

Has Regulation of Charitable Foundations Thrown the Baby Out With the Bath Water?

Benjamin M. Marx*

July 8, 2015

Abstract

Regulations to curb tax avoidance and evasion through charitable foundations have been in place since the Tax Reform Act of 1969. Newly-compiled longitudinal data makes it possible to estimate the effects of these regulations by comparing affected and unaffected foundations before and after the reform. Donations and entry dropped precipitously. Proxy variables suggest significant deterrence of abuses, but half of the decline in donations can be explained by the increased cost of running a foundation. The results highlight the potential for large reductions in the benefits of regulation when the cost of compliance affects externality-producing actions such as charitable giving.

Keywords: charitable, foundations, donation, avoidance, compliance, regulation

* Department of Economics, University of Illinois at Urbana-Champaign, 214 David Kinley Hall, 1407 W. Gregory, Urbana, IL 61801. Correspondence should be sent to benmarx@illinois.edu, 217-300-1435.

1 Introduction

Americans give about \$300 billion per year to charity, \$33 billion of which goes to charitable foundations (Giving USA Foundation, 2011). Because these contributions fund public goods and other benefits external to the donor, donors are subsidized through income tax deductions for donations to registered charitable organizations. Internal Revenue Code section 501(c)3 distinguishes between two types of tax-exempt charitable organizations: public charities, such as the Red Cross and many universities, and private foundations. Public charities engage in continual fundraising to cover the costs of providing charitable goods or services, whereas most U.S. foundations are “private,” i.e. they are funded by a small number of individuals or companies, and “non-operating” in that they primarily make grants to public charities rather than providing services directly. Wealthy families and companies give a large share of their charitable donations to foundations, and their ability to control their private foundations raises concerns for tax enforcement.¹

Foundation donors and managers have more opportunity to use the organization for their own benefit, for example to maintain control of a company’s stock, instead of the charitable uses for which the federal tax subsidy is provided. As a prominent example that served as a key impetus for regulatory reform in 1969, Congress lambasted the Ford Foundation’s grants to former Kennedy Senate staffers and for targeted voter registration in a tight mayoral race as serving political rather than charitable purposes (Troyer, 2000). To prevent abuse of the charitable deduction, regulation of private non-operating foundations was incorporated into the Tax Reform Act of 1969 (TRA69), “the most far-reaching legislation affecting private philanthropy in our two hundred year history” (Worthy, 1975). Like the Sarbanes-Oxley Act targeting abuses at for-profit firms several decades later, TRA69 strengthened financial reporting requirements and restricted the behavior of foundations and the individuals controlling them.

The effects of the foundation regulations in TRA69 have proven difficult to estimate, in part because they have remained largely unaltered since the law’s enactment. This paper presents evidence that the regulation of charitable foundations had mixed results. Consistent with what evidence has been marshaled, gifts to foundations decreased abruptly after 1969. Estimated effects of proxies for the misuse of foundations suggest that part of the decline in reported gifts was due to successful deterrence of gifts going to noncharitable purposes. Unfortunately, regulations also greatly increased foundations’ administrative expenses. Foundations that had kept administrative expenses low before TRA69 saw these expenses rise the most, and these foundations were significantly less likely to receive gifts from their donors thereafter. A simple decomposition shows that the rise in administrative expenses explains half of the drop in gifts, suggesting the regulations have discour-

¹Warren Buffet’s gift to the Bill and Melinda Gates Foundation garnered attention in part because such gifts to others’ foundations are rare.

aged a large amount of genuine charitable giving in the attempt to root out noncharitable gifts. The results highlight the potential for regulatory compliance costs to have large, unintended effects on externality-producing activities like charitable giving.

To analyze foundation donations and responses to regulation I compiled a new electronic data set. To my knowledge this is the first panel data on charitable foundations that include multiple years prior to 1969. I produced the database from hard copies of the Foundation Directory, a regular publication of the Foundation Center that provides financial and grantmaking data on the foundations large enough to account for over 90 percent of U.S. foundation assets. With these data it is possible to not only follow aggregate trends but to perform the type of foundation-level analyses necessary for estimating and decomposing causal effects of policies like TRA69. These data are now posted on the journal website.

This study first provides difference-in-differences estimates of the overall impact of TRA69. The numerous provisions of TRA69 included documentation and reporting requirements, prohibition of certain types of transactions, a tax on investment returns, and the requirement to spend a minimum percentage of the foundation's assets each year. I estimate the overall effect on entry, exit, giving, and expenses by comparing changes among regulated foundations to changes among unaffected community foundations (geographically-based grantmakers that receive funds from many donors) and operating foundations (endowed organizations that provide direct services).²³ I find that TRA69 reduced the entry rate of private non-operating foundations by roughly one third (from around 35 percent per Directory or 10 percent per year), reduced the share of regulated foundations receiving donations by about 50 percent (30 percentage points), and more than doubled administrative expenses without significantly affecting total spending.

With the foundation data I am also able to estimate predictors of the overall decline in gifts to provide evidence consistent with deterrence of abuse but also adverse effects of compliance costs on charitable giving. First I define two proxies for misuse of foundations: donors who manage their own foundations, and states that did not require the type of public financial reporting that was mandated nationally by TRA69. Difference-in-difference estimates comparing such foundations

²The three foundation types are similar to each other, and distinct from public charities, in that much of their annual income derives from endowment assets. Difference-in-difference estimates may be attenuated by cases of private foundations that no longer receive gifts after the initial donor has stopped giving, but most continue to receive support from founding corporation or family of the founding individual; nearly 80 percent of private foundations received a gift in at least one of the two periods before the reform.

³To qualify for "operating" status a foundation must meet an "income" test and one of an "asset" test, an "endowment" test, or a "support" test. The "income" test essentially requires the foundation to spend at least 85 percent of a measure of income (the lesser of investment income or five percent of assets) on activities that meet a detailed definition of direct conduct in support of the foundation's charitable purpose. The additional tests essentially require that a minimum percentage of assets or endowment be directly devoted to the charitable purpose unless the foundation meets the alternative requirement of having most income come from a broad set of public sources, an analog of the "public support" test that distinguishes public charities (including community foundations) from private foundations (Internal Revenue Service, 1999).

to the other private non-operating foundations indicate that both factors predicted significant drops in reported gifts when TRA69 was enacted, and the interaction of the two shows that gifts fell most for donor-managers who were not subject to state reporting. Next I analyze how donors respond to administrative expenses. Identification of the causal effect of expenses on donors is made difficult by the fact that expenses are endogenous to donor choices and generally increasing with gifts and assets. For this reason I exploit the fact that foundations with a lower level of administrative expenses before TRA69 experienced greater sudden increases in administrative expenses after the reform, as would be expected if compliance entailed significant fixed costs. I therefore instrument for a foundation's TRA69-related administrative expense growth using the level of administrative expenses before the reform to obtain causal estimates of the effects of compliance costs on gifts to foundations. I estimate that a one percent increase in administrative expenses lowers the probability of donation by about .05 percentage points (about .15 percent of the post-reform average). A decomposition of the results indicates that the increase in administrative expenses explains half of the decline in gifts, and the two proxies for malfeasance explain about 30 percent of the decline.

This paper contributes to a long literature on the elasticity of charitable giving with respect to price (e.g. Randolph 1995, Auten et al. 2002, Bakija and Heim 2011). Here the source of exogenous variation in price comes not through the individual income tax but through a tax on foundation investment returns and other administrative expenses necessitated by compliance with regulation. Other studies have included administrative expenses in the price of giving (for example Khanna et al. (1995) and Okten and Weisbrod (2000)), but generally among public charities that are competing for donations. The strategic interplay between the donors and managers of public charities clouds the interpretation of behavior; charities are likely to manipulate their administrative expenses to appeal to donors, much like they manipulate their incomes to avoid federal reporting requirements (Marx, 2015). Meer (2013) addresses this problem by studying donors who give through an intermediary organization that varies its administrative fees and finds that donors are sensitive to this effect on price. I examine private foundations, which have donors who can largely determine the level of administrative expenses except to the extent necessary to comply with exogenous federal regulations. I find that high-income donors respond strongly to the administrative expenses of organizations they themselves control. My finding provides evidence that such donors care about the degree to which their donation goes to charitable recipients, indicating that they are not motivated entirely by the warm glow of giving to their foundation, similar to a recent test by Ottoni-Wilhelm et al. (2014) that finds altruism largely explains giving in a different context.

Optimal regulation of charities remains a pressing and heavily debated issue. Concerns about the Internal Revenue Service's use of organizations' political motivations as a trigger for audits has brought renewed attention to the process and criteria for granting tax-exempt status. U.S. Senator Charles Grassley has issued recommendations that would strengthen enforcement of penalties for

“excess benefit transactions” between a charitable organization and a related party. Others have called for stricter regulation of donor-advised funds, financial accounts that allow donors to claim tax deductions at the time of deposit and delay granting the funds to public charities. Donor-advised funds have grown dramatically in popularity and size as a low-cost alternative to starting a private foundation but could see this cost advantage deteriorate if they were regulated more like private foundations. The Pension Protection Act of 2006 took one step in this direction by imposing taxes on excessive business holdings in donor-advised funds. A draft bill released in the House of Representatives in 2014 would treat donor-advised funds even more like private foundations by taxing them if they fail to disburse funds to charities within a certain timeframe. This paper provides evidence of the compliance cost that can be imposed by such regulation and the strong effect it can have on charitable giving.

