

The Market for Charitable Giving

John A. List

Through good and bad economic times, charitable gifts have continued to roll in largely unabated over the past half century. In a typical year, total charitable gifts of money now exceed 2 percent of gross domestic product. Moreover, charitable giving has nearly doubled in real terms since 1990, and the number of nonprofit organizations registered with the IRS grew by nearly 60 percent from 1995 to 2005.

The market for charitable giving primarily revolves around three major players: Donors provide the resources to charities. Charitable organizations develop strategies to attract resources and allocate those resources. Finally, the government decides (among other issues) on the tax treatment of individual contributions, the level of government grants to various charities, and what public goods to provide itself.

This study provides a perspective on the economic interplay of these three actors. I begin by exploring data on aggregate giving patterns: How much is given annually? Who gives? Who are the recipients of these gifts? Focusing on gifts of money in the United States, I find that since 1968, growth in charitable gifts of money roughly *doubled* the growth of the Standard & Poor's 500. One interesting pattern that emerges concerns the cyclical nature of giving: while individual gifts are responsive to the economic environment, they are much more sensitive to economic upturns than to downturns. This relationship has led to charitable gifts significantly outpacing the S&P 500 over the last decade. I then turn to an exploration of facts that have emerged from the early years of research in this

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area. For economic theorists, one feature of this line of research is that it has lent insights into the types of models that predict giving behavior. In this sense, work in this area can inform modeling of systematic deviations from a purely self-interested framework. In addition, this work has proven informative about models of persuasion and more generally permits measurement of key parameters to help construct economic theories of giving.

For policymakers, a recurring issue concerns the benefits and costs of proposed policies. For example, would changes in the tax treatment of charitable contributions lead to more or less giving? In this spirit, some empirical evidence suggests that governmental proposals to limit the tax deductibility of individual charitable contributions would fall entirely on charities themselves: taxpayers would cut their gifts by roughly the increase in their tax bill, reducing charities' receipts by an equivalent amount.¹ This finding suggests an interesting conclusion—on the margin, taxpayers are spending \$1 for every \$1 given to charity. Another question of import to policymakers revolves around how government grants to charitable organizations influence the charitable sector. Although we might reasonably expect charities that receive public funds to provide higher levels of service, there is empirical evidence suggesting that publically funded charities are no more likely to provide better service.

For those who work in charitable institutions, research on what motivates people to give and how to design mechanisms to generate the greatest level of gifts has been instructive. For example, securing funds privately in the form of seed money and matching grants before the public drive begins turns out to be an effective way of increasing donations. Furthermore, long-run fund-raising success depends on incentives used to attract first-time donors.

A Primer on the Charitable Sector

It is useful to start by considering the charitable sector as a whole. What are the legal requirements for being a charitable organization in the United States? How do firms in this sector compare to for-profits or governmental agencies? Answers to questions like these provide a basis for understanding the scope of charitable activities.

The legal requirements for a charitable organization are outlined by sections 501(c)(3) and 508(c) and 509(a) of the Internal Revenue Code. Legal qualifications require that a nonprofit organization be “organized and operated exclusively for one or more exempt purposes.” This law requires that a nonprofit be set up as a corporation, trust, or unincorporated association and directed by documentation that permanently limits its purpose to the one or more tax-exempt purposes

¹ For example, Feldstein and Clothfelter (1976).

that is responsible for its status as a nonprofit organization. The law also prohibits nonprofits from engaging in a number of activities, including but not limited to: participating in political campaigns at the local, state, and federal levels; substantial lobbying; benefiting a private shareholder or individual with its earnings; pursuing private interests; participating in activities unrelated to its tax exempt purposes; and acting or intending to act illegally.

Nonprofits that meet such requirements include, but are not limited to: churches; schools; organizations that provide medical and/or hospital care; organizations whose financial support comes substantially from publicly supported organizations, governmental units, and/or from the general public; organizations whose support is not more than one-third gross investment income and more than one-third from contributions, memberships, and other activities directed towards their tax-exempt purposes; and organizations supporting other legally declared public charities. A nonprofit that derives its status from being publicly supported must continue to demonstrate public support for its existence to maintain its legal status as a charitable organization.

There aren't many venues that allow us to compare behavior by for-profits, nonprofits that solicit charitable giving, and government-run organizations. One excellent example is Duggan (2000), who compares the responsiveness by organizations from each of these three groups to a government incentive program for the poor. In particular he looks at how California hospitals reacted to a change in state Medicaid funding. California created the Disproportionate Share Program in 1990 to encourage hospitals to offer treatment to the poor. The program offered hospitals substantial payment if hospitals treated above a certain threshold of low-income patients. He finds that for-profits and nonprofits responded to the incentives by giving additional treatment to the least costly indigent patients, while government-run organizations were not nearly as responsive to the incentives. He also finds that the extra revenues generated by for-profits and nonprofits from the program were invested in financial assets rather than used to improve care for the poor.

There are at least two ways to interpret Duggan's results. One is to applaud the nonprofit hospitals for being more responsive to incentives than the government-run hospitals. A second interpretation would point out that nonprofits could be more adept at rent-seeking behavior than government-run groups. One would expect such responsiveness to carry over to provision of the public good. In that vein, Karpoff (2001) finds that government-run Arctic explorations were slower to adopt newer technologies and suffered from poor leadership structures compared to their private counterparts. In addition, Dewenter and Malatesta (2001) compare performance of firms before and after privatization. They find that in the run-up to privatization the government-run firm begins to improve performance. Clearly, this first-order question of the relative efficiency of for-profits, nonprofits, and government-run organizations remains open, and further research needs to be conducted.

Aggregate Giving Patterns: Who, What, and Where?

