Reducing Evasion Through Self-Reporting: Evidence from Charitable Contributions☆

Alisa Tazhitdinova

McMaster University, Canada

Abstract

In absence of third-party reporting, taxpayers are required to self-report information with various degrees of detail, ranging from uncorroborated claims to comprehensive records with receipts. Using a quasi-experimental design applied to noncash charitable contribution deductions, I show that even basic self-reporting requirements are effective at reducing evasion but impose large compliance costs on taxpayers. I find that simplified reporting requirements reduce reporting costs by \$55 per person and substantially increase claimed donations. However, half of the new donations are due to evasion. Thus, information reporting should only be imposed on total reported donations above a pre-specified threshold.

Keywords: Information Reporting, Evasion, Compliance Cost, Tax Filing, Charitable Giving

1. Introduction

It has been shown that third-party reporting is effective at reducing evasion (Kopczuk and Slemrod (2006); Gordon and Li (2009); Kleven et al.

☆I am very grateful to the editor Claus Thustrup Kreiner, two anonymous referees, James Andreoni, Alan Auerbach, Jon Bakija, Youssef Benzarti, Martin Farnham, Alexander Gelber, Hilary Hoynes, Emmanuel Saez, Silvio Städter, Danny Yagan, and seminar participants at UC Berkeley, McMaster University, National Tax Association Meetings, IIPF Annual Congress and Canadian Public Economic Group meetings for helpful comments. Finally, I thank Social Sciences and Humanities Research Council of Canada and Robert D. Burch Center for Tax Policy and Public Finance for financial support. Previously circulated under the title "Optimal Reporting Thresholds: Theory and Evidence from Charitable Contributions."

(2011)), but there are circumstances in which it is infeasible or prohibitively costly. For example, in many tax systems, self-employed individuals are allowed to deduct expenses such as the use of one's personal car or home space for business purposes. Introducing third-party reporting for such transactions is not possible. Requiring organizations to report all contractual payments (as is currently done with Form 1099-Misc for large transactions in the U.S.) would impose large compliance costs, especially for small businesses. In short, it is unlikely that third-party reporting can be imposed on all income, deductions, expenses and credits that individuals and firms claim on their tax returns. In these circumstances, tax authorities rely on self-reported information to access tax liability.

To limit potential cheating, tax authorities require that self-reported accounts follow a set of "self-reporting" rules. These requirements often range in stringency – from basic requirements to provide unsubstantiated details of claimed expenses to more stringent rules that require receipts to be included with tax returns. However, we know little about the effectiveness of self-reporting at curbing evasion: could a requirement to provide potentially unverifiable information reduce cheating by making the cheating process costlier and by increasing the scope of information available to tax authorities? Moreover, welfare implications are also unclear: even the simplest compliance rules can prove to be costly and impose a burden not only on prospective cheaters, but also on law-abiding individuals. This trade-off between evasion and compliance costs suggests that reporting should be imposed only on a subset of the population. Yet current reporting requirements vary greatly across tax items and often impose all-or-nothing requirements. For example, in the U.S., claiming a cash donation deduction requires no reporting, while claiming the Child and Dependent Care Expenses Credit requires individuals to provide detailed descriptions regardless of the amount claimed.

This paper develops a framework to study self-reporting requirements and reporting thresholds for claiming deductions and expenses. I focus on the simplest form of self-reporting regulations – a requirement to provide self-reported details of claimed deductions with no requirement to attach receipts. Using a natural experiment, I document the effectiveness of self-reporting requirements against evasion and provide estimates of compliance costs and the magnitude of evasion. Empirical results imply that self-reporting requirements should be imposed only on individuals with reported donations above a pre-specified threshold and that setting such a threshold optimally could lead to substantial welfare improvements.

Since 1917, the U.S. federal government has subsidized charitable contributions in the form of a tax deduction. This favorable treatment makes charitable deductions highly susceptible to evasion. To limit potential misreporting, the IRS has developed a set of rules that make evasion costlier. I use a regulation change in 1985 that relaxed self-reporting requirements for noncash charitable contributions. Prior to 1985, individuals had to submit a detailed statement regardless of the dollar value of the reported donations. Starting in 1985, a formal statement, Form 8283, has been required only when reported noncash donations exceed \$500. Employing a novel identification approach, I non-parametrically identify the share of new donations due to lower compliance costs and the share of new donations due to evasion, and I estimate the hassle cost of compliance. I find that relaxing reporting requirements led to a steady increase in reported donations but that more than 50% of these new donations were untruthful. The tax revenue loss, however, was offset by substantial savings for taxpayers because reporting requirements impose large hassle costs: \$55 (in 2015 dollars), on average, per person. Thus, the empirical findings suggest that while self-reporting requirements are effective at reducing evasion, they are burdensome and, therefore, should be imposed on only a subset of individuals. A calibration exercise in the appendix suggests that setting the threshold optimally at \$350 instead of \$500 would have reduced welfare losses from evasion and compliance by 70%.

The empirical approach proceeds in two steps. To estimate the compliance costs associated with Form 8283, I compare the distributions of noncash donations above the reporting threshold before and after the reform. Since reporting requirements have not changed for taxpayers who wish to report more than \$500, these individuals will choose to reduce their donations and report \$500 only to avoid the hassle of filing Form 8283. Therefore, the size of the missing mass to the right of the \$500 threshold allows me to estimate the distribution of compliance costs. I find that individuals are willing to forgo an average of \$55 (in 2015 dollars) in order to avoid filling out Form 8283. The magnitude of compliance costs is surprisingly high since it is unlikely that filling out Form 8283 would require more than half an hour of one's time. The cost estimate, however, is consistent with the findings of Benzarti (2015), who estimates that individuals forgo \$644, on average, (in 2014 dollars) to avoid filing Schedule A (Itemized Deductions).

Next, I use my estimates of compliance cost to distinguish between truthful and untruthful donations. The 1985 reform increased the threshold from

\$0 to \$500, which resulted in an increase in reported donations below the \$500 threshold. To identify which portion of these new donations is due to evasion, I must account for two effects. First, part of the increase in donations in the neighborhood of \$500 is due to compliance costs, as described above: some taxpayers choose to reduce their donations and bunch at \$500 to avoid the hassle of filling out Form 8283. To account for these individuals, I adjust the post-reform distribution downward by redistributing just enough of the excess mass at \$500 to fill in the missing mass above the threshold. Second, since all individuals had to submit a detailed statement before the reform, individuals with high compliance costs who wished to donate small amounts chose to report \$0 to avoid the hassle of writing a statement. To account for these taxpayers (who are missing from the observed pre-reform distribution), I extrapolate the compliance cost found in step 1 to identify a "counterfactual" distribution of donations – this counterfactual distribution represents the number of truthful donations prior to the reform if there were no reporting and no evasion. Finally, I quantify evasion as the difference between the adjusted post-reform distribution and the counterfactual pre-reform distribution. Intuitively, once I have accounted for legitimate sources of increased donations (due to the compliance burden before and after the reform), the remaining, unexplained increase in donations at the \$500 threshold must be due to evasion.

Overall, I find that at least 48% of the new donations were untruthful. The overall level of evasion, however, is small and suggests that taxpayers find cheating very costly. Even ten years after the reform, the number of donations below \$500 remained small. The magnitude of evasion found in this study is generally consistent with evasion estimates from the 1982 Taxpayer Compliance Measurement Program (TCMP) study. Slemrod (1989) finds that among taxpayers who claim a charitable deduction, 27% cheated and overstated their donation by approximately 9%, which corresponds to an average of \$96.4 (1982 dollars). My calibration of evasion behavior suggests that approximately 24% of individuals cheat, with an average cheating amount of \$350 (1986 dollars).

The findings of this paper are policy-relevant for three reasons. First, the empirical results show that self-reporting requirements are effective against evasion. In circumstances in which third-party reporting is infeasible or too costly, requiring individuals to fill out a form or provide self-reported accounts can reduce evasion. This is a striking result because it shows that merely asking individuals to provide more information – but requiring no proof – can reduce evasion. Second, the findings confirm the intuition that even these minimal requirements come at a cost and should not be ignored by policy makers. Individuals dislike tax paperwork and find it bothersome. Third, the trade-off between compliance and evasion implies that reporting requirements should not be imposed on all taxpayers. Instead, welfare can be substantially improved by setting reporting thresholds optimally. The identification approach further highlights a path to determining these thresholds: it is best to start with stringent requirements and ease them over time, as this allows for estimation of compliance costs and evasion behavior. While the analysis of this paper focuses on noncash charitable donations, the results can be directly applied to other deductions, credits, and business expenses, and particularly to unverifiable expenses such as the use of one's personal car or home space for business purposes, which are likely to become even more prevalent due to increased use of digital platforms such as Uber and Airbnb.

The paper contributes to three areas of research. First, this study contributes to the empirical literature that investigates the effectiveness of information reporting against evasion. While the literature has carefully documented the power of third-party reporting ((Kopczuk and Slemrod (2006); Gordon and Li (2009); Kleven et al. (2011)), little is known about the effectiveness of other approaches. In the U.S. and other OECD countries, tax liability often depends on self-reported measures of income and expenses, with varying levels of supporting documentation requirements (Lederman (2010)). This paper is the first to show that a simple requirement to provide self-reported details of transactions without providing receipts reduces evasion. Previous work has focused on stronger forms of reporting requirements, such as submitting proof of expenses (Fack and Landais (2016)) or providing easily verifiable information (LaLumia and Sallee (2013)).[1]

Second, the paper contributes to a literature that documents and estimates the high costs of complying with tax regulations. The revealed preference approach taken in this paper is similar to the methodology of Benzarti (2015), who estimates that an average household is willing to forgo $644 to avoid filing Schedule A.[2] Benzarti's larger estimate accounts for both record-

[1]See, also, studies of accounting regulations (Asatryan and Peichl (2016)), monitoring rules (Almunia and Lopez-Rodriguez (2018)), electronic payments (Slemrod et al. (2017)), and receipt incentives (Naritomi (2013)).

[2]Previous studies typically rely on survey evidence: e.g. Slemrod and Sorum (1984); Blumenthal and Slemrod (1992); and European Commission (2013). See, also,

keeping costs and the process of filling out Schedule A, while the smaller estimate of my study measures primarily the filling-out costs, suggesting that record keeping is most costly to taxpayers. Finally, the existence of both evasion and compliance responses suggests that reporting requirements should be imposed only on a subset of taxpayers. Such compliance thresholds could be chosen in a similar fashion to the tax exemption thresholds studied by Keen and Mintz (2004), Dharmapala et al. (2011) and Kanbur and Keen (2014).

Third, the paper suggests a novel nonparametric approach to measuring evasion. Accurately estimating evasion is difficult because researchers cannot directly observe cheating behavior.[3] The approach used in this paper circumvents this problem by studying changes in aggregate distributions, thus avoiding the need to tag individual cheaters. Although several other papers study changes in reporting requirements to identify cheating behavior, most of these studies cannot accurately separate evasion responses from behavioral responses to compliance cost (e.g. Buchheit et al. (2005); Ackerman and Auten (2011); Serocki and Murphy (2013); Fack and Landais (2016)).

Within these literatures, several recent papers investigate how charitable giving specifically responds to changes in tax-compliance requirements. Gillitzer and Skov (2018) show that the use of pre-filled forms in Denmark led to a large increase in the number of reported charitable deductions, despite concurrently introducing third-party reporting. Surprisingly, the authors do not find a decrease in the number of large donations, suggesting that over-reporting prior to the reform was small. This finding contradicts the results of Fack and Landais (2016), who document a large decrease in

Pitt and Slemrod (1989), who use a structural model and find an average cost of itemizing to be $100.

[3]For a comprehensive review of the literature on evasion, see, e.g., Andreoni et al. (1998) and Slemrod (2007). The literature estimates evasion behavior in three general ways. The first approach directly quantifies evasion by looking at the results of tax audits; for examples, see Clotfelter (1983) and Christian (1994). The second approach estimates evasion indirectly, by looking at discrepancies between reported values and actual spending; see, e.g. Pissarides and Weber (1989); Feldman and Slemrod (2007); and Artavanis et al. (2016). In this paper, I adopt the third approach, which relies on compliance reforms. Besides charitable giving, this approach has been used by LaLumia and Sallee (2013) to study claiming of dependents, and by Marion and Muehlegger (2008) to study evasion in the market for diesel fuel.

reported charitable deductions in France after taxpayers were required to include receipts with their tax returns. Similarly Ackerman and Auten (2011) study the effects of the 2005 U.S. reform that tightened the valuation process for donations of cars, boats and airplanes. They find that prior to the reform, these types of donations were largely overstated and that the reform significantly reduced such donations. All of these studies consider reforms that *increased* compliance requirements, making it difficult to separate compliance responses from evasion. This paper complements earlier work by studying a reform that *simplified* tax-compliance rules, thus allowing me to estimate compliance costs and the level of evasion.

2. Data and Institutional Background

2.1. The 1985 Reform

The U.S. Federal Tax Code allows individuals to include their charitable contributions on the list of itemized deductions. With the exception of a short period in the 1980s, no such deductions have been allowed for those who claim the standard deduction.[4] Two types of deductions are allowed: donations made in the form of cash and in the form of assets. Noncash contribution deductions, which are the focus of this paper, are limited to 20% of AGI, and any excess contributions can be carried over to future years.

To reduce the possibility of tax evasion, the tax authorities design a set of regulations, summarized yearly as Publication 526, pertaining to what can be claimed as a charitable contribution, up to what amount, and what supporting documents are required. In this paper, I focus on one of the most salient of these rules: the threshold beyond which individuals need to provide a detailed description of their donations. Prior to 1985, individuals had to attach a statement detailing their noncash donations for *any* amount of contributions. In particular, individuals had to specify the kind of property given, who it was given to and on what date, how the value was calculated, and whether it was a capital gain or ordinary income property. If the total

[4]In 1982 and 1983, those claiming the standard deductions could deduct 25% of their charitable contributions up to a maximum of $25. This limit increased to a maximum of $75 in 1984. In 1985, the policy changed to allow individuals to deduct 50% of their charitable contributions with no upper limit. The rule became even more generous the following year: 100% of charitable contributions were deductible with no upper limit in 1986. The policy was canceled in 1987.

asset contribution exceeded \$200, individuals also had to specify the address of the charitable organization, a description of the property, any conditions attached to the gift, how the individual initially obtained the property, and more detailed information on the initial cost and current valuation of the property. Starting in 1985, individuals had to fill out and attach Form 8283 *only* if they claim *more* than \$500 in noncash charitable donations. Otherwise, no forms are necessary. Form 8283 requires individuals to provide the same information as when donating more than \$200 in the past. Depending on the actual amount claimed and the type of items given, further restrictions apply: for example, for very large donations, a formal appraisal might be required. In this paper, I focus on charitable contributions around the \$500 threshold for which appraisals and other restrictions do not apply. The requirement to file Form 8283 is very salient: Schedule A explicitly states that "one must attach Form 8283 if over \$500" next to the noncash donation box.

Importantly, no other major tax changes happened in 1985 that could affect the likelihood or magnitude of charitable donations. The largest changes included: inflation adjustment of tax brackets and exemption amounts; changes to child exemptions for divorced and separated parents; and changes to reporting rules for alimony payments.