The rest of the paper is organized as follows. Section 2 outlines the policy reforms affecting private non-operating foundations and describes the data compiled for the analysis. Section 3 provides estimates of the overall effect of TRA69 that compare regulated foundations to community foundations and operating foundations. Section 4 explores the determinants of the fall in giving by comparing the responses of different types of foundations. Section 5 concludes.

2 Policy Background and Data Description

In this section I describe the regulations affecting private non-operating foundations as well as the Foundation Directory data that were compiled for this analysis. The Tax Reform Act of 1969 induced a sea change in the regulation of charitable foundations, and the digitized Foundation Directory data enable a detailed examination of the effects of the reform.

2.1 Private Foundations and the Tax Reform Act of 1969

Statistics from the nonprofit Foundation Center describe the foundation sector in 2010 as comprising roughly 76,000 foundations holding \$622 billion in assets and making \$46 billion in grants to individuals and charitable organizations (Lawrence and Mukai, 2011). These foundations accounted for over 15 percent of the \$291 billion in U.S. charitable giving in that year (Bond, 2009). Private foundations make up an even larger percentage of charitable bequests. Tabulations from 1995 IRS Statistics of Income data put giving to charitable foundations at 36 percent of charitable bequests, 60 percent among charitable bequests of married men and close to 75 percent among estates worth \$20 million or more (Auten et al., 2000). In tax returns from 1996-1998 the percentage of charitable bequests going to foundations is over 60 percent for estates worth more than \$10

million and close to 95 percent for estates worth over \$50 million (Joulfaian, 2000).⁴

Charitable tax deductions become less socially desirable if individuals can abuse them to obtain subsidies for non-charitable activity, and privately-controlled foundations may offer particularly good opportunities for such abuse. CEOs' gifts of company stock to their private foundations often occur just before declines in share prices, suggesting CEOs use insider information or even illegal backdating to maximize their tax deductions (Yermack, 2009). Moreover, assets within foundations have not always been used for charitable purposes. Before TRA69, a donor was able to give corporate stock to his foundation, claim a tax deduction, then instruct the foundation to hold the stock in perpetuity and vote according to his preferences. For example, as of 1968, 77 percent of the Duke Endowment's \$629 million in assets was invested in stock of the Duke Power Company, a 55 percent interest (Brody, 1997). Congressional investigations in the 1950s and 1960s discovered donors enriching themselves by having their foundations purchase their assets or extend loans to them on favorable terms (Smith and Chiechi, 1974). The commissions performing these investigations argued that foundations represented a small network accumulating wealth and power that interfered with markets and politics, and their numerous recommendations included prohibiting certain foundation activities and limiting the life of a foundation to 25 years (Liles and Blum, 1975). A 1965 report by the Treasury Department concluded that fears of accumulating influence were unfounded but that malfeasance had occurred. The report also concluded that while the 1950 Revenue Act contained vague admonitions against accumulating too much income before making grants to charities it had not prevented some foundations from doing so, leading to lengthy delays between the granting of tax deductions and the benefits to charities (Smith and Chiechi, 1974).

Congressional efforts to prevent misuse of foundations culminated in the Tax Reform Act of 1969, which placed restrictions on private non-operating foundations and their donors and gave the federal government new authority to regulate and fine charitable organizations beyond the blunt tool of rescinding tax-exempt status. TRA69 prohibited political activity and "self-dealing" transactions that would benefit "related parties" including the donor, managers, and directors. It placed a 4 percent tax on the investment returns of private non-operating foundations.⁵ It required them to document due diligence in confirming that grants went towards charitable purposes, including showing that all grants to individuals were allocated according to a competitive application process. It capped foundations' voting shares of companies' stock and taxed any holdings above the permitted amount. It required all charitable organizations to file more informative returns with the IRS (using new Form 990-PF) and make annual reports publicly available. It raised the maximum deduction an individual could claim for charitable contributions to public charities from 30 percent

⁴Descriptive statistics on charitable foundations are provided in Clotfelter (1985), Margo (1992), Meckstroth and Arnsberger (1996), and Whitten (2001).

⁵In 1978 the tax rate was lowered to 2 percent, and starting in 1984 a foundation could qualify for a 1 percent rate in a particular year if its spending rate in that year was high relative to its spending rate in the 5 preceding years.

to 50 percent of the individual's income but kept the limit at 20 percent of income for gifts to private foundations. It reduced the allowable deduction for gifts of appreciated property by half the value of the appreciation. Finally, it established the "payout rule" requiring foundations to spend a minimum percentage of assets on non-investment expenses each year, with the minimum initially set at 6 percent.⁶

While the foundation provisions of TRA69 were intended to reduce perceived and documented abuses, some would impose costs on all foundations. The tax on investment returns, the first income tax ever imposed on U.S. charitable organizations, was included on the grounds that it would pay for heightened IRS enforcement. Perhaps even more costly for small foundations were the new reporting requirements, necessitated in part to ensure compliance with the payout rule. Prior to TRA69, foundations filed the two-page Form 990-A, which included a basic statement of income and expenses and a basic balance sheet. After TRA69, private foundations were required to file the thirteen-page Form 990-PF, which includes significantly more detailed versions of the sections from the 990-A, as well as sections for listing capital gains, calculating the tax on investment returns, describing program activities (some of which require completion of additional forms), naming and listing compensation of key employees and contractors, calculating the required spending amount and qualifying distributions, tabulating income produced by activities and explaining these activities' connection to the foundation's charitable purpose, listing transactions with other exempt organizations, and providing other "supplementary information." Compliance with the new requirements may have necessitated hiring professional staff; in a 2004-2006 sample of about 1000 of the largest foundations, the two items accounting for the greatest share of administrative expenses were compensation (50 percent) and "other professional fees" (14 percent), and larger foundations were more likely to have paid staff (The Foundation Center, 2011).

Existing empirical analysis suggests TRA69 reduced giving and increased expenses. A difference-in-differences analysis of tax records from 1960 to 1990 reveals that charitable deductions claimed by individuals in the 99.9th percentile of the income distribution, those most likely to give to foundations, declined by roughly 30 percent relative to those of the 90th percentile (Fack and Landais, 2014). Time series aggregates from the Foundation Directory reveal that the average ratio of administrative expenses to grants never exceeded 9.9 percent in periods between 1957 and 1969 but was never below 14.9 percent between 1972 and 1989 (Margo, 1992). Foundations surveyed in 1974 reported average legal and accounting fees more than 50 percent greater than those reported for 1968, and the share of respondents with such fees totaling less than \$2000 for the fiscal year fell from 52 percent to 29 percent. 46 of 350 respondents added their first executive after 1968, reported

⁶For a comprehensive history of the tax treatment of charity up to 1969 see Liles and Blum (1975). For details on the foundation-related sections of TRA69 see Smith and Chiechi (1974), and for subsequent adjustments to the regulation of foundations see Deep and Frumkin (2001) and Gravelle (2003).

staffing increased by 25 percent, and fully 90 percent of foundations reported being audited by the government between 1969 and 1974 (The Council on Foundations, Inc., 1977). Past estimates of the effects of TRA69 using foundation data have relied on simple differences of averages between a changing sample of foundations across two time periods with very different economic conditions.⁷ Moreover, there has been no attempt in past research to link the changes in administrative costs to changes in gifts received or to distinguish between desirable and undesirable giving. Until now there has been no electronic data that could be used to measure within-foundation changes.

2.2 Data

For this analysis I have compiled a multi-year panel database from the Foundation Directory (The Foundation Center, 1960-1986). The Directory allows grant seekers to find likely funders and provides information about the foundations' grants and finances. The Foundation Center has published an edition of the Foundation Directory at least once every three years since 1960. The Directory includes all known foundations with grants or assets exceeding a time-varying truncation point. These truncation points are all round numbers that appear to have been chosen to keep a roughly constant number of foundations and share of assets in the sample. In the period covered by each edition of the Directory, included foundations account for 90 percent or more of all estimated foundation assets.