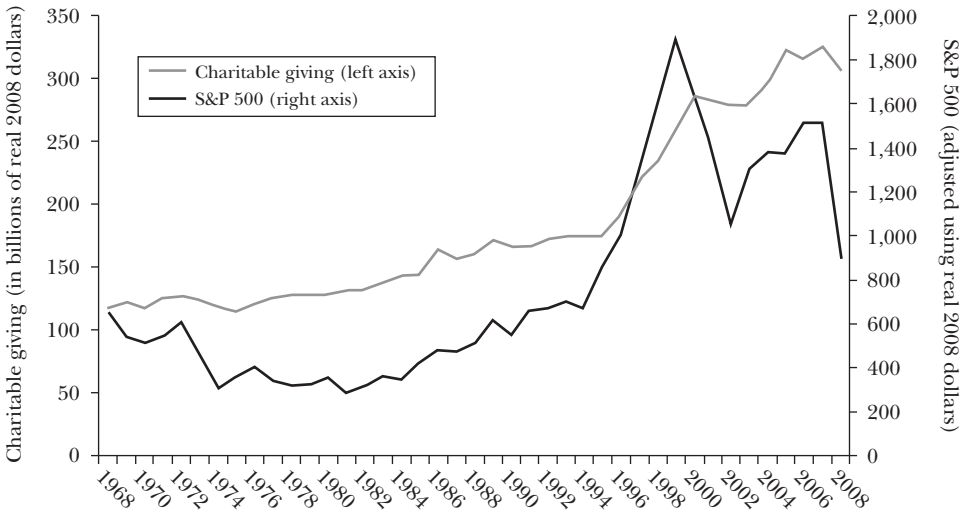
People typically help worthy causes in two ways: giving money and volunteering time. Volunteerism in the United States is an important and growing component of charity. However, in this article, I will focus on gifts of money by U.S. citizens to charitable causes. Although I focus on gifts of money from individuals, it should be noted that charitable donations arise from four central entities: individuals, bequests, corporations, and charitable foundations. Each provides considerable resources, but the most significant is by far individual givers, who comprise more than 75 percent of total gifts given annually. The second biggest source, foundations, is typically responsible for roughly 12 percent of all donations; bequests and corporations make up the remainder, roughly 6.5 percent each. Given changing demographics, bequests seem likely to be a growing share of charitable giving in the future.

Figure 1 provides a time series of individual charitable giving from 1968–2008, along with the Standard & Poor's 500 stock index for comparison. The data on charitable giving is largely based on IRS Form 990 (a tax exemption form that nonprofits complete), as compiled by the Giving USA Foundation, which publishes and analyzes trends in charitable giving by source of contribution and by type of recipient. The foundation also econometrically adjusts its estimates based on information from other research institutions. Recipients are categorized as religious organizations, educational institutions, human services charities, health charities, public and social organizations, and arts and culture. Figure 1 shows dramatic growth in the charitable sector, as giving of money reached a 2007 high of \$314 billion (in real 2008 dollars), or more than 2 percent of GDP. Charitable giving as a percentage of GDP has climbed steadily since the mid-1990s, from roughly 1.5 percent to more than 2 percent today. Charitable giving has increased significantly more in percentage terms than the broad S&P stock index over this time period, with the gap significantly widening in the past several years.

To what extent do changes in the stock market co-vary with changes in charitable giving? A simple regression of the *percentage change* in charitable giving regressed on the previous year's *percentage change* in the Standard & Poor's 500 indicates that nearly 40 percent of the variance in percentage changes in total charitable giving is accounted for by variation in the previous year's percentage change in the S&P 500. Thus, over this time period, a simple regression model that includes only a constant term and one year of lagged percentage change in the S&P 500 explains 40 percent of the variation in the changes in charitable giving for the current year. In this calculation, a 1 percent increase in last year's S&P 500 is correlated with a 0.19 percent increase in charitable giving this year.

The simple regression hides an interesting fact about the relationship between charity and the economy, however. To highlight this relationship, Figure 2 shows the relationship between percentage changes in charitable giving and lagged percentage changes in the Standard and Poor's 500. Comparing the right-hand line, a best-fit for

Figure 1

Real Charitable Giving and the S&P 500 Index over Time

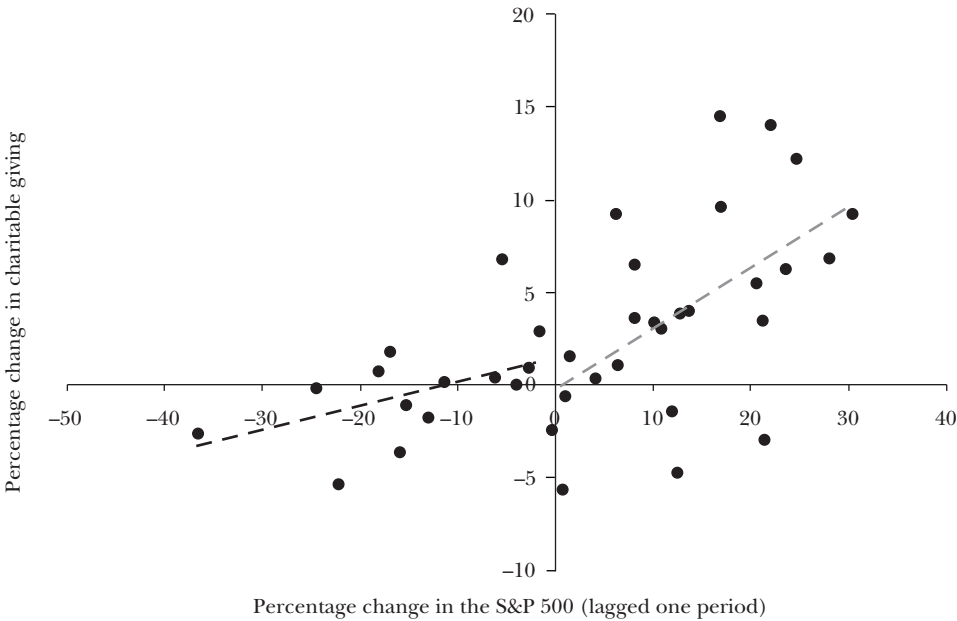
Sources: Data on trends in charitable giving is from Giving USA Foundation. Sharon Bond provided me with a timeline on uses and sources of charitable giving as of 2009. Historical S&P 500 prices are from Yahoo! Finance. Nominal values are adjusted to 2008 U.S. dollars using Consumer Price Index data from the IMF.

Notes: The Giving USA Foundation publishes and analyzes trends in charitable giving by source of contribution and by type of recipient. Recipients are categorized as religious organizations, educational institutions, human services charities, health charities, public and social organizations, and arts and culture. Giving USA's annual estimates are based largely on IRS Form 990 (a tax exemption form that nonprofits complete), but the foundation also econometrically adjusts its estimates based on information from other research institutions.

data where changes in the S&P 500 are positive, to the left-hand line, which is fit to data where the changes in the S&P 500 are negative, it appears that charitable giving is sticky downwards. That is, individual givers are significantly more responsive to macroeconomic improvements than to macroeconomic declines as defined by the S&P 500. The relationship of charitable giving to several other aggregates—GDP, consumption expenditures, and unemployment—shows a similar relationship.

