison to other itemized deductions that are allowed under Puerto Rican income tax law, such as mortgage interest, automobile license plates, dependent's educational expenses, child care expenses, and property taxes, and to the U.S. charitable deduction which is claimed by roughly ninety percent of taxpayers who itemize deductions.

Our analysis and interviews with key Puerto Rican stakeholders suggest that the potential incentive effects of deductibility of charitable contributions in Puerto Rico are not fully realized both because the complex structure of the Puerto Rican charitable deduction requires the taxpayer to engage in a series of computations on Puerto Rican Tax Return Schedule J in order to determine the size of the allowable deduction and because the interaction of the various provisions of the charitable deduction limit the number of

**Table 5: Individual Income Tax Data from Form 482 Schedule J**

Level of adjusted gross income	Number of tax payers	Adjusted gross income	Other contribution to charities (schedule J)	Contribution in excess of 3% of AGI (schedule J, line 5)	33% of other contribution to charities (schedule J)	Average Contribution Per Return (Calculated)	Contributions as a % of AGI (Calculated)	Deduction for other contributions (schedule J, line 7) (Before applying 15% AGI Ceiling)	Multiply the adjusted gross income by 15% (schedule J)	Schedule J, line 7 as a % of all Contributions	Total tax payers with itemized deductions	Percentage of Itemizers with Charitable Deductions
-	166	139,206	338,764	330,004	110,980	2,041	243.4%	330,835	24,171	97.7%	5,241	3.2%
2,001	58	148,475	104,887	98,635	33,753	1,808	70.6%	99,316	22,255	94.7%	1,781	3.3%
3,001	94	330,989	244,815	230,731	78,407	2,604	74.0%	232,283	52,568	94.9%	2,325	4.0%
4,001	100	450,292	238,175	224,695	78,569	2,382	52.9%	224,763	67,517	94.4%	2,336	4.3%
5,001	99	544,520	232,901	217,291	76,830	2,363	42.8%	217,309	80,981	93.3%	2,474	4.0%
6,001	254	1,775,438	788,682	735,049	259,259	3,105	44.4%	736,300	266,243	93.4%	5,415	4.7%
8,001	286	2,583,509	715,174	636,749	224,875	2,501	27.7%	635,420	387,448	88.8%	5,669	5.0%
10,001	469	5,330,608	1,238,387	1,083,588	402,561	2,640	23.2%	1,086,936	797,957	87.8%	9,498	4.9%
12,501	510	7,006,871	1,317,872	1,115,308	430,683	2,584	18.8%	1,120,012	1,051,094	85.0%	11,390	4.5%
15,001	1,249	21,975,282	3,231,545	2,585,257	1,057,432	2,587	14.7%	2,605,785	3,293,275	80.6%	26,610	4.7%
20,001	1,441	32,431,577	3,932,133	3,008,397	1,284,419	2,729	12.1%	3,040,130	4,861,210	77.3%	29,933	4.8%
25,001	1,538	42,439,800	4,339,804	3,178,812	1,425,934	2,822	10.2%	3,226,698	6,356,539	74.4%	31,943	4.8%
30,001	1,291	40,930,213	3,631,411	2,513,317	1,192,094	2,813	8.9%	2,563,380	6,132,702	70.6%	23,808	5.4%
33,334	2,276	83,157,466	9,449,978	7,207,849	3,097,570	4,152	11.4%	7,308,184	12,493,322	77.3%	37,593	6.1%
40,001	2,869	128,346,561	10,142,287	6,807,037	3,333,808	3,535	7.9%	6,965,857	19,251,549	68.7%	39,847	7.2%
50,001	2,245	123,172,819	9,170,487	6,042,366	3,004,564	4,085	7.4%	6,212,818	18,474,319	67.7%	26,798	8.4%
60,001	2,576	172,307,136	12,532,730	8,351,324	4,114,452	4,865	7.3%	8,609,647	25,841,062	68.7%	25,194	10.2%
75,001	1,595	130,500,420	7,892,808	4,963,828	2,565,908	4,948	6.0%	5,157,732	19,553,696	65.3%	14,412	11.1%
90,001	695	65,839,613	4,685,192	3,243,124	1,539,052	6,741	7.1%	3,345,774	9,875,750	71.4%	6,218	11.2%
100,001	1,677	201,740,193	11,137,512	7,003,446	3,427,063	6,641	5.5%	7,382,297	30,261,075	66.3%	13,556	12.4%
150,001 and over	1,413	632,802,993	18,068,941	10,866,260	5,945,601	12,788	2.9%	12,019,305	94,840,756	66.5%	9,106	15.5%
<b>Total</b>	<b>22,901</b>	<b>\$1,693,953,981</b>	<b>\$103,434,485</b>	<b>\$70,443,067</b>	<b>\$33,683,814</b>	<b>\$4,517</b>	<b>6.1%</b>	<b>\$73,120,781</b>	<b>\$253,985,489</b>	<b>70.7%</b>	<b>331,087</b>	<b>6.9%</b>

**Table 6: Individual Income Tax Data from Form 482 Schedule J**

Level of adjusted gross income	Number of tax payers	Adjusted gross income	Other contribution to charities (schedule J)	Deduction for other contributions (schedule J, line 7) (Before applying 15% AGI Ceiling)	Deductions Disallowed by 15% AGI Ceiling (Calculated)	Percentage of Deductions Disallowed by 15% AGI Ceiling	Allowable deduction for other contributions (Schedule J, line 9)
-	166	139,206	338,764	330,835	309,815	93.6%	21,020
2,001	58	148,475	104,887	99,316	78,864	79.4%	20,452
3,001	94	330,989	244,815	232,283	184,639	79.5%	47,644
4,001	100	450,292	238,175	224,763	165,530	73.6%	59,233
5,001	99	544,520	232,901	217,309	148,978	68.6%	68,331
6,001	254	1,775,438	788,682	736,300	531,280	72.2%	205,020
8,001	286	2,583,509	715,174	635,420	345,322	54.3%	290,098
10,001	469	5,330,608	1,238,387	1,086,936	541,942	49.9%	544,994
12,501	510	7,006,871	1,317,872	1,120,012	462,211	41.3%	657,801
15,001	1,249	21,975,282	3,231,545	2,605,785	799,445	30.7%	1,806,340
20,001	1,441	32,431,577	3,932,133	3,040,130	681,382	22.4%	2,358,748
25,001	1,538	42,439,800	4,339,804	3,226,698	525,106	16.3%	2,701,592
30,001	1,291	40,930,213	3,631,411	2,563,380	249,328	9.7%	2,314,052
33,334	2,276	83,157,466	9,449,978	7,308,184	2,757,845	37.7%	4,550,339
40,001	2,869	128,346,561	10,142,287	6,965,857	579,139	8.3%	6,386,718
50,001	2,245	123,172,819	9,170,487	6,212,818	690,958	11.1%	5,521,860
60,001	2,576	172,307,136	12,532,730	8,609,647	1,605,762	18.7%	7,003,885
75,001	1,595	130,500,420	7,892,808	5,157,732	323,503	6.3%	4,834,229
90,001	695	65,839,613	4,685,192	3,345,774	1,019,479	30.5%	2,326,295
100,001	1,677	201,740,193	11,137,512	7,382,297	1,299,422	17.6%	6,082,875
150,001 and over	1,413	632,802,993	18,068,941	12,019,305	4,003,323	33.3%	8,015,982
<b>Total</b>	<b>22,901</b>	<b>\$1,693,953,981</b>	<b>\$103,434,485</b>	<b>\$73,120,781</b>	<b>\$17,303,273</b>	<b>23.7%</b>	<b>\$55,817,508</b>

taxpayers who are eligible for a full tax incentive for additional giving.

We discuss five options for encouraging greater giving by Puerto Ricans through tax incentives for charitable contributions.

- Option 1: Current Puerto Rican law;
- Option 2: Maintain Current Law, but lift the contributions ceiling;
- Option 3: Adopt a Simplified 1 Percent Contribution Floor, while maintaining the current contributions ceiling;
- Option 4: Replace the existing charitable deduction with one in which 100 percent of contributions in excess of 1 percent of AGI can be deducted, and lift the contributions ceiling;
- Option 5: Replace the existing charitable deduction with a U.S. style deduction that allows 100 percent of all contributions to be deducted.<sup>16</sup>

### *Option 1: The Status Quo*

Table 7 illustrates the incentives for charitable giving provided under current Puerto Rican tax law and predicted behavioral responses of Puerto Rican taxpayers in different circumstances. We illustrate the case of taxpayers with an Adjusted Gross Income (AGI) of \$100,000, each of whom is assumed to be in the 33 percent tax bracket and to have an after-tax income of \$80,000.

<sup>16</sup> The U.S. federal deduction for charitable contributions also has a contributions ceiling equal to 50 percent of AGI. This ceiling is put in place mainly to prevent abuse, and there is general agreement that the practical effect is that there is effectively no limit on the amount of actual contributions that can be deducted by virtually all taxpayers.

Table 7 shows the range of financial incentives for giving available to taxpayers who, in the absence of the charitable deduction, give different percentages of AGI to charity. As noted in the full report, under current law Puerto Ricans who claim itemized deductions fall into three groups:

- Taxpayers who give up to 4.5 percent of AGI to charities and would benefit more from deducting one third of all contributions than deducting 100 percent of contributions in excess of 3 percent of AGI, are represented in Table 3 by the hypothetical taxpayers assumed to give from 1 percent to 3.5 percent of AGI ;
- Taxpayers who give between 4.5 percent and 15 percent of AGI to charities and benefit more from deducting 100 percent charitable contributions in excess of 3 percent of AGI than from deducting 1/3 of all contributions. They are represented in Table 3 by taxpayers assumed to give 5 percent and 10 percent of AGI;
- Taxpayers who give more than 15 percent of AGI to charities are represented by the taxpayer with assumed contributions equal to 20 percent of AGI, who deducts 100 percent of contributions between 3 percent and 15 percent of AGI.

Table 3 shows the behavioral response effects to the subsidy by taxpayers in each of these groups. The response is modeled under the assumption that the price elasticity of giving for taxpayers in this income category is -1.2 and that the income elasticity of giving is 0.7.<sup>17</sup> The simulated behavioral responses also incorporate the effect of “non-linear” lump sum tax and subsidy effects that result from the deduction floor and ceiling

<sup>17</sup> A price elasticity of -1.2 means that a 10 percent reduction (increase) in the after tax cost of giving would increase giving by 12 percent. An income elasticity of giving means that a 10 percent increase in (after-tax income) would increase giving by 7 percent.

in current law. A full treatment of these effects is outside the scope of this report, but is discussed in greater detail in Feldstein and Lindsey (1983).

Text Box 2 describes the general approach used to simulate the effect of the current deduction. Consider for example a taxpayer in the 33 percent tax bracket who is assumed to contribute 2 percent of AGI (\$2,000) in the absence of a subsidy. Under current Puerto Rican tax law, the after-tax cost of giving an extra dollar is reduced by 11 percent for this taxpayer. Based on estimates of the price sensitivity of giving, her simulated percentage increase in giving in response to the lower price (see Text Box 2) is 13.2 percent of baseline contributions, or \$264. The estimated revenue cost (\$249) is equal to the taxpayers' marginal rate (33 percent) multiplied by the sum of the baseline contribution of \$2,000 and the induced contribution of \$264.