The Foundation Center collected the data from a combination of surveys and public records. The Center contacted each foundation multiple times to complete its survey, then provided IRS data for non-respondents. Much of the data were publicly available because the Revenue Act of 1950 required foundations to file annual information returns that include the financial variables of interest (Liles and Blum, 1975). Observations in years beginning with 1974 report whether data were retrieved from public records. The foreword to the first edition of the Directory aptly described foundations' incentives for providing information:

We recognized that some foundations would prefer anonymity, and would not supply any information. For this position they may have cogent reasons, including the fear that listing will increase the flood of appeals, which they are ill-equipped to handle. However, the fact is that anonymity is already impossible; by federal law the information returns of all tax-exempt foundations are open to public inspection, and address lists are on sale by commercial organizations. Under these circumstance an

⁷Labovitz (1974) compares the traits of 388 foundations in 1967 to the traits in 1970 of the 275 of those who remained in existence and whose data could be obtained. The Council on Foundations, Inc. (1977) sent a single questionnaire to 2248 foundations and received 566 responses, of which 433 reported expenses in the most recent year and 360 reported expenses in 1968. The criteria for inclusion in the Foundation Directory changed over time, particularly in the 1960s, leading to changes in the sample underlying the statistics reported by Margo (1992).

adequate description, including geographical and other limitation, may reduce—though it will not eliminate—the inappropriate appeals foundations receive (The Foundation Center, 1960).

The Foundation Center published several editions of the Directory before TRA69, but their contents were never compiled electronically. Research on foundations has therefore relied heavily on the IRS Form 990-PF that foundations have been required to file annually since TRA69 was passed. To create a panel database spanning TRA69 I scanned hard copies of the first 15 editions of the Foundation Directory, converted the images to text using ABBYY FineReader and OmniPage Pluse optical character recognition software, wrote Python code with Regular Expressions to organize the text by variable name and extract information to populate a data table, and merged editions in Stata. Further details of this process are provided in Online Appendix 5.

The database contains a wealth of information about foundations. Key financial variables include gifts received by the foundation during the fiscal year (for editions after the first), assets accumulated, and expenses incurred. Expenses are broken down into several categories, including grants made to charitable organizations, grants made to individuals, scholarships awarded, loans made, in-kind gifts, matching gifts, and programs. The Directory does not explicitly list administrative expenses but does provide total expenses. I define “charitable spending” as the sum of outlays in the aforementioned charitable categories and “administrative expenses” as the difference between this amount and the amount of total spending. The Foundation Center (1975) uses the same formulation but cautions that accounting practices differ between foundations, a source of measurement error that should be mitigated by using foundation fixed effects to estimate within-foundation changes. Except where stated otherwise, all log financial variables are defined as the log of one plus the value of the variable so that the values of zero are included and the sample is consistent across regressions. Donors are listed throughout, and all editions except the first indicate if a donor is deceased. I am able to identify company donors by the existence of terms such as “Company,” “Companies,” “Ltd.,” “Inc.,” “Corp” and major industries among donor names. I construct variables counting the number of full-name matches between donors and management (“donor-managers”) and the number of last-name matches (“donors’ family”) to allow for heterogeneous responses along these dimensions. The Foundation Directory generally identified community and operating foundations, and missing foundation types were filled in with text searches and linking data between editions.⁸ Because each edition includes data for multiple years, with nonrandom

⁸I assign a foundation to the control group if it is identified as a community or operating foundation in any edition of the Foundation Directory. Community foundations are well identified by phrases such as “Community foundation established in 1955” in early editions and by an explicit “Foundation Type” field in Edition 6 and thereafter. I augment these designations by searching for “Community Foundation” or “Community Trust” in the foundation name and find that among all community foundations in the balanced panel there were only two observations that did not identify the foundation type. Operating foundations are not identified until after TRA69, when their definition was codified.

timing of foundation responses within edition, I use edition as the time variable rather than year.⁹

A few stylized facts highlight the advantages of the new data for exploring long-run trends and patterns related to donors. While foundations have grown over time with the economy, the shape of the asset size distribution has not changed. In Directory editions from both the 1960s and 1990s, the distribution of foundation assets is closely approximated by a truncated log-normal distribution, and the estimated share of foundations below the truncation point is consistent with the Foundation Center's estimates. Prior to TRA69, 68 percent of foundations listed a single donor, 22 percent listed two donors, and 6 percent listed three or four. Over time there has been a slight shift from single-donor foundations to two-donor foundations, perhaps reflecting greater female labor force participation and earnings, but private foundations with more than two donors remain relatively rare. Based on word matching, about 80 percent of private foundations are named after donors, with the prevalence being slightly higher among the largest and oldest foundations.

I make three major sample restrictions for this study and then prepare unbalanced and balanced panels. First, I remove unusually small foundations. The Directory includes foundations that have enough assets *or* enough grants, but I exclude foundations that qualify only based on grants so that the sample is determined entirely by asset size. Second, I use only the first eight editions, thus centering the sample around the 1969 reforms and excluding years after the major tax reforms of 1981. Third, I exclude Edition 4, which includes years just before as well as just after the reform, when some provisions had not been fully implemented. I also exclude the Ford Foundation, a potential outlier with five times the assets of the second-largest foundation, and a small number of foundations that merged. To compare entry and exit across periods I use the unbalanced panel obtained by restricting the sample to observations with real assets worth over \$1 million (1974 dollars), the most restrictive of the asset thresholds that determined inclusion in each edition of the Foundation Directory. To estimate financial changes within foundations I select a balanced panel of organizations that report total expenses or charitable expenses in Editions 1-3 and Editions 5-8 and for which date of establishment, assets, and administrative expenses are each observed at least once in Editions 1-3.¹⁰

Table 1 provides summary statistics for both the treated and untreated foundations in both the unbalanced and balanced panels and for two subgroups of treated foundations in the balanced panel.

Failure to attribute some of these foundations to the treatment group will lead to attenuation bias. Estimates of the overall effect of the reform are robust to excluding either community or operating foundations from the control group.

⁹When I regress financial variables on edition dummies and year in the unbalanced panel I find that within-edition timing is mostly related to foundation size. Reporting data one year later is associated with increases of 0.34 and 0.37 in log assets and log expenses, respectively. In contrast, reporting data one year later is associated with an increase of 0.0129 in log(gifts+1000) and a decrease of 0.015 in the probability of receiving a gift, and neither of these estimates is statistically different from zero.

¹⁰The restrictions on the balanced panel ensure a constant sample across regressions but are shown in robustness tests to have little effect on the results.

Treated foundations are smaller than untreated foundations in all financial respects, motivating the use of foundation fixed effects and controls for differential changes by size. Foundations in the balanced panel are larger than those in the unbalanced panel, as expected, but the two groups are comparable in regard to the number of donor-managers and family managers. In both samples the vast majority of foundations are treated, which causes estimates of the total treatment effect to have relatively large standard errors. Among treated foundations in the balanced panel, roughly one quarter had donor-managers before TRA69 and two thirds were in states with no financial reporting law. Foundations whose donors served as managers had more assets and expenses despite receiving a bit less gift revenue. Foundations subject to no state reporting law were about five percent larger than the average among treated foundations but had similar numbers of donor-managers and family managers.

Table 1: Summary Statistics

	(1) Unbalanced Community & Operating	(2) Unbalanced Private Non-Operating	(3) Balanced Community & Operating	(4) Balanced All Private Non-Operating	(5) Balanced Private w/ Donor-Managers	(6) Balanced Private w/ No State Report
Observations	747	11,407	448	5,187	1,386	3,430
Unique Organizations	80	1,715	64	741	198	490
Assets (M)	13.9	11.4	17.7	16.3	26.3	17.0
Any Gifts	0.69	0.39	0.68	0.40	0.44	0.41
Gifts (K)	506	345	501	273	245	287
Expenses (K)	849	708	997	909	1,367	952
Admin. Expenses (K)	295	86	318	110	170	125
Donor-Managers pre-TRA69	0.1	0.2	0.1	0.3	1.0	0.3
Donors' Family pre-TRA69	0.2	0.5	0.2	0.6	1.0	0.6

Notes: Summary statistics are provided for the unbalanced panel in the first two columns and for the balanced panel in columns 3-6. Construction of the two samples is described in the text. For the unbalanced panel, column 1 describes the control group and column 2 the treatment group. For the balanced panel, the total effect of reform is estimated by comparing among foundations in column 3 vs. column 4. Heterogeneous effects are estimated among the subsets of foundations from column 4 that had donors managing the foundation at some time before TRA69 (column 5) or that were not subject to state financial reporting requirements before TRA69 (column 6). Monetary statistics shown in current dollars.