Why might we expect an asymmetric relationship between the economy and charitable giving? If during economic downturns, charitable giving becomes more valuable to recipients—that is, dollars are more valuable to a cause—then an income effect that decreases donations to charity may be significantly countered by a substitution effect towards the more valuable commodity of charitable giving. Given the observed relationship in Figure 2, this might suggest that with positive economic shocks, the difference in size between income and substitution effects is much greater than for cases of negative economic shocks. Why the net effect is not

Figure 2
Changes in the S&P 500 versus Changes in Charitable Giving from 1970 to 2009 with Trendlines



Source: Data on charitable giving is from Giving USA. S&P 500 data is from Yahoo! Finance. See Figure 1 for details.

identical for economic upturns and downturns might require certain nonlinearity assumptions or a deeper behavioral explanation.

One alternative is that charitable gifts are sticky downwards because of social pressure to maintain past giving levels. Generally, solicitors for annual gifts seek to improve on past gifts from donors, or at least not step backwards. One fundraising handbook urges readers to remember that “Secure the gift, renew the gift, upgrade the gift’ is the watchword of the annual fund” (Rosso, 2003). Serving to reinforce this notion is the fact that many large gifts are contracted years in advance, making it difficult to change the trajectory when times become difficult. Certainly, these explanations need not operate independently, as they (and others) may interact to create the observed relationship from the data (List and Pysakhovich, 2011).

Composition of Dollar Gifts: Who Receives?

Table 1 provides a glimpse of where the dollars of individual givers were directed in 2006, a fairly typical giving year. Interestingly, 61 percent of contributions by U.S. households were to religious causes. Yet, giving remains broad-based,

Table 1
Breakdown of U.S. Household Giving in
2006 by Recipient Status

Recipient status	Percentage given
Religious purposes	61%
Help people in need	10%
Combined purposes	10%
Health care/Medical research	5%
Educational purposes	5%
Youth and family services	2%
Environmental organizations	2%
Arts	2%
Neighborhoods	1%
International peace organizations	1%
Other	2%

Source: Giving USA Foundation and the Center on Philanthropy at Indiana University (2010).

as nearly 50 percent of households give to more than one cause annually. These remaining gifts are commonly directed to the poor, health care/medical research, educational purposes, and combined purposes.

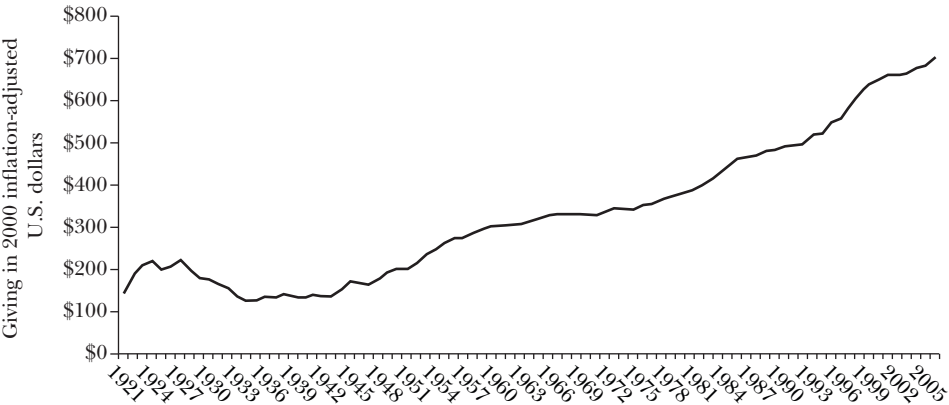
Along with the growth in charitable giving, the number of nonprofit organizations has also expanded. The number of tax-exempt, nonprofit organizations registered with the IRS grew by nearly 60 percent from 1995 to 2005. In 1995, nearly 181,000 charitable, religious, and nonprofit organizations registered with the IRS; by 2005 the number grew to more than 286,000 such organizations. To my knowledge, the entry and exit patterns of charitable organizations have not been studied, and represent a potentially fertile area of research.

Because religious giving dominates the charitable giving landscape, I dig a level deeper into religious giving. To do so, I obtained data from *empty tomb, inc.*, a Christian service and research organization that provides churches with both a financial discipleship strategy and information about church giving patterns. I obtained data from 11 denominations over the period 1921–2007, as summarized in Figure 3A–C.²

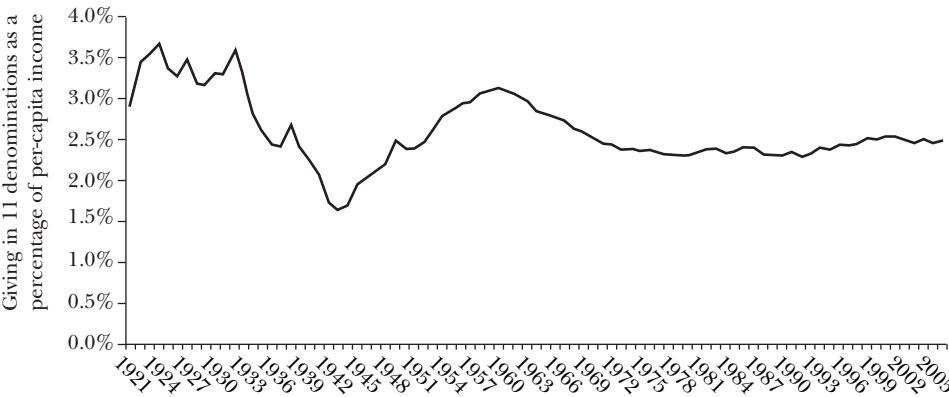
²The empty tomb organization obtains a large portion of their data on membership from the Yearbook of American and Canadian Churches, supplementing these figures with data they themselves obtain directly from individual denomination offices. Definitions of membership and related terms vary widely across churches, but tend to be remarkably consistent within one church over time. In addition, the numbers reported represent “the actual dollar records included in reports submitted by pastors and lay congregational leaders to their own denominational offices” (empty tomb, p. 3). Data used from the empty tomb report includes Appendix Tables B1 and data received on April 16, 2010 through correspondence with the authors. More information about empty tomb, inc. can be found at (<http://www.emptytomb.org/about.html>).