The remaining compliance requirements for charitable donations during the 1980s were minimal. Individuals did not need to attach written proof of their contributions, but they were required to keep accurate records. While actual receipts and written statements were preferred, "reliable written records" were deemed appropriate for any amount of contributions. The instructions in Publication 526 state that "records may be considered reliable if they were made at or near the time of the contribution, were regularly kept by you, or if, in the case of small donations, you have buttons, emblems, or other tokens, that are regularly given to persons making small cash contributions." Records should include the name of the organization, the date of the contribution, and the amount of the contribution.

The 1985 reform was previously studied by Buchheit et al. (2005) and Serocki and Murphy (2013). Buchheit et al. (2005) were the first to document the persistent and increasing spike at the \$500 threshold for noncash charitable donations. The authors argue that the sharp increase in charitable donations after the reform is a sign of evasion. However, the authors do not attempt to differentiate between bunching due to compliance costs, due to inflation and due to evasion. Serocki and Murphy (2013) focus on the introduction of an appraisal requirement for noncash charitable donations above $5,000. Because this regulatory change increased compliance rules above the cutoff, the authors are not able to differentiate between evaders and individuals who find the need to obtain an appraisal too bothersome.

2.2. Data

I use annual cross-sections of individual tax returns constructed by the Internal Revenue Service (IRS) and commonly known as the Statistics of Income (SOI) Public Use Files, for years 1970-2009. The annual cross-sections are stratified random samples of approximately 80,000–200,000 tax returns per year with randomization over the Social Security Number (SSN). High-income taxpayers and those with business income are oversampled, but weights are provided. Since, for the majority of years charitable deductions, could be claimed only by itemizers, I restrict the sample to individuals who itemized in that tax year. Moreover, because noncash donations are limited to 20% of AGI, I further restrict the sample to taxpayers whose overall charitable contributions do not exceed 20% of AGI, which is the case for approximately 98% of tax filers.

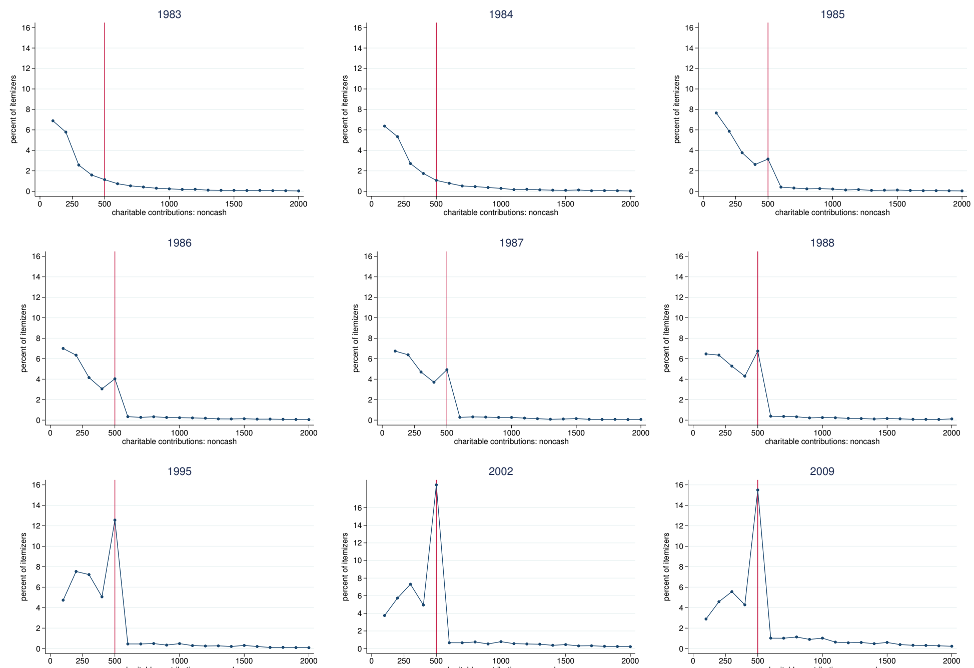
The unweighted number of observations are provided in Panel A of Table 1. Panel B of Table 1 provides appropriately weighted summary statistics. In 1984, among taxpayers who filed a tax return and itemized, approximately 22% claimed noncash charitable donations, for a total of $12.68 billion dollars and with a median donation of $435 (all in 2015 dollars). Among these, 95% reported contributions of less than $2,000. The average contribution for all individuals who donated a positive amount less than $2,000 was $655, with a median of $424. Overall, those who donated less than $2,000 accounted for 41% of the dollar value of noncash donations. The number of noncash contributions has substantially increased since 1984. In the latest year of data available, 2009, approximately 48% of all itemizers reported noncash donations, for a total of $35.96 billion dollars. Nevertheless, the majority of individuals – 89% – still donate less than $2,000, which corresponds to an average donation of $572. Panel B of Table 1 shows that the number of noncash donations increased dramatically over the years, but the median and average donation amounts remained roughly the same.

Table 1: Summary Statistics

	1984	1985	1986	2009
Panel A: Number of Observations				
Number of returns	79,556	108,840	75,400	152,526
Number of itemizers	54,976	76,908	54,411	76,113
Number of donors	52,518	73,650	52,118	67,657
Number of noncash donors	18,412	28,404	21,279	34,693
Core sample	12,981	20,818	14,604	27,093
AGI 1st quartile	935	1,316	815	3,388
AGI 2nd quartile	984	1,358	990	3,333
AGI 3rd quartile	1,760	2,677	2,343	3,523
AGI 4th quartile	8,922	14,838	9,997	14,950
Number of cash donors	51,799	73,085	51,684	65,139
Core sample	28,713	38,863	26,587	23,927
Panel B: Summary Statistics				
Total noncash donations (in 2015 $)	$12.68 bil.	$13.88 bil.	$21.79 bil.	$35.96 bil.
Median donation (in 2015 $)	$435	$420	$464	$542
Median donation (infl unadj)	$200	$200	$225	$490
Core sample (less than $2000):				
Mean donation (in 2015 $)	$655	$592	$623	$572
Mean donation (infl unadj)	$301	$282	$302	$517
Median donation (in 2015 $)	$424	$420	$438	$531
Median donation (infl unadj)	$195	$200	$212	$480
% of noncash donors	95%	96%	96%	89%
% of noncash donations $	41%	43%	32%	31%

Notes: Number of itemizers, donors, noncash donors, and cash donors: unweighted number of individuals in the SOI samples who itemize, donate cash or assets, donate assets, or donate cash, respectively. Core samples: individuals with positive noncash (cash) donations of less than or equal to $2000 (inflation unadjusted) and whose overall charitable donations do not exceed 20% of AGI. AGI quartile subsamples include only single and joint filers from the core sample. AGI quartiles determined for single and joint filers separately, for each year. *Source*: Cross-sectional data from SOI Public Use Tax Files.

Figure 1: Noncash Contributions in Select Years



Notes: Distributions of noncash contributions of individuals who itemized deductions in that year and whose overall charitable contributions did not exceed 20% of AGI. Unadjusted for inflation \$100 bins: (\$0,\$100],..,(\$1900,\$2000]. Vertical line marks the \$500 reporting threshold introduced in 1985. *Source*: Cross-sectional data from SOI Public Use Tax Files.

3. Suggestive Evidence

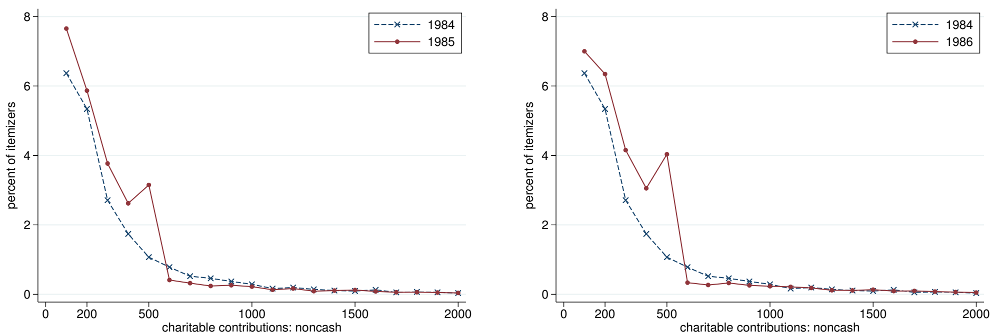
In this section, I provide graphical evidence of the effects of the 1985 reform. To motivate the analysis, consider the distributions of reported noncash charitable donations from 1979 to 2009. Figure 1 shows the number of *positive* donations (unadjusted for inflation) in \$100 bins, starting with (0,\$100], as a percent of all itemizers in that year.[5] The vertical line marks the \$500 reporting threshold introduced in 1985. Three observations are striking. First, the 1985 reform, as originally documented by Buchheit et al. (2005), led to a persistent spike in the distribution of noncash donations at \$500. Second, the observed bunching is concentrated just below the threshold – i.e. in the \$400-\$500 range – suggesting that individuals are careful not to report donations above the threshold. Without further analysis, it is not possible to determine whether the increase in donations is due to evasion or due to an increase in reported donations by taxpayers who have previously not reported or not donated because of compliance costs. Third, the excess mass at \$500 has grown over the years. Given that the threshold has been nominally fixed since 1985 and since inflation pushes charitable donations rightward, at least part of the growth can be attributed to inflation rather than to increased evasion.

Figure 2 overlaps the distributions of reported noncash charitable donations in 1984 and 1985, and in 1984 and 1986, all unadjusted for inflation. In addition to an increase in the number of reported donations below \$500, Figure 2 documents a decrease in the number of donations above \$500. Since the compliance requirements have not changed above the threshold, a decline in donations to the right of the threshold is direct evidence of the existence of compliance costs. Intuitively, if individuals with reported donations above \$500 were willing to cheat under the old rules, they should be willing to cheat under the new rules. Hence, reductions in reported donations above the threshold represent attempts to avoid compliance costs rather changes in cheating behavior, as discussed in greater detail in Section 4. It is notable that the size of the spike increased from 1985 to 1986. It is possible that taxpayers discovered the compliance rule change only when they started

[5] Information about the types of noncash donations is not available in the data. Ackerman and Auten (2011) examine Form 8283 filed in 2003 – 2005 and find that the most often reported donations include clothing and household items, electronics, vehicles and food.

Figure 2: Noncash contributions in 1984–1986

(a) 1984 vs. 1985 (b) 1984 vs. 1986



Notes: Distributions of noncash contributions of individuals who itemized deductions and whose overall charitable contributions did not exceed 20% of AGI. Unadjusted for inflation \$100 bins: (\$0,\$100],..,(\$1900,\$2000]. *Source*: Cross-sectional data from SOI Public Use Tax Files.

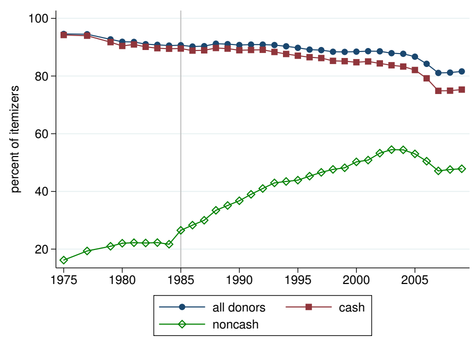
preparing their tax return, at which point donations had already been made. Alternatively, cheating may have increased over time as taxpayers became accustomed to the new rules.

Figure 3(a) plots the percent of itemizers who report noncash or cash donations over time and shows that the 1985 reform triggered a lasting increase in the number of reported noncash donations. The reform sharply increased the number of noncash donors in 1985 and led to persistent growth of noncash donations until approximately 2003. At the same time, the overall number of donors slightly decreased over the years. Figure 3(b) shows that the reform increased mainly the number of donors who made both cash and noncash contributions. The number of "only noncash" donors steadily increased but remained small: from less than 1% of itemizers in 1979 to just over 6% in 2008, as shown in Figure 3(b).

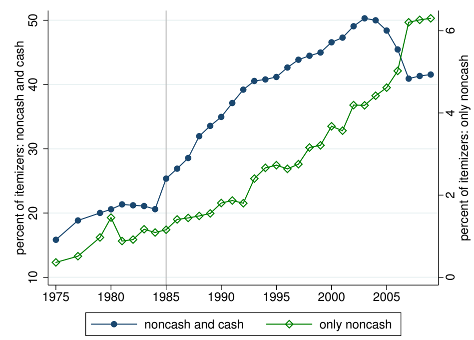
In Figure 4, I plot the 25th, 50th, and 75th percentiles of dollar value of contributions (all inflated to 2015 dollars). Figure 4 shows that an increase in noncash donations is unlikely to have been due to the crowding out of cash contributions. All percentiles of cash donations did not decrease in 1985 and, instead, increased after the passage of the 1986 Tax Reform Act. Meanwhile, noncash donations steadily grew in value.

Figure 3: Type of Donations

(a) Donations by Type



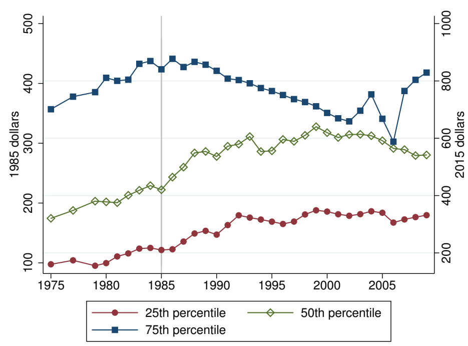
(b) Noncash Donations



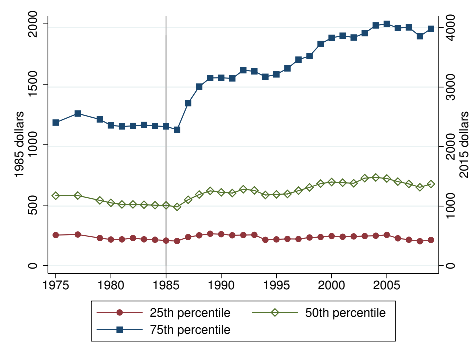
Notes: (a) Percent of itemizers who made noncash, cash or both types of contributions. (b) Percent of itemizers who reported noncash or cash donations, or only noncash contributions. No data available for 1976 and 1978. *Source*: Cross-sectional data from SOI Public Use Tax Files.

Figure 4: Quartiles of Donations

(a) Noncash donations



(b) Cash Donations



Notes: Quartiles of cash and noncash donations by year, in 1985 and 2015 dollars. No data available for 1976 and 1978. *Source*: Cross-sectional data from SOI Public Use Tax Files.

Figures 5(a) and (b) show even more clearly that there was no substitution between the two types of donations in 1985: the distribution of cash donations was not affected by the 1985 reform. The distributions overlap very well, suggesting that the observed changes to the distribution of noncash donations were driven by the change in compliance rules, since any changes to the financial incentives of charitable giving or itemizing would have affected both cash and noncash donations. Figure 5(c) confirms that it is also unlikely that such a substitution happened in later years, as cash contributions remained relatively stable, with an increase in the amount of cash donations after the 1986 Tax Reform.

Finally, as a robustness check, I plot the distributions of noncash donations prior to the reform in Figure 5(d). These distributions overlap closely, suggesting that while individual donations may have varied substantially from year to year, aggregate donations remained very stable. Therefore, the 1984 distribution represents an accurate counterfactual density to study the effect of the 1985 reform on noncash charitable giving.