3 Total Effect of TRA69: Private Non-Operating vs. Other Foundations

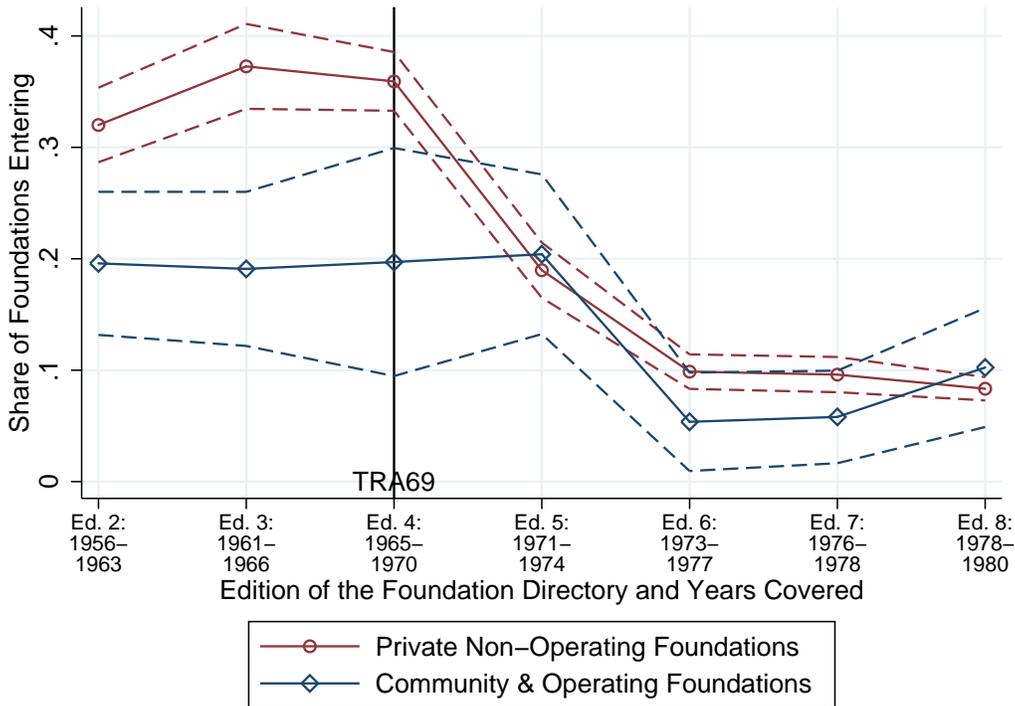
I first estimate the total effect of TRA69 on charitable foundations by comparing changes among regulated private non-operating foundations to changes among unaffected community and operating foundations. Results indicate that the law reduced the number of foundations receiving gifts and greatly increased the administrative expenses of the average foundation.

3.1 Effects on Entry and Exit

3.1.1 Graphical Evidence and Empirical Strategy

Figure 1 depicts the entry rates of regulated foundations and of community and operating foundations in each edition of the Foundation Directory after the first. The entry rate of regulated foundations falls from around 35 percent before the reform to less than 10 percent after. The entry rate of community and operating foundations also falls between Foundation Directory Editions 5 and 6, reflecting the fall in the stock market, poor economic conditions, and the fact that the Foundation Directory was then being published every two years rather than every three or four. The decline among community and operating foundations is significantly smaller, however. One can also see that entry of private non-operating foundations begins to fall immediately after the reform, whereas unregulated foundations continue to enter at a relatively high rate until the economic conditions deteriorate. While it was difficult to determine from previously-available data whether the reform or economic conditions were responsible for declines among private foundations, it is clear in Figure 1 that private foundation entry declined before market conditions turned.

Figure 1: Decline In Entry by Private Foundations

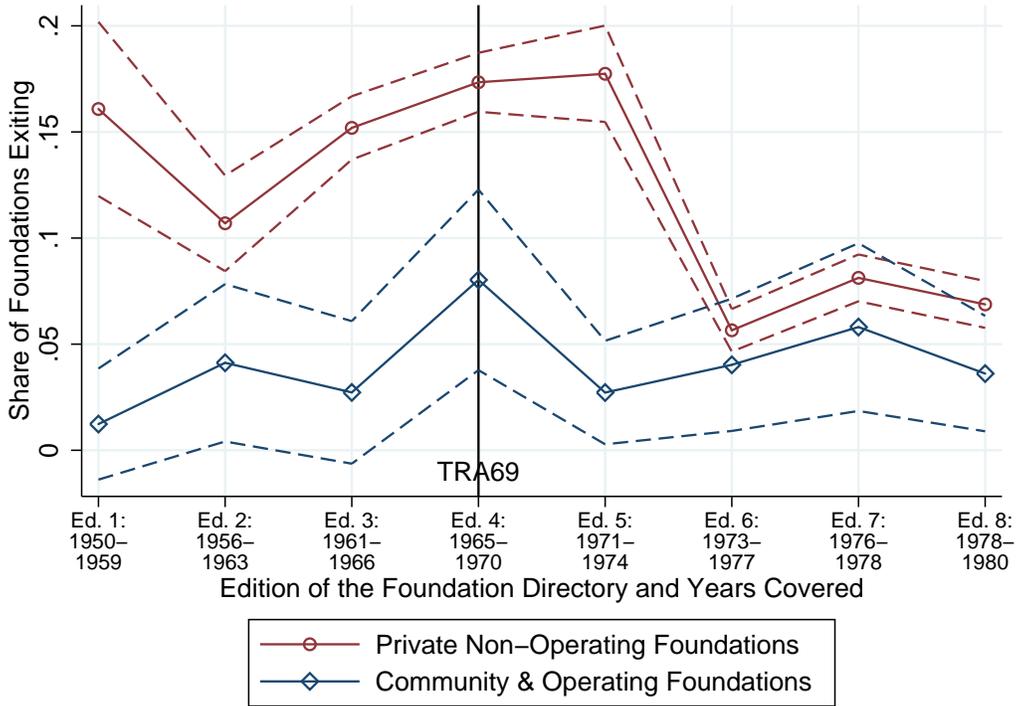


Notes: The figure displays the number of foundations first appearing with assets over \$1 million (in constant 1974 dollars) as a share of the total number of the same type in each edition of the Foundation Directory. Each edition includes one observation per foundation in the displayed span of a few years. Edition 1 is excluded because there is no prior edition in which to see whether assets exceeded \$1 million. TRA69 was enacted towards the end of 1969, during the period spanned by Edition 4. Entry by newly-regulated private non-operating foundations fell immediately after the reform, while entry of unaffected community and operating foundations did not decline until the market decline from 1973 to 1975. $N=14,646=12,154(\text{estimation sample})+2492(\text{Edition 4})$.

Figure 2 depicts the exit rates of each type of foundation in each period. In contrast to past studies, there is no evidence of exit by newly-regulated foundations. If anything, the rate of exit declined once the market decline played out. It should perhaps not be surprising, however, that few donors with large foundations would shut them down in response to the reform, since dissolution would require that the foundation’s assets be given to another charitable organization. Past findings of a high degree of exit immediately after TRA69 may therefore reflect dissolution of low-asset foundations that would not appear in the Foundation Directory sample.¹¹

¹¹ A 1970s report of the Council on Foundations showed a sharp increase in exit among private foundations in twelve states (The Council on Foundations, Inc., 1977). The methodology and identities of the twelve states were not reported. The report attributes the results to earlier work by the firm Caplin & Drysdale and the Foundation Center. Staff of the Council on Foundations, Caplin & Drysdale, the Foundation Center, the Philanthropy Archives at IUPUI University Library, and the Rockefeller Archive Center all graciously attempted to locate the earlier study or its analysis but were unsuccessful.

Figure 2: No Increase In Exit by Private Foundations



Notes: The figure displays the number of foundations appearing for the last time with assets over \$1 million (in constant 1974 dollars) as a share of the total number of the same type in each edition of the Foundation Directory. Exit by private non-operating foundations was somewhat greater than exit by community and operating foundations until the market decline from 1973 to 1975. TRA69 did not increase the exit rate of large private foundations and may have reduced it, consistent with a reduction in churning. $N=15,694=12,154(\text{estimation sample})+1048(\text{Edition 1})+2492(\text{Edition 4})$.

To estimate effects on entry and exit I compare changes in the hazard rates among the regulated foundations to the changes among unregulated foundations. A difference-in-difference estimator will be consistent if the hazard rates for the two groups would have evolved similarly in the absence of the reform. To set a consistent size threshold across time I restrict attention to the subsample of foundations with assets greater than \$1 million in constant 1974 dollars. I estimate regressions of the form

$$E_{it} = \beta * post_t * private_i + \gamma * private_i + \delta_t + \epsilon_{it}$$

where $post_t$ is an indicator for years after TRA69, $private_i$ is an indicator for private non-operating foundations (those subject to the new regulations), and δ_t is a vector of dummies for editions of the Foundation Directory. I estimate regressions with these same regressors for two different dummy variable outcomes E_{it} : the foundation's first appearance in the subsample (entry) and its last (exit). Because each observation is currently in the data, effects in these regressions can be interpreted

as changes in the number of foundations as a percentage of the number in the data as of Edition t . I also estimate regressions in which the entry and exit dummies in Edition t are divided by the difference between the average reporting years of Edition t and Edition $t-1$. These rescaled regressions directly address the increasing frequency of directories over time, and the estimates can be interpreted as changes in the rate of entry or exit per year. In all regressions the coefficient γ captures time-invariant differences between treated and control foundations, and the edition dummies control for shocks over time that affect all foundations similarly. The coefficient of interest, β , identifies the effect of the reform on the entry and exit hazard rates.