Figure 3
Trends in Giving at Denominations

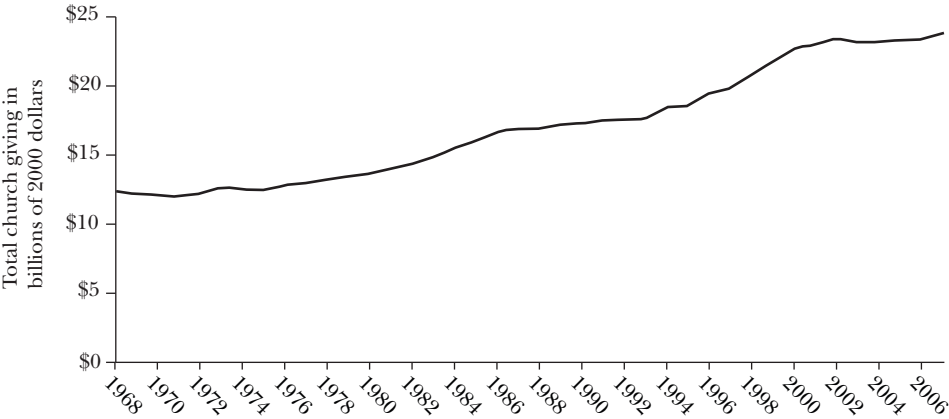
A: Per-Member Giving for 11 Denominations, 1921–2007



B: Giving for 11 Denominations as a Percentage of U.S. Per-Capita Income, 1921–2007



C: Total Giving to All Recorded Denominations from 1968–2007



Source: Data from empty tomb, inc., *The State of Church Giving through 2007*, including Appendix B-1 and data received on April 16th, 2010 through correspondence with the authors.

Figure 3A shows that total member giving from 1921–2007 rose from roughly \$150 per member in 1921 to \$700 per member in 2007. Yet this marked increase in giving over time hides the fact that giving as a percentage of income is actually lower in 2007 than in 1921, as seen in Figure 3B. This graph also reveals that since the late 1960s, giving has been roughly constant as a fraction of income. Figure 3C shows that since 1968, total giving to the available denominations has increased from roughly \$12 billion to almost \$25 billion in 2007 (in 2000 dollars). Combined, the three graphs of Figure 3 inform us that, even in the face of declining church membership, giving to religion is on the rise, although giving as a percentage of income is stagnant.

Interestingly, when performing a regression exercise in the spirit of Figure 2 but using data on religious giving, I find that percentage changes in giving to religion are nearly constant when plotted against percentage changes in the Standard and Poor's 500. This finding suggests that giving to religious causes is largely unaffected by economic times. Yet, percentage changes in giving to other major areas—such as education—follow a sharp trend around percentage changes in the S&P 500. More specifically, variation in changes in the S&P 500 can explain approximately 51 percent of the variance in changes in educational giving but only 10 percent of the variance in religious giving.

Such data patterns suggest that religious gifts may be motivated by something different than motivations underlying gifts to other charitable organizations. More research is necessary, but motives such as social insurance and ensuring a peaceful afterlife might be two factors influencing giving to religious causes. For instance, it might be the case that people give to churches so that in times of need they can more readily receive church services or help from fellow churchgoers.

Composition of Donors: Who Gives?

Who gives to charity? Just about everyone: Sullivan (2002) estimates that 89 percent of Americans give to at least one charitable cause per year. When one looks more carefully at the data, however, this conclusion might be overstated. Table 2 provides summary statistics describing average charitable contributions of donors with various characteristics. In these data, we see that, on average, households gave about \$2,120 to charity in 2004. These data also suggest that two-thirds gave donations to charity in 2004.

In general, Table 2 shows that a household is more likely to give as its income increases. For example, when household income is above \$130,000, more than 90 percent of households give, whereas fewer than 40 percent of households earning \$20,000 or less give. Likewise, those with a higher education give at significantly higher rates than high school dropouts.

Intriguingly, giving as a percentage of household income is U-shaped. Households with incomes between \$20,000 and 40,000 give 5 percent of their income to charity. As incomes grow to about \$75,000, gifts fall to 2 percent of income, but then rise slightly to 3 percent. Though I have limited data on the donations of the

Table 2
Decomposition of Giving by Various Demographics

	<i>% households who donated</i>	<i>Average amount given by those who gave</i>	<i>Donation as % of household income</i>	<i>Average amount given by those who gave to religion</i>	<i>Average amount given by those who gave to secular causes</i>	<i>% households who donated to more than one cause</i>
All households	67%	2120	4%	873	548	49%
Total family income (\$)						
under 20,000	37%	747	12%	194	83	21%
20,001–40,000	58%	1,408	5%	560	259	40%
40,001–60,000	71%	1,651	3%	854	321	51%
60,001–75,000	79%	1,980	3%	1,060	505	57%
75,001–100,000	83%	2,053	2%	1,029	679	64%
100,001–130,000	91%	2,775	3%	1,601	915	73%
> 130,000	93%	4,644	2%	2,104	2,196	82%
Age of head of household						
Up to 25 yrs	38%	591	3%	95	128	20%
26–35 yrs	58%	1,398	2%	472	335	36%
36–45 yrs	63%	1,666	2%	594	464	47%
46–60 yrs	73%	2,578	4%	1,120	775	55%
61–75 yrs	77%	2,401	5%	1,240	619	61%
76+ yrs	75%	2,601	12%	1,391	577	61%
Race of head of household						
African-American	48%	1,650	4%	601	195	29%
Hispanic	50%	956	2%	350	137	26%
Other race	71%	2,242	4%	962	641	54%
Highest education of head of household						
0–8 yrs of schooling	46%	1,806	6%	743	88	27%
9–11 yrs of schooling	43%	1,192	5%	383	133	26%
12 yrs of schooling	60%	1,465	5%	630	255	39%
Some college	73%	1,979	3%	949	500	52%
College	83%	2,622	3%	1,121	1,055	68%
More than college	84%	3,764	6%	1,736	1,426	75%
Gender of household head						
Male	70%	2,422	4%	1,059	642	52%
Female	59%	1,253	6%	423	319	43%

Source: The Center on Philanthropy Panel Study (COPPS) Module of the Panel Study of Income Dynamics (PSID).

Notes: Data restricted to respondents for whom donations were bigger than \$0. Also, the data drops households without a positive income and excludes family units not asked the giving, volunteering, and attendance questions. Data was weighted using family weights to avoid overrepresentation of low-income families.

wealthiest members of the population, the Center on Philanthropy (2007b) has reported that among those with net worth between \$1 million to \$5 million, the average donation to charity in 2005 was more than 5 percent of average income.

What might be causing this U-pattern of giving? The usual explanation is that poor households tend to give to religious causes. This is indeed part of the story: as shown by the data in Table 2, religious giving represents a substantial fraction of giving for low-income households but a lesser fraction for wealthy households. Another proposed explanation in the literature is that younger people with low current incomes expect their wages to rise in the future, which makes the current charitable gifts more affordable. But this does not seem to be the case if one considers the data on age of giver in the middle panel of Table 2.