The analysis is more complicated for taxpayers giving between 4.5 percent and 15 percent of AGI. In this case, it can be shown that current law is financially equivalent to giving such taxpayers a tax subsidy equal to their marginal tax rate ( $t = .33$ ) on all contributions, and imposing a tax on 3 percent of AGI. In this case, the current charitable deduction reduces the net cost of giving an additional dollar by 33 percent. The reduced price of giving increases contributions by \$1,980. The lump sum tax on contributions up to 3 percent of AGI equals \$990 (33 percent of the first \$3,000 of contributions) and reduces giving by \$43.31 for taxpayers initially contributing 5 percent of AGI. The net increase in contributions is the sum of the price and income effects, or \$1,937. The tax revenue foregone equals the tax rate multiplied by the sum of the baseline and induced contributions (\$6937 times .33, or \$2289) less the lump sum tax of \$990, for a net tax of \$1,299.

Finally, for taxpayers currently giving more than 15 percent of AGI, current law provides a lump sum subsidy equal to 12 percent of AGI (\$12,000)

times .33, or \$3,960, but does not reduce the price of giving an additional dollar. In the example shown in Table 3, this subsidy is equivalent to an increase in after-tax income of 4.95 percent. Applying the income elasticity of 0.7, we calculate a simulated increase in giving of \$693. The revenue cost is simply the amount of lump sum grant (\$3,960) because there is no subsidy for additional contributions.

The results in Table 3 are illustrative cases rather than a full simulation model, but they highlight several key points about the current Puerto Rican charitable deduction:

- Given the price and income elasticity estimates assumed in the table, the current charitable deduction increases simulated charitable contributions by amounts roughly commensurate with or greater than tax revenue foregone for taxpayers who give less than 15 percent of AGI.
- Among hypothetical taxpayers who give above the 15 percent AGI ceiling, there is a fairly large simulated revenue cost of the deduction in exchange for a rather modest incentive effect.

The last result is of some importance. It comes about because an unintended, but significant, side-effect of capping deductions at 15 percent of AGI is to give large givers a lump sum tax deduction, but no financial incentive to contribute more. Although their higher after-tax income does lead to some increase in giving, the deduction for these taxpayers is mostly "wasted" through a rebate for giving that would happen without the tax subsidy. Option 2 below, by removing the ceiling, converts this lump sum subsidy into an incentive for additional giving. Although it adds to total revenue loss by subsidizing additional giving, it induces a very large increase in contributions per additional dollar of foregone revenue.

## **Text Box 2: Simulating Illustrative Effects of the Current Puerto Rican Charitable Deduction**

Charitable deductions affect charitable giving through two channels: (1) a price effect, and (2) a tax/transfer effect. Our analyses of the current Puerto Rican charitable deduction and options for changing it use these effects to predict how changes in law are likely to affect charitable giving.

**Price Effect:** The price effect refers to changes in giving prompted by changes in the after-tax cost of giving.

In a world in with no tax deduction, the cost of giving \$1 to charity is \$1. A Puerto Rican taxpayer who, under current Puerto Rican law, elects to deduct one-third of all charitable contributions has her after tax cost of giving reduced from \$1 to  $\$1 - (1/3 \cdot t)$  (e.g. one dollar minus  $1/3^{\text{rd}}$  multiplied by the taxpayers tax rate). For a taxpayer in the 33 percent tax bracket, the after-tax cost of giving falls from \$1 to \$.89, which is a reduction of 11 percent.

The predicted percentage change in the amount given caused by the change in the after-tax price of giving — the price effect — experienced by this hypothetical taxpayer equals:

$$(1) \% \Delta C = \% \Delta P \cdot E_p, \text{ where}$$

$\% \Delta C$  = the percentage change in contributions due to the change in the after-tax price of giving

$\% \Delta P$  = the percentage change in the after-tax price of giving

$E_p$  = the price elasticity of charitable giving

In the examples depicted in Table 3, the percentage increase in contributions would equal 13.2 percent = -11 percent multiplied by -1.2

The absolute change in giving then equals:

$$(2) \Delta C = \% \Delta C \cdot C, \text{ where}$$

$C$  is the amount contributed before the price change. For example, for the taxpayer assumed to give \$1000 in the absence of the current law deduction, the simulated change in contributions equals \$132, as is shown in column 12 of Table 3.

**Text Box 2: Simulating Illustrative Effects of the Current Puerto Rican Charitable Deduction (continued)**

**Tax/Transfer Effect:** The current Puerto Rico charitable deduction is financially equivalent to giving taxpayers who contribute between 3 percent and 15 percent of AGI a price subsidy of  $\$t$  (where  $t$  is the tax rate) for all contributions and then imposing a lump sum tax equal to 3 percent of AGI. In the case of taxpayers giving above the 15 percent ceiling the deduction provides a lump sum subsidy equal to 12 percent of AGI  $(.15-.03)$ , but no price subsidy for additional contributions.

The predicted percentage change in the amount given caused by lump sum taxes and transfers equals:

$$(3) \% \Delta C_Y = \% \Delta Y_D \cdot E_Y, \text{ where}$$

$\% \Delta C_Y$  = the percentage change in contributions:

$\% \Delta Y_D$  = the percentage change in the taxpayer's after-tax income due to the lump sum tax or transfer: and

$E_Y$  = the income elasticity of charitable giving.

In Table 3, taxpayers giving 5 percent and 10 percent of AGI pay an implicit tax of  $(\$03 \cdot 100,000 \cdot .33)$  or \$990, which equals -1.24 percent of after tax income of \$80,000, leading to a predicted percentage drop in contributions of 0.87 percent of initial contributions  $(0.7 \cdot 1.24)$  (not shown on Table 3). The taxpayer who contributes 20 percent of income receives a tax cut of  $(.15-.03) \cdot \$100,000 = \$3,960$ , which equals 4.95 percent of after tax income of \$80,000, leading to a predicted percentage increase in contributions of 3.47 percent  $(0.7 \cdot 4.95)$ .

The absolute change in giving due to the income effect equals:

$$(4) \Delta C = \% \Delta C_Y \cdot C, \text{ where } C \text{ is the amount of contributions before the change in after-tax income.}$$

In Table 3, these amounts equal  $-.0087 \cdot 5,000 = -\$43.31$ ,  $-.0087 \cdot 10,000 = -\$86.6$ , and  $+.0347 \cdot 20,000 = +\$693$ .

### ***Option 2: Retain the Current Deduction but Lift the 15 percent Cap***

Table 8 shows the effect of lifting the current cap on deductions of 15 percent for a hypothetical taxpayer currently giving 20 percent of AGI. (As noted above in footnote 1 operationally, this might effectively be accomplished by adopting the contribution ceiling of 50 percent of AGI in the U.S. federal income tax.) Lifting the ceiling can be thought of as operating in the following manner:

- A taxpayer who was previously capped at the 15 percent ceiling would effectively be allowed to deduct 100 percent of additional amounts contributed.
- This change is financially equivalent to taking away the lump sum subsidy of \$3,960 described above and replacing it with matching subsidy with a matching rate equal to 33 cents per dollar contributed, combined with a lump sum tax on the first \$3,000 of contributions (3 percent of AGI). The result is that the hypothetical taxpayer giving 20 percent would now be treated the same as taxpayers giving between 4.5 percent and 15 percent of AGI under current Puerto Rico law. The net effect of these changes is to increase simulated giving by \$7,249 from \$20,693 to \$27,942.

The net additional revenue cost of \$4,271 equals the sum of (a) foregone tax revenue on the additional amount contributed of \$7,249 plus the revenue loss from allowing previous amounts contributed in excess of 15 percent of AGI (\$5,693) to be claimed as a deduction.

### ***Option 3: Allow 100 percent of Charitable Contributions in Excess of a Floor of 1 percent Up to 15 percent of AGI to be Deducted***

The current structure of the deduction, which allows contributors to deduct the greater of

one third of all contributions, or 100 percent of contributions in excess of 3 percent of AGI, is complex and limits the financial incentive to give. One way of simplifying the current deduction and expanding its financial incentive would be to replace the current charitable deduction with one in which Puerto Rican taxpayers were allowed to deduct 100 percent of all contributions in excess of 1 percent of AGI, up to the current ceiling amount of 15 percent of AGI.

This option would affect taxpayers differently depending on their current level of giving. The effects are illustrated in Table 5, which takes as its starting point the simulated contributions for the illustrative cases shown in Table 3.

- Taxpayers contributing less than 1 percent of AGI, who had previously been able to deduct one-third of contributions, would no longer be able to claim a deduction;
- Taxpayers contributing between 1 percent and 4.5 percent of AGI, who would have deducted one-third of contributions, would be able to deduct 100 percent of contributions in excess of 1 percent of AGI. This would increase the marginal tax subsidy from  $\$1/3$  to  $\$t$  and the amount of the tax deduction from  $\$1/3 \cdot C$  to  $\$C$ , where  $C$  is the amount contributed. These taxpayers would now pay a lump sum tax of \$330 on contributions up to 1 percent of AGI, where previously they paid no lump sum tax;
- Taxpayers contributing between 4.5 percent and 15 percent of AGI who already receive a marginal tax subsidy of  $\$t$  per dollar contributed would continue to receive the same marginal subsidy. In addition, taxpayers in this situation would be able to deduct contributions between 1 percent and 3 percent of AGI that would not be deductible under current Puerto Rican law;



- Taxpayers currently constrained to the 15 percent ceiling would also now be able to deduct charitable contributions between 1 percent and 3 percent of AGI.

As is illustrated in Table 9, for taxpayers giving between 1 percent and 4.5 percent of AGI, Option 3 increases the marginal incentive to give; and the predicted amount of additional giving in response to the greater financial incentive is roughly equal to or exceeds the added revenue cost. Taxpayers already giving in excess of 4.5 percent of AGI do not receive an added financial incentive to give, but receive an additional lump sum subsidy from the deduction of contributions between 1 percent and 3 percent of AGI.

Table 9 illustrates that whether Option 3 would boost charitable deductions more than the revenue cost depends on the relative shares of contributions made that are below and above 4.5 percent of AGI. The larger the relative share above 4.5 percent of AGI, the more likely it is that lowering the floor to 1 percent would provide a larger tax cut, but without providing an additional incentive to give.

***Option 4: Adopt a Simplified 1 Percent Contribution Floor and Raise the Contribution Ceiling to 50 percent of AGI***

A fourth alternative would be to adopt Option 3, while also raising the contribution ceiling to 50 percent of AGI. Adopting this option would combine the behavioral and revenue effects of Option 2 and 3. In addition to the incentive effects from lowering the contribution floor for those giving between 1 and 4.5 percent of AGI, taxpayers at or above the 15% deduction ceiling would have an increased incentive to give, as in Option 2.

***Option 5: Allow Taxpayers to Deduct 100 percent of Contributions not Exceeding 50 percent of AGI***

Lastly, we consider the effect of replacing the current Puerto Rico charitable contribution with a U.S.-style deduction equal to 100 percent of charitable contributions.

As in the case of the proposal to adopt a simple 1 percent floor, such a change would affect both the tax liabilities and the financial incentive to give of taxpayers in different circumstances.