3.1.2 Results

Table 2 provides regression results for entry and exit. Whether one uses a linear probability model (column 1), a probit model (column 2), or a linear model estimating annualized entry (column 3), there is a significant adverse effect on the entry rate of private non-operating foundations. The effect on exit is negative, and it is only statistically significant for the linear probability model. Similar results obtain when restricting the control group to either community foundations or operating foundations, as shown in Online Appendix Figure B.1. The results suggest a reduction in churning rather than exodus of newly-regulated foundations. Online Appendix Figure B.2 shows that it was newer private foundations that were exiting at a higher exit rate before the reform. Online Appendix Figure B.3 shows that small foundations (just above the threshold for inclusion in the data) were especially likely to exit during the stock market decline between Editions 5 and 6, and Online Appendix Table B.2 shows that the types of private foundations studied in the paper showed no differential propensity to exit at this time. Since only asset size predicts exit by existing foundations, I turn to analysis of a balanced panel to study the effects of TRA69 on existing foundations.

Table 2: Stronger Effects on Entry Than Exit of Private Foundations

	(1)	(2)	(3)	(4)	(5)	(6)
	Entry - LPM	Entry - Probit	Entry Per Year	Exit - LPM	Exit - Probit	Exit Per Year
Post * Private Foundation	-0.137*** (0.032)	-0.094*** (0.031)	-0.038*** (0.010)	-0.035** (0.015)	-0.041 (0.029)	-0.007 (0.005)
Private Foundation	0.147*** (0.028)	0.108*** (0.024)	0.042*** (0.008)	0.090*** (0.015)	0.114*** (0.032)	0.026*** (0.004)
N	12,154	12,154	12,154	12,154	12,154	12,154

Notes: The table displays the results of regressions estimating relative changes in the entry and exit rates of newly-regulated foundations after TRA69. Post is an indicator for Editions 5-8 of the Foundation Directory, which covered years after TRA69, and Private is an indicator for the private non-operating foundations subject to the new rules in the law. Entry and exit are defined as dummies for a foundation's first and last appearance in the sample with assts over \$1 million (1974). Columns 1 and 4 provide results from a linear probability model, columns 2 and 5 contain marginal effects estimated with a probit model, and columns 3 and 6 show linear estimates for outcomes rescaled by the change in the average year of filing in each edition. The first row of results indicates that regulated foundations were less likely to enter after the reform but were not more likely to exit. Regressions include edition (time) dummies and are estimated using all observations from Editions 2-3 (pre-TRA69) or 5-8 (post TRA69) with assts over \$1 million (1974). Standard errors are clustered by the state in which a foundation first appears.

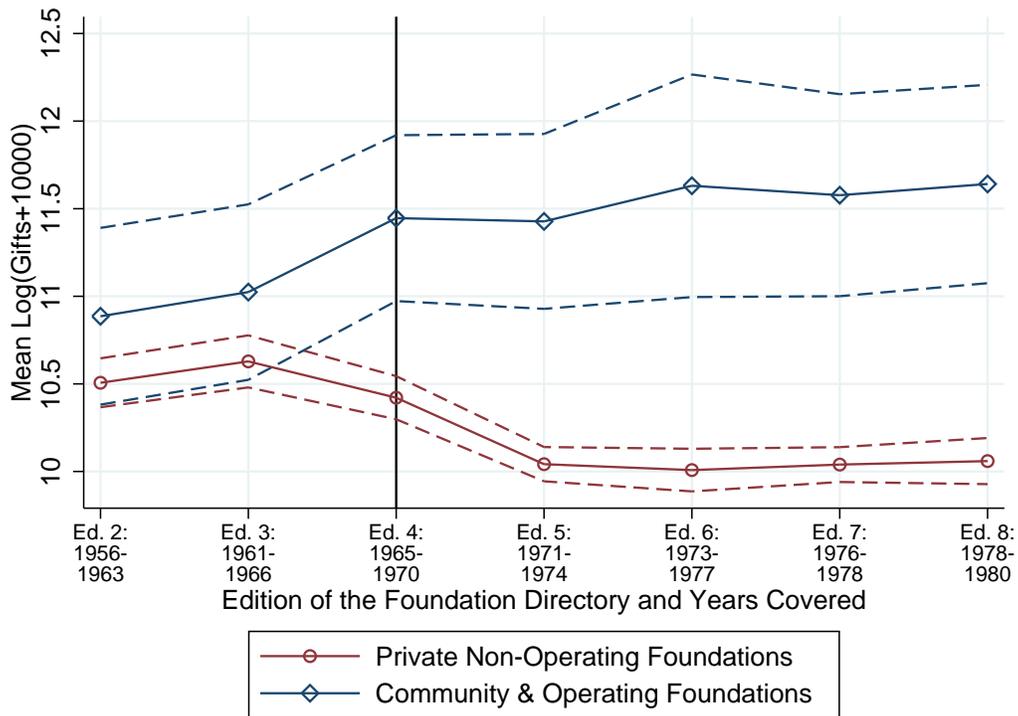
3.2 Effects on Balanced Panel

3.2.1 Graphical Evidence and Empirical Strategy

Comparing measures of giving to treated and control foundations over time provides visual evidence of the effects of the reform. Figure 3 shows log gifts to foundations in each edition of the Foundation Directory for which gifts were reported.¹² Trends for the two groups appear very similar before and after the reform, but the regulated foundations exhibit a large decline at the time TRA69 is enacted. The decline in the average gift size is driven by a reduction in the probability of receiving any gift at all. Figure 4 shows the share of foundations receiving a gift in each edition. The share of private non-operating foundations receiving gifts fell from over 55 percent before TRA69 to about 30 percent after. In contrast, community and operating foundations maintain a steady upward trend. While the difference between the two groups' trends is not statistically significant, foundation time trends reduce the estimated impacts on the share receiving gifts and are included in the primary specification to provide conservative estimates.

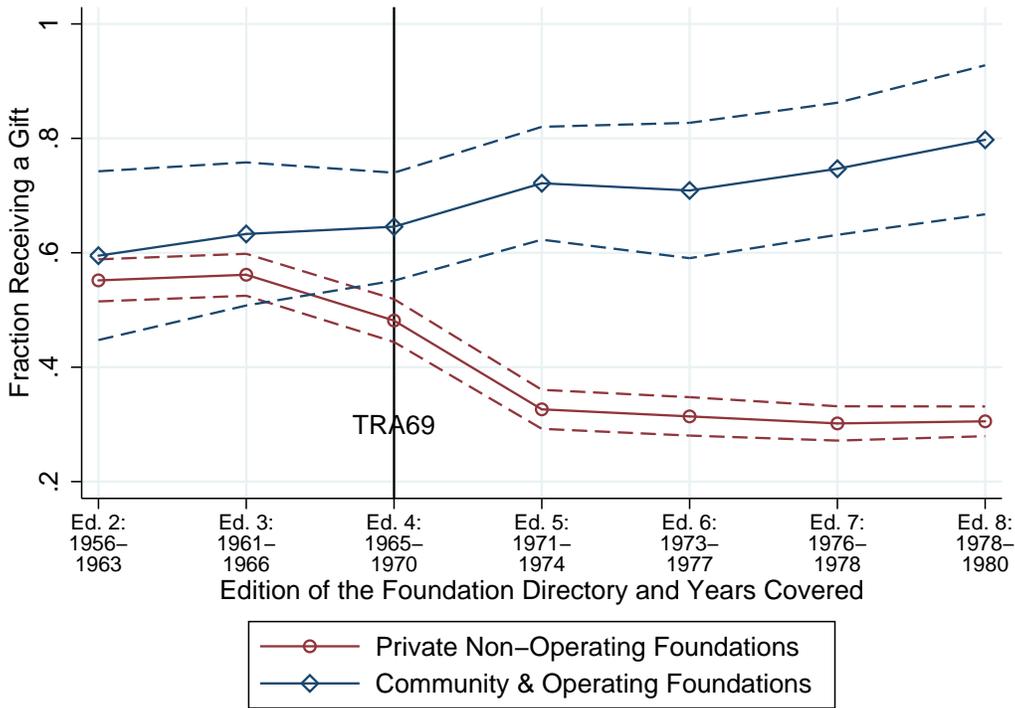
¹²While the logarithmic specification is often employed for its convenient interpretation as an approximate percentage change, the logarithm is undefined when gifts are zero. Because the majority of foundations receive no gifts in any particular year, I add 10,000 (roughly the 11th percentile of nonzero gifts) before taking the log.

Figure 3: Decline in Gifts Received by Private Foundations



Notes: The figure displays the mean level of gifts received by each type of foundation in each edition of the Foundation Directory. The measure of gifts is $\log(\text{gifts}+10,000)$ so that zeros are included. Gifts to regulated private non-operating foundations follow a trend similar to that of community and operating foundations except for a large decline upon the enactment of TRA69. Edition 1 is excluded because it does not include data on gifts received. $N=5625=4830(\text{estimation sample})+795(\text{Edition 4})$.