Another explanation for a U-shape in charitable giving is that a large fraction of the high-percentage donors reporting low incomes are wealthy. When one looks more closely at giving by donors in the bottom income class, it is largely driven by the 5 percent of households that contribute one-tenth or more of their after-tax income. Many of these high-commitment households are high-asset, retired members of the population who are in effect making their contributions out of accumulated wealth rather than out of current income (James and Sharpe, 2007). Taken together, these data patterns suggest that although fewer poor households give money to charity compared to other income classes, the ones that do contribute give much more as a percentage of income than any other income class.

Table 2 also reveals that even though high-income givers are giving less of their household income, the total amount is substantial: households with incomes exceeding \$130,000 give more than \$4,500 annually to charity. This begs the question: how much do the mega-wealthy give? Havens and Schervish (1999) show that households in the top 4 percent of the income distribution provided over 40 percent of the total charitable contributions in 1995. Furthermore, they report that the households in the highest 1 percent of the income distribution (annual income above \$250,000 in 1994) provided 33 percent of the total charitable dollars in 1995. Auten, Clotfelter, and Schmalbeck (2000) note that the wealthiest 1.4 percent of decedents are responsible for 86 percent of charitable giving from bequests. A more recent figure comes from a Bank of America "High Net Worth Philanthropy" study of giving conducted by the Center for Philanthropy at Indiana University in 2005, which found that the wealthiest 2.3 percent of givers gave 56.5 percent of total donations.

Interactions of the Three Major Players

Three main players populate the ecosystem of charitable giving: governments, charities, and individuals. Much of the economics literature on philanthropy focuses on the interactions between these groups. This section provides a perspective on what we have learned from this literature and where the important questions lie ahead. The interested reader should also see Andreoni (2006a).

The Government and Charitable Organizations

The tasks that government chooses to take on will affect the tasks that charitable organizations choose to embrace (Roberts, 1984). For example, before the 1930s, charitable institutions focused on providing assistance to the poor, but as the government took on that role, charitable institutions handed off the task. As Cloward and Epstein (1965) write, "Once publicly supported income maintenance programs came into existence, following the depression, private agencies began to refer economically deprived clients [to public agencies], thus conserving their resources for other services."

A more subtle manner in which government affects the charitable sector is through grants. Many charitable organizations receive a significant fraction of their revenues from government grants. (Charitable organizations sometimes also generate revenues by providing a good or service. For example, nonprofit hospitals raise funds but also charge patients for the care that is provided.) From 1988 to 2005, government grants to charitable organizations have more than doubled in real terms, rising from just under \$60 million to almost \$120 million in 2006 dollars. A growing component of government grants has been in the area of health, education, and social services: these components represented 32 percent of federal spending in 1965 and 66 percent in 2004.

The question of how such grants influence charitable organizations is an important area of research. For instance, if government grants crowd out private giving, then the grants might not be as productive as they seem *prima facie*.

The interplay of government grants and fund-raising is also of importance to economists interested in determining the motives for giving. If people give money to a charitable organization purely for the purpose of funding the provision of a desired good or service, then under typical assumptions, government grants should crowd out at least some portion of giving. But, if people instead give because of the "warm glow" associated with the act of giving, then classic crowding out is likely to be much less significant.

However, measuring the effect of government grants on fund-raising is difficult. Ideally, a scholar would like to examine the extent of a charitable organization's fund-raising over time with random variation in its amount of government grants, but such data have yet to surface. The main approach to analyzing crowding out is to use regression analysis to simulate such an ideal experiment.³

In a clever set of papers, Andreoni and Payne (2003, 2009) shed insights in this area by making use of naturally occurring data and an instrumental variables

³ Another approach is to use laboratory experiments. Eckel, Groosman, and Johnston (2005) run a set of experiments in which subjects are given a certain amount of money to allocate to themselves or to a charitable organization. In one treatment, they are told that a certain amount of money is going to be given to the charity by the experimenters. In the second treatment, subjects are told that the same amount of money will be given to the charity by the experimenters, but also that that amount of money has been "taxed" from the amount of money that they can allocate. In this experiment, they find nearly complete crowd-out from the "taxation."

approach. Andreoni and Payne (2003, 2009) explore the simple question of how government grants affect a charitable organization's expenses on fund-raising. They use a panel data set on two types of charitable organizations: i) arts organizations, which tend to receive a small amount of revenue from government grants and a large amount from fund-raising; and ii) social services organizations, which receive a large amount of revenue from government grants and a small amount from fund-raising. Then they take this approach one step further: First, they increase the number and types of organizations they examine by including charitable organizations involved in "human service, children and family related service, poverty, housing and food related, and other types of social service." Second, they explore the extent to which a government grant decreases funds raised because of classic crowd-out (donors feel they already paid for this service through their taxes) and the extent to which decreases in funds raised are a result of lower expenditure on fund-raising (fund-raising crowd-out). They find that a \$1,000 increase in government grants leads to a significant drop in charitable contributions. More specifically, they report that charitable contributions decrease by \$772 as a result of reduced fund-raising expenditures, but that the grant actually brings in an additional \$45 because of classic "crowding in." As discussed later, crowding in can be the result of donors viewing the government grant as a positive signal of quality. In terms of why overall charitable contributions decline, Andreoni and Payne (2003) report that for the arts organizations, a \$1,000 government grant decreases fund-raising expenditures by \$265 (or 50 percent), and for social services organizations, a \$1,000 government grant decreases fund-raising expenditures by \$54 (or 35 percent).

While this literature is only beginning to scratch the surface of one aspect of the interplay between governments and charitable organizations, it provides a sense of the richness of unresolved issues within this area. Social scientists have much to do in exploring a body of empirical evidence on the interplay of government spending and charitable organizations—from industrial organizational issues of entry and exit of charities to classic public finance work.

The Government and the Individual

Soon after the 1913 Revenue Act, which introduced the income tax, the Revenue Act of 1917 included a stipulation that charitable gifts are tax deductible. These two Revenue Acts have shaped the relationship between tax policy and individual giving.