- As shown in Table 10, for taxpayers currently giving less than 4.5 percent of AGI who deduct one-third of all contributions, the tax subsidy would increase from one third of the taxpayer's applicable tax rate ( $1/3 \cdot t$ ) to the full tax rate ( $t$ ). As a consequence, the after-tax, out-of-pocket cost of giving an extra \$1 would fall from  $\$(1-1/3t)$  to  $\$(1-t)$  where  $t$  is the taxpayer's next dollar tax rate.
- In addition, taxpayers who deducted only one-third of the amount contributed under current law would now be able to deduct the full amount. As a result, they would receive a larger tax cut as may be seen by comparing cols. 6 and 5 in Table 10. They also increase their giving, leading to a further revenue loss.
- Taxpayers with contributions between 4.5 percent and 15 percent of AGI would experience no change in the after-tax cost of giving an additional dollar. Before the proposed change, they would deduct 100 percent of each dollar given above 3 percent of AGI up to the ceiling amount of AGI; and they would continue to do so after the proposed change.
- Taxpayers deducting 100 percent of contributions in excess of 3 percent of AGI would, however, receive a tax cut, and an increase in after tax income. Before the proposed change they would not have received a tax deduc-



**Table 10: Effect of Adopting a U.S. Style Charitable Deduction**

AGI	\$100,000	After Tax Income	\$80,000	Tax Rate	0.33	1% AGI	\$1,000	15% AGI	\$15,000						
Giving as a % of AGI	Giving: Current Law	Tax Deduction No Floor	Tax Deduction Under 3% Floor	Value of Tax Saving With 3% Floor	Value of Tax Saving With No Floor	Current Law After Tax Cost of Next \$1 Given	After Tax Cost with 100% Deductibility	Percent $\Delta$ in After Tax Price of Giving	Price Elasticity of Giving	Income Elasticity of Giving	Non-Linear (Tax) and Subsidy Effects	$\Delta$ in Giving: (Tax) Transfer Effect	$\Delta$ in Giving: Price Effect	$\Delta$ in Total Giving Relative to Current Law	$\Delta$ in Taxes Relative to Current Law
2.3%	\$2,264	\$2,264	\$755	\$249.04	\$747	\$0.89	\$0.67	-24.7%	-1.2	0.7	0	\$0	\$672	\$672	(\$720)
2.8%	\$2,830	\$2,830	\$943	\$311.30	\$934	\$0.89	\$0.67	-24.7%	-1.2	0.7	0	\$0	\$839	\$839	(\$900)
3.4%	\$3,375	\$3,375	\$1,125	\$371.27	\$1,114	\$0.89	\$0.67	-24.7%	-1.2	0.7	0	\$0	\$1,001	\$1,001	(\$1,073)
4.0%	\$3,962	\$3,962	\$1,500	\$495.03	\$1,307	\$0.89	\$0.67	-24.7%	-1.2	0.7	0	\$0	\$1,175	\$1,175	(\$1,200)
6.9%	\$6,945	\$6,945	\$3,945	\$1,301.97	\$2,292	\$0.67	\$0.67	0.0%	-1.2	0.7	990	\$60	\$0	\$60	(\$1,010)
13.9%	\$13,891	\$13,891	\$10,891	\$3,593.93	\$4,584	\$0.67	\$0.67	0.0%	-1.2	0.7	990	\$120	\$0	\$120	(\$1,030)
20.6%	\$20,693	\$20,693	\$12,000	\$3,960.00	\$6,829	\$1.00	\$0.67	-33.0%	-1.2	0.7	-3,960	-\$717	\$8,195	\$7,478	(\$5,336)

tion on contributions below 3 percent of AGI; after the proposed change such contributions would be fully deductible.

- Taxpayers subject to the 15 percent of AGI ceiling on contributions would be affected in a manner similar to that resulting from lifting the contribution ceiling discussed under Option 2.

### **Estimating Effects on Puerto Rican Charitable Giving**

In this section we present simulations of the impact of the current Puerto Rican charitable deduction on giving, and of the options for change discussed above. Due to data limitations, however, these simulations should be viewed more as gauging orders of magnitude than as estimates or projections of the traditional type. Because of the complicated nature of the deduction option, the deduction floor, and the deduction ceiling in current Puerto Rican law, micro-data on individual taxpayers are needed in order to estimate the effects of various alternatives. Such data are not presently available for Puerto Rico taxpayers.

Instead, the estimates presented below are based on spreadsheet simulations that draw upon (a) aggregate data by AGI class provided by Hacienda, and (b) break-downs of taxpayers into different categories that are constructed using the Urban/Brookings Tax Policy Center micro-simulation model for U.S. tax returns, modified to represent the Puerto Rican charitable deduction. Essentially, ratios and percentages that are estimated with the U.S. tax model are applied to the Hacienda data to apportion total contributions reported on the Hacienda data among taxpayers giving different percentages of AGI to charity, who are affected differently by proposed changes in current law.

We should note that the simulations are based on contribution data for 2007 that were provided to us by Hacienda. Thus the results reported below

are best interpreted as an attempt to gauge the effect of different policies had they been in effect in 2007, and that baseline contributions under current law could be lower both in the present in the future due to the economic recession.

We believe that this approach provides a useful basis for gauging order of magnitude effects of changes on different types of givers. At the same time, due to limitations from having to rely on ratios from a U.S. sample of individual income taxpayers to impute data to Puerto Rico taxpayers in different income groups, the estimates are much less robust than if we had available a micro-data file of Puerto Rico taxpayers.

In this section, we present summaries of the approach used to simulate the effects of the various provisions. More detail on how the simulations were undertaken is provided in the appendices to this section.

#### ***Option 1: Maintain Current Puerto Rican Law***

We begin by simulating the effect of current Puerto Rican tax law on giving and on revenue as a benchmark for assessing proposed changes in current law. Several assumptions must be made in order to gauge the effect of current Puerto Rican law on charitable giving. First, one needs to be able to apportion total contributions made by taxpayers into contributions made by taxpayers giving up to 4.5 percent of AGI, who under current law deduct one-third of all contributions, taxpayers giving between 4.5 percent and 15 percent of AGI who deduct 100 percent of contributions in excess of 3 percent of AGI, and taxpayers giving more than 15 percent of AGI whose deductions are capped. We do not have data from Hacienda that allow us to estimate these amounts directly for Puerto Rican taxpayers. We can, however, compute the share of charitable contributions below 4.5 percent, between 4.5 percent and 15 percent, and above 15 percent for U.S. taxpayers in AGI groups corresponding to the Hacienda

data and who claim charitable contributions as itemized deductions and can apply these percentages to the Hacienda data.

Recent research also has found that sensitivity to changes in the cost of giving rises with income. Thus, in this and the other simulations of reform options (below), we assume that Puerto Rican taxpayers whose AGI places them in the top tenth of those who itemize deductions have a price elasticity of giving of -1.2 while the remaining nine tenths of itemizers have a price elasticity of -0.80. In other words, our simulations assume that a 10 percent cut in the cost of giving would raise contributions by 12 percent among high income itemizers and by 8 percent among other itemizers. We also assume that the income sensitivity of giving – its income elasticity – is positive and that a 10 percent increase in the taxpayer’s after-tax income (through, for example, a deduction that does not apply to an additional dollar of contributions) would increase contributions by 7 percent. We use these estimates as representative findings from previous research, but note that there is a wide range of uncertainty attached to the size of these responses.

We then use the Hacienda data to simulate the amount of charitable contributions that taxpayers in each of these three categories would have made if there were no Puerto Rican charitable deduction. For example, applying the shares from the U.S. tax policy model, we estimate that approximately \$30 million in contributions were reported by taxpayers giving up to 4.5 percent of AGI. Under current law, these contributions would have been made in a regime in which the after-tax cost of giving was  $\$(1-1/3-t)$ . We use this information to estimate what would have been given by these taxpayers if the after tax cost of giving was \$1 instead of  $\$(1-1/3-t)$ , which

equals roughly \$25 million.<sup>18</sup> We then calculate the loss in tax revenue from the existing deduction as equal to the tax rate times the estimated \$30 million given under current tax law. A similar approach is used to estimate the amount that would have been given by taxpayers contributing between 4.5 percent and 15 percent of AGI. In the case of taxpayers giving more than 15 percent of AGI, who do not receive a marginal subsidy, based on illustrative calculations in Table 7 for taxpayers in this circumstance, we adjust the amount of giving under current law downward by a small factor to reflect the impact of the non-matching grant on giving.<sup>19</sup>

Applying these procedures, the simulated amount of giving in the absence of current Puerto Rican law is estimated to be approximately \$15.1 million greater with current law than with no deduction, and the amount of revenue loss is estimated to be approximately \$15.2 million.

### ***Option 2: Maintain Current Law While Lifting the Contribution Ceiling***

Several assumptions must be made in order to extrapolate to the entire Puerto Rico taxpayer population as represented by the Hacienda data

<sup>18</sup> More specifically, assume that  $C_1$  is the amount given under current law. We assume that this amount is related to the amount given in the absence of the deduction by the equation  $C_1 = C_0 + C_0 * \% \Delta P * E_D = C_0(1 + \% \Delta P * E_D)$ , where  $\% \Delta P$  is the percentage change in the after tax of giving under current law, and  $E_D$  is the price elasticity of giving. Since  $C_1$  is known, based on the Hacienda data, one can solve for  $C_0$  as:  $C_0 = C_1 / (1 + \% \Delta P * E_D)$ .

<sup>19</sup> In Table 3, for the taxpayer assumed to give 20 percent of AGI, the ratio of giving “before” and “after” current law is approximately 96 percent. We apply this percentage to all giving by taxpayers estimated to give more than 15 percent. The exact ratio would of course vary as a function of a number of variables including AGI, the percentage of AGI contributed, and after-tax income. However, trial calculations for a range of values produce estimates of the ratio of “pre-current law giving” to “current law giving” that are close to this number.

the illustrative calculations shown in Table 8. First, one needs to estimate the total amount of contributions at each AGI level that equal or exceed 15 percent of AGI. We do not have data from Hacienda that allow us to estimate these amounts directly for Puerto Rican taxpayers. We can, however, compute the share of charitable contributions that exceed 15 percent of AGI for U.S. taxpayers who claim charitable contributions as itemized deductions, and can apply these percentages to the Hacienda data. Then, as illustrated in Table 8, we assume that givers whose deductions are capped at 15 percent of AGI would respond to a marginal subsidy to give (equal to their tax rate) in the same manner as givers who are not capped.

Applying these factors to the Hacienda data yields the following results:

- Overall, we estimate that just under \$30 million of contributions are made by Puerto Rican taxpayers who are subject to the 15 percent cap.
- Lifting the cap would lower the after-tax price of additional giving for taxpayers currently subject to the cap from \$1 to  $\$(1-t)$ , which in turn leads to a simulated increase in contributions of roughly \$7.0 million for this group of taxpayers.
- The revenue cost of lifting the cap equals: (a) taxes foregone on existing capped contributions of \$30 million + \$7.0 million of new contributions minus (b) the lump sum subsidy that is taken back. The former amount is simulated to equal \$9.3 million. To estimate the aggregate magnitude of the lump-sum subsidy that is taken back, we note that, depending on the percentage of AGI that is contributed above the cap, roughly 43 percent of this \$9.3 million, or \$4 million, would be offset by the take-back of the lump sum subsidy, resulting in a revenue loss compared with current law of \$5.3 million.

Overall, the simulated results indicate that lifting the cap on charitable contributions would increase charitable contributions by approximately \$7 million, at a revenue cost of roughly \$5.3 million or an increase of about \$1.30 in contributions per dollar of additional revenue loss.

### ***Option 3: Adopt a Simplified 1 percent Contribution Floor While Maintaining the Current Contribution Ceiling***

In order to simulate the effect of adopting a 1 percent contribution floor, it is first necessary to estimate the total amount of contributions made at different AGI levels by taxpayers contributing: (1) less than 1 percent of AGI; (2) 1 percent to 4.5 percent of AGI; (3) 4.5 percent to 15 percent of AGI, and (4) more than 15 percent of AGI. To do so we compute the share of charitable contributions in each of these categories for U.S. taxpayers who claim charitable contributions as itemized deductions, and apply these percentages to the Hacienda data. Then, as illustrated in Table 9, we simulate the behavioral response and the revenue effects of switching from current law to allowing deductions up to 15 percent of AGI for contributions in excess of 1 percent of AGI for each of the above-listed category of taxpayer.