4. Empirical Approach

4.1. Conceptual Framework

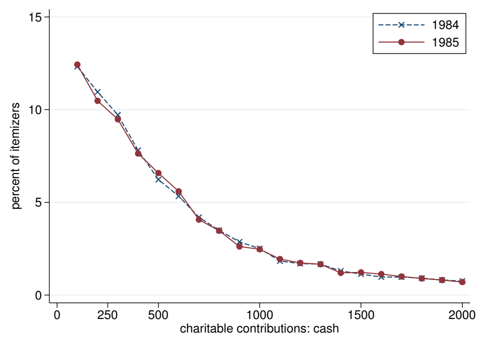
Consider an individual i who allocates his earnings Y_i between consumption C and charitable giving X, and who obtains a government subsidy τ for reporting donations R. The government announces a pre-determined threshold T and requires individuals to fill out some paperwork whenever their reported donations exceed the threshold. Further, suppose that evasion is 100% detectable whenever $R > T$. If an individual overstates his reported donations by declaring $R > X$, he experiences evasion cost $h_{i0} + h_i(R - X)$ with $h_{i0} \geq 0$, $h_i' \geq 0$ and $h_i(z) = \infty$ for all $z \geq T$. In addition, individual experiences a fixed compliance cost $\phi_i \geq 0$ whenever he reports $R > T$. In this setting, the subscript i allows for heterogeneity in charitable giving preferences, as well as in magnitudes of compliance and evasion costs. In sum, individual i solves

$$\max_{C,X,R} \quad U_i(C, X) \text{ s.t. } C = Y_i - X + \tau R - [h_{i0} + h_i(R - X)]\mathbb{1}_{R-X>0} - \phi_i \mathbb{1}_{R>T}, \tag{1}$$

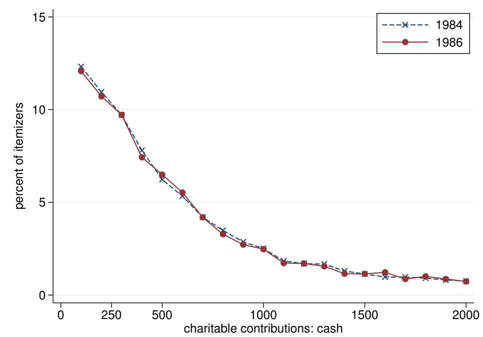
where $U'_{xi} > 0, U''_{xi} < 0$, $U'_{ci} > 0, U''_{ci} \leq 0$.

Figure 5: Robustness Checks

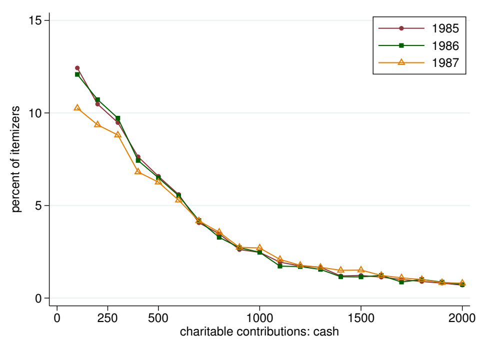
(a) Cash Donations Before/After Reform



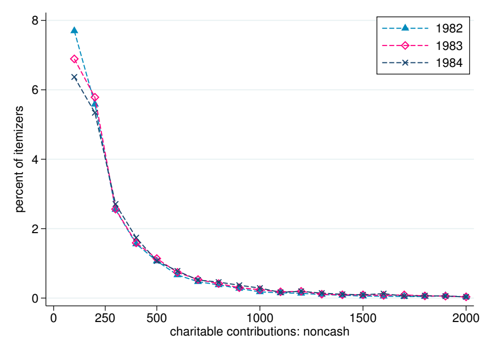
(b) Cash Donations Before/After Reform



(c) Cash Donations After Reform



(d) Noncash Donations Before Reform



Notes: Dashed lines identify pre-reform years, and solid lines denote after-reform years. Noncash and cash contributions of individuals who itemized deductions and whose overall charitable contributions did not exceed 20% of AGI. Unadjusted for inflation \$100 bins: (\$0,\$100],..,(\$1900,\$2000]. *Source*: Cross-sectional data from SOI Public Use Tax Files.

Several observations follow from (1). First, if the threshold is set to zero, then no individuals are able to cheat because of the infinitely high cost of evasion, and all individuals must pay the compliance cost if they report positive donations. Therefore, some individuals will choose to report $R = 0$, despite donating a positive amount, in order to avoid the compliance cost ϕ_i.[6] Second, if the threshold is positive, then cheating is possible only below the threshold. Hence, individuals with strong preferences for charitable giving will not cheat, and instead will report $R = X > T$ and bear the cost of compliance, or report $R = T < X$ and avoid the compliance cost.[7] Third, if the threshold is positive, evasion would be present only below the threshold, and the magnitude of cheating would be determined by the relative magnitudes of the fixed and variable costs of evasion, h_{i0} and $h_i(R-X)$, respectively.[8] If the variable costs of evasion are small, individuals will maximize their utility by reporting their donations to be equal to the threshold amount T.

The model makes four key predictions about the effects of the 1985 reform. Prior to 1985, the reporting threshold was set to zero – all taxpayers had to submit a written statement as long as they reported a positive donation. Thus, the first prediction is that some taxpayers with a preference for giving "bunched" at $0 (to avoid the compliance cost), and, therefore, the observed 1984 distribution of noncash charitable donations has a missing mass just above the 1984 reporting threshold, $0. When the threshold was moved to $500 in 1985, individuals who were previously bunching at $0 would have found it optimal to report their contributions as long as they did not exceed $500. Thus, the second prediction of the model, is that we should observe an increase in genuine donations in 1985 below $500. At the

[6]Individual i will choose a triple (C, X, R) that generates the highest level of utility among the following three options: (a) an interior solution $(C, X, R) = (Y_i - (1-\tau)X^* - \phi_i, X^*, X^*)$ where X^* satisfies $U'_{xi} = (1-\tau) \cdot U'_{ci}$; (b) a corner solution $(C, X, R) = (Y_i, 0, 0)$; or (c) a combination solution $(C, X, R) = (Y_i - X^*, X^*, 0)$ where X^* satisfies $U'_{xi} = U'_{ci}$.

[7]These individuals have utility functions U_i such that X that satisfies $U'_{xi}(Y_i - (1-\tau)X, X) = (1-\tau) \cdot U'_{ci}(Y_i - (1-\tau)X, X)$ is greater than or equal to T. Individual i will choose a triple (C, X, R) that generates the highest level of utility among the following three options: (a) an interior solution $(C, X, R) = (Y_i - (1-\tau)X^* - \phi_i, X^*, X^*)$ where X^* satisfies $U'_{xi} = (1-\tau) \cdot U'_{ci}$; (b) a corner solution $(C, X, R) = (Y_i - (1-\tau)T, T, T)$; or (c) a combination solution $(C, X, R) = (Y_i - X^* + \tau T, X^*, T)$ where X^* satisfies $U'_{xi} = U'_{ci}$ and $X^* > T$.

[8]These individuals have utility functions U_i such that X that satisfies $U'_{xi}(Y_i - (1-\tau)X, X) = (1-\tau) \cdot U'_{ci}(Y_i - (1-\tau)X, X)$ is less than T.

same time, some individuals who donated more than $500 in the past would now choose to bunch at $500 to avoid the compliance cost. Hence, the third prediction is that we should observe a missing mass in the distribution of observed donations in 1985 above $500 and a corresponding excess mass at $500. Finally, because self-reporting rules were simplified in 1985 and evasion became possible, the fourth prediction stipulates that some of the donations below the $500 threshold in 1985 might be untruthful.

The four predictions suggest an identification strategy for disentangling increases in reported donations due to evasion from increases due to compliance costs. Below, I briefly summarize the empirical approach, identifying assumptions are discussed in Section 4.2 and implementation details are available in Sections 5.1 and 5.2. I proceed in three steps. First, using prediction #3, I measure the compliance costs associated with filing Form 8283. To do so, I compare the observed distribution of noncash donations in 1984 to the observed 1985 distribution *above* $500. Since the rules for donations above $500 have not changed, it follows that the only reason that individuals would switch from donating more than $500 to donating precisely $500 is to avoid the cost of filing Form 8283. Therefore, one can use the differences between the 1984 and 1985 distributions to back out compliance costs. Bunching by these individuals represents neither new donations, nor cheating donations. I account for this by removing just enough of the excess mass at $500 to fill in the missing mass to the right of the threshold.

Second, I use my measure of compliance costs to estimate an increase in *genuine* donations due to simplified self-reporting requirements (predictions #1 and #2). To do so, I make a simplifying assumption that the cost of writing a statement in 1984 was equivalent to the cost of filling out Form 8283 in 1985. The assumption relies on the fact that the content of the statement is equivalent to that of Form 8283; thus, both actions should require approximately the same amount of effort. If the two costs are equivalent, then the proportion of taxpayers who chose to forgo the deduction in 1984 should correspond to the proportion of taxpayers who chose to bunch in 1985, bin by bin. Thus, I can estimate the number of individuals who would have reported in 1984 if self-reporting was not required, by appropriately scaling the observed 1984 distribution upward.[9]

[9] The actual approach works as follows. Suppose that 70% of taxpayers who reported between $500 and $600 dollars in 1984 chose to bunch at $500 in 1985. I then adjust

Third, I measure evasion as the difference between the total observed increase in donations after the reform, minus the estimated increase in genuine donations from step 2 (prediction #4). In other words, I define evasion as the difference between the adjusted 1985 distribution – which removes bunching at \$500 from the right – and the counterfactual 1984 distribution – which accounts for an increase in genuine donations due to simplified reporting rules. Intuitively, once we have accounted for legitimate sources of increased donations below the threshold, the remaining excess donations represent evasion.

4.2. Identification Assumptions

The approach described in the previous section relies on several assumptions. In this section, I briefly discuss the validity of each assumption. The failure of these assumptions would imply that the results present a lower bound on the magnitude of evasion, but the qualitative results of the paper remain intact.

Assumption 1: absent reform, the distribution of noncash donations in 1985 would resemble the distribution in 1984. This assumption is verified in Figure 5(d), which shows that prior to 1985, the distributions of noncash donations remained very stable, with minimal variation across years. Moreover, Figures 5(a)-(b) confirm that the observed increase in noncash donations in 1985 was caused by the 1985 reform since the distribution of cash donations was unaffected. Together, these results show that the 1984 distribution of noncash donations can be used as a counterfactual for the 1985/1986 distributions of noncash donations.

Assumption 2: compliance costs are fixed, and the distribution of compliance costs is similar across individuals. The cost of filling out Form 8283 is likely to depend on the number of items described rather than the overall dollar value. Unfortunately, the available data do not provide details on the type and number of donations made. Since there is no reason to believe that individuals who make larger donations necessarily give more items rather than the same number of items but of higher value, one can reasonably as-

---

the first bin, \$0 to \$100, of the observed 1984 distribution by multiplying the number of donors in that bin by $1/(1-0.7)$ to account for the 70% of missing donors. I repeat this procedure for the next bin, etc. The adjustment stops when the proportion of taxpayers who chose to bunch at \$500 instead of reporting the actual number of donations in 1985 is zero.

sume that the cost of compliance is fixed, but heterogeneous. Individuals who bunched at \$0 in 1984 are poorer and had lower MTRs and a potentially lower opportunity cost of time than individuals who bunched at \$500 in 1985. Thus, the chosen approach is likely to overestimate the compliance cost of writing a statement in 1984 and, therefore, underestimate the amount of evasion. Therefore, the results in this study generate a lower bound on the true amount of evasion generated by the 1985 reform. If compliance cost heterogeneity is driven by income differences, I partially circumvent this concern by estimating compliance and evasion responses separately for each quartile of adjusted gross income in Appendix A.

Assumption 3: cheating is possible only below the threshold. If filling out Form 8283 does not prevent taxpayers from cheating, then the described approach underestimates the magnitude of total evasion. The main concern about the chosen identification strategy is the possibility that some individuals experienced an increase in both compliance and evasion costs at \$500, in which case my estimate of compliance cost is biased upward, and the results again generate a lower bound on the true amount of evasion. This would be the case if, for example, the evasion cost is fixed and depends on the level of self-reporting requirements: low when no reporting is required and high when some reporting is necessary. While this is possible, the magnitude of the bias is likely to be small for two reasons. First, only decreases in *fixed* costs of evasion would persuade individuals to reduce their reported donations since, for individuals who report more than \$500, the *marginal* cost of evasion does not change (both before and after the reform, they had to fill out Form 8283). Second, the results in Section 5.2 will show that, while individuals reported many untruthful noncash donations after the reform, the overall magnitude of cheating was rather small, suggesting that even when self-reporting is not required, the fixed and marginal costs of evasion are high enough to discourage individuals from cheating. If the cost of cheating is even higher in the presence of self-reporting, the number of evaders prior to the 1985 reform is likely to be very low. Both arguments imply that, while a change in compliance requirements affected all individuals – those who cheated and those who did not cheat – the change in evasion costs would have only affected a small group of cheaters. Therefore, it is reasonable to assume that changes in the cost of evasion are of second order to the changes in compliance costs experienced by these individuals. Hence, relaxing the third assumption and allowing for cheating above the self-reporting thresholds does not change the validity of the results, merely the interpretation. If self-reporting does not prevent individuals from cheating, this study estimates evasion by taxpayers who are influenced by the self-reporting requirement – the ultimate group of interest from the policy perspective – and disregards individuals who cheat, regardless of reporting requirements.

Assumption 4: Form 8283 is viewed as equivalent to the hand-written statement. While the content of the written statement that was required prior to 1985 is identical to that of Form 8283, individuals might view Form 8283 as more "official" and, therefore, interpret the reform as an increase in scrutiny. If this were the case, part of the decrease in donations to the right of the $500 threshold could be due to reductions in cheating, which would then lead to overestimation of compliance costs and underestimation of evasion responses.

Finally, it is possible that individuals choose to bunch at the compliance threshold because they think that the probability of being audited is higher if their reported donations exceed the threshold, regardless of whether or not they cheat on charitable donations. With this possibility in mind, the comliance costs should be interpreted broadly and encompass both the opportunity cost of time for filling out Form 8283, the psychological hassle cost of doing so, and the expected cost of future audits.[10]

5. Estimating Evasion and Compliance Costs

5.1. Empirical Results: Identifying Evasion

It is likely that individuals learned about the compliance change in the beginning of 1986, when they began preparing their 1985 tax return but after they had made their 1985 donations. For this reason, I study changes in noncash donations in both 1985 and 1986. Extending the analysis to later years is problematic because of the Tax Reform Act of 1986. When comparing the 1984 and 1985/1986 distributions, I choose not to adjust for inflation; however, the results are not very sensitive to inflation adjustments (see Appendix A).[11]

[10] For the majority of taxpayers who are not self-employed, the probability of being audited is very small and is less than 0.5%. There is also no empirical evidence that indicates that the probability of audit increases if one submits Form 8283.