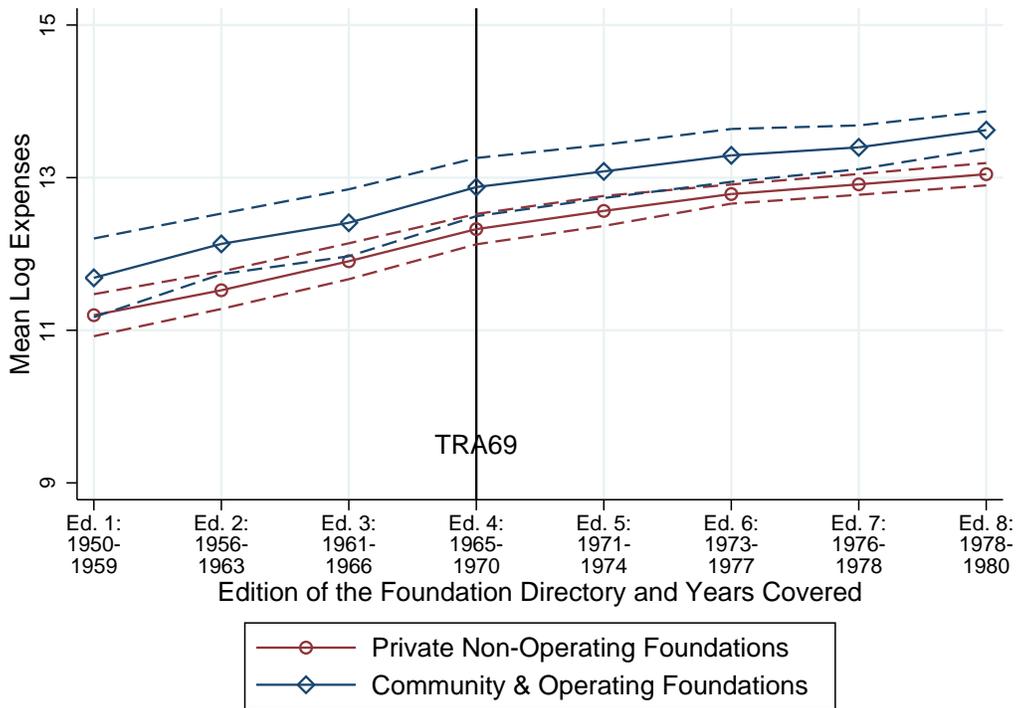
Figure 4: Decline in Share of Private Foundations Receiving a Gift



Notes: The figure displays the mean level of gifts received by each type of foundation in each edition of the Foundation Directory. The measure of gifts is an indicator for nonzero gifts received. Gifts to regulated private non-operating foundations follow a trend similar to that of community and operating foundations except for a large decline upon the enactment of TRA69. Edition 1 is excluded because it does not include data on gifts received. $N=5625=4830(\text{estimation sample})+795(\text{Edition 4})$.

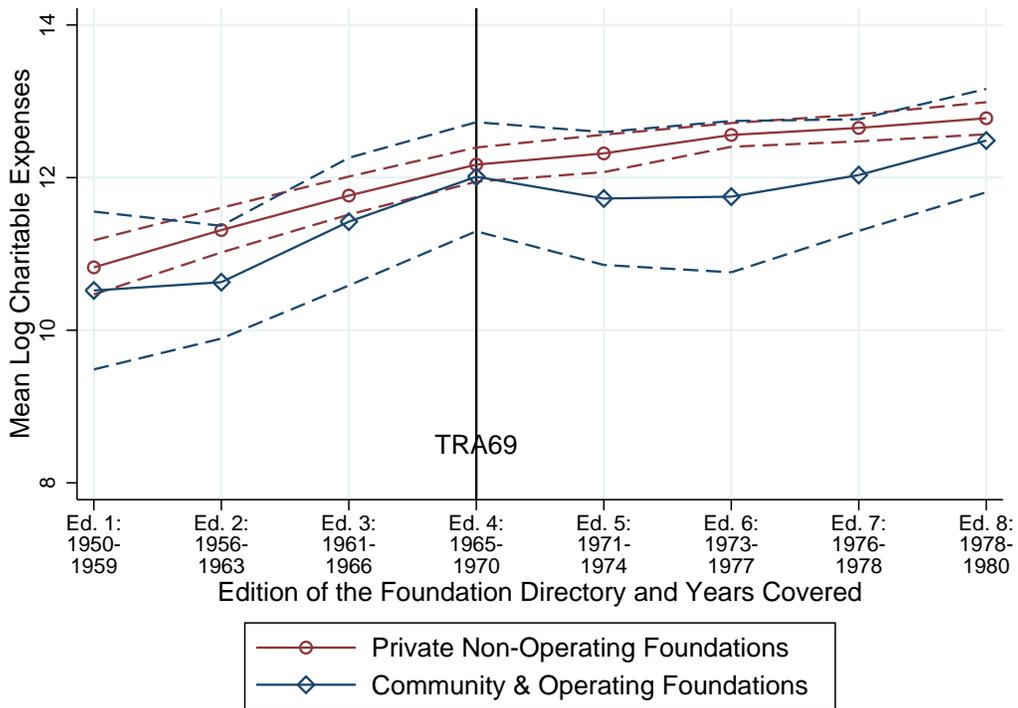
Effects on foundation spending appear to be mixed. In Figure 5 there does not appear to be a strong relative change in total spending. When one focuses on charitable spending, as in Figure 6, there appears to be a lull among community and operating foundations during the market downturn following TRA69. Private non-operating foundations do not share this lull, but it is difficult to assess whether the differences are significant. In contrast, it is more apparent from Figure 7 that while administrative expenses of community and operating foundations rose at a slightly lesser rate in the 1970s than in the 1960s, private non-operating foundations experienced a sharp increase in administrative expenses when TRA69 was passed.

Figure 5: Little Change in Charitable Expenditures of Private Foundations



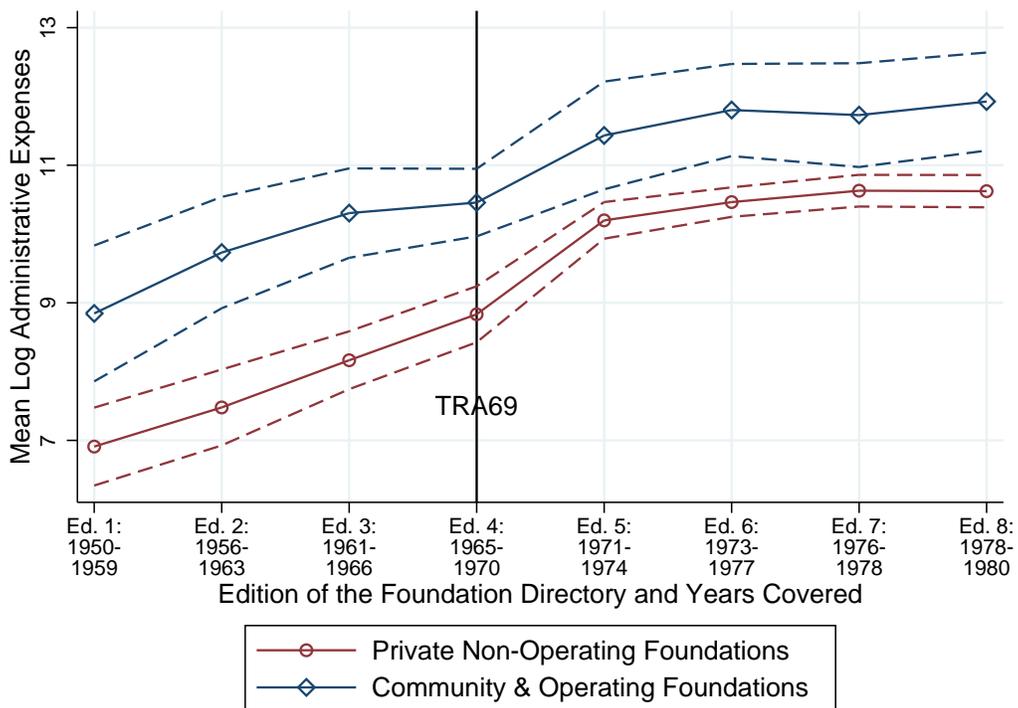
Notes: The figure displays the mean level of log expenditures by each type of foundation in each edition of the Foundation Directory. The parallel trends of private non-operating foundations and community and operating foundations suggests TRA69 did not have a significant effect on total spending. $N=6230=5635(\text{estimation sample})+795(\text{Edition } 4)$.

Figure 6: Relative Change in Charitable Expenditures of Private Foundations



Notes: The figure displays the mean level of log of one plus charitable (non-administrative) expenditures by each type of foundation in each edition of the Foundation Directory. Charitable expenses of private non-operating foundations follow a trend similar to that of community and operating foundations until the enactment of TRA69 but continue to grow rather than fall afterwards. $N=6230=5635(\text{estimation sample})+795(\text{Edition 4})$.