- Taxpayers contributing less 1 percent or less of AGI would not be able to deduct charitable contributions under Option 3. The simulated effect of the policy change for these taxpayers would be a reduction in contributions of roughly \$482 thousand and a revenue pick-up of approximately \$512 thousand.
- Taxpayers contributing between 1 percent and 4.5 percent of AGI would be able to deduct 100 percent of charitable deductions in excess of 1 percent of AGI, increasing the tax subsidy for each additional \$1 given from  $1/3t$  to  $t$ , and lowering the after-tax price of giving an extra dollar from  $\$(1-1/3t)$  to  $\$(1-t)$ . The simulated increase in contributions for this group of taxpayers is approximately

\$5.6 million at a simulated revenue cost of \$4.4 million.

- Lowering the floor does not change the after tax cost of giving an additional \$1 for taxpayers whose contributions range from 4.5 percent to 15 percent of AGI. However, a lower floor increases the amount of charitable contributions made by these taxpayers that could be deducted. The estimates in appendix Table A3-1, indicate that under current law \$13 million of contributions made by taxpayers giving between 4.5 percent and 15 percent of AGI are not claimed as a deduction on schedule J because these amounts fall below the 3 percent floor. If we assume that reducing the floor from 3 percent to 1 percent would render 2/3<sup>rd</sup> of these contributions deductible, then lowering the floor would allow taxpayers contributing between 4.5 percent and 15 percent to deduct an additional \$8.7 million at an estimated revenue cost of roughly \$2.2 million. There would be a modest amount of additional giving resulting from the increase in after-tax income experienced by taxpayers receiving a larger tax deduction which is estimated to be roughly \$162,000.
- Taxpayers contributing more than 15 percent of AGI would also receive an additional deduction equal to the difference between 3 percent and 1 percent of AGI. While the Hacienda data do provide information on the total amount of deductions that are disallowed because they exceed 15 percent of AGI, we do not know the amount of such contributions that are between 1 percent and 3 percent of AGI. If we assume that 10 percent of contributions for those who contribute more than 15 percent of AGI fall into this category, then lowering the floor would increase the deduction taken by taxpayers in this group by an estimated \$1.7 million, at an estimate revenue cost of roughly \$360,000.

Overall relative to the status quo, Option 3 is thus estimated to increase charitable giving by roughly \$5.3 million (5.6m+.16m-.48m) at a revenue cost of approximately \$6.4 million (4.4m+2.2m+.36m-.51m).

#### ***Option 4: Adopt a Simplified 1 percent Contribution Floor With a Contribution Ceiling of 50% of AGI***

The overall effect of this option would combine those estimated for Options 2 and 3. Basically, the effect of Option 4 on taxpayers who contribute less than 1 percent, between 1 percent and 4.5 percent, and between 4.5 percent and 15 percent to charity would be as described immediately above. The effect, relative to current law, on those contributing more than 15 percent would be to replace a non-matching lump sum subsidy equal to  $(.15-.03) \cdot \text{AGI}$  with a matching subsidy equal to  $(1-t)$  combined with an implicit tax equal to 1 percent of AGI. The simulated effects on giving and revenue of making such a change would be close, though not identical to those described above in the case of Option 2.

We estimate that raising the ceiling, combined with lowering the floor to 1 percent would have the simulated effect of increasing contributions by roughly \$7 million relative to current law at a simulated revenue cost of about \$4.2 million. When these amounts are added to the estimated changes in contributions and revenue simulated for Option 3, the estimated total change in giving and revenue of Option 4 relative to current law equals \$12.3 million and \$10.6 million, respectively.

#### ***Option 5: Adopt a U.S.-Style Charitable Deduction***

Lastly, we simulate the effects of replacing the current Puerto Rican charitable deduction with a U.S.-style charitable deduction with no contribution floor and a deduction ceiling of 50 percent of

AGI. As we note in Appendix 4, this option can be thought of as a variant of Option 4 without a 1 percent contribution floor. The estimated effect of Option 5 would be to increase contributions by \$13.4 million relative to current law at an estimated revenue cost of \$12.1 million.

among current contributors in a fiscally efficient manner.

### Summary and Policy Implications

The table below summarizes the results of the simulation results discussed above.

### Conclusions

- Relative to having no charitable deduction, the current Puerto Rican charitable deduction is simulated to increase giving by \$15 million (approximately 17 percent) at a revenue cost of approximately \$15 million.
- Lifting the current ceiling on contributions that can be deducted from 15 percent to 50 percent, which substitutes a matching subsidy for a non-matching subsidy, has the potential to stimulate additional giving

- The maximum impact on giving is achieved by combining policies that lower the contribution floor with lifting the contribution ceiling.
- Although the simulations are best viewed as orders of magnitude, they suggest that the effect of policy changes on the giving of those who currently claim the Puerto Rican charitable deduction would be modest.

An implication of the latter finding is that achieving significant increases in charitable giving will require increasing the number of Puerto Ricans who give to charity. To the extent that adopting a simpler 1 percent contribution floor, or moving to a U.S.-style deduction make it easier and more attractive for more Puerto Ricans than those who currently report itemized charitable deductions to give to charities, the effect of changing current Puerto Rican law would be larger than those shown in the simulations.

**Table 11: Summary Effects of Options**

Options	Charitable Giving \$ (Millions)	Revenue Cost \$ (Millions)
<b>No Deduction</b>	\$ 88.3	--
<b>Current Puerto Rican law</b>	\$103.4	-\$15.2
Change in Giving and Revenue Compared with No Deduction	+ \$15.1	- \$15.2
<b>Lift the Deduction Ceiling</b>	\$110.4	-\$20.5
Change in Giving and Revenue Compared with Current Law	+ \$7.0	- \$5.3
<b>Deduction for 100 percent of contributions &gt; 1 percent of AGI up to 15 percent of AGI</b>	\$108.7	-\$21.6
Change in Giving and Revenue Compared with Current Law	+ \$5.3	- \$6.4
<b>Deduction of 100 percent of contributions in excess of 1 percent of AGI</b>	\$115.8	-\$25.8
Change in Giving and Revenue Compared with Current Law	+ \$12.3	- \$10.6
<b>Adopt a U.S.-Style Charitable Contribution</b>	\$116.8	-\$27.3
Change in Giving and Revenue Compared with Current Law	+ \$13.4	- \$12.1

Note: The amount for charitable giving under current Puerto Rican Law (\$103.4) is based on data provided by Hacienda. All other amounts are estimated as discussed in the text.

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## Appendix 1: Review of the Effects of Tax Incentives on Charitable Contributions

The mechanism by which charitable tax deductions provide financial incentives for private giving is by lowering the after-tax or out-of-pocket cost of making donations. The price to the taxpayer of giving an additional \$1 to a charitable organization is \$1 minus the taxpayer's marginal tax rate. For example, for a taxpayer in the 35 percent marginal tax bracket the after tax cost of giving \$1 is just \$0.65. Similar to other commodities, the expectation is that lowering the price of giving results in an increase in the amount donated to charity.

The usual test of effectiveness is whether the tax deduction increases charitable contributions by more than the revenue loss. If, instead the revenue cost of the deduction is greater than the increase in charitable contributions, it would cost less to provide direct government grants to charitable organizations or, alternatively, more money for charities could be provided for the same budgetary cost.<sup>20</sup>

To answer the question of whether the contribution deduction provides more "bang for the buck" than direct government outlays, researchers generally estimate the price elasticity of giving, which equals the percentage reduction in giving for every one-percentage increase in the price of giving.<sup>21</sup> Roughly speaking, when the absolute value of the price elasticity of giving is one or higher, the tax incentive is considered

<sup>20</sup> Even if the favorable tax policy toward charitable contribution is not tax efficient under this measure, it could still be justified if it provides a socially superior pattern of funding than a direct grant (Cordes 2001).

<sup>21</sup> Theoretically, contributions are expected to decrease with increases in prices, which implies a negative relationship between the percentage change in giving and the percentage change in the price of giving – that is, the price elasticity of charitable giving is negative. The elasticity is generally expressed as the absolute value of the ratio of these percentage changes.

"treasury efficient", meaning that the tax incentive encourages people to increase their giving by more than the revenue loss to the Treasury.<sup>22</sup> There have been numerous attempts to estimate the price elasticity of giving, using administrative tax return data, survey responses, and more recently, laboratory experimental methods.<sup>23</sup>

### *Estimates of the Price Elasticity Using Tax Return Data and Survey Responses*

The technique to estimate the price elasticity of charitable contributions follows standard methods used to estimate the price elasticity of demand for other consumption goods and services. The starting point is to express individuals' demand for charitable contributions as a function of income, the price of giving, and other explanatory variables. The function is often expressed in logarithms, so that estimating a linear equation with traditional econometric techniques produces a direct estimate of the price elasticity (Clotfelter 1985). The typical equation is estimated as:

$$\ln(\text{Deductible Contributions}) = \ln A + a \ln(\text{Income}) + b \ln(\text{Price of giving}) + c Z$$

where  $A$  is a constant,  $a$  is the income elasticity of giving,  $b$  is the price elasticity of giving, and  $Z$  is a vector of other explanatory variables. For decades, researchers have sought to estimate whether  $b$  is (in absolute value) greater, equal, or less than one to test the efficiency of the charitable contributions deduction. The estimates require data on amounts given to charity, the income level, the (marginal) price of giving for the taxpayer, and other demographic information, such as age, marital status, education level, and ethnicity.

<sup>22</sup> See Feldstein (1980) and Vesterlund (2006).

<sup>23</sup> For previous comprehensive literature reviews on the efficacy of tax deductions see Clotfelter (1985), Steinberg (1990), Randolph (1995), Pelozo and Steel (2005), and Vesterlund (2006).

Data on charitable contributions come from two main sources. The first source is administrative records from individual tax filings. These data are an accurate measure of reported charitable contributions. In addition, individual tax return data usually come from large samples and sometimes consist of panel data that follow the same taxpayers over a number of years. The main downside of tax return data, however, is that they only include contributions for individuals who itemize their deductions, leaving out many low and middle income taxpayers who take the standard deduction and therefore do not report charitable contributions. This limitation means that the estimates of elasticity of contributions from administrative tax data are not representative of the entire taxpaying population. Another drawback from tax filings data is that taxpayers might over-report contributions to claim a larger tax benefit, which might lead to biased estimates of the sensitivity of charitable contributions to prices.<sup>24</sup>

The second source of data on charitable contributions is household surveys. These are usually nationally representative data sets that include questions about the giving behavior of households. Their main advantage is that they include all households – not just taxpayers who claim itemized deductions. Survey data, however, might be less accurate than administrative data and also might include biases. For example, questions on charity might generate responses that are socially desirable and produce an overestimate of contributions.<sup>25</sup> Non-itemizers, however, might under-report contributions because they have less incentive to keep good records to claim a tax

benefit and therefore are unaware of how much they contributed.

Three main conclusions emerge from efforts to estimate the price elasticity of giving from administrative data and surveys.

- The estimates of the price elasticity of giving consistently support the hypothesis that contributions are affected by the price of giving in the expected direction – individuals contribute more when the price of contributing goes down.
- Survey data, on average, produce higher elasticity estimates than tax data. Both the mean and median elasticity estimates from survey data are larger than the estimates from administrative data.<sup>26</sup>
- Data from both administrative records and survey data indicate that, on average, the price elasticity of contributions is above one, which suggests that the tax incentive for charitable contributions is treasury efficient. Note, however, that about 40 percent of the studies, especially more recent studies report price elasticity estimates either at or below one, suggesting that the data did not support early claims of a consensus finding.

The consensus that emerged from the early literature was that the price elasticity was greater than one (Clotfelter 1990).<sup>27</sup> Subsequent research raised doubts about high price elasticity estimates from the traditional methodology. The criticism initially arose from research based on observed trends in aggregate data in the 1980s. Contrary to what early econometric studies would have predicted, charitable giving remained stable during

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<sup>24</sup> Tax data are also subject to misreporting which also introduce biases. Using returns audited by IRS examiners, Joulfaian and Rider (2004) find that price-elasticity estimates from actual returns were substantially lower than estimations using IRS-corrected returns.