The Revenue Acts provide two avenues for the government to alter the effective "price" of giving. First, a taxpayer in the 28 percent marginal tax bracket who itemizes deductions faces a "price" of 72 cents for a \$1 donation, because charitable gifts of money are tax deductible. If the government decides to raise the taxpayer's rate to, say 35 percent, then the taxpayer faces a lower price of giving, now 65 cents for a \$1 donation, which *might* through a substitution effect stimulate more gifts (of course, there is a countervailing income effect because the individual now has less

income *ceteris paribus*). Second, the government can change the rate of tax deductibility of donations directly—perhaps by limiting the tax deductibility. For example, the Obama budget proposal released early in 2010 planned to lower the itemized deductions rate to 28 percent among the high-income households who otherwise face a 35 percent marginal tax rate.⁴

Research into the effects of the tax system has explored how such price changes might affect charitable giving. A first consideration is whether price changes have been sufficient over time to identify price effects, and they clearly have. For example, the top marginal income tax rate reached a high of 90 percent during World War II, but tax reforms of 1981 (Economic Recovery Tax Act) and 1986 (Tax Reform Act of 1986) reduced the top marginal rates significantly for wealthy families. The top marginal rate was 28 percent in 1988–1990. Tax changes in the Bush I and Clinton administrations raised tax rates, while the Bush II tax cut brought the top rate back down to 33 percent.

Complementing the variation in marginal tax rate changes are changes in the charitable deduction caps. For example, a donor can deduct gifts to public charities only up to 50 percent of taxable income, and gifts to private foundations only up to 30 percent of taxable income. For researchers, changes in tax deductibility represent another source of variation that can affect giving.

When policymakers consider giving tax breaks for charitable gifts, they are at least implicitly considering the issue of whether the marginal cost (foregone tax revenues) is less than the marginal benefit (increased dollars of giving). In a simple world, the answer will be yes *if* the price elasticity of giving is less than negative one—that is, if giving is price elastic. As Andreoni (2006a) notes, this has led the literature to assess the price elasticity against the “gold standard” of -1 .⁵

An early empirical example is due to Taussig (1967), who explored data from nearly 50,000 individual tax returns in the 1962 Treasury tax file. While the work was rudimentary, it set the stage for the seminal work of Feldstein and Clotfelter (1976), who relied on Federal Reserve Treasury data that included both itemizers and non-itemizers to compute a price elasticity of giving. Between the different datasets and with various empirical specifications, the authors found price elasticities between -1.1 and -1.5 .

Feldstein and Taylor (1976) conducted a similar study using the 1970 Treasury tax file. Their sample consisted of 15,000 itemizers, and they accounted for state tax laws in computing the tax price of giving. In addition, they made a serious attempt to account for gifts of appreciated assets. Across several empirical specifications, they found price elasticities consonant with those reported in Feldstein and

⁴ The Center on Philanthropy (2009) has calculated the one-year impact of the proposed changes. Their estimates suggest that this will result in a \$1.63 billion reduction in charitable giving in the first year alone.

⁵ For useful discussions of the identification issues facing such work, see Triest (1998), Clotfelter and Steuerle (1981), Clotfelter (1985, 1990), Steinberg (1990), and Andreoni (2006b).

Clotfelter (1976). Overall, both of these early seminal studies found price elasticities that suggested giving was price elastic.

Such empirical results soon became the industry norm—for example, Feenberg (1987) uses cross-sectional data and employs differences in state tax rates as the source of variation in the price of giving. He finds a price elasticity estimate of -1.63 . Clotfelter (1985) presents an excellent early literature review on this topic and points out that the consensus price elasticity is around -1.3 .⁶

In the 1990s, economists began using richer datasets and the magnitude of the price elasticity became murkier. In particular, the literature started to rely on comprehensive IRS tax data and utilized the tax reform of the 1980s to achieve random variation in tax rates. The significant advantage of using IRS data over a long time span is that it allows estimates of short-run and long-run price elasticities. Prior studies had focused on a cross section of individuals observed at one point in time. Such cross-sectional analysis might generate an average of various people's short-run and long-run elasticities, rather than isolating each effect. In one important paper analyzing the comprehensive IRS data, Randolph (1995) used a panel of U.S. federal tax returns running from 1979 to 1989. The panel followed 12,000 filers and covered a period of two tax reforms: the Economic Recovery Tax Act of 1981 and the Tax Reform Act of 1986. Each tax reform provided necessary variation to estimate price elasticities, especially for high-income taxpayers.

Randolph's (1995) empirical model considers the effect of both current and future prices and income in the "Almost Ideal Demand System" of Deaton and Muellbauer (1980). By disaggregating permanent and transitory effects, Randolph found that the permanent price elasticity was between -0.08 and -0.51 and that the transitory price elasticity was between -1.55 and -2.27 , depending on the chosen specification. As noted, the consensus elasticities of the prior literature fell between these permanent and transitory measures. Accordingly, this research called into question the consensus view on price elasticities and, in particular, suggests that the price elasticity that matters most may in fact be far closer to zero than previously believed.

Auten, Seig, and Clotfelter (2002) tackle the same questions as Randolph (1995) using the same data set, but spanning five more years, 1979–1993, and including 20,000 filers. The approach of Auten, Seig, and Clotfelter is different from Randolph's in the sense that rather than relying on instruments to identify permanent and temporary elasticities, they assume a constant elasticity with a log-log regression. Combined with a certain parameterization of permanent and transitory

⁶ The interested reader should see Clotfelter and Steuerle (1981), Clotfelter (1990), Steinberg (1990), and Andreoni (2006b). The work of Clotfelter (1980) and Broman (1989) deserves special mention here, as it is early work that questions the price elasticity measures. They use a first-differenced model to estimate price elasticities of charitable contributions in the -0.24 to -0.33 range. In addition, Barrett, McGuirk, and Steinberg (1997) implement a dynamic specification to estimate the price elasticity of giving for middle-class taxpayers. Their result indicates a price elasticity of giving around -0.47 .

prices and incomes,⁷ they report relevant permanent and temporary elasticities in stark contrast to those of Randolph. Most importantly, they find results that suggest the permanent price elasticity exceeds the “gold standard” of -1 .

Related research due to Tiehan (2001), Joulfaian (2000), and O’Neil, Steinberg, and Thompson (1996) sheds further light on this issue. Tiehan (2001) constructs a cohort panel from a series of biennial survey data to estimate the income and price elasticities of charitable contributions. His estimated price elasticity is -1.15 , which is higher than estimates in the literature using conventional taxpayer-specific panel data, but lower than those using cross-sectional data analysis. O’Neil et al. (1996) permit individuals in different income brackets to have different price elasticities. Their results show the importance of allowing heterogeneity and highlight that asset gifts are price-elastic for high-income groups.