Figure 7: Rise in Administrative Costs of Private Foundations



Notes: The figure displays the mean level of log of one plus administrative expenses by each type of foundation in each edition of the Foundation Directory. Administrative expenses of private non-operating foundations follow a trend similar to that of community and operating foundations except for a large increase upon the enactment of TRA69. N=6230=5635(estimation sample)+795(Edition 4).

To estimate the impact of TRA69 on existing foundations that continued operations I estimate several regressions of the form

$$Y_{it} = \beta * post_t * private_i + \phi' X_{it} + \gamma_i + \delta_t + \gamma_i * t + \epsilon_{it}$$

where the outcomes Y_{it} are various measures of gifts and expenses, while $post_t$, $private_i$, γ_i , and δ_t are defined as in the previous section. The time-varying characteristics X_{it} are dummies for 1 or more deceased donors, 2 or more deceased donors, and an unknown number of deceased donors.¹³ Linear time trends for each foundation, $\gamma_i * t$, are included to allow for differential trends. Standard errors are always clustered by the U.S. state in which a foundation is first observed.

3.2.2 Results

The regression results in Table 3 confirm the graphical evidence of impacts on existing foundations. The first two columns present impacts on measures of gifts received by foundations: the log of gifts plus 10,000 and an indicator for any gift. In each case, the relative reduction among newly-regulated foundations is highly significant. Column 2 shows that the probability of receiving a gift dropped by nearly 30 percentage points when TRA69 was passed. Total expenses increased by an estimated four percent, as shown in column 3, but this result is not statistically significant. Effects on spending appear to be concentrated among foundations that had previously had either little charitable spending (the outcome in column 4) or little administrative spending (column 5), as the average percentage increase in each type of spending was large. While the estimates in columns 4 and 5 are imprecise, the result for administrative expenses is a statistically significant increase of nearly one full log point.

¹³Results are robust to inclusion of lagged financial variables as well as interactions of $post_t$ with financial variables, age, and deceased donor variables.

Table 3: Effects of TRA69 On Private Foundation Gifts and Expenses

	(1)	(2)	(3)	(4)	(5)
	log(gifts+10,000)	any gift	log exps	log charity	log admin
Post * Private Foundation	-0.957*** (0.262)	-0.273*** (0.066)	0.038 (0.144)	0.437 (0.405)	0.965** (0.376)
N	4,830	4,830	5,635	5,635	5,635
Adj. R-Squared	0.243	0.318	0.696	0.479	0.685

Notes: The table displays the results of regressions estimating relative changes in the finances of newly-regulated foundations after TRA69. Post is an indicator for Editions 5-8 of the foundation directory, which covered years after TRA69, and Private is an indicator for the private non-operating foundations subject to the new rules in the law. The estimation sample is the balanced panel of foundations that appear in Editions 1-3 and Editions 5-8. Sample size is reduced in columns 1 and 2 because gifts are not observed in Edition 1. Each column represents a regression with a different outcome, showing that newly-regulated foundations experienced a relative decline in gifts received (1-2), marginally-significant increase in total expenses (3), insignificant change in charitable (non-administrative) expenses (4), and marginally-significant increase in administrative expenses (5). Regressions include edition (time) dummies and foundation linear time trends. Standard errors are clustered by the state in which a foundation first appears.

Robustness tests are displayed in the Online Appendix. Online Appendix Table B.3 shows a number of alternative specifications, none of which change the results considerably.¹⁴ Finally, Online Appendix Table B.4 provides evidence, obtained by adding different constants to the expense variables before taking logs, that very small expenses do not drive the results.¹⁵

One empirical challenge that cannot be addressed with these data is the possibility that when donors gave less to their foundations they instead gave more to other charities. To the extent that donors shifted gifts to other recipients rather than reducing total gifts, the results would overestimate the true impact on giving. While this concern, which is common to many studies of charitable giving, cannot be ruled out entirely, there are reasons to believe that shifting gifts between charities was limited. The popularity of private foundations among the wealthy is likely related to the degree of control afforded to the donor and the opportunity to establish a fund in one's own name (the case for the vast majority of foundations) that can exist in perpetuity. Donor-advised funds offer similar benefits and have grown dramatically in recent years, but in 1969 there were few close substitutes for one's own private foundation. The magnitude of the estimated change in foundation giving is

¹⁴Robustness tests include: (1) performing the selection correction of weighting by the inverse of the probability of appearing in the balanced panel, estimated as a function of Edition-1 log assets using a kernel-weighted local polynomial regression; (2) weighting by pre-TRA69 log assets; (3) excluding foundation time trends; (4) including only community foundations in the control group; and (5) including only operating foundations in the control group. The biggest differences from the estimates in Table 3 arise when excluding foundation time trends, which results in a smaller-but-still-highly-significant estimate of the effect on administrative expenses and a much greater estimated effect on gifts to private foundations.

¹⁵Replacing the log of expenses plus one with the log of expenses plus the fifth or tenth percentile of nonzero expenses does not change the results appreciably. The effect on charitable spending shrinks to about .25 but becomes significant at the 10 percent level. The effect on administrative expenses remains significant but shrinks in size as a larger number is added to expenses, consistent with the lowest-expense foundations experiencing the greatest percentage change in administrative expenses, as argued in the next Section.

also very close to the change in total giving estimated by Fack and Landais (2014). By combining the giving rates that they report with the income shares in Piketty and Saez (2003), I conclude that individuals in the top 1 percent of the income distribution have accounted for 27 percent of total charitable giving in recent years. As Fack and Landais report, these individuals control nearly all foundations, and one can therefore infer that gifts to foundations make up about 40 percent ($11/.27$) of their total gifts from the fact that gifts to foundations make up 11 percent of total giving (Giving USA Foundation, 2011). If gifts to foundations fell by 50 percent, as estimated here, with no shifting of gifts to other charities, then the percentage decrease in giving to all recipients would have been 29 percent ($.4/(1+.4)$), directly in line with the conclusion of Fack and Landais that giving fell by 25 to 30 percent.

A second challenge relates to estimating responses on the intensive margin, or changes in amounts given by those who continued to give. In any year after the reform, only a third of foundations receive a gift, consistent with the general finding that giving by the wealthy is more sporadic, often consisting of appreciated property (Andreoni, 2006). Online Appendix Figure B.4 provides some evidence that the distribution of gift amounts was also affected, with treated foundations becoming more likely to receive a small gift when they received any gift at all, but the result is much less striking than the change on the extensive margin. The figure also shows that left-censoring at zero cannot explain the large number of foundations with no gift, suggesting that a two-part hurdle model (following Huck and Rasul (2011) and Meer (2011)) would be more appropriate than a censored regression model such as a Tobit. The first part of a two-part hurdle model for giving estimates the conditional probability of any gift being received, and I focus on this specification throughout the rest of the paper. The lumpiness of foundation gifts results in noisy estimates in the second part, examining log gifts conditional on a nonzero gift (with a coefficient of $-.16$ and standard error of $.42$). To the extent that gift size also falls, the change in the probability of a gift serves as a lower bound for the effect on total dollars donated.

The evidence strongly suggests that TRA69 had a negative impact on the foundations it affected. The question, then, is whether the decline among private non-operating foundations should be interpreted in a positive or negative light. If donors were mostly turned off by the increased cost of administration then the reforms introduced socially costly distortions. On the other hand, we would consider the reforms a success if they mostly prevented tax deductions for “donations” that were not going towards charitable purposes. I next estimate the extent to which different factors influenced donors’ decisions to stop giving to private, non-operating foundations.

4 Heterogeneous Responses By Donor Type, State Law, and Administrative Expenses

In this section I estimate instrumental variables, difference-in-difference, and triple-difference regressions to analyze heterogeneity in the reduction of gifts to private foundations. Results indicate that TRA69 may have had some expected effects but also reduced giving significantly by increasing compliance costs.

4.1 Donor Type and State Reporting Laws

4.1.1 Empirical Strategy

One observable form of heterogeneity is the characteristics of donors. Foundations may be formed by companies or by individuals, and the mandated increase in spending rates might have disproportionately affected foundations started by individuals with a preference for a foundation that exists in perpetuity. Among human donors, those who managed their own foundations would have had the most opportunity to obtain private benefits, and so the number of donor-managers, as measured by matching donor names to management names, offers a proxy for the type of “self-dealing” transactions for which the law strengthened enforcement. Matching simply on last names reveals whether the foundation is run by kin of the donor(s), an alternative proxy for impropriety, though one that would be weakened by the existence of family foundations that exist for generations beyond the death of the donor(s).

A second set of observable differences can be found in state laws governing foundations. Some states required that foundations file regular financial reports to the attorney general or other state officials. In all but a few states, attorneys general had the power to dissolve a charitable corporation. Fremont-Smith (1965) provides the reporting and other requirements across states, a copy of the federal Form 990-A, and examples of (more detailed) state reporting forms.¹⁶ I take the lack of a state financial reporting law as an additional proxy for foundation malfeasance. If donors gave more to non-reporting foundations in order to obtain private benefits then gifts to such foundations should fall by more upon enactment of TRA69.¹⁷

The influence of both donor characteristics and state laws can be identified in a simple difference-in-differences framework similar to that of the previous section. I drop community and operating foundations and estimate

¹⁶Online Appendix Figure B.5 maps these state reporting requirements.