<sup>25</sup> See Peloza and Steel (2005) and Clotfelter (1985).

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<sup>26</sup> The difference between the mean elasticities calculated by survey data vs. administrative data is statistically significant (Peloza and Steel 2005).

<sup>27</sup> Clotfelter (1990) writes “typical estimates for the price elasticity are greater than one in absolute value”.

the 1980s despite dramatic increases in the price of giving from marginal tax rate cuts in 1981 and 1986. Research using panel data also found that increases in the price of giving from the Economic Recovery Act of 1981 and the Tax Reform Act of 1986 decreased charitable contributions of those affected by the increases by much less than predicted (Auten, Cilke and Randolph 1992).<sup>28</sup>

One explanation for the discrepancy between the observed and predicted responses to changes in the price of giving is that the use of cross-sectional data (one year of data) introduces a bias to the estimate of elasticity by failing to account for the dynamic nature of contributions. Individuals choose not only how much to contribute, but also when to contribute.<sup>29</sup> An individual who experiences an unusually high income in a particular year might end up in a higher marginal tax bracket and consequently face an unusually low price of giving. What the cross-section observes is that people with a low price contribute a lot, but this may reflect a shifting between years instead of a permanent effect of the price change. Any estimation that does not separate these transitory and permanent effects is likely to overestimate the permanent effects on contributions of policies that change the price of giving.

In response to the dynamic nature of income and charitable contributions – and thanks to advances in the quality and availability of data – researchers now generally use multiyear averages of income and prices to differentiate between temporary and permanent components. For example, the average of the observed incomes over different years is assumed to be the permanent com-

<sup>28</sup> They find that total deductible contributions *increased* steadily during the 1980s in spite of substantial *increases* in the price of giving – the opposite of what theory would suggest. They do note that the negative relationship between charitable contributions and the price of giving is present for the highest income tax payers, but that the change in contribution is much less than predicted by cross-section regression estimates.

<sup>29</sup> See Randolph (1995), and Bakija (2000).

ponent of income. Deviations of current income from its average are assumed to be transitory. In general, this line of research finds that the temporary effects are larger than the permanent effects. Estimates of the elasticity of transitory changes in the price of giving from this research are between 1.15 and 1.96 while those of the permanent effects are in the 0.29-0.51 range.<sup>30</sup>

According to this research, previous estimates of the elasticity combine temporary and permanent effects and over-estimate the permanent price elasticity of giving. Even more recent research, however, questions the methodology used to separate temporary from permanent shocks. The main argument the latest group of researchers uses is that not all of the difference between current and average income is transitory. For at least some households, the difference represents changes in permanent income (Auten, Sieg, and Clotfelter 2002). Instead, a model that explicitly accounts for the dynamic processes of price and income – which allows for persistent shocks – estimates a temporary elasticity of giving (0.40-0.61) equal to about half of the permanent elasticity (0.79-1.26). The larger response to persistent price effects means that changes in the tax code can have a long term effect on charitable contributions. More recently, Bakija and Heim (2008) introduced a model that not only differentiates between temporary and permanent components, but also accounts for expectations for future policy changes (the literature often assumes that changes in tax policy come as a surprise). Bakija and Heim (2008) estimate the permanent price elasticity of giving to be about 0.70.

Finally, researchers have pointed out that the estimates of price elasticity lump all types of charities into one category and thus assume that the price elasticity to give is constant across different categories (Feldstein 1975). This assumption does

<sup>30</sup> See Randolph (1995), Barret, Mcurk, and Steinberg (1997), and Bakija (2000).

not appear to be consistent with the evidence (Cordes 2001).

In sum, the jury is still out on estimates of the efficacy of tax incentives to giving. Early literature combined temporary and permanent effects, resulting in an upwardly biased estimate of the permanent price elasticity of giving. More recent research, which has attempted to separate temporary and permanent effects, has generally resulted in lower estimates of the price elasticity of giving ranging between 0.29 and 1.26.

### *Empirical Research on the Effect of State Charitable Tax Incentives*

A small but growing literature has also examined the effectiveness of state tax credits using tax administrative data. In the case of Arizona, contributions to eligible organizations seem to have increased notably after the credit was enacted. But smaller, non-eligible organizations might have experienced an offsetting decrease in contributions. Therefore, it is not clear whether *total* contributions to charity increased as a result of the Arizona tax credit (De Vita and Twombly 2004). In the case of North Carolina, the credit is available to all non-itemizers who contribute more than 2 percent of their AGI and is not restricted to a specific type of charity. The credit was initially limited to 2.75 percent of charitable contributions above 2 percent of AGI. This credit limit was increased to 7 percent in 1999. After the increase, claimed credits increased from \$3.3 million to \$12 million – an increase of about \$51 million in total contributions above 2 percent of AGI. These aggregate figures suggest a price elasticity of contributions well above one. However, increases in contributions of the same magnitude can be observed in other years in which the credit limit was fixed at 7 percent. For example, between 2002 and 2003, total contributions above 2 percent of AGI increased by \$85 million (North Carolina Department of Revenue 2004-2005). More research is needed to separate the effects of the increase in the limits in 1999 from other fac-

tors that might influence the growth of charitable contributions (Waller 2001).

### **Estimates of the Price Elasticity Using Experimental Methods**

Over the past 10 years, researchers have tried to estimate the price elasticity of giving using a novel experimental approach. Instead of using data from individual tax filings, this new research uses laboratory and field experimental methods to estimate the response of charitable contributions to price. In these experiments, the researcher randomly divides subject individuals into groups, provides each group with a different incentive to give to charity, and compares the behavior of the groups. Researchers then estimate the relationship between charitable contributions and prices faced by each group.

The initial evidence from this literature comes from laboratory experiments. The subjects include a limited number of individuals (in the tens or hundreds at best) in a controlled laboratory setting. Individuals are asked about a hypothetical situation in which they have to decide how much to donate to a charity given a limited budget and a price of giving. For example, Eckel and Grossman (2003) conducted an experiment on 181 college students in which participants were asked to choose how much to donate to an specific organization depending on their budget (between \$4 and \$10, provided by the researchers) and the price of giving a dollar to charity (\$0.50, \$0.75, \$0.80, and \$1.00).<sup>31</sup> Students were allowed to keep the difference between their budget and the amount contributed to charity. This experiment estimated that the price elasticity of giving was somewhere between 0.340 and 1.067.

An important question, however, is whether the results from laboratory research provide good

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<sup>31</sup> For an earlier experiment that compared the giving behavior of men and women, see Andreoni and Vesterlund (2001).

enough information to evaluate policy issues such as the tax treatment of charitable contributions. Although insightful, these results are obtained from small samples and are limited to subjects who might not be representative of the general population (usually college students). Furthermore, because these experiments deal with hypothetical situations, they might not say much about how individuals behave in real-life settings.

An experimental approach that relies on more “real world data” is the use of field experiments to evaluate the effects of prices on charitable giving.<sup>32</sup> These experiments apply the methodologies from lab research – random assignment of treatments to different groups – at a much larger scale on real-life fundraising efforts from specific charitable organizations. To introduce changes to the price of giving, these studies use external funds (from a research grant or from a donor who agrees to be part of the experiment). Thus far, the field experiments seem to validate the findings from lab experiments. Eckel and Grossman (2007), for example, find that the price elasticity of giving ranges between 0.112 and 1.045 (compared to 0.340-1.067 in the lab). Another study examines the giving behavior of about 50,000 individuals to a large unnamed organization and finds the elasticity to be about 0.225 (List and Karlan 2007).<sup>33</sup>

<sup>32</sup> For a review of field experiments, see Harrison and List (2004).

<sup>33</sup> The organization is reported to work on “social and policy issues relating particular civil liberties” (List and Karlan 2007).

More interestingly, this literature has demonstrated that how the incentives are structured affects the level of contributions.<sup>34</sup> This is relevant. For a given price of charitable contributions individuals respond differently to rebate subsidies (such as the tax deduction for charitable contributions) than they do to matching subsidies (under which the charitable organization receives a matching donation for every dollar donated by the individual). Eckel and Grossman (2007), for example, find matching subsidies are a much more effective way to attract contributions than rebate subsidies.<sup>35</sup> Research by List and Karlan (2007) finds that the existence of a match increases charitable contributions, but the level of the match (\$3 for every \$1 donated, or \$2 for every \$1) does not have a noticeable effect.

In brief, the experimental methods literature finds that charitable giving responds to prices in the expected direction – lower prices cause increases in the level of contributions. The price elasticity estimates that emerge from experiments are on the low end of the estimates from the previous empirical literature. For tax policy, perhaps the most important lesson to be drawn from these experiments is that the structure of the tax incentives matter and, in particular, a matching grant might be more effective than a tax rebate. The experimental literature, however, is in its early stages and more research is needed to validate these findings.

<sup>34</sup> These findings are consistent with the growing literature on behavioral economics. For example, recent research shows that positive framing (presenting the positive outcomes from a given choice) results in very different choices than negative framing (highlighting the negative consequences from a decision). See Agnew et al. (2008).

<sup>35</sup> Davis and Millner (2005) find equivalent differences on matches vs. rebates for consumer purchases.

## Appendix 2: A Matching Treasury Grant as an Alternative to a Tax Deduction

Both charitable deductions and charitable tax credits can be viewed as providing grants that match individual contributions, where the matching rate is determined either by the tax rate at which deductions are taken, or by the tax credit rate. As is illustrated in the table below, the financial incentive that is provided by a charitable tax deduction can alternatively be structured as an explicit matching grant whereby in place of reducing the individual’s tax liability the Treasury would make additional contributions to charities receiving donations from the taxpayer. For example, allowing a taxpayer to deduct \$1 in charitable contributions at a rate of 20 percent, effectively allows the taxpayer to give the charity \$1.00 at a net cost of \$.80. This is financially equivalent to an arrangement in which the Treasury would match an 80 cent contribution at a rate of 25 percent (20/80), thereby also providing the charity with \$1.00.

The most notable example of a fiscal incentive for charitable giving that is structured as an explicit matching grant is the case of the United Kingdom. Under the Gift Aid program, UK taxpayers who make contributions to registered charities report the amount of such contributions to the Treasury. These contributions are then treated as being made after deduction of income tax at a basic rate of 22 percent, and the charity can reclaim the basic income tax that the taxpayer is deemed to have paid on the gift. For example, assume that

a UK taxpayer makes a contribution of £780 to a charity registered with the UK Treasury. Under the Gift Aid scheme, the £780 gift is deemed to have been made after deduction of taxes levied at a basic 22 percent rate on income of £1,000. The taxpayer would report having made the gift to the charity, which would then file request with the Treasury to reclaim the taxes deemed to have been paid on the gift equal to £220 = £1,000 - £780. In effect, the taxpayer gift of £780 after tax would be matched at a rate of 28 percent, so it would be equivalent to a pretax gift of £1,000. Taxpayers with tax rates above the basic rate of 22 percent are able to claim an additional tax deduction equal to the difference between the basic rate and the higher tax rate. For example, if the taxpayer making the gift of £780 in the example faced a tax rate of 40 percent, the charity would first receive the explicit match of 28 percent resulting from applying the basic rate of 22 percent to the gift. The taxpayer would then be allowed to claim a tax deduction on the gift of £1,000 at a rate of 18 percent (equal to the difference between the higher tax rate of 40 percent and the basic tax rate of 22 percent on the gross amount of the gift).