[11] I find that inflation adjustment is not necessary for three reasons. First, the unadjusted for inflation past distributions of noncash donations overlap well in 1982-1984

I start by comparing the number of individuals with donations above \$500 in 1985 and in 1984 using the results from Figure 2(a). Let $b_{84}(i)$ and $b_{85}(i)$ identify the percent of itemizers with noncash donations of $i = (\$0, \$100]$, $(\$100, \$200]$, etc. in 1984 and 1985, respectively. First, I fit a 3rd-degree fractional polynomial to the bins $b_{84}(i)$ and $b_{85}(i)$ with $i = (500, 600], .., (\$N, \$N + \$100]$ and $N = 2000$, resulting in smoothed counts $Poly_{84}(i)$ and $Poly_{85}(i)$.[12] The procedure is not very sensitive to the degree of polynomial used and the choice of window N, see robustness checks in Appendix Figure C.3. Next, I adjust the 1985 distribution to the right of the threshold upward by "filling in" the missing mass for all bins in which the difference between the smoothed polynomials is positive. I do so by multiplying the number of donors in each bin $b_{85}(i)$ by $\text{Poly}_{84}(i)/\text{Poly}_{85}(i)$ until the first bin for which $\text{Poly}_{84}(i)/\text{Poly}_{85}(i) \leq 1$. At the same time, I reduce the size of the spike at \$500 by subtracting the respective amounts from the \$500 bin. This procedure results in an adjusted 1985 distribution b_{85}^{adj} that satisfies

$$b_{85}^{adj} = \begin{cases} b_{85}(i) & \text{if } i = (\$0, \$100]), ..., (\$300, \$400] \\ b_{85}(i) - \sum_{j=(\$500,\$600]}^{(\$J,\$J+\$100]} b_{85}(j) \left[\frac{\text{Poly}_{84}(j)}{\text{Poly}_{85}(j)} - 1\right] & \text{if } i = (\$400, \$500] \\ b_{85}(i) * \frac{\text{Poly}_{84}(i)}{\text{Poly}_{85}(i)} & \text{if } i = (\$500, \$600], .., (\$J, \$J + \$100] \\ b_{85}(i) & \text{if } i = (\$J{+}\$100, \$J{+}\,\$200], .., (\$N, \$N{+}\$10 \end{cases}$$

where $\$J$ is such that $\frac{\text{Poly}_{84}(i)}{\text{Poly}_{85}(i)} > 1$ for all $(\$500, \$600] \leq i \leq (\$J, \$J + \$100]$ and $\frac{\text{Poly}_{84}(i)}{\text{Poly}_{85}(i)} \leq 1$ for $i = (\$J + \$100, \$J + \$200]$.

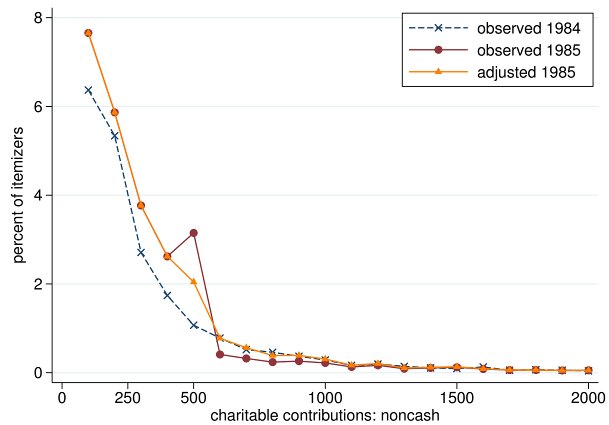
The results of this adjustment procedure are shown in Figure 6(a). The dashed-X line and the solid-circles line are inflation-adjusted reproductions from Figure 2(a). The solid-triangle line is the adjusted 1985 density: it matches the original distribution up to \$500 and approximately above \$1100. But it shows a much smaller spike at \$500 and approximately matches the observed 1984 distribution between \$500 and \$1100. Note that the persistent

(Figure 5(d)). Second, the unadjusted cash donations overlap well in 1984-1985 (Figures 5(a)-(b)). Third, many noncash donations are multiples of \$100, which means that any inflation adjustment would "push" these donations into the larger bin.

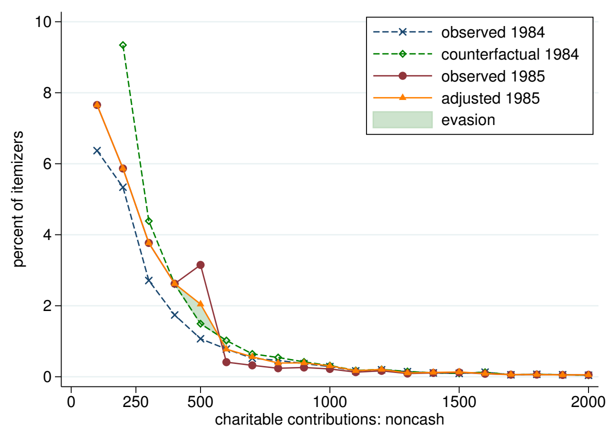
[12] The implemented approach can be applied directly to the observed counts of noncash donations in 1984 and 1985. However, using polynomial approximation results in more accurate estimates of compliance costs, described in Section 5.2.2.

Figure 6: Comparing the 1984 and 1985 Distributions of Noncash Donations

(a) Adjusted 1985 Density



(b) Adjusted 1985 and Counterfactual 1984 Densities, and Evasion



Notes: Noncash contributions of individuals who have itemized deductions and whose overall charitable contributions did not exceed 20% of AGI. Unadjusted for inflation \$100 bins: (\$0,\$100],..,(\$1900,\$2000]. The adjusted 1985 distribution accounts for bunching at the \$500 threshold from the right by redistributing part of the excess mass to fill in the missing mass between the observed 1985 and 1984 distributions to the right of \$500. The counterfactual 1984 distribution (bin (\$0,\$100] is omitted) accounts for missing donations around the \$0 threshold by inflating the reported donations in 1984 by the fraction of missing filers based on compliance cost estimates (lower bound counterfactual). For a detailed explanation, see Section 5.1.

spike at \$500 is the first sign of evasion. If all of the excess mass at \$500 was due to the cost of filing Form 8283, the adjusted 1985 distribution would be smooth, with no bunching at \$500.

The next step is to recreate the counterfactual 1984 distribution to account for the missing genuine donations close to \$0. Recall that, prior to 1985, all individuals who reported any amount of noncash contributions had to submit a written statement detailing their donations. Since the content of the statement is equivalent to that of Form 8283, both actions should require approximately the same amount of effort. As described in Section 4.2, I make a simplifying assumption that the cost of writing a statement in 1984 is equal to the cost of filling out Form 8283 in 1985. If the two costs are equal, then the proportion of taxpayers who chose to forgo a deduction of \$50 in 1984 should correspond to the proportion of taxpayers who chose to reduce reported donations from \$550 to \$500 in 1985 since, in both cases, individuals forgo \$50 worth of deductions. This means that I can account for the missing donations in 1984, by multiplying the observed distribution $b_{84}(i)$ by $\text{Poly}_{84}(i)/\text{Poly}_{85}(i)$. The counterfactual distribution b_{84}^{lb} then satisfies

$$b_{84}^{lb} = \begin{cases} b_{84}(i) * \frac{\text{Poly}_{84}(i)}{\text{Poly}_{85}(i)} & \text{if } i = (\$0, \$100], .., (\$J - \$500, \$J - \$400] \\ b_{84}(i) & \text{if } i = (\$J - \$400, \$J - \$300], .., (\$N, \$N + \$100]. \end{cases}$$

The recovered counterfactual – dashed-diamond line – is presented in Figure 6(b). The adjustment procedure grossly overestimates the number of potential new donors in the (\$0, \$300] region. Two explanations are possible. First, these individuals' compliance costs might be significantly lower than assumed, leading to an overestimate of missing donations. However, accounting for variation in income or other observable characteristics still results in an overestimation of small donations (see the heterogeneity analysis in Appendix A). A more likely explanation is that some taxpayers do not bother reporting all of their charitable donations even when compliance requirements are low. This is consistent with the findings of Gillitzer and Skov (2018), who document that the introduction of pre-populated forms significantly increased the claims of *small* charitable donations. Both explanations imply that the estimated counterfactual represents an upper bound on donations that would have been reported in 1984 if individuals had not been required to write a statement and could not cheat.

The adjustment procedure suggests that all new donations below \$400 in 1985 are likely to have been genuine. In other words, individuals who found it too costly to write a statement in 1984 started to report donations in 1985. However, in the [\$400, \$500] region, the adjusted 1985 density is greater than the recovered counterfactual 1984 density. This suggests that even after removing the excess mass from \$500 (to account for those who bunched from the right) and after accounting for legitimate new donors (who found it too costly to report in 1984), there remains an "unexplained" excess mass at \$500. These individuals must have been cheating.

Figure 7(a) and (b) repeats the above procedure using the 1984 and 1986 distributions. The results are similar, but the magnitude of evasion is much larger. This finding is not surprising in light of the large increase in donations around the \$500 threshold in 1986. Figures 6 and 7 suggest that the 1985 reform led to a substantial increase in evasion. At the same time, the reform also led to an increase in genuine charitable donations and saved time and money for many individuals who donated less than \$500. I quantify the results of the reform in the next section.

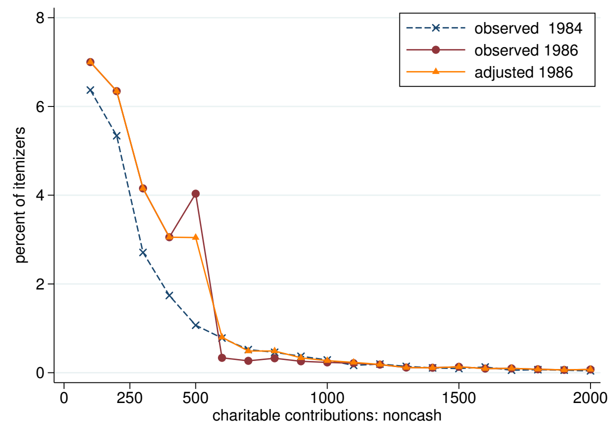
The counterfactuals $b_{84}^{lb\,counter}$ shown in Figures 6 and 7 are appropriate if the cost of the statement is correctly predicted by the cost of Form 8283, and the relatively low number of small new donations in 1985/86 was due to an additional fixed cost of reporting any amount of noncash donations. If the cost of writing a statement is overestimated, then counterfactual b_{84}^{lb} generates a lower bound on the magnitude of evasion. In an attempt to estimate an upper bound on evasion, I compute alternative counterfactuals shown in Figure 8. To construct these counterfactuals, I use the same adjustment procedure as when I construct b_{84}^{lb} but scale each adjustment by $\frac{\sum_{j=(0,100]}^{(400,500]} b_{85}^{adj}(j)}{\sum_{j=(0,100]}^{(400,500]} b_{84}^{lb}(j)}$, so that the total number of counterfactual donations matches the number of observed donations below the threshold in 1985 or 1986, respectively. In other words,

$$b_{84}^{ub} = \begin{cases} b_{84}(i)\frac{\text{Poly}_{84}(i)}{\text{Poly}_{85}(i)}\frac{\sum_{j=(0,100]}^{(400,500]} b_{85}^{adj}(j)}{\sum_{j=(0,100]}^{(400,500]} b_{84}^{lb}(j)} & \text{if } i = (\$0,\$100], .., (\$J-\$500, \$J-\$400] \\ b_{84}(i) & \text{if } i = (\$J-\$400, \$J-\$300], .., (\$N, \$N+\$100]. \end{cases}$$

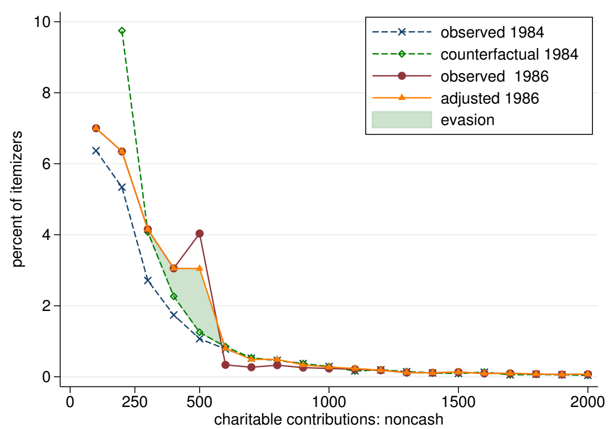
This counterfactual is built on the assumption that some share of individuals in the population choose not to report their donations, regardless of the compliance rules, and that these individuals are spread uniformly across the compliance cost spectrum. The main advantage of this counterfactual is that it matches the number of actual observed donations after the reform. Since

Figure 7: Comparing 1984 and 1986 Distributions of Noncash Donations

(a) Adjusted 1986 Density



(b) Adjusted 1986 and Counterfactual 1984 Densities, and Evasion



Notes: Noncash contributions of individuals who have itemized deductions and whose overall charitable contributions did not exceed 20% of AGI. Unadjusted for inflation \$100 bins: (\$0,\$100],..,(\$1900,\$2000]. The adjusted 1986 distribution accounts for bunching at the \$500 threshold from the right by redistributing part of the excess mass to fill in the missing mass between the observed 1986 and 1984 distributions to the right of \$500. The counterfactual 1984 distribution (bin (\$0,\$100] is omitted) accounts for missing donations around the \$0 threshold by inflating the reported donations in 1984 by the fraction of missing filers based on compliance cost estimates (lower bound counterfactual). For a detailed explanation, see Section 5.1.

individuals are less likely to not claim their deductions when the amounts are large, counterfactual b_{84}^{ub} arguably generates an upper bound on the amount of evasion.

5.2. Empirical Results: Quantifying Compliance Costs and Evasion

The 1985 reform had several effects. First, it removed compliance costs for individuals donating less than \$500. This decrease in compliance costs also led to an increase in genuine donations. Second, it decreased the number of donations above \$500 and led to more evasion. Table 2 summarizes the results of this cost-benefit analysis with bootstrapped standard errors based on 1000 replications. The results presented are based on the lower bound counterfactuals shown in Figures 6 and 7 and upper bound counterfactual shown in Figure 8.

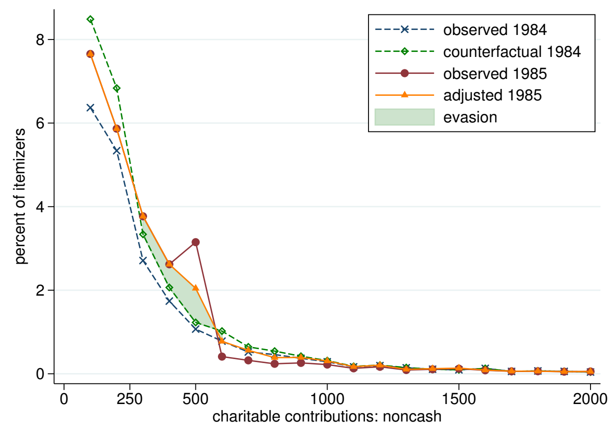
Table 2 shows that the reform increased the reported donations by \$460 million in 1985 and by \$770 million in 1986. At the same time, the reform led to approximately \$58-70 million less in claimed donations in the [\$500,\$2000] range, calculated as the area between the adjusted 1985/1986 distribution and observed the 1985/1986 distribution.