This next result relates to the work on a tax problem faced only by the wealthy—charitable bequests by those facing the estate tax. An estate tax return must be filed if the recently deceased has \$600,000 in gross assets. Joulfaian (2000) uses a panel dataset of income tax returns and estate tax returns to estimate various elasticities. He finds that the income tax price elasticity for charitable contributions is around -2.8 and that the estate tax price elasticity for charitable bequests is somewhere between -1.1 and -1.7 . This work might best be viewed as a first step in analyzing the complexity of the taxation choices faced by big ticket charitable contributors. From a policy perspective, very little is known about how tax laws like the alternative minimum tax, the estate tax, various tax shelters, and the levels of tax write-offs that accompany each of these taxes affect charitable contributions.

Combining the totality of the evidence with the results on price elasticities from the field experiments discussed below, I am left with the thought that there is a fair amount of evidence, although not universal agreement, that charitable giving is at least unitary price elastic if not price elastic, especially amongst the high-income classes. This result suggests that if one were interested in stimulating the charitable sector, one avenue is to enhance the tax deductibility of individual charitable contributions.

The Individual and Charitable Organizations

The main drivers of most charitable organizations are donors. Whether through gifts of time or money, donors guide the array, scope, and quality of goods and services that the charitable organization provides. Perhaps not surprisingly, then, charitable organizations spend an average of nearly \$100,000 per year on fund-raising (Andreoni and Payne, 2009). To put this number into perspective, the

⁷ Auten, Seig, and Clotfelter’s (2002) parameterization allows them to specify the covariance of income and prices in between different periods as a function of the transitory and permanent elements depending on the number of periods between the observed prices and incomes. Further, the assumption that changes in marginal tax rates are not perfectly explained by income allows them to identify prices effects separate from income.

fund-raising to donation ratio typically is between 10 percent (for arts organizations) to 15 percent (for social service ones), but there is substantial variability. For instance, Andreoni and Payne (2009) report that the average fund-raising to donation ratio is 12 percent, based on an average \$787,000 in donation and \$91,000 in fund-raising cost. Yet, the ratios vary greatly depending on the types of charities: the ratio for charities in the category of Food, Agricultural, and Nutrition is 2.7 percent; for the Housing and Shelter category, 10 percent; and for the Human and Services category, 15 percent.

In an effort to understand these yield ratios more fully and to deepen our understanding of economic models applicable in this area, an active area of research has developed within economics using field experiments. This research has targeted why people give, what causes them to maintain their commitment to a cause, and the factors related to their long-run giving behaviors.

An early natural field experiment,⁸ completed by myself and David Lucking-Reiley, tested the effects of seed money on charitable giving rates, while trying to raise money for the University of Central Florida (UCF). This study (List and Lucking-Reiley, 2002) explores if seed money works and why it might work. We solicited contributions from 3,000 central Floridian residents who had previously given to UCF. They were randomly assigned to six different groups of 500, with each group asked to fund a separate computer costing \$3,000. We used \$5,000 in seed funds, allocated across the six capital campaigns. For example, some households received a mail solicitation that noted UCF had already secured \$1,000 of the \$3,000 goal and was asking solicitees to make up the shortfall to buy a computer. Other households received a mail solicitation that stated that UCF had received \$300 of the \$3,000 goal; still others, \$2,000 of the \$3,000 goal.

We found that seed money increased the average gifts of donors: more seeds led to more money. More specifically, total contributions in the \$1,000 seed treatment were more than double those in the \$300 seed treatment, and contributions in the \$2,000 seed treatment were nearly double contributions in the \$1,000 treatment. In addition, the results suggested that seed money worked because it provided a signal of charitable quality to donors. Follow-up natural field experiments have replicated the importance of seeds in stimulating charitable contributions (for example, Rondeau and List, 2008).⁹

One can use natural field experiments to explore price elasticities as well; for this, we must consider the case where the seed donation is a matching grant, that is, a donation conditional on other donations. In Karlan and List (2007),

⁸ A natural field experiment tests subject response to treatments controlled by the experimenter without the subject even knowing that they are in an experiment.

⁹ Theoretical work by Vesterlund (2003) and Andreoni (2006b), who model charities' use of seeds as an information device, provides intuition on how a charity can effectively use resources to further their fund-raising efforts. Potters, Sefton, and Vesterlund (2005) provide laboratory evidence of the effect of seeds. For a discussion of other natural field experiments, see Harrison and List (2004).

my coauthor and I solicited contributions from more than 50,000 supporters of a liberal organization, assigning households to either a control group or to a matching-grant treatment group. Within the matching-grant treatment group, individuals were randomly assigned to different matching-grant rates, ranging from \$1:\$1 to \$3:\$1. In the \$1:\$1 group, for every dollar the individual donates, the matching donor also contributes \$1; hence, the charity receives \$2. In the \$2:\$1 group, for every dollar the individual donates, the matching donor contributes \$2; hence, the charity receives \$3. Accordingly, the price of giving changes as the match rate changes.

We found that simply announcing a match increases the revenue per solicitation considerably—by 19 percent. In addition, the offer of a match significantly increases the probability that an individual donates—by 22 percent. However larger match ratios—offering a \$3:\$1 or \$2:\$1 match rather than a \$1:\$1 match—have no additional effect. The elasticity estimate of the price change from the baseline to the treatment is -0.30 . Our estimate is near the lower range of the elasticity of giving with respect to transitory price changes reported in Auten et al. (2002).

Other studies have also lent similar insights into the value of using a match. For example, Meier and Fry (2004) explore interesting behavioral hypotheses using smaller changes in matching in a dichotomous choice fund-raising experiment. Students at the University of Zurich were given the option to donate to one, both, or neither, of two funds: one for disadvantaged domestic students and one for disadvantaged foreign students. Meier and Frey (2004) ran a field experiment involving 600 subjects; some were offered as 25 percent match, and others a 50 percent match, if they donated to both charities. They find that the 25 percent match does not increase giving but the 50 percent does.

In a much different environment and context, Eckel and Grossman (2003) use lab experiments to compare matching to an equivalent rebate of one's contributions in the context of a dictator game. They find that matching contributions lead to significantly larger contributions than the rebate mechanism. Finally, in Rondeau and List (2008), my coauthor and I also report evidence consonant with the positive effects of having a match available. Raising money for the Sierra Club of Canada, we find that households in a one-to-one match treatment contribute significantly more than those households in the control, no-match group (\$1,235 versus \$945); but, the noisiness of the estimates precludes strong statements of statistical significance.¹⁰

¹⁰ Related work investigating why people give focuses on estimating the effects of gifts (Falk, 2006), lotteries and auctions (Landry and Price, 2007; Carpenter, Holmes, and Matthews, 2008), and social conformity (Meier and Frey, 2004; Croson and Shang, 2009). Further, Landry, Lange, List, Price, and Rupp (2010) find that those incentives that signal charitable quality keep first-time donors engaged in giving whereas those that do not signal charitable quality tend to have transitory effects. See List (2006) for a survey.