A potential advantage of structuring fiscal incentives for giving as an explicit match instead of a deduction is that, as discussed in the literature survey, there is some empirical evidence that taxpayers are more responsive to an explicit match than to the implicit match that is provided by a tax deduction. The implication is that one can achieve a greater increase in charitable giving per dollar of revenue foregone by substituting an equivalent matching grant for a tax deduction.

**Table A2.1 Financial Equivalence of Tax Deductions and Matching Grants**

	Amount Contributed	Amount Received by Charity	Tax Saving	Out-of-Pocket Contribution	Implicit Match	Explicit Match	Matching Rate
<b>Tax Deduction at 20% Tax rate</b>	\$1.00	\$1.00	\$0.20	\$0.80	\$0.20	N.A.	25.0%
<b>Matching Grant = 25%</b>	\$0.80	\$1.00	N.A.	\$0.80	N.A.	\$0.20	25.0%

At the same time, the administration of a Treasury matching grant program would differ from that of a tax deduction in several potentially important ways. In order to provide the rebates, the Treasury would need to have and maintain a list of registered charities that would be eligible to receive rebates, and would need to disburse rebates directly to the charities. While the administrative expense of maintaining a list of eligible charities would be comparable to the current administrative expense of maintaining a list of charities that are eligible to receive tax-deductible contributions, issuing rebates to individual charities would be an added administrative step not presently required. Perhaps even more important, individual charities would need to take the added step of claiming the rebate from the Treasury which might involve additional administrative overhead on their part.

Compared with a tax deduction, it would be more complicated to combine a direct match modeled along the lines of the UK Gift Aid scheme with a contribution floor. In the case of a tax deduction, whether an amount given to charity exceeds the floor can be verified as part of filing the individual tax return. Under a Gift-Aid-like system, one would need to stipulate that individuals should report amounts in excess of the floor given to charity, and that charities, in turn, should request rebates only for amounts given above the floor. Verifying whether such reported amounts actually exceeded the floor, would, however, require additional verification, either on the part of the charity requesting the rebate, or the Treasury.

### Appendix 3: Imputing Estimates of the Components of Total Contributions and Deductions to Data from Departamento de Hacienda de Puerto Rico

#### *Breaking Down Contributions by Amount of the Charitable Deduction Claimed*

In order to simulate the effects of options for modifying the Puerto Rican charitable deduction, one needs to estimate the various components of total charitable contributions and charitable deductions. These separate components, which are not available in the Hacienda data, include:

1. the total amount of contributions made by taxpayers who choose to deduct one-third of all contributions;
2. the total amount of contributions made by taxpayers who choose to take 100 percent of contributions above 3 percent of AGI, along with a breakdown of contributions made by these taxpayers below the 3 percent floor, and contributions made above the 3 percent floor; and
3. the total amount of contributions that are disallowed by the 15 percent of AGI ceiling on deductions.

Algebraically, total contributions reported by Puerto Rican itemizers can be written as:

$$(1) C = C_1 + C_{21} + C_{22} + C_3$$

where:

$C_1$  = contributions made by taxpayers who take a deduction equal to one-third of total contributions;

$C_{21}$  = contributions above 3 percent of AGI made by taxpayers who take a deduction equal to 100 percent of contributions in excess of 3 percent of AGI;

$C_{22}$  = contributions *below 3 percent* of AGI made by taxpayers who take a deduction equal to 100 percent of contributions in *excess of 3 percent* of AGI;

$C_3$  = contributions in excess of 15 percent of AGI.

Contributions made by taxpayers who take a deduction equal to one-third of total contributions can, in turn, be broken down into the one-third of total contributions that are claimed as deductions, and the 2/3<sup>rd</sup>s of contributions that are not deducted:

$$(2) C = \frac{1}{3}C_1 + \frac{2}{3}C_1 + C_{21} + C_{22} + C_3$$

Rearranging the above expression, the terms in the parentheses in (3) below are the amount of contributions that are actually deducted. These are: (a) one-third of contributions deducted by those either subject to the one-third deduction limit, or who choose to deduct one-third of all contributions instead of 100 percent of contributions in excess of 3 percent of AGI; and (b) 100 percent of contributions in excess of 3 percent of AGI. The terms that are in brackets are the amount of contributions that are not deducted: (a) 2/3<sup>rd</sup>s of contributions made by those who deduct 1/3 of contributions, (b) contributions less than 3 percent of AGI made by those who deduct 100 percent of contributions in excess of 3 percent of AGI, and (c) contributions in excess of the 15 percent AGI ceiling.

$$(3) C = \left( \frac{1}{3}C_1 + C_{21} \right) + \left[ \frac{2}{3}C_1 + C_{22} + C_3 \right]$$

Estimates of these magnitudes can be obtained from the Hacienda data through the following procedure.

*Step 1:* In terms of equation (3) above, the information compiled by Hacienda provide data for each AGI group  $j$  on: total contributions,  $C_j$ , which (e.g. for the highest AGI class) equals \$18.07 million; and on potential deductions

(before disallowance of deductions before the ceiling),

(4)  $D = \left( \frac{1}{3} C_{1j} + C_{21j} + C_{3j} \right)$ , which equals \$12.02 million.

*Step 2:* The difference between these amounts, or \$6.05 million, equals the total amount of contributions not deducted before application of the deduction ceiling:

$$(5) \quad Z_j = C_j - \left( \frac{1}{3} C_{1j} + C_{21j} + C_{3j} \right) = \$18.07 - \$12.02 \\ = \$6.05 = \left[ \frac{2}{3} C_{1j} + C_{22j} \right]$$

Although the Hacienda data do not provide information on the individual terms on brackets in the equation above, we use data from the Urban-Brookings Tax Policy Center (TPC) Microsimulation Model, combined with data provided by Hacienda to estimate the components of charitable contributions as follows.

The TPC model is based on a sample of individual taxpayers from the Public Use File (PUF) produced by the IRS Statistics of Income Division (Rohaly, Carasso, and Saleem, 2005). We used simulations from the TPC of the breakdown of charitable contributions by size of contributions (as a share of AGI) for percentile income groupings equivalent to the percentile groupings in the Hacienda data for Puerto Rico individual income tax returns.

*Step 3:* We use results from TPC model simulations to estimate the ratio:

$$(6) \quad \frac{\frac{2}{3} C_1}{C - \left[ \frac{1}{3} C_1 + C_{21} + C_3 \right]} = S_1$$

(for ease of notation, we ignore subscripts for the AGI class):

*Step 4:* We then multiply the value of  $Z$  that is calculated in the Hacienda data – e.g. \$6.05 million – by the ratio  $S_1$ . This calculation provides us with an estimate of the  $2/3^{\text{rds}}$  of contributions that

are not taken because of the one-third contribution limit. For notational purposes, we define the amount that is estimated as  $\frac{2}{3} \bar{C}_1$

*Step 5:* Subtract the amount  $\frac{2}{3} \bar{C}_1$  from the amount  $Z$  to estimate the amount of contributions less than 3 percent of AGI that are not claimed as deductions by those who claim 100 percent of deductions in excess of 3 percent of AGI. This is an estimate of  $C_{22}$ , which we denote as  $\bar{C}_{22}$ .

*Step 6:* Note that the total amount of contributions that can be claimed under the one-third limit equals one half of the estimate of  $\frac{2}{3} \bar{C}_1$ . We denote this estimated amount as  $\frac{1}{3} \bar{C}_1$ .

*Step 7:* Now observe that the total amount of deductions taken on line 7 of Puerto Rico schedule J is either 1/3 of all deductions, or 100 percent of deductions in excess of 3 percent of AGI. Since we know the total amount of deductions reported on line 7, we can estimate this amount from the relationship  $\bar{C}_{21} = \left[ D - \frac{1}{3} \bar{C}_1 \right]$

Based on these calculations, we are able to:

(1) Decompose deductions reported on Puerto Rico line 7 into its two components:

$$D = \frac{1}{3} \bar{C}_1 + \bar{C}_{21}$$

(2) Decompose Puerto Rico contributions into its components  $C = \bar{C}_1 + \bar{C}_{21} + \bar{C}_{22} + C_3$

The results of applying this procedure to the data provided by the Puerto Rican Hacienda are shown in Table A3-1.

### ***Breaking Down Total Contributions by Percent of AGI Contributed***

It is also useful to have a breakdown of total contributions by the contributions as a percent of AGI. To construct such a breakdown, we use TPC simulations to estimate the breakdown of contributions among U.S. taxpayers claiming charitable deductions into the following groups: (1)

those reporting contributions that are less than 1 percent of AGI, (2) those reporting contributions between 1 percent and 3 percent of AGI, (3) those reporting contributions between 3 percent and 4.5 percent of AGI, (4) those reporting contributions between 4.5 percent and 15 percent of AGI, and

(5) those reporting contributions greater than 15 percent of AGI. We then apply these percentages to the data provided by Hacienda for total contributions by AGI class. The results of these imputations are reported in Table A3-2.

**Table A3-1: Total Puerto Rican Charitable Deductions and Imputed Components**

Level of adjusted gross income	Other contribution to charities (schedule J)	Deduction for other contributions (schedule J, line7)	Deductions for other Contributions Not Reported on Sched J Line 7	1/3*C1:			C2: Deductions Not on Line 7 Below 3% of AGI (Estimated)	Deductions reported on Line 7 Subject to the 1/3rd Limit (Estimated)	C21: Deductions Reported on Line 7 100% in Excess of 3% of AGI (Estimated)	C3: Deductions Disallowed by 15% AGI Deduction Ceiling (Calculated)
				2/3*C1: Deductions not on Line 7 Subject to the 1/3rd Limit (Estimated)	Deductions for other Contributions Not Reported on Sched J Line 7	Deductions reported on Line 7 Subject to the 1/3rd Limit (Estimated)				
-	338,764	330,835	7,929	1,961	5968	981	329854	309,815		
2,001	104,887	99,316	5,571	1,378	4193	689	98627	78,864		
3,001	244,815	232,283	12,532	12,345	187	6172	226111	184,639		
4,001	238,175	224,763	13,412	3,317	10095	1659	223104	165,530		
5,001	232,901	217,309	15,592	3,856	11736	1928	215381	148,978		
6,001	788,682	736,300	52,382	23,318	29064	11659	724641	531,280		
8,001	715,174	635,420	79,754	26,548	53206	13274	622146	345,322		
10,001	1,238,387	1,086,936	151,451	58,030	93421	29015	1057921	541,942		
12,501	1,317,872	1,120,012	197,860	58,812	139048	29406	1090606	462,211		
15,001	3,231,545	2,605,785	625,760	223,371	402389	111686	2494099	799,445		
20,001	3,932,133	3,040,130	892,003	344,512	547491	172256	2867874	681,382		
25,001	4,339,804	3,226,698	1,113,106	469,555	643551	234778	2991920	525,106		
30,001	3,631,411	2,563,380	1,068,031	481,120	586911	240560	2322820	249,328		
33,334	9,449,978	7,308,184	2,141,794	1,007,238	1134556	503619	6804565	2,757,845		
40,001	10,142,287	6,965,857	3,176,430	1,580,237	1596193	790119	6175738	579,139		
50,001	9,170,487	6,212,818	2,957,669	1,576,360	1381309	788180	5424638	690,958		
60,001	12,532,730	8,609,647	3,923,083	2,192,555	1730528	1096277	7513370	1,605,762		
75,001	7,892,808	5,157,732	2,735,076	1,682,303	1052773	841151	4316581	323,503		
90,001	4,685,192	3,345,774	1,339,418	800,753	538665	400376	2945398	1,019,479		
100,001	11,137,512	7,382,297	3,755,215	2,371,724	1383491	1185862	6196435	1,299,422		
150,001 and over	18,068,941	12,019,305	6,049,636	3,511,469	2538167	1755734	10263571	4,003,323		
<b>Total</b>	<b>\$103,434,485</b>	<b>\$73,120,781</b>	<b>\$30,313,704</b>	<b>\$16,430,762</b>	<b>\$13,882,942</b>	<b>\$8,215,381</b>	<b>\$64,905,400</b>	<b>\$17,303,273</b>		