5.2.1. Quantifying Evasion

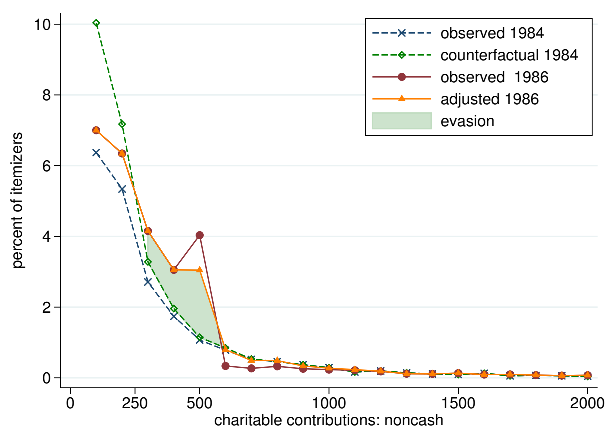
Quantifying evasion requires an additional assumption, as one cannot observe how much, if at all, the evaders have actually donated. To estimate the amount of cheating donations I rely on the following two approaches. For the lower bound counterfactual, I assume that each evader donated \$100. Two justifications for this choice. First, cheating is likely to be confined to experienced "donors." If all individuals were willing to cheat, one would expect a surge in cheating donations over time since individuals who make \$0 noncash donations could cheat by some positive amount. Yet Figure 3 documents that the number of noncash donors increased from 20% in 1984 to only 40% in 1995 – ten years after the reform. One possible explanation is that taxpayers were unaware of this evasion channel because they were not familiar with the reporting rules. However, this justification is partially inconsistent with the fact that more than 80% of itemizers reported cash donations and, therefore, must be somewhat familiar with the regulations associated with the charitable giving deduction. Second, from Figures 6 and 7 follows that the lower bound counterfactual distribution of 1984 donations exceeds the observed 1985/1986 distributions in the (\$0,\$200] range. There-

Figure 8: Evasion: Upper Bound Counterfactuals

(a) 1984 – 1985



(b) 1984 – 1986



Notes: Noncash contributions of individuals who have itemized deductions and whose overall charitable contributions did not exceed 20% of AGI. Unadjusted for inflation $100 bins: ($0,$100],..,($1900,$2000]. The adjusted 1986 distribution accounts for bunching at the $500 threshold from the right by redistributing part of the excess mass to fill in the missing mass between observed the 1986 and 1984 distributions to the right of $500. The counterfactual 1984 distribution accounts for missing donations around the $0 threshold by inflating the reported donations in 1984 by the fraction of missing filers based on compliance cost estimates (upper bound counterfactual). For a detailed explanation, see Section 5.1.

fore, if cheaters made any donations, they must have made a donation of less than $200, or an average of $100.

For the upper bound counterfactual, the dollar value of evasion can be estimated directly from Figure 8 because the total number of counterfactual donors matches the number of observed donors below the threshold in 1985/86. Therefore, evasion is the difference between the area under the adjusted 1985/86 distribution (with bunching from the right due to compliance costs removed) and the area under the upper bound 1984 counterfactual distribution. In other words, the cheating donations equal the difference between the total reported below-the-threshold donations in 1985/86 and the total predicted donations.

Using the lower bound counterfactual, I find that the reform led to $78 million of false donations in 1985 and $340 million in 1986. This suggests that 20% of the observed increase in donations in 1985 and 48% in 1986 were due to evasion. The upper bound estimates imply higher levels of evasion – 49–67%.

While the observed levels of cheating are generally consistent with the findings from other studies (see Slemrod (2007) for a review), the low levels of cheating are nonetheless surprising because charitable giving is not third-party reported and the likelihood of getting caught is extremely low. As was discussed in Section 2.1, in contrast to cash donations for which receipts are generally required, receipts are not required for noncash donations if "it is impractical to get one (for example, if you leave property at a charity's unattended drop site)." Thus, in case of an audit, it would be very difficult to prove that a taxpayer who reported $500 worth of noncash donations is cheating.

Appendix A explores whether evasion is more prevalent among certain demographic groups. The results suggest that richer individuals might evade more, but the differences are not statistically significant. Similarly, I find little variation in the amount of evasion among single and married individuals, individuals who use tax preparers and those who do not, and among those who report some self-employment income and those who do not.

5.2.2. Quantifying Compliance Costs

One major benefit of the 1985 reform was the removal of compliance costs for all individuals who donate $500 or less. As discussed in Section 4.1, individuals who chose to bunch at $500 either reduced their donations, thus forgoing some utility from giving, or reported less, thus forgoing part

Table 2: Evasion and Compliance Cost Savings

	Lower Bound		Upper Bound	
	1985	**1986**	**1985**	**1986**
New Donations (in mil. $)	460.28	769.55	460.28	769.55
	(41)	(48)	(41)	(48)
(Potentially) Lost Donations (in mil. $)	70.17	57.91	70.17	57.91
	(11)	(12)	(11)	(12)
Evasion (in mil. $)	77.98	339.97	192.22	479.96
	(45)	(66)	(39)	(53)
Assuming donations above $500 are reduced				
Percent Evasion (%)	19.99	47.77	49.27	67.44
	(9.46)	(6.76)	(7.24)	(4.67)
Average Cost of Filing Form 8283 (in $)	51.08	26.75	51.08	26.75
	(13.17)	(7.62)	(13.17)	(7.62)
Compliance Cost Saved (in mil. $)	18.19	29.64	18.19	29.64
	(5)	(5)	(5)	(5)
Assuming donations above $500 are not reduced				
Percent Evasion (%)	16.94	44.18	41.76	62.37
	(8.64)	(7.02)	(6.78)	(5.04)
Average Cost of Filing Form 8283 (in $)	98.52	70.56	98.52	70.56
	(17.33)	(11.51)	(17.33)	(11.51)
Compliance Cost Saved (in mil. $)	124.04	162.40	124.04	162.40
	(16)	(16)	(16)	(16)
Average Tax Rate	29.4	30.08	29.4	30.08

Notes: Standard errors shown in parentheses. New donations: dollar amount of new donations (both genuine and not). Potentially lost donations: dollar amount of the missing donations above $500. Evasion: dollar amount of untruthful donations. Percent evasion: percent of untruthful donations among "new" donations in 1985 or 1986. Average cost: cost of filing Form 8283 in 1985 and 1986 dollars, respectively. Compliance cost saved: dollar amount of the compliance cost saved because of the reform. Average tax rate: for individuals who donate noncash contributions in the range of $500-$1000. Based on noncash contributions of individuals who have itemized deductions and whose overall charitable contributions did not exceed 20% of AGI. *Source*: Cross-sectional data from SOI Public Use Tax Files. See complete description in Section 5.2.

of the tax deduction. Since reporting precisely the threshold amount implies forgoing part of the deduction, the optimal donation depends on the individual's decision to donate at the marginal cost of one dollar instead of $1-\tau$. Given an average marginal tax rate of 30% and a plausible range of elasticities of charitable giving, ranging between -0.3 to -1.3 (Andreoni (2006); Hungerman and Ottoni-Wilhelm (2016)), most individuals will find it optimal to reduce their donation significantly, and many will reduce it to \$500 precisely.[13] Therefore, as a first approach, I estimate a lower bound on compliance costs by assuming that individuals reduce their donations to \$500. Second, I also estimate an upper bound on compliance costs by assuming that individuals choose to forgo the subsidy. While the first approach requires an estimate of forgone utility due to the suboptimal amount of donations made, the advantage of the second approach is in its simplicity: it relies on a revealed preference argument and requires no parametric assumptions about utility functions. In both cases, I assume that charitable giving is a small share of the overall income, and, therefore, individuals' utility can be approximated with a quasilinear utility function – i.e. $U_i(C,X) = C + u_{xi}(X)$.

Let X^* denote the amount of donations an individual would make if compliance costs were zero and evasion was not possible. Then, X^* solves $U'_{xi} = (1-\tau)U'_{ci}$.

Case 1: Individuals reduce donations. Taxpayer i will report *and* donate \$500 if the utility from doing so is higher than reporting and donating X^*:

$$Y_i - (1-\tau)X_i^* + u_{xi}(X_i^*) - \phi_i \leq Y_i - 500(1-\tau) + u_{xi}(500)$$

or

$$\phi_i \geq u_{xi}(X_i^*) - u_{xi}(500) - (1-\tau)(X_i^* - 500).$$

Assume that $u_{xi} = A_i \varepsilon^{-1} X^{\varepsilon}$. Then, using a Taylor expansion of $u_{xi}(\cdot)$ around X_i^*, we find

$$u_{xi}(500) \approx u_{xi}(X_i^*) - (1-\tau)(X_i^* - 500) + \frac{1}{2}(1-\tau)(\varepsilon - 1)\frac{(X_i^* - 500)^2}{X_i^*}.$$

[13] An MTR of 30% implies a 43%($= 0.3/(1-0.3)$) increase in donation cost. For elasticities of -0.3 and -1.3, this would, for example, incentivize a reduction of giving from \$600 to \$523 or \$265, and from \$800 to \$697 or \$352, respectively. Therefore, while individuals with small elasticities will reduce donations to amounts above \$500, individuals with larger elasticities are likely to report and donate precisely \$500.

Therefore, taxpayer i will report and donate \$500 if $\phi_i \geq \frac{1}{2}(1-\tau)(1-\varepsilon)\frac{(X_i^*-500)^2}{X_i^*}$. The percentage of people who continue to contribute in 1985 gives us the values of the cumulative distribution function of compliance cost, F_ϕ, since for each bin $b_j = (\$500, \$600], (\$600, \$700]$, etc. with average donation $j = \$550, \$650$, etc. we have

$$\frac{\text{Poly}_{85}(b_j)}{\text{Poly}_{84}(b_j)} = Prob\left(\phi_i \leq \frac{1}{2}(1-\tau)(1-\varepsilon)\frac{(j-500)^2}{j}\right) \tag{2}$$

$$= F_\phi\left(\frac{1}{2}(1-\tau)(1-\varepsilon)\frac{(j-500)^2}{j}\right). \tag{3}$$

Case 2: Individuals do not reduce donations. Alternatively, taxpayer i will choose to donate X_i^* but report \$500 if the utility from doing so is higher than donating and reporting X_i^*:

$$Y_i-(1-\tau)X_i^*+u_{xi}(X_i^*)-\phi_i \leq Y_i-X_i^*+500\tau+u_{xi}(X_i^*) \quad \text{or} \quad \phi_i \geq \tau(X_i^*-500).$$

Therefore, I can estimate the distribution of compliance cost $\phi_i \sim F_\phi$ by quantifying the amount of forgone deductions above \$500 in 1985 as compared to 1984. Thus, for bins b_j with average donations j, we have

$$\frac{\text{Poly}_{85}(b_j)}{\text{Poly}_{84}(b_j)} = Prob\left(\phi_i \leq \tau(j-500)\right) = F_\phi(\tau(j-500)). \tag{4}$$

Equations (3) and (4) specify two approaches to estimating the cost of compliance. The first approach assumes that both donations and claiming decreased, while the second approach assumes that donations remained the same but claiming decreased. In 1985, individuals who reported noncash donations in the range of $[\$500, \$1000]$ had an average marginal tax rate of 29.4%, while in 1986, the average tax rate was 30.08%. I use these tax rates to back out the cumulative distribution of compliance cost using formulas (3) and (4). To estimate the cost of compliance using (3), I set $\varepsilon = 0.23$, which corresponds to an estimate of elasticity of charitable giving of $1/(\varepsilon - 1) = -1.3$.[14]

[14]The chosen value is at the upper bound of the empirical estimates, which implies that the estimated compliance costs are at the lower bound of possibilities (Andreoni (2006); Hungerman and Ottoni-Wilhelm (2016)). I choose a more conservative measure of compliance cost to complement the upper bound estimates derived from the first approach.

Table 2 presents the results of these calculations. Under the first assumption, I find that individuals are willing to forgo up to \$27–\$51, on average, in order to avoid filling out Form 8283 (in 1985/1986 dollars). Under the second assumption, I calculate the average cost of filling out Form 8283 as \$71–\$99. In addition to the average cost of filing, Table 2 also shows cumulative savings from simplified compliance requirements. These savings rely on the number of donors in 1984 (unadjusted) and account for the fact that these individuals self-selected into donating and, therefore, had lower-than-average compliance costs. The results show that even under a more conservative assumption (using (3)), the 1985 reform decreased compliance costs by \$18-30 million (1985/1986 dollars).

The estimates of compliance cost – \$27–\$51 in 1985/1986 dollars or \$55–\$107 in 2015 dollars – are rather high considering the content of Form 8283. It is unlikely that filling out Form 8283 would take more than an hour of one's time. Several explanations are possible. First, filling out Form 8283 might be time-consuming because doing so requires taxpayers to learn the rules, obtain Publication 526, and organize receipts. Second, individuals might procrastinate on filing tax returns until the deadline, at which point the cost of filing any additional tax forms can be particularly high. Third, individuals might choose to not exceed the reporting threshold because they think that doing so will increase the probability of being audited. In this study, I am not able to differentiate between these alternative explanations. However, the results of Benzarti (2015), who studies the decision to itemize and explores various explanations for the high estimated cost of filing Schedule A, suggest that high hassle costs and procrastination are the most likely explanations for the observed behavior.

The heterogeneity analysis in Appendix A provides some suggestive evidence that high-income individuals and taxpayers who employ the help of a tax-preparer or who file Schedules C, E, F might experience lower costs of compliance. The differences, however, are not statistically significant.

6. Policy Implications and Conclusion

The results of this paper highlight the effectiveness of self-reporting requirements against evasion. In circumstances in which third-party reporting is not feasible or is too costly, requiring individuals to fill out a form or provide self-reported details of transactions can reduce evasion, even if the provided information is unverifiable. This approach can be particularly useful for transactions that do not generate receipts. For example, commonly-claimed expenses, such as the use of one's personal car or home space for business purposes, are regulated but very difficult to verify. Asking individuals to provide more information for these types of transactions could reduce evasion substantially. Importantly, self-reporting provides a lasting solution to evasion: in 2009, even 24 years after the reform, Figure 1 shows large bunching at the \$500 threshold in the distribution of noncash donations.

While the results of this study show that self-reporting helps reduce evasion, it is unlikely that self-reporting eliminates cheating completely. As Ackerman and Auten (2011) document, taxpayers often exaggerate estimated values of donated items even when they fill out Form 8283. Whether this is done deliberately is unclear: individuals may overvalue personal possessions because these items carry non-monetary values – e.g., through memories. In general, the results of this paper support the view that individuals do not always cheat even when given an opportunity. For most wage earners, deductions are the only opportunity to reduce taxable income, and noncash deductions are the hardest to verify. Because receipts are generally required for cash donations but not for noncash donations, one would expect noncash deductions to be more heavily utilized. Yet, even 20 years after the reporting rules were simplified, less than 50% of itemizers report any amount of noncash donations. This finding suggests that individuals are likely to experience high fixed and variable costs of evasion, in line with previous studies that document low levels of cheating (e.g., Slemrod (2007)). The low rate of cheating is unlikely to be due to lack of information: nearly 90% of itemizers report making cash contributions and, therefore, must be somewhat familiar with tax rules.

The results also call attention to the cost of complying with tax regulations and caution policy makers against excessive requirements. My estimates of compliance costs suggest that individuals are willing to forgo up to \$55–\$107, on average, not to provide a simple account of their noncash donations. Since the estimate is calculated by observing individuals who continue to report positive noncash donations, the estimated compliance cost primarily measures the cost of filling out the statement, rather than the costs of collecting information about their donations or keeping track of receipts. This is the likely explanation for why this paper's compliance estimate of \$55–\$107 is much lower than that of Benzarti (2015), who shows that individuals are willing to forego up to \$644 to avoid the hassle of filing Schedule A (itemized deductions). Benzarti (2015) estimates the cost by observing individuals who choose between itemizing and claiming the standard deduction; choosing the latter avoids not only the cost of filling out Schedule A, but also the cost of record keeping. Therefore, while more-complicated forms are likely to generate higher compliance costs, it is the record keeping that appears to matter the most.