A first lesson that I take from this body of field experimental research is that it has lent insights into the types of models that predict giving behavior. Indeed, these studies have collected enough facts to help construct new economic theories of giving. Simple models that treat individual contributions as if they are identical to purchases of private goods should be reconsidered in light of the findings from this literature. Additionally, work in this area that measures key parameters has provided useful information for policymaking discussions.

For practitioners, understanding what motivates people to give, how to use upfront monies efficiently to generate the greatest level of gifts, and learning about appropriate ask strategies for the present and future are invaluable. In this regard, consider that fund-raising consultants ubiquitously note that increases in the matching ratio have noticeable power to influence future contributions. For instance, Dove (2000, p. 15) reminds us that one should “never underestimate the power of a challenge gift” and that “obviously, a 1:1 match—every dollar that the donor gives is matched by another dollar—is more appealing than a 1:2 challenge . . . and a richer challenge (2:1) greatly adds to the match’s attractiveness.” Such strong claims have lead fund-raisers to make use of the perceived “extra” power of larger matching ratios. For example, a recent \$50 million challenge grant gift to Drake University, which was among the 40 largest gifts in U.S. history to an institution of higher education by an individual, was used to spur further gifts through 2:1 and 3:1 matching solicitations (Dove, 2000). Such rules of thumb are largely anecdotal, as little scientific study had been completed to examine such claims. Actually, the data point to the importance of having upfront money, not that the match rate itself is important—directly at odds with the anecdotes.

Discussion

At first glance, the market for charitable giving clearly has some oddities. On the demand side and on the supply side, it is driven by a mix of altruism and more-or-less enlightened self-interest. The federal government feeds it with tax breaks, which suggests that it serves some public policy purpose. While I have discussed some evidence on efficiency in the charitable sector, it is only narrowly understood. More generally, it is difficult to answer simple queries of whether the quantity of charitable contributions is too low or too high; whether extant resources are spent on the “correct” mix of products; or whether the current tax incentives are too big or too small.

Clearly, however, there are good reasons for decentralized provision of such goods. First, ever-mounting budgetary difficulties of federal and state governments, and more generally of decentralized governments in a great number of countries have generated a renewed and serious concern with the economic strains of providing such goods. Second, it is difficult for federal authorities to understand the benefits and costs of providing such goods in various localities.

As de Tocqueville (1835, 1840 [2010]) observed over a century ago, “In great centralized nations the legislator is obliged to give a character of uniformity . . . which does not always suit the diversity of customs and districts.” Another potential advantage of decentralized decision making is that localities can serve as laboratories to foster innovation. Finally, such an approach can harness the power of competition amongst charities.

As a point of comparison, it is instructive to consider the structure of the charitable sector in the United States relative to other advanced countries, and whether the differences in the size of sectors are best explained by tax deductibility versus public provision (crowding out private provision) versus some third set of factors. Governments’ systems of financing charitable organizations through tax expenditures differ throughout the world. These differences manifest themselves in governments’ direct contributions to charitable organizations, governments’ tax exemption policies for the organizations, governments’ tax deduction policies for those contributing to the organizations, and governments’ definitions of a charitable organization.

The Johns Hopkins Center for Civil Society Studies has a wealth of research investigating such differences. For instance, Salamon, Haddock, Sokolowski, and Tice (2007), using data collected by the center in 2007, find that the percentage of support for nonprofits coming directly from governments (excluding volunteers) ranges from 30.5 percent in the United States and 46.7 percent in the United Kingdom to 76.8 percent in Belgium. Salamon and Flaherty (1996) provide an outline of some of these international differences in financing organizations through tax expenditures.

Governments’ policies regarding charitable organizations’ tax exemption status vary as well. Favorable tax treatment can be limited primarily to organizations that exclusively serve charitable purposes, as they are in the United Kingdom; whereas in the United States, all types of nonprofits discussed earlier are exempt from income taxes.

Concerning tax deductions for charitable contributions, the United States allows deductions for contributions to “public benefit organizations.” Likewise, the United Kingdom allows deductions for contributions to organizations with exclusively charitable purposes. In contrast, the French system offers deductions only for contributions to a small set of “public utility corporations” selected by the French government. Along with differences in what charitable organizations merit tax deductions for contributions, differences in deduction limits exist across countries. They range from a limit of 5 percent of income in Belgium to a limit of 35 percent on gifts that are less than 25 percent of taxable income in Israel, compared to the limit of 50 percent of income for individuals in the United States.

Such differences might lead to the observed differences in charitable acts across the globe. I made a considerable attempt to obtain comparable charitable giving data across countries over time. In the end, the varied sources of information and the inconsistent definitions of charitable giving and nonprofit organizations hindered

this effort. There is one source—the Johns Hopkins Comparative Nonprofit Sector Project—that permits a glimpse at the size of the charitable sectors of various economies. Based on this source, in terms of giving to charities defined as such, the United States stands out as being the most reliant on private donations of money, at roughly 20 percent of all revenues annually. Most other countries are well below this amount. Andreoni (2006a) presents these figures and offers an excellent summary of philanthropy more generally.

In summary, while far from conclusive, my perspective is that differences in tax policies, unmeasured direct giving, national income distribution, and national attitudes on whether the government or charities are responsible for satisfying social needs explain an important part of the observed international differences in charitable contributions. This is another area that begs for future exploration. Another area in need of further work is whether the current tax structure in the United States can be made more efficient. While it is beyond the scope of this study, more carefully considering encouragement of charitable giving through the estate tax, and exploring tax credits as a substitute for tax deductions seem apropos. As one example, the state of Michigan currently uses a partial income tax credit for donations to help the homeless. Of course, before such proposals are advanced, empirical evidence on their efficacy through field experiments and analyzing naturally occurring data makes sense.

Conclusion

Many economic facts concerning the charitable market remain unknown. The literature has begun to address some of the important issues, but a first lesson that I take from this body of research is that what we do not know dwarfs what we do know about the economics of charity. This perspective pinpoints some of the areas where economists have been able to speak to policymakers, provide theorists with empirical facts, and give practitioners useful advice, but clearly more work is necessary.

I suspect that this line of research will continue to be a strong growth area. As fund-raisers continue to recognize the value of experimentation, economists will increasingly be called upon to lend their services. Likewise, as economists continue to recognize the value of using naturally occurring settings as laboratories, such domains will increasingly be used to generate new data sets.

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