**Table A3-2: Imputed Contributions by Percentage of AGI Contributed**

Level of adjusted gross income	Number of tax payers	Adjusted gross income	Other contribution to charities (schedule J)	Less Than 1%	1 to 3%	3% to 4.5%	4.5% to 15%	More Than 15%	less than 1%	1 to 3%	3% to 4.5%	4.5% to 15%	More than 15%
-	166	139,206	338,764	0.00	0.02	0.04	0.09	0.86	609	5,328	12,889	29,249	290,688
2,001	58	148,475	104,887	0.00	0.02	0.04	0.09	0.86	189	1,650	3,991	9,056	90,002
3,001	94	330,989	244,815	0.02	0.00	0.00	0.00	0.98	4,527	-	-	-	240,288
4,001	100	450,292	238,175	0.00	0.00	0.00	1.00	0.00	-	-	-	238,175	-
5,001	99	544,520	232,901	0.00	0.16	0.00	0.84	0.00	0	38,302	-	194,599	-
6,001	254	1,775,438	788,682	0.00	0.02	0.04	0.09	0.86	1,419	12,404	30,006	68,096	676,757
8,001	286	2,583,509	715,174	0.01	0.04	0.06	0.34	0.56	7,493	25,930	40,412	243,620	397,720
10,001	469	5,330,608	1,238,387	0.00	0.04	0.06	0.30	0.60	2,934	46,791	72,568	376,026	740,069
12,501	510	7,006,871	1,317,872	0.00	0.04	0.05	0.35	0.56	6,238	50,377	62,463	463,191	735,601
15,001	1,249	21,975,282	3,231,545	0.01	0.06	0.06	0.42	0.45	25,303	201,451	193,520	1,363,104	1,448,167
20,001	1,441	32,431,577	3,932,133	0.02	0.09	0.07	0.48	0.35	64,090	340,000	276,999	1,881,772	1,369,273
25,001	1,538	42,439,800	4,339,804	0.02	0.11	0.07	0.49	0.31	90,602	462,941	312,503	2,139,848	1,333,910
30,001	1,291	40,930,213	3,631,411	0.04	0.13	0.10	0.53	0.21	130,864	471,477	353,479	1,924,957	750,635
33,334	2,276	83,157,466	9,449,978	0.04	0.13	0.11	0.52	0.20	335,103	1,256,466	1,002,912	4,959,814	1,895,683
40,001	2,869	128,346,561	10,142,287	0.05	0.16	0.11	0.53	0.16	458,211	1,578,679	1,077,172	5,360,237	1,667,988
50,001	2,245	123,172,819	9,170,487	0.05	0.17	0.13	0.51	0.14	433,793	1,584,794	1,189,342	4,637,582	1,324,975
60,001	2,576	172,307,136	12,532,730	0.05	0.19	0.14	0.48	0.14	647,866	2,423,589	1,708,137	6,025,319	1,727,819
75,001	1,595	130,500,420	7,892,808	0.05	0.23	0.14	0.40	0.18	405,620	1,780,068	1,116,276	3,141,495	1,449,349
90,001	695	65,839,613	4,685,192	0.05	0.21	0.11	0.39	0.23	252,869	1,004,441	493,179	1,842,743	1,091,960
100,001	1,677	201,740,193	11,137,512	0.06	0.22	0.12	0.36	0.24	658,890	2,414,136	1,340,524	4,044,751	2,679,210
150,001 and over	1,413	632,802,993	18,068,941	0.04	0.11	0.07	0.25	0.53	735,439	2,016,740	1,211,463	4,542,534	9,562,764
<b>Total</b>	<b>22,901</b>	<b>\$1,693,953,981</b>	<b>\$103,434,485</b>						<b>\$4,262,061</b>	<b>\$15,715,564</b>	<b>\$10,497,834</b>	<b>\$43,486,169</b>	<b>\$29,472,857</b>

Source: Data on number of taxpayers, Adjusted Gross Income, and Other Contributions to Charities are taken from tax return data provided by Departamento de Hacienda. Data on contributions distributed by contributions as a percentage of AGI are taken from the Urban Institute Brookings Tax Simulation Model. The breakdown of total contributions by percentage of AGI contributed is estimated by applying the percentages from the Tax Policy Model to the Hacienda data.

## Appendix 4: Simulating the Effects of the Current Puerto Rican Deduction on Giving

This section describes the simulations that were undertaken of the effects of policy options 1-5 in the report.

### *Option 1: Current Puerto Rican Law vs. No Deduction*

As a benchmark for evaluating the effect of changes in policy, we begin by examining the effect of the current Puerto Rican charitable deduction on charitable giving. We start with the data on contributions provided by Hacienda and simulate what charitable giving would have been if there were no charitable deduction.

Relative to no deduction, current Puerto Rican law has the following effect on potential givers:

1. As shown in the report, under current law, a contributor giving up to 4.5 percent of AGI would find it advantageous to deduct one-third of all contributions. The effect on the financial incentive to give would be a reduction in the after-tax cost of giving an additional \$1 from \$1 with no deduction to  $\$(1-1/3 \cdot t)$  with the charitable contribution.
2. Taxpayers contributing between 4.5 percent and 15 percent of AGI would elect to deduct 100 percent of contributions in excess of 3 percent of AGI. Relative to a world with no deduction, the effect on the financial incentive to give of taxpayers in this circumstance would be equivalent to granting such taxpayers a tax subsidy for each additional \$1 given of  $\$(1-t)$  with a portion of the subsidy "taken back" by a lump-sum tax of  $\$.03AGI$ .
3. Taxpayers contributing more than 15 percent of AGI would receive a tax deduction on the difference between the amount contributed up to 15 percent of AGI and 3 percent of AGI,

but would not receive a reduction in the cost of contributing an additional \$1. For taxpayers in these circumstances, current law is financially equivalent to giving them a lump-sum subsidy equal to  $\$t \cdot (.15 - .03) \cdot AGI$ .

The basic approach for simulating the impact of current law relative to no deduction is to project what the contributions of taxpayers in each of the above categories would have given had the charitable deduction not been in place. For example, for taxpayers deducting one-third of all contributions the contribution levels reported in the Hacienda data represent giving among taxpayers for whom the after-tax price of giving is  $p = \$(1-1/3 \cdot t)$ . In the case of, say, a taxpayer in the 33 percent tax bracket,  $p = \$(1-.11) = .89$ . Relative to the no deduction case, this represents a percentage reduction in the price of giving of 11 percent. We then use the formula below to estimate the relationship between contributions observed in the Hacienda data and giving that would have taken place in the absence of the deduction:

$$(1) C_H = C_0 + \% \Delta P \cdot E_D \cdot C_0 = C_0 (1 + \% \Delta P \cdot E_D)$$

where:

$C_H$  is the contribution level under current law observed in the Hacienda data

$\% \Delta P$  is the percentage change in the after-tax cost of giving under current law

$E_D$  is the price elasticity of charitable giving

$C_0$  is the amount contributed in the absence of the current law charitable deduction

Since the value of  $C_H$  can be estimated from the Hacienda data (see below), one can solve for  $C_0$  based on the percentage change in the after-tax cost of giving, and the price elasticity of giving:

$$(2) C_0 = \frac{C_H}{(1 + \% \Delta P \cdot E_D)}$$

For example, as discussed in Appendix 1, we estimate that among taxpayers with AGI of \$150,000 and over, approximately \$4 million of total contributions (Table A3-2) were made by taxpayers for whom the contribution amount was less than 4.5 percent. As noted above, for taxpayers in this circumstance  $\% \Delta P = .11$ . If the price elasticity of giving is assumed to be -1.2, then we estimate  $C_0$  to be:

$$(3) \$3.53m = \frac{\$4.0m}{(1 + .11 \cdot -1.2)} = \frac{\$4.0m}{(1 + .132)}$$

In the case of taxpayers contributing between 4.5 percent and 15 percent of AGI, the percentage reduction in the tax price of giving resulting from current is financially equivalent to: (a) a percentage reduction in the after-tax cost of giving equal to  $t$  percent, where  $t$  = the tax rate combined with (b) a lump sum tax equal to  $t \cdot .03 \cdot \text{AGI}$ . Algebraically:

$$(4) C_H = C_0 + \% \Delta P \cdot E_D \cdot C_0 - \% \Delta Y_d \cdot E_Y \cdot C_0 \\ = C_0 (1 + \% \Delta P \cdot E_D - \% \Delta Y_d \cdot E_Y)$$

where:  $\% \Delta Y_d$  = the percentage in after-tax income represented by the lump-sum tax

$E_Y$  = the income elasticity of demand

Rearranging terms yields:

$$(5) C_0 = \frac{C_H}{(1 + \% \Delta P \cdot E_D - \% \Delta Y_d \cdot E_Y)}$$

Because the percentage change in after-tax income attributable to the lump-sum tax is rather small, the third term in the denominator of (5) is approximately 0 so that for estimation purposes

$$(6) C_0 = \frac{C_H}{(1 + \% \Delta P \cdot E_D - \% \Delta Y_d \cdot E_Y)} \approx \frac{C_H}{(1 + \% \Delta P \cdot E_D)}$$

Thus, among taxpayers with AGI of \$150,000 and over, we estimate that \$4.5 million in contributions were made in amounts between 4.5 percent and 15 percent of AGI. Substituting this value into (6), for values of  $\% \Delta P$  and  $E_D$  of .33 and -1.2, respectively, one has:

$$(7) \$3.2m = \frac{\$4.5m}{(1 + .396)}$$

Lastly, in the case of taxpayers contributing more than 15 percent, the effect of current law is to provide a lump-sum subsidy equal to  $t \cdot (.15 \cdot .03) \cdot \text{AGI}$ . The estimated relationship between contributions reported under current law, and contributions with no deduction is given by:

$$(8) C_H = C_0 + \% \Delta Y_d \cdot E_Y \cdot C_0 = C_0 (1 + \% \Delta Y_d \cdot E_Y)$$

Re-arranging terms yields:

$$(9) C_0 = \frac{C_H}{(1 + \% \Delta Y_d \cdot E_Y)}$$

Where  $\% \Delta Y_d$  in this case equals the ratio of  $[t \cdot (.15 \cdot .03) \cdot \text{AGI}]$  to the taxpayer's taxable income. Estimating this ratio requires data at the individual taxpayer level which are not available. However, it can be shown that for a wide range of values of AGI, and after-tax income that the factor:  $\frac{1}{(1 + \% \Delta Y_d \cdot E_Y)}$  in equation (6) is clustered around a value of approximately .97. As a rough adjustment for the impact of the lump sum subsidy on contributions we assume that in the absence of current law, contributions of those giving more than 15 percent of AGI would be approximately 95 percent lower.

Thus, for taxpayers in the \$100,000 or greater AGI class whose contributions are estimated to exceed 15 percent of AGI (\$9.5 million), we apply this factor to arrive at an estimate of  $C_0$  for taxpayers in these circumstances of roughly \$9.0 million.

Overall, applying the above procedures to all AGI classes in the Hacienda data, we estimate that total contributions would equal approximately \$88.1 million compared with 103.4, as shown in the following table.