Altogether, the high value of hassle costs and low levels of cheating imply that the government should not impose self-reporting requirements on all citizens, but only on part of the population. To better understand how the reporting thresholds should be set and to determine whether the chosen reporting threshold was set optimally, I calibrate a simple model in Appendix B. In the model, I assume that the government maximizes a social welfare function that accounts for individual utilities, externalities from charitable giving and the cost of providing the subsidy. I show that when determining the optimal reporting threshold, policy makers should weigh the utility and externality losses due to compliance requirements against the tax revenue loss generated by evasion. The reporting threshold is governed primarily by the type and magnitude of cheating: if variable costs of evasion are low and individuals are willing to cheat by large amounts, a low threshold is necessary. However, if variable costs are high, then the optimal threshold depends on the relative magnitudes of the evasion amount and the compliance costs. Overall, in the presence of positive compliance costs and nonzero cheating, it is never optimal to set the threshold at zero or to have no threshold at all. Calibration of the model suggests that setting the threshold at $350 instead of $500 would have reduced welfare losses from evasion and compliance by 70%.[15] The approach employed in this paper thus highlights a path to determining optimal levels of self-reporting: it is best to start with stringent requirements and ease them over time, as this allows for identification of compliance costs and evasion behavior.

While the analysis of this paper focuses on noncash charitable donations, the approach can be directly applied to other settings – in particular, to other tax deductions and credits, as well as to business expenses. The external validity of the results and the recommendations for optimal thresholds

[15] In other words, let W_0 measure individuals' welfare if cheating was not possible and compliance costs are zero. Let W^X measure individuals' welfare if cheating is possible and compliance costs are as estimated and the threshold is set to $X. Then the estimated welfare gains are $\Delta W = \frac{W^{optimal} - W^{500}}{W_0 - W^{500}}$.

in other settings will depend largely on what drives the cheating behavior. Policy makers would need to understand how evasion depends on the nature of self-reporting requirements, the likelihood of being caught, the visibility of the evasion channel, and ethical considerations.

Ackerman, D., Auten, G. E., Jun. 2011. Tax Expenditures For Noncash Charitable Contributions. National Tax Journal 64, 651–687.

Almunia, M., Lopez-Rodriguez, D., Feb. 2018. Under the Radar: The Effects of Monitoring Firms on Tax Compliance. American Economic Journal: Economic Policy 10 (1), 1–38.
URL https://www.aeaweb.org/articles?id=10.1257/pol.20160229

Andreoni, J., 2006. Philanthropy. In: Kolm, S.-C., Ythier, J. M. (Eds.), Handbook of the Economics of Giving, Altruism and Reciprocity. Vol. 2 of Applications. Elsevier, pp. 1201–1269.
URL http://www.sciencedirect.com/science/article/pii/S1574071406020185

Andreoni, J., Erard, B., Feinstein, J., Jun. 1998. Tax Compliance. Journal of Economic Literature 36 (2), 818–860.
URL http://www.jstor.org/stable/2565123

Artavanis, N., Morse, A., Tsoutsoura, M., May 2016. Measuring Income Tax Evasion Using Bank Credit: Evidence from Greece. The Quarterly Journal of Economics 131 (2), 739–798.
URL https://academic.oup.com/qje/article-abstract/131/2/739/2607170/Measuring-

Asatryan, Z., Peichl, A., Oct. 2016. Responses of Firms to Tax, Administrative and Accounting Rules: Evidence from Armenia. Mimeo.
URL https://papers.ssrn.com/abstract=2850534

Benzarti, Y., 2015. How Taxing Is Tax Filing? Leaving Money on the Table Because of Compliance Costs. Mimeo.

Blumenthal, M., Slemrod, J., Jun. 1992. The Compliance Cost of The U.S. Individual Income Tax System: A Second Look After Tax Reform. National Tax Journal 45 (2), 185–202.

Buchheit, S., Lightner, T., Masselli, J. J., Ricketts, R. C., Jan. 2005. Noncash Charitable Giving: Evidence of Aggressive Taxpayer Reporting

Following a Compliance Change. The Journal of the American Taxation Association 27 (s-1), 1–17.
URL http://aaajournals.org/doi/abs/10.2308/jata.2005.27.s-1.1

Christian, C. W., 1994. Voluntary Compliance With the Individual Income Tax: Results From the 1988 TCMP Study. The IRS Research Bulletin Publication 1500, 35–42.

Clotfelter, C. T., Aug. 1983. Tax Evasion and Tax Rates: An Analysis of Individual Returns. The Review of Economics and Statistics 65 (3), 363–373.
URL http://www.jstor.org/stable/1924181

Dharmapala, D., Slemrod, J., Wilson, J. D., Oct. 2011. Tax Policy and the Missing Middle: Optimal Tax Remittance with Firm-level Administrative Costs. Journal of Public Economics 95 (9–10), 1036–1047.
URL http://www.sciencedirect.com/science/article/pii/S0047272710001568

European Commission, 2013. A Review and Evaluation of Methodologies to Calculate Tax Compliance Costs. Taxation Paper 40, European Commission.

Fack, G., Landais, C., 2016. The Effect of Tax Enforcement on Tax Elasticities: Evidence from Charitable Contributions in France. Journal of Public Economics 133, 23–40.

Feldman, N. E., Slemrod, J., 2007. Estimating Tax Noncompliance with Evidence from Unaudited Tax Returns. The Economic Journal 117 (518), 327–352.
URL http://onlinelibrary.wiley.com/doi/10.1111/j.1468-0297.2007.02020.x/abstra

Gillitzer, C., Skov, P. E., 2018. The Use of Third-Party Information Reporting for Tax Deductions: Evidence and Implications from Charitable Deductions in Denmark. Oxford Economic Papers.
URL https://academic.oup.com/oep/advance-article/doi/10.1093/oep/gpx055/47919

Gordon, R., Li, W., Aug. 2009. Tax Structures in Developing Countries: Many Puzzles and a Possible Explanation. Journal of Public Economics 93 (7–8), 855–866.
URL http://www.sciencedirect.com/science/article/pii/S004727270900036X

Hungerman, D., Ottoni-Wilhelm, M., 2016. What is the Price Elasticity of Charitable Giving? Toward a Reconciliation of Disparate Estimates. Mimeo.
URL http://fieldexperiments-papers.s3.amazonaws.com/papers/00557.pdf

Kanbur, R., Keen, M., May 2014. Thresholds, Informality, and Partitions of Compliance. International Tax and Public Finance, 1–24.
URL http://link.springer.com/article/10.1007/s10797-014-9314-3

Keen, M., Mintz, J., Mar. 2004. The Optimal Threshold for a Value-Added Tax. Journal of Public Economics 88 (3–4), 559–576.
URL http://www.sciencedirect.com/science/article/pii/S0047272702001652

Kleven, H. J., Knudsen, M. B., Kreiner, C. T., Pedersen, S., Saez, E., 2011. Unwilling or Unable to Cheat? Evidence From a Tax Audit Experiment in Denmark. Econometrica 79 (3), 651–692.
URL http://onlinelibrary.wiley.com/doi/10.3982/ECTA9113/abstract

Kopczuk, W., Slemrod, J., 2006. Putting Firms Into Optimal Tax Theory. The American Economic Review 96 (2), 130–134.
URL http://www.jstor.org/stable/30034628

LaLumia, S., Sallee, J. M., Apr. 2013. The Value of Honesty: Empirical Estimates from the Case of the Missing Children. International Tax and Public Finance 20 (2), 192–224.
URL http://link.springer.com/article/10.1007/s10797-012-9221-4

Lederman, L., 2010. Reducing Information Gaps to Reduce the Tax Gap: When is Information Reporting Warranted. Fordham L. Rev. 78, 1733.
URL http://heinonline.org/hol-cgi-bin/get_pdf.cgi?handle=hein.journals/flr78&

Marion, J., Muehlegger, E., Aug. 2008. Measuring Illegal Activity and the Effects of Regulatory Innovation: Tax Evasion and the Dyeing of Untaxed Diesel. Journal of Political Economy 116 (4), 633–666.
URL http://www.jstor.org/stable/10.1086/591805

Naritomi, J., 2013. Consumers as tax auditors. Mimeo.
URL http://www8.gsb.columbia.edu/faculty-research/sites/faculty-research/file

Pissarides, C. A., Weber, G., Jun. 1989. An Expenditure-Based Estimate of Britain's Black Economy. Journal of Public Economics 39 (1), 17–32.
URL http://www.sciencedirect.com/science/article/pii/0047272789900522

Pitt, M. M., Slemrod, J., Dec. 1989. The Compliance Cost of Itemizing Deductions: Evidence from Individual Tax Returns. The American Economic Review 79 (5), 1224–1232.
URL http://www.jstor.org/stable/1831448

Serocki, J. S., Murphy, K. J., 2013. The Effect of the U.S. Federal Income Tax Appraisal Requirement on Noncash Charitable Contributions for Individuals. Journal of Economics and Finance, 1–18.
URL http://link.springer.com/article/10.1007/s12197-013-9264-0

Slemrod, J., Aug. 1989. Are Estimated Tax Elasticities Really Just Tax Evasion Elasticities? The Case of Charitable Contributions. The Review of Economics and Statistics 71 (3), 517–522.
URL http://www.jstor.org/stable/1926910

Slemrod, J., Jan. 2007. Cheating Ourselves: The Economics of Tax Evasion. The Journal of Economic Perspectives 21 (1), 25–48.
URL http://www.jstor.org/stable/30033700

Slemrod, J., Collins, B., Hoopes, J. L., Reck, D., Sebastiani, M., May 2017. Does credit-card information reporting improve small-business tax compliance? Journal of Public Economics 149 (Supplement C), 1–19.
URL http://www.sciencedirect.com/science/article/pii/S0047272717300233

Slemrod, J., Sorum, N., 1984. The Compliance Cost of the U.S. Individual Income Tax System. National Tax Journal 37 (4), 461–474.

APPENDIX

A Inflation Adjustment and Response Heterogeneity

Table A.1 shows the results with the inflation adjustment. While the estimates of evasion are slightly lower and estimates of compliance costs are higher, the overall results are similar to the estimates in Table 2.

Next, I explore whether evasion is more prevalent among some demographic groups and whether the cost of filing Form 8283 varies across individuals. The results presented in Tables A.2 and A.3 are based on the distributions of noncash donations in 1984 and in 1986. The compliance cost is calculated under the assumption that individuals reduce their donations to $500.

I start by breaking down itemizers by quartiles of income in Figure A.1 and Table A.2.[16] Two observations are notable from Figure A.1. First, richer individuals make substantially larger donations than poorer individuals. Second, richer individuals evade more. Estimates in Table A.2 suggest that individuals in the top quartile of adjusted gross income (AGI) evade about 1.5 to 2 times more than individuals in the bottom two quartiles of AGI; however, the difference between the top quartile and the bottom two quartiles is not statistically significant. I use (2) to estimate compliance costs and find that the cost of filing Form 8283 decreases with income. Top-quartile individuals incur a cost of filing Form 8283 that is nearly two times lower than that of individuals in the bottom two quartiles. A possible explanation is that individuals in the top quartile of AGI are more likely to employ a tax preparer, which may reduce the cost of filing Form 8283.

Figure A.1 also allows me to investigate the validity of the adjustment procedure used in Section 5.1: Recall that under assumption 2, discussed in Section 4.2, I assume that individuals who donate less than $500 incur similar compliance costs as individuals who donate $500 or more. Table A.2 clearly shows that there is substantial heterogeneity in compliance costs among individuals with varying levels of AGI. At the same time, Figure A.1 shows that, even when restricted to a quartile of AGI, the adjustment procedure grossly overestimates the number of individuals who would have reported positive donations in 1984 had there been no reporting requirements. The most likely explanation for the observed behavior is that many individuals choose not to deduct noncash charitable donations when these amounts are small. It could be that taxpayers are not aware of the existence of the noncash deduction or do not find it worthwhile to learn about the rules.

Next, I explore how responses differ depending on whether individuals use tax preparers, whether they report some self-employment income and whether they are single or married. Table A.3 summarizes the results. I find little variation in the amount of evasion across groups, with none of the differences being statistically significant. However, there is substantial variation in the perceived costs of filing Form 8283. For individuals who use a tax-preparer, the costs of filing Form 8283 are two times lower than for those who do not use a tax preparer. Similarly, individuals who

[16] The bottom two quartiles are pooled together, as most of these individuals report noncash donations of less than $500.

have to file Schedules C, E or F incur lower costs than those who do not file self-employment income schedules. Finally, single individuals incur slightly higher costs than joint tax filers. Unfortunately, the observed differences are not statistically significant due to large standard errors. The observed heterogeneity suggests that the perceived cost of compliance may be lower for individuals who are accustomed to filing tax forms, e.g. self-employed individuals, and for taxpayers who use tax preparer assistance.

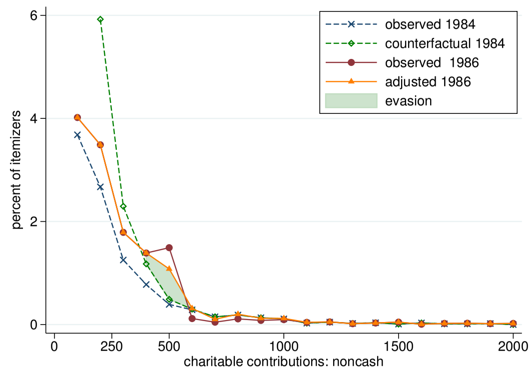
Table A.1: Evasion and Compliance Cost Savings (With Inflation Adjustment)

	Lower Bound		**Upper Bound**	
	1985	**1986**	**1985**	**1986**
New Donations (in mil. $)	323.86	627.99	323.86	627.99
	(45)	(50)	(45)	(50)
(Potentially) Lost Donations (in mil. $)	77.72	69.54	77.72	69.54
	(11)	(12)	(11)	(12)
Evasion (in mil. $)	22.07	235.45	43.51	312.20
	(32)	(60)	(48)	(55)
Assuming donations above $500 are reduced				
Percent Evasion (%)	8.97	42.16	17.68	55.90
	(10.2)	(7.82)	(15.83)	(6.34)
Average Cost of Filing Form 8283 (in $)	68.63	39.72	68.63	39.72
	(13.32)	(11.24)	(13.32)	(11.24)
Compliance Cost Saved (in mil. $)	23.55	35.71	23.55	35.71
	(5)	(5)	(5)	(5)
Assuming donations above $500 are not reduced				
Percent Evasion (%)	6.81	37.49	13.44	49.71
	(8.4)	(7.79)	(12.59)	(6.56)
Average Cost of Filing Form 8283 (in $)	122.17	89.86	122.17	89.86
	(17.28)	(15.68)	(17.28)	(15.68)
Compliance Cost Saved (in mil. $)	139.68	179.47	139.68	179.47
	(17)	(16)	(17)	(16)
Average Tax Rate	29.4	30.08	29.4	30.08

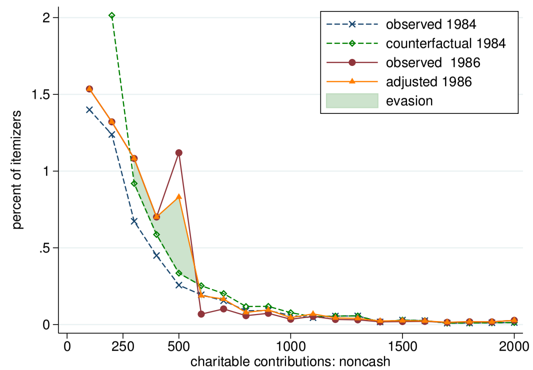
Notes: Standard errors shown in parentheses. New donations: dollar amount of new donations (both genuine and not). Potentially lost donations: dollar amount of the missing donations above $500. Evasion: dollar amount of untruthful donations. Percent evasion: percent of untruthful donations among "new" donations in 1985 or 1986. Average cost: cost of filing Form 8283 in 1985 and 1986 dollars, respectively. Compliance cost saved: dollar amount of the compliance cost saved because of the reform. Average tax rate: for individuals who donate noncash contributions in the range of $500-$1000. Based on noncash contributions of individuals who have itemized deductions and whose overall charitable contributions did not exceed 20% of AGI. *Source*: Cross-sectional data from SOI Public Use Tax Files. See complete description in Section 5.2.

Figure A.1: Noncash Contributions in 1984–1986 by Income Quartiles

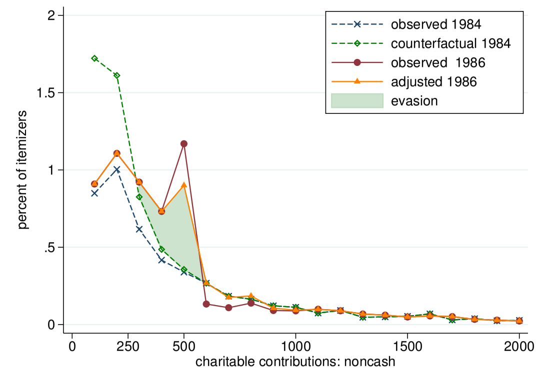
(a) Lower Bound: First and Second Quartiles



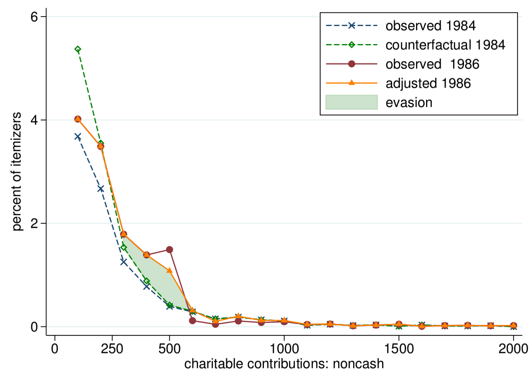
(b) Lower Bound: Third Quartile



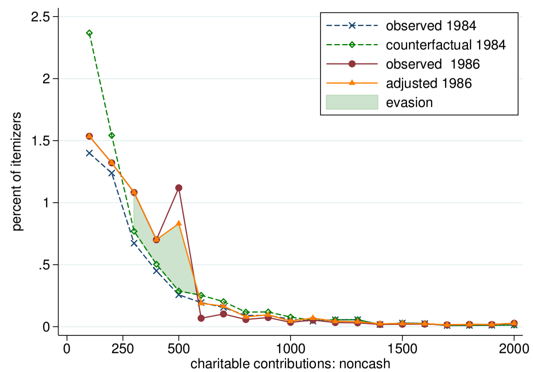
(c) Lower Bound: Fourth Quartile



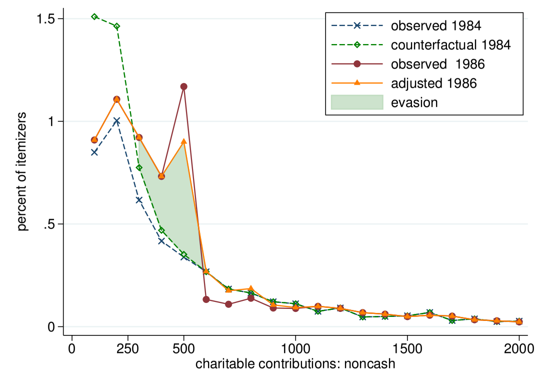
(d) Upper Bound: First and Second Quartiles



(e) Upper Bound: Third Quartile



(f) Upper Bound: Fourth Quartile



Notes: Noncash contributions of individuals who have itemized deductions and whose overall charitable contributions did not exceed 20% of AGI. Unadjusted for inflation \$100 bins: (\$0,\$100],..,(\$1900,\$2000]. The adjusted 1986 distribution accounts for bunching at the \$500 threshold from the right by redistributing part of the excess mass to fill in the missing mass between the observed 1986 and 1984 distributions to the right of \$500. The counterfactual 1984 distribution (bin (\$0,\$100] is omitted in (a)–(c)) accounts for missing donations around the \$0 threshold by inflating the reported donations in 1984 by the fraction of missing filers based on compliance cost estimates (lower bound (a)-(c) and upper bound (d)-(f) counterfactuals). For a detailed explanation, see Section 5.1. Cross-sectional data from SOI Public Use Tax Files.

Table A.2: Evasion and Compliance Cost Savings in 1986: Results by Quartile of AGI

	Lower Bound				Upper Bound			
	All AGI	**1st & 2nd quartile**	**3rd quartile**	**4th quartile**	**All AGI**	**1st & 2nd quartile**	**3rd quartile**	**4th quartile**
New Donations (in mil. $)	769.55	324.24	190.18	186.11	769.55	324.24	190.18	186.11
	(12)	(9)	(5)	(4)	(48)	(30)	(18)	(14)
(Potentially) Lost Donations (in mil. $)	57.91	27.08	13.60	14.55	57.91	27.08	13.60	14.55
	(12)	(9)	(5)	(4)	(12)	(9)	(5)	(4)
Evasion (in mil. $)	339.97	105.39	92.16	108.25	479.96	187.10	128.99	118.64
	(66)	(45)	(29)	(18)	(53)	(37)	(25)	(16)
Percent Evasion (%)	47.77	35.46	52.19	63.10	67.44	62.96	73.05	69.15
	(6.76)	(12.15)	(12.26)	(5.91)	(4.67)	(9)	(9)	(6)
Average Cost of Filing Form 8283 (in $)	26.75	37.04	54.89	15.76	26.75	37.04	54.89	15.76
	(8)	(15)	(21)	(5)	(8)	(15)	(21)	(5)
Compliance Cost Saved (in mil. $)	29.64	15.81	7.16	5.72	29.64	15.81	7.16	5.72
	(5)	(5)	(2)	(1)	(5)	(5)	(2)	(1)
Average Tax Rate 1986	30.08	19.70	29.67	38.93	30.08	19.70	29.67	38.93

Notes: Standard errors shown in parentheses. New donations: dollar amount of new donations (both genuine and not). Potentially lost donations: dollar amount of the missing donations above $500. Evasion: dollar amount of untruthful donations. Percent evasion: percent of untruthful donations among "new" donations in 1985 or 1986. Average cost: cost of filing Form 8283 in 1985 and 1986 dollars, respectively. Compliance cost saved: dollar amount of the compliance cost saved because of the reform. Average tax rate: for individuals who donate noncash contributions in the range of $500-$1000. Based on noncash contributions of individuals who have itemized deductions and whose overall charitable contributions did not exceed 20% of AGI. *Source*: Cross-sectional data from SOI Public Use Tax Files. See complete description in Section 5.2.

Table A.3: Evasion and Compliance Cost Savings in 1986: Heterogeneity Analysis

	Filed Sch. C, E, or F	**No Sch. C, E, or F**	**Singles Only**	**Joint Only**	**Used Tax Preparer**	**No Tax Preparer**
Lower Bound						
New Donations (in mil. $)	87.40	98.92	181.06	525.69	352.19	404.88
	(11)	(12)	(25)	(41)	(38)	(34)
(Potentially) Lost Donations (in mil. $)	5.83	8.13	6.06	49.36	28.80	26.95
	(2)	(3)	(3)	(11)	(8)	(7)
Evasion (in mil. $)	54.40	55.53	85.86	235.71	153.57	184.09
	(11)	(13)	(30)	(51)	(42)	(46)
Percent Evasion (%)	66.70	61.17	49.06	49.48	47.49	48.71
	(7.3)	(7.94)	(13.37)	(7.49)	(9.16)	(9.11)
Average Cost of Filing Form 8283 (in $)	11.18	22.60	43.62	25.74	20.55	56.85
	(4.59)	(14.21)	(34.45)	(6.91)	(5.89)	(17.9)
Compliance Cost Saved (in mil. $)	2.91	2.94	7.04	21.66	14.25	14.56
	(1)	(1)	(2)	(4)	(4)	(2)
Upper Bound						
New Donations (in mil. $)	87.40	98.92	181.06	525.69	352.19	404.88
	(11)	(12)	(25)	(41)	(38)	(34)
(Potentially) Lost Donations (in mil. $)	5.83	8.13	6.06	49.36	28.80	26.95
	(2)	(3)	(3)	(11)	(8)	(7)
Evasion (in mil. $)	57.00	65.53	125.69	333.46	228.44	250.77
	(12)	(12)	(27)	(41)	(33)	(40)
Percent Evasion (%)	69.88	72.18	71.82	70.01	70.64	66.35
	(9.04)	(7.03)	(9.91)	(5.06)	(6.84)	(7.45)
Average Cost of Filing Form 8283 (in $)	11.18	22.60	43.62	25.74	20.55	56.85
	(4.59)	(14.21)	(34.45)	(6.91)	(5.89)	(17.9)
Compliance Cost Saved (in mil. $)	2.91	2.94	7.04	21.66	14.25	14.56
	(1)	(1)	(2)	(4)	(4)	(2)
Average Tax Rate 1986	39.30	38.31	27.25	30.45	30.31	29.65

Notes: Standard errors shown in parenthesis. New donations: dollar amount of new donations (both genuine and not). Potentially lost donations: dollar amount of the missing donations above $500. Evasion: dollar amount of untruthful donations. Percent evasion: percent of untruthful donations among "new" donations in 1985 or 1986. Average cost: cost of filing Form 8283 in 1985 and 1986 dollars, respectively. Compliance cost saved: dollar amount of the compliance cost saved because of the reform. Average tax rate: for individuals who donate noncash contributions in the range of $500-$1000. Based on noncash contributions of individuals who have itemized deductions and whose overall charitable contributions did not exceed 20% of AGI. *Source*: Cross-sectional data from SOI Public Use Tax Files. See complete description in Section 5.2.

B Optimal Reporting Thresholds

B.1 Theoretical Framework

To illustrate how one could determine an optimal reporting threshold, consider the following simple case. Suppose individuals maximize the quasilinear utility function $U_i(C,X) \equiv C + A_i\varepsilon^{-1}X^{\varepsilon}$, trading off personal consumption C against charitable giving X. Define $\hat{X}_i = \arg\max_X\{C + A_i\varepsilon^{-1}X^{\varepsilon} \text{ s.t. } C = Y_i - (1-\tau)X\}$. Then, heterogeneity in tastes $A_i \sim F_A$ in the absence of evasion and compliance costs can be translated into a distribution of truthful donations F_X.

Instead, suppose evasion is possible and the current regulations require an individual to fill out some paperwork if his reported charitable contributions exceed a pre-determined threshold T. The individual may choose to report his true contributions, X; overstate his contributions by an amount E, thus reporting $R = X + E$; or underreport his contributions, $R < X$.[17] The individual solves

$$\max_{C,X,R} \quad C + A_i\varepsilon^{-1}X^{\varepsilon} \quad \text{s.t.} \quad C = Y_i - X + \tau R - h_i(R-X)\mathbb{1}_{R-X>0} - \phi_i\mathbb{1}_{R>T}, \tag{4}$$

where $h_i(\cdot)$ and ϕ_i are evasion and compliance costs, respectively, and R is the reported amount of charitable contributions. The cost of compliance is fixed and distributed according to $\phi_i \sim F_\phi$, while evasion cost $h_i(\cdot)$ follows a quadratic function of the amount of evasion $R - X$, i.e.

$$h_i(R-X) \equiv \begin{cases} \gamma_{1i} + \gamma_{2i}(R-X)^2 & \text{if } E > 0 \text{ and } R \leq T \\ +\infty & \text{if } E > 0 \text{ and } R > T \end{cases} \tag{5}$$

with $(\gamma_{1i}, \gamma_{2i}) \sim F_\gamma$. I assume that compliance cost ϕ_i, evasion costs γ_{1i} and γ_{2i} and the preferences for charitable giving A_i are mutually independent.

Then individuals with $\hat{X}_i < T$ might cheat, while individuals with $\hat{X}_i \geq T$ might suffer due to compliance costs. Solving (4), we find that the ideal amount of cheating is $R_i^* - X_i^* = \tau/(2\gamma_{2i})$. However, considering the fixed cost of evasion, γ_{1i}, individuals will cheat by

$$R_i^* - X_i^* = \begin{cases} \frac{\tau}{2\gamma_{2i}} & \text{if } \frac{\tau^2}{4\gamma_{2i}^2} - \gamma_{1i} > 0 \text{ and } T - \hat{X}_i \geq \frac{\tau}{2\gamma_{2i}} \\ T - \hat{X}_i & \text{if } \frac{\tau^2}{4\gamma_{2i}^2} - \gamma_{1i} > 0,\ (T - \hat{X}_i) > \frac{\tau}{2\gamma_{2i}} - \sqrt{\frac{\tau^2}{4\gamma_{2i}^2} - \frac{\gamma_{1i}}{\gamma_{2i}}} \text{ and } T - \hat{X}_i < \frac{\tau}{2\gamma_{2i}} \\ 0 & \text{otherwise.} \end{cases} \tag{6}$$

From (6) follows that if the fixed cost $\gamma_{1i} = 0$, individuals will always evade and the amount of evasion will depend on the variable cost γ_{2i}. On the other hand, if $\gamma_{2i} = 0$, then individuals will want to evade to an infinite degree but will not be able to because of the threshold T. Instead, they will evade $T - \hat{X}_i$ as long as $T - \hat{X}_i > \gamma_{1i}/\tau$. Since the framework is interesting only when people can evade, I assume condition $\frac{\tau^2}{4\gamma_{2i}^2} - \gamma_{1i} > 0$ is satisfied. Define $E_i = \frac{\tau}{2\gamma_{2i}}$ and $ME_i =$

[17] As in Section 4.1, I focus on the case where evasion is 100% detectable whenever $R > T$.

$E_i - \sqrt{E_i^2 - \frac{\gamma_{1i}}{\gamma_{2i}}}$. Then, E_i determines the *ideal* amount by which an individual would like to cheat and ME_i determines the *minimum* amount of cheating an individual is willing to do.