To estimate the revenue cost of the current deduction we proceed as follows. First, we take the amount of increased contributions in each AGI class that we estimate are attributable to current

**Table A4-1: Simulated Effect of Current Puerto Rican Charitable Deduction on Charitable Contributions**

Tax Payer Group Contributions as a percent of AGI	Estimated Contributions No Deduction	Estimated Contributions Current Law	Change in Contributions	Estimated Revenue Cost
Less than 4.5 percent	\$25.1	\$30.4	+ \$5.3	NA
4.5 percent to 15 percent	\$35.2	\$43.5	+ \$8.3	NA
More than 15 percent	\$28.0	\$29.5	+ \$1.5	NA
Total	\$88.3	\$103.4	+\$15.1	-\$15.2

law and multiply these amounts by the Puerto Rican marginal tax rate assigned to that AGI class. Second, we calculate the ratio of deductions allowed on Schedule J to contributions reported on Schedule J and then take this ratio and multiply it by the amount of contributions in each AGI class that we estimate would have been made in the absence of current law. This is an estimate of deductions taken for contributions that “would have been made without the deduction.” We multiply these amounts by the marginal tax rate assigned to the relevant AGI class to estimate the revenue cost of allowing existing contributions to be deducted. The total revenue loss estimate in this manner equals \$15.2 million

### ***Option 2: Lift the Current Deduction Ceiling***

Lifting the deduction ceiling is predicted to affect the giving behavior of taxpayers whose charitable deduction is capped at 15 percent of AGI. For these taxpayers, lifting the deduction ceiling is financially equivalent to substituting a matching grant of  $\$(1-t)$  combined with a lump-sum tax equal to  $t \cdot .03 \cdot \text{AGI}$  for a lump-sum (non-matching) subsidy to give equal to  $t \cdot (.15 - .03) \cdot \text{AGI}$ . We simulate the impact of these changes in financial incentives in several steps.

First, we estimate the impact of the matching tax subsidy on giving, ignoring the effect of the other incentives. The predicted percentage change in the amount given caused by the change in the after-tax price of giving experienced by a taxpayer whose contributions are capped equals:

$$(10) \% \Delta C = \% \Delta P \cdot E_p, \text{ where}$$

$\% \Delta C$  = the percentage change in contributions due to the change in the after-tax price of giving

$\% \Delta P$  = the percentage change in the after-tax price of giving

$E_p$  = the price elasticity of charitable giving.

The change in giving then equals

$$(11) \Delta C = \% \Delta C \cdot C, \text{ where}$$

$C$  is the amount contributed before the price change.

For example, among taxpayers with an AGI of \$100,000 or more, we estimate that \$9.5 million is contributed under current law by taxpayers who are capped at 15 percent of AGI. The percentage change in the after-tax of giving resulting from lifting the cap for taxpayers in this AGI class equals .33. At an assumed price elasticity of giving of 1.2, we estimate that the change in contributions for taxpayers with an AGI of \$100,000 or more who are subject to the 15 percent deduction cap is:

$$(12) \Delta C = \% \Delta P \cdot E_p \cdot C = -.33 \cdot -1.2 \cdot 9.5 = \$3.76\text{m}$$

Applying the formulas above to the amount of capped contributions in all AGI classes yields an estimate of total increased contributions of \$7.0 million resulting from lifting the deduction cap.

The revenue cost of lifting the cap equals: (a) taxes foregone on existing capped contributions of \$30 million + taxes foregone on \$7.0 million of new contributions minus (b) the lump sum subsidy that is taken back. The former amounts are estimated by multiplying the marginal tax rate that is assigned to each AGI group by the amount of estimated current law contributions that are subject to the cap plus the estimated increase in contributions. This estimate equals a total of \$9.3 million.

To estimate the aggregate magnitude of the lump-sum subsidy that is taken back when the cap is lifted, one ideally needs to have more disaggregated data than are presently available from the Hacienda data. Based on the illustrative example presented above in Table 4, however, it is possible to derive a plausible estimate of the fraction of the revenue loss estimated above (\$9.3 million) that would be offset by the removal of the lump-sum subsidy. We estimate this fraction to equal .43, or \$4 million, resulting in a revenue loss of \$5.3 million – \$9.3 million minus \$4 million – from lifting the deduction ceiling compared with current law.

### ***Option 3: Adopt a Simplified Deduction Floor of 1 percent of AGI***

Replacing current Puerto Rican law with a charitable deduction under which taxpayers were allowed to deduct 100 percent of contributions greater than 1 percent of AGI up to a ceiling of 15 percent of AGI would have the following effects:

- Compared with current law, taxpayers contributing 1 percent or less of AGI would not be able to deduct charitable contributions under Option 3.
- Taxpayers contributing between 1 percent and 4.5 percent of AGI would be able to deduct 100 percent of charitable deductions in excess of 1 percent of AGI, increasing the tax subsidy for each additional \$1 given from

$1/3t$  to  $t$ , and lowering the after-tax price of giving an extra dollar from  $\$(1-1/3t)$  to  $\$(1-t)$ .

- Taxpayers contributing more than 4.5 percent of AGI would receive an additional deduction equal to the difference between the current law deduction floor of 3 percent and the proposed floor of 1 percent.
- Taxpayers contributing more than 15 percent of AGI would receive an additional deduction equal to the difference between 3 percent and 1 percent of AGI.

Taxpayers contributing 1 percent or less of AGI would no longer be able to deduct their contributions, resulting in a revenue gain, and would experience an increase the after-tax cost of giving from  $\$(1-1/3t)$  to  $\$1$ . To estimate the revenue gain from disallowing deductions for contributions at or below 1 percent of AGI, we multiply the marginal tax rate assigned to each AGI group in the Hacienda data by the estimated amount of contributions made by taxpayers who contribute 1 percent or less of AGI by one-third of the estimated contributions made by these taxpayers. This estimated amount equals \$512,000. We estimate the reduction in contribution by these taxpayers using a procedure similar to outlined above in equations (10) to (12), resulting in an estimated drop in contributions by taxpayers in this circumstance of approximately \$482,000.

As shown above in Table A3-2, some \$26.2 million in contributions are made by taxpayers who give between 1 percent and 4.5 percent of AGI. If these taxpayers were instead subject to a 1 percent floor, the after-tax cost of giving would decline from  $\$(1-1/3t)$  to  $\$(1-t)$ . Using the approach outlined in equations (10) to (12), we estimate that this decline in the after-cost of giving would increase the amount contributed by this group of taxpayers by approximately \$5.6 million.

To estimate the revenue cost of the more generous deduction for this group, we note that taxpayers contributing between 1 percent and 4.5 percent of AGI would be allowed to deduct 100 percent of contributions under a 1 percent contribution floor, whereas under current law, they would deduct only one-third of such deductions. The estimated revenue cost of lowering the contribution floor for this group would thus equal the applicable marginal tax rate multiplied by 2/3rds of contributions made by taxpayers whose contributions equaled between 1 percent and 4.5 percent of AGI. This amount equals \$4.4 million.

In the case of taxpayers whose contributions range from 4.5 percent to 15 percent of AGI, lowering the floor does not change the after tax cost of giving an additional \$1. However, a lower floor would increase the amount of charitable contributions made by these taxpayers that could be deducted. The estimates in appendix Table A3-1, indicate that under current law \$13 million of contributions that are reported by taxpayers giving between 4.5 percent and 15 percent of AGI that are not claimed as a deduction on schedule J because the amounts fall below the 3 percent floor. If we assume that reducing the floor from 3 percent to 1 percent would render 2/3<sup>rd</sup> of these contributions deductible, then lowering the floor would allow taxpayers contributing between 4.5 percent and 15 percent to deduct an additional \$8.7 million at an estimated revenue cost of roughly \$2.2 million. There would be a modest amount of additional giving resulting from the increase in after-tax income experienced by taxpayers receiving a larger tax deduction which is estimated to be roughly \$162,000.

The Hacienda data show that some \$17 million of contributions are not deducted because they exceed 15 percent of AGI. We do not, however, know the amount of such contributions that are between 1 percent and 3 percent of AGI, and hence, would become deductible if the contribution floor were lowered to 1 percent of AGI. If

we assume that 10 percent of contributions that are currently disallowed because they exceed 15 percent of AGI would become deductible under a 1 percent floor, then lowering the floor would increase the deduction taken by taxpayers in this group by an estimated \$1.7 million, at an estimate revenue cost of roughly \$360,000.

Overall relative to current law, Option 3 is thus estimated to increase charitable giving by roughly \$5.3 million (5.6m+.16m-.48m) at a revenue cost of approximately \$6.4 million (4.4m+ 2.2m+.36m -.51m).

#### ***Option 4: Lower the Contribution Floor to 1 percent and Lift the Deduction Ceiling***

The overall effect of Option 4 would be a combination of the effects estimated for Options 2 and 3. For taxpayers who contribute less than 1 percent of AGI, between 1 percent and 4.5 percent of AGI, and between 4.5 percent and 15 percent of AGI to charity, the effect on giving and revenue of adopting Option 4 would be as described immediately above. For those contributing more than 15 percent of AGI, the effect of lifting the cap, compared with current law, would be to replace a lump sum subsidy equal to  $$(.15-.03) \cdot \text{AGI}$  with a matching subsidy of  $t$  for each additional \$1 given combined with an implicit tax equal to  $(t-.01) \cdot \text{AGI}$ . The simulated effects on giving and revenue of making such a change would be close if not identical to those estimated above in the case of Option 2.

The main difference is that lifting the deduction ceiling under Option 2 is equivalent to replacing a lump-sum subsidy equal to  $t \cdot (.15-.03) \cdot \text{AGI}$  with a matching grant plus a lump sum tax of  $.03 \cdot \text{AGI}$ . By comparison, Option 4, which involves lifting the deduction ceiling when the ceiling is 15 percent and the floor is 1 percent, is equivalent to replacing a lump-sum subsidy equal to  $t \cdot (.15-.01) \cdot \text{AGI}$  with a matching grant plus a lump sum tax of  $.01 \cdot \text{AGI}$ .

Thus, compared with lifting the deduction ceiling under Option 2, lifting the ceiling under Option 4 would have the same effect on the after-tax price of giving for someone subject to the ceiling; but the revenue effects would differ somewhat. Like Option 2, lifting the contribution ceiling with a contribution floor of 1 percent would thus increase estimated contributions among those at the deduction cap by \$7.0 million. The revenue cost of lifting the cap before applying an offset for removing the lump-sum subsidy would equal \$9.3 million. In the case of Option 4, however, it can be shown that the fraction of the revenue loss that would be offset by elimination of the lump sum subsidy would be on the order of .55, or \$5.1 million, so that the estimated revenue cost of lifting the ceiling when the contribution floor is 1 percent after applying the offset would equal \$4.2 million.

#### ***Option 5: Adopt a U.S. Style Deduction***

Lastly we consider the effect of adopting a U.S. style deduction which would allow 100 percent of all contributions to be deducted (subject to a contribution ceiling of 50 percent of AGI). Relative to

current law, such a change would be equivalent to Option 4 without a 1 percent contribution floor. Thus the simulated effects of this change would be equivalent to those estimated for Option 4, adjusted for the absence of the 1 percent floor.

Unlike Option 4 (and Option 3) which disallow a deduction for contributions below 1 percent of AGI, Option 5 would provide a full deduction instead of a partial  $1/3$  deduction for taxpayers with contributions less than 1 percent of AGI. The effect of such a change would be to lower the after-tax cost of giving for these taxpayers from  $\$(1-1/3-t)$  to  $\$(1-t)$ . Using procedures similar to those described in connection with equations (10) and (12), we estimate that this change would increase charitable giving by taxpayers giving less than 1 percent of AGI by \$595,000 at a revenue cost of \$929,000.

Thus, the estimated effect of Option 5 would be to increase contributions by roughly \$13.4 million ( $5.6m+.16m+7.0m+.6m$ ). The revenue cost of the change would be approximately \$12.1 million ( $4.4m+ 2.2m+.36m+.4.2m+.92m$ ).