Some individuals with $\hat{X}_i \geq T$ might wish to avoid the compliance costs by bunching at the threshold. For simplicity, I assume that these individuals will reduce donations to T and set $X_i^* = R_i^* = T$.[18] We can then estimate the forgone utility of these individuals using a Taylor approximation. Specifically, for $u_{xi}(X) = A_i X^{\varepsilon}$, I approximate $u_{xi}(T) - u_{xi}(\hat{X}_i) \approx (1-\tau)(T - \hat{X}_i) + \frac{1}{2}(1-\tau)(\varepsilon - 1)\frac{(T-\hat{X}_i)^2}{\hat{X}_i}$ as was done in Section 5.2.2.[19] Define $TC_i = T + \frac{\phi_i}{(1-\tau)(1-\varepsilon)} + \sqrt{T\frac{2\phi_i}{(1-\tau)(1-\varepsilon)} + \frac{\phi_i^2}{(1-\tau)^2(1-\varepsilon)^2}}$. Then, individuals with optimal donations $\hat{X}_i \in [T, TC_i]$ choose to bunch at the threshold, while those with $\hat{X}_i > TC_i$ donate optimally, $X_i^* = \hat{X}_i$, and bear the full cost of compliance ϕ_i.[20]

The government's problem is to choose an optimal subsidy rate τ and threshold T that will maximize social welfare, which is the sum of individual welfare and externality benefits from charitable giving, minus the cost of raising funds to support the subsidy. Formally,

$$\max_{\tau,T} W = \int g_i U_i(\hat{C}_i^*(\tau), \hat{X}_i^*(\tau))dF_i + \int B \cdot \hat{X}_i^*(\tau)dF_i - \int C_F \cdot \tau \hat{X}_i^*(\tau)dF_i, \tag{7}$$

where g_i is the individual's social welfare weight, B is the positive externality introduced by charitable giving, C_F is the marginal cost of providing the subsidy and F_i is the cumulative distribution of individuals type i. It can be easily shown that under the assumption of the quasilinear utility function problem, the optimal threshold setting follows from (7) and requires one to solve

$$\begin{aligned}
\min_{T} \quad \Delta W = & \underbrace{\mathbb{E}_{\gamma}\left[\int_{0}^{T-E} C_F \tau E dF_X + \int_{T-E}^{T-ME} C_F \tau (T-X) dF_X\right] - \mathbb{E}_{\phi}\left[\int_{T}^{TC} C_F \tau (X-T) dF_X\right]}_{\text{Funding Cost Change due to Evasion and Compliance}} \\
& - \underbrace{\mathbb{E}_{\phi}\left[\int_{T}^{TC} B(X-T) dF_X\right]}_{\text{Externality Change due to Compliance}} - \underbrace{\mathbb{E}_{\phi}\left[\int_{TC}^{\infty} \phi dF_X + \int_{T}^{TC} \frac{1}{2}(1-\tau)(1-\varepsilon)\frac{(X-T)^2}{X} dF_X\right]}_{\text{Utility Loss due to Compliance}} \\
& - \underbrace{\mathbb{E}_{\gamma}\left[\int_{0}^{T-E} \Omega[\tau E - \gamma_1 - \gamma_2 E^2] dF_X + \int_{T-E}^{T-ME} \Omega[\tau(T-X) - \gamma_1 - \gamma_2 (T-X)^2] dF_X\right]}_{\text{Utility Gain due to Evasion}},
\end{aligned} \tag{8}$$

[18]In other words, I disregard the possibility that some individuals will choose to partially reduce their donations and donate between T and $\hat{X}_i$.

[19]The approximation relies on the fact that $u'_{xi} = (1-\tau)$ and that $u''_{xi} = u'_{xi}(\varepsilon - 1)/\hat{X}_i$.

[20]Note that individuals who choose to donate $\hat{X}_i$ and bear the compliance cost ϕ_i enjoy utility $Y_i - (1-\tau)\hat{X}_i + u_{xi}(\hat{X}_i) - \phi_i$, while those who reduce donations to T enjoy utility $Y_i - (1-\tau)T + u_{xi}(T)$. TC_i thus solves $\phi_i = \frac{1}{2}(1-\tau)(1-\varepsilon)\frac{(TC_i - T)^2}{TC_i} = u_{xi}(TC_i) - u_{xi}(T) - (1-\tau)(TC_i - T)$.

where I set $g_i = 1$ if the person is not an evader, and $g_i = \Omega$ if the person is an evader. In doing so, I allow the positive utility derived from evasion to be disregarded if necessary.

Examining problem (8), one can see that unless no individuals evade and compliance costs are zero, it is never optimal to set the threshold at zero or at infinity. Furthermore, it can be shown that the optimal threshold T^* increases in the welfare weight on cheaters Ω, increases in B, and decreases in C_F when the probability density of donations f_X is strictly decreasing. For most distributions, the optimal threshold T^* increases in the variable cost of evasion and in the compliance cost. The optimal threshold T^* decreases in the fixed cost of evasion if f_X is strictly decreasing and the optimal T^* is not a corner solution, and increases in the fixed cost of evasion otherwise.

B.2 Calibrating Cheating Behavior

To determine the optimal threshold, one needs to estimate evasion costs. To do so, I rely on several insights discussed in Section 5.2.1. First, individuals who had not donated in the past were unlikely to cheat in 1986. This observation stems from the fact that only 20% of itemizers claimed noncash donations in 1984. Since cheating is most profitable for individuals with small truthful donations, expected levels of cheating would have been significantly larger if non-donors had cheated in 1986. Second, because a large number of individuals continued to report donations of \$200 or less in 1986, it follows that a substantial share of individuals incurred high evasion costs that prevented them from cheating. Relying on these two insights, I calibrate three parameters – percent cheaters, fixed costs, and variable costs – by minimizing the squared differences between the observed distribution of donations in 1986 (with bunching from the right due to compliance costs removed) and the predicted bunching based on the upper bound 1984 counterfactual distribution (derived in Section 5.1 and shown in Figure 8(b)).

Note that if individuals incur only the fixed cost of evasion, they will be willing to cheat by any amount as long as the reward – evasion amount times the deduction rate – exceeds the cost of cheating. Therefore, the fixed costs of evasion determine the minimum amount by which individuals are willing to cheat. The variable cost, on the other hand, determines the optimal amount by which individuals would like to cheat. Therefore, in my calibration I can focus on the minimum and ideal amounts of cheating as parameters, which can then be converted into fixed and variable costs.

Thus, to perform this calibration, I assume that only a small share of individuals cheat and that these individuals experience homogeneous fixed and variable evasion costs. Figure B.2 shows the results of the calibrations. The best fit suggests that roughly 24% of individuals cheat, and those who do cheat exaggerate their donations by approximately \$350.

B.3 Calibrating Optimal Threshold

Optimal threshold determination requires knowledge of the distribution of ideal donations F_X, as well as knowledge of the distributions of compliance cost ϕ and evasion costs γ_1 and γ_2. The calibration in this section relies on the upper bound counterfactual distribution of noncash donations derived in Section 5.1 as a proxy for F_X and on the distribution of compliance costs derived in Section 5.2.2 as a proxy for ϕ, and on the evasion costs estimated in the previous section.

So what should the threshold be in the case of noncash charitable donations in the U.S.? Table B.4 summarizes the calibration results, all measured in 1986 dollars. I assume a deduction rate of $\tau = 0.25$ and a marginal cost of funds $C_F = 1.16$.[21] As before, I assume the elasticity of charitable giving is equal to $1/(1-\varepsilon) = 1.3$. I vary the externality benefit $B - C_F\tau$ and the weight on the utility of cheaters Ω. I consider several choices for the compliance cost ϕ. In column (1), I assume the compliance cost is fixed for all individuals and is equal to \$27 – an estimate of compliance cost based on the analysis in Section 5.2.2. In column (2), I consider how the threshold changes if all individuals incur a higher compliance cost – equal to \$71 – which corresponds to the average upper bound on compliance cost, again derived in Section 5.2.2. Finally in column (3), I consider the full distribution of compliance cost as estimated in Section 5.2.2 (this full distribution implies an average compliance cost of \$27). My preferred specification is column (3).

Several observations follow from Table B.4. First, the preferred specification suggests that the optimal threshold $T^* = \$350$ is lower than the threshold chosen by the government $T = \$500$. Second, the results highlight the importance of corner solutions: under all scenarios the threshold is close to the minimum evasion amount ME or the ideal evasion amount E. Third, setting self-reporting thresholds optimally could reduce welfare losses from evasion and compliance costs by more than 70%. In other words, let W_0 measure individuals' welfare if cheating is not possible and compliance costs are zero. Let W^X measure individuals' welfare if cheating is possible and compliance costs are as estimated and the threshold is set to $\$X$. Then, the estimated welfare gains are

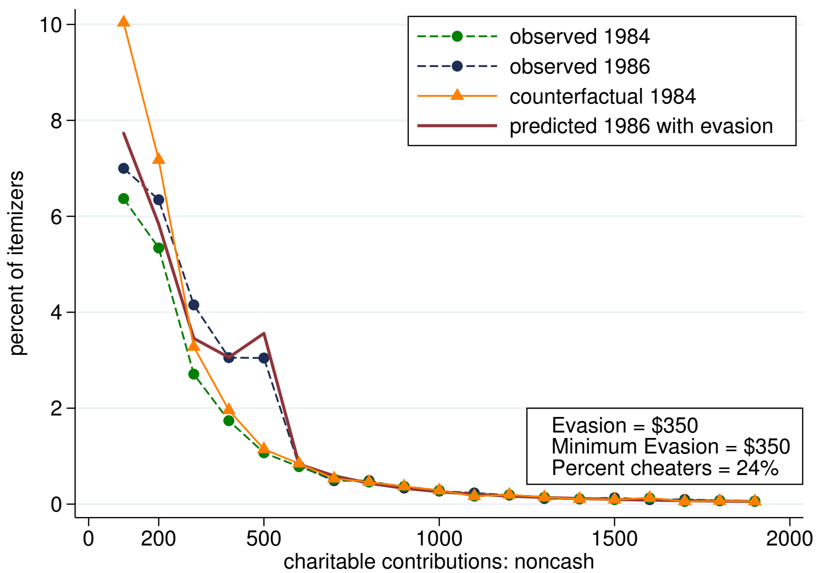
$$\Delta W = \frac{W^{optimal} - W^{500}}{W_0 - W^{500}}.$$

Because the welfare gains are measured relative to setting the threshold at \$500, welfare gains do not change dramatically when cheaters are weighted the same as non-cheaters.

Finally, the threshold does not change when one considers higher compliance costs, e.g. \$71 vs \$27. This result is specific to the setting considered. Both estimates of compliance costs are lower than the potential losses from cheating – $\$350 \times 0.25 = \$87.5$ per person. Therefore, eliminating evasion is preferable over eliminating compliance costs.

[21] The marginal tax rate of 25% corresponds to the median MTR experienced by noncash donors in 1986. The marginal cost of funds is based on the estimates of MCF by Kleven and Kreiner (2006) for the UK.

Figure B.2: Calibration of Cheating Behavior: only p% cheat, homogeneous variable and fixed costs of evasion



Notes: This table shows the observed 1984 distribution, the 1986 distribution adjusted for bunching from above the $500 threshold and the 1984 upper bound counterfactual, all derived in Section 5.1; and the distribution of predicted donations given the assumptions listed. Based on SOI Public Use Tax Files, 1984–1986. Noncash contributions of individuals who itemized deductions and whose overall charitable contributions did not exceed 20% of AGI.

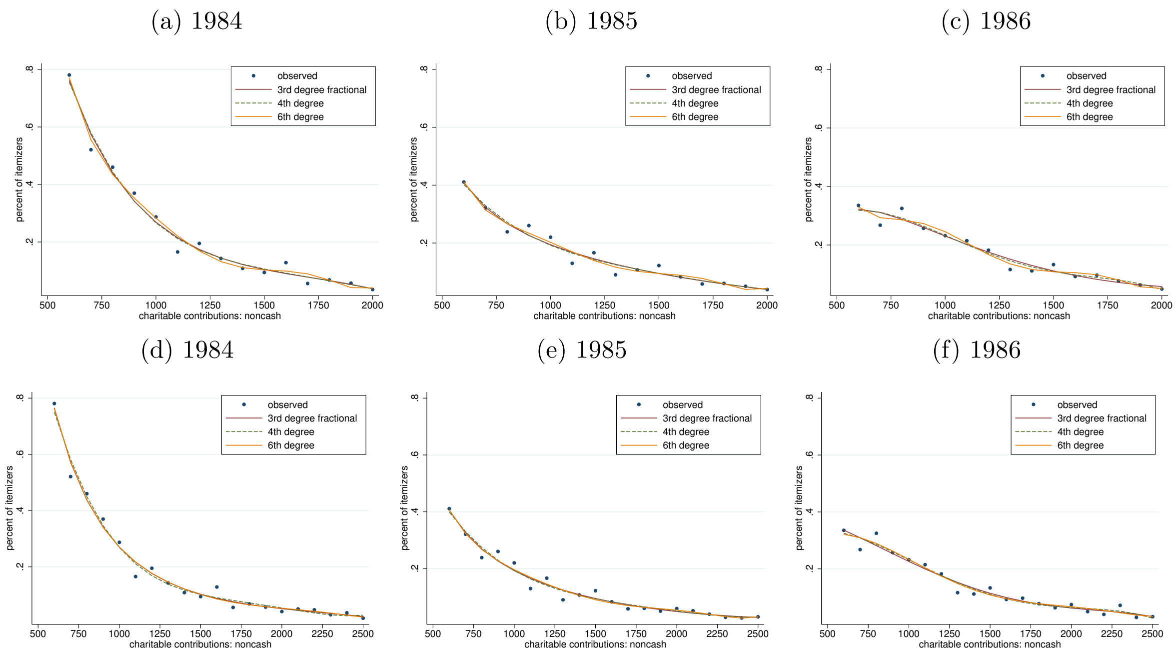
Table B.4: Optimal Thresholds: Calibration

	Utility Weight on Cheaters $\Omega = 0$, Externality - MCF$\cdot$ MTR $= 0$		
Compliance Cost ϕ	Homogeneous $\phi = 27$	Homogeneous $\phi = 71$	Homogeneous ϕ distribution
Percent Cheaters p	24	24	24
Optimal Evasion E	350	350	350
Minimum Evasion Amount ME	350	350	350
Externality B^a	1	1	1
Utility Weight on Cheaters Ω	0	0	0
Optimal Threshold	360	360	350
Reduction in Welfare Loss	74%	71%	71%
	Utility Weight on Cheaters $\Omega = 0$, Externality - MCF$\cdot$ MTR $= 0.2 \cdot C_F\tau$		
Compliance Cost ϕ	Homogeneous $\phi = 27$	Homogeneous $\phi = 71$	Homogeneous ϕ distribution
Percent Cheaters p	24	24	24
Optimal Evasion E	350	350	350
Minimum Evasion Amount ME	350	350	350
Externality B^a	1.2	1.2	1.2
Utility Weight on Cheaters Ω	0	0	0
Optimal Threshold	360	360	360
Reduction in Welfare Loss	73%	71%	71%
	Utility Weight on Cheaters $\Omega = 1$, Externality - MCF$\cdot$ MTR $= 0.2 \cdot C_F\tau$		
Compliance Cost ϕ	Homogeneous $\phi = 27$	Homogeneous $\phi = 71$	Homogeneous ϕ distribution
Percent Cheaters p	24	24	24
Optimal Evasion E	350	350	350
Minimum Evasion Amount ME	350	350	350
Externality B^a	1.2	1.2	1.2
Utility Weight on Cheaters Ω	1	1	1
Optimal Threshold	360	360	360
Reduction in Welfare Loss	73%	71%	71%

Notes: Marginal tax rate $\tau = 0.25$, elasticity of charitable giving $1/(1-\varepsilon) = 1.3$, marginal cost of funds $C_F = 1.16$. This table shows optimal thresholds based on the calibration of the model described in Section B.3. [a] Externality benefits measured as a share of $\tau \cdot C_F$. [b] Distribution of cost of filing Form 8283 based on results from Section 5.2.2 and assuming individuals reduce donations above the threshold.

C Other

Figure C.3: Polynomial Fits



Notes: Distributions of observed noncash donations >$500 in 1984, 1985 and 1986 and corresponding polynomial fits. This figure shows that the results are not sensitive to the degree of polynomial used and the window to which the polynomial is fit. In Figures (a) through (c), N is set to $2000, while in (d) through (f) it is set to $2500.