¹⁷This variable will be subject to measurement error if state reporting requirements changed between the publication of Fremont-Smith (1965) and the enactment of TRA69.

$$gift_{it} = \beta * post_t * W_i + \phi' X_{it} + \gamma_i + \delta_t + \gamma_i * t + \epsilon_{it}$$

where $gift_{it}$ is an indicator for receiving a gift. W_i may include (1) an indicator for having human donors (rather than companies), (2) managers with last names matching those of donors, (3) donor-managers, or (4) an indicator for the state having no financial reporting law for this type of foundation. These time-invariant variables are defined as the maximum value observed before the reform so that, for example, “Has Human Donors” indicates whether non-company donors were ever listed before TRA69. Because most foundations are incorporated and because the minority that are organized as trusts are subject to varying laws depending on the timing of the gift relative to the donor’s death, I include specifications that include only incorporated foundations, for which the reporting law variable is likely to be measured with less error.¹⁸ I also present triple-difference specifications that interact the donor-managers variable with state reporting laws to assess whether donor-managers are particularly sensitive to the public reporting regime.

4.1.2 Results

Table 4 shows the decline in the probability of receiving a gift for several types of foundation. TRA69 had the strongest effect on the giving of donor-managers. The heightened response of donor-managers does not reflect a general difference between companies and individuals; the indicator for having human donors has no significant predictive power, and neither does the number of donor family members appearing among management. State reporting laws, however, are significantly predictive, with foundations in nonreporting states showing a greater decline in giving.^{19,20} These findings indicate that giving declined most among donors in position to benefit from their own foundations and in states where foundations did not have to provide public financial reports. These results are consistent with a reduction in the misuse of foundations for private benefits, the intended effect of the reform, but it could also be that the reform imposed greater costs on these

¹⁸Regression results in Online Appendix Table B.6 indicate no significant effect of state reporting laws on a foundation’s probability of incorporating or moving between states.

¹⁹In principle, changes among foundations with no state report can be identified separately from state-level changes because reporting laws for trusts and those for incorporated foundations are not collinear across states. Re-estimating the regression in column 4 using the 2088 observations for states with a reporting requirement for one type of organization but not the other makes the point estimate a more negative -0.134 but increases the standard error to 0.092.

²⁰Table B.5 further explores these responses by examining results according to state law. Interaction of the donor-managers variable with the state law variable reveals that it was donor-managers in non-reporting states who most reduced their giving. Restricting the sample to incorporated foundations isolates the reporting variable that has less measurement error, and the coefficient on this variable’s interaction with $post_t$ is significant at the .05 level. The main result is the same: Gifts decreased significantly among donor-managers that didn’t have to provide public financial reports before the reform.

foundations, such as the administrative cost of meeting new reporting requirements. I now explore these possibilities by estimating changes in administrative expenses and the reactions of the different foundation types to these expenses.

Table 4: Decline in the Probability of Receiving a Gift by Foundation Type

	(1)	(2)	(3)	(4)	(5)
Post * Donor-Managers	-0.073*** (0.026)				-0.075*** (0.024)
Post * Managers in Donors' Family		0.003 (0.022)			0.015 (0.022)
Post * Has Human Donors			-0.036 (0.055)		-0.002 (0.053)
Post * No State Reporting Law				-0.093** (0.042)	-0.086** (0.044)
N	4,446	4,446	4,446	4,446	4,446
Adj. R-Squared	-0.450	-0.454	-0.453	-0.452	-0.450
Post * Year Established			X	X	X
Post * Log Assets and Charity Before TRA69				X	X
Post * Cubics in Log Assets and Charity Before TRA69					X

Notes: The table displays the results of regressions estimating post-TRA69 relative changes in the share of different types of regulated foundations receiving gifts. Post is an indicator for editions after TRA69, Donor-Managers is the count of managers with both first and last name matching a donor, Managers in Donors' Family is the count of managers with only the last name matching a donor's, Has Human Donors is an indicator for donors that are people (not companies), and No State Reporting Law is a dummy indicating that just before TRA69 the foundation was in a U.S. state that did not require it to file financial reports. The estimation sample is the balanced panel of private non-operating foundations that appear in Editions 1-3 and Editions 5-8. Results indicate that gifts decreased most among donor-managers (though not other human donors) and foundations for which reporting requirements were new. Regressions include edition (time) dummies and foundation linear time trends. Standard errors are clustered by the state in which a foundation first appears.

4.2 Administrative Expenses

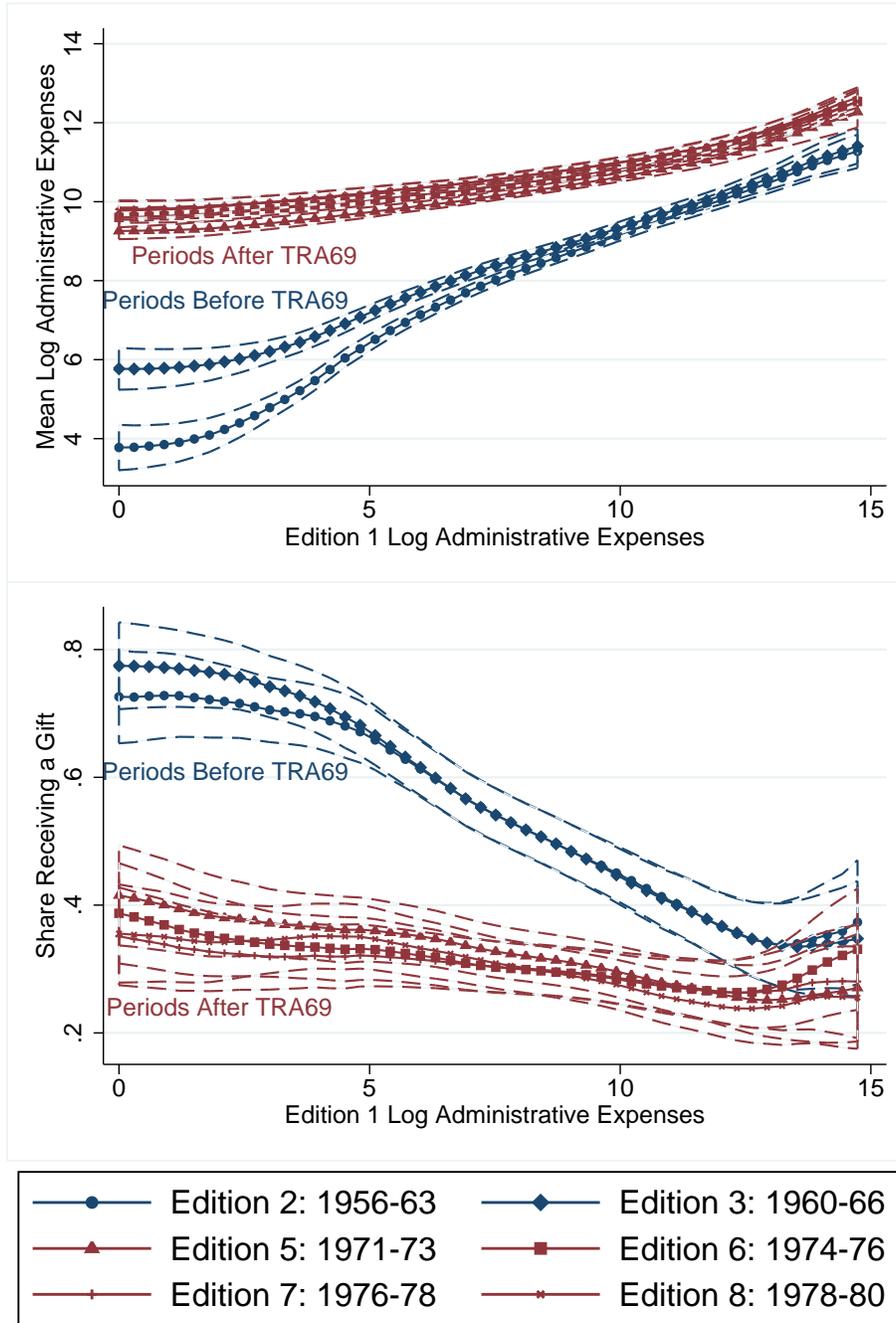
4.2.1 Graphical Evidence and Empirical Strategy

Next I examine the influence of compliance costs. Several components of the law increased administrative duties: the public reporting requirement, the grantee due diligence requirement, the tax on investment returns, the need to calculate and meet the minimum spending ratio, and an increase in the frequency of audits. Adherence to the new rules necessitated a certain amount of compliance cost spending, increasing the administrative expenses most among those foundations that had operated with little overhead prior to the reform.

Figure 8 compares current administrative expenses to the level in Edition 1 of the Foundation Directory, many years before the reform. When TRA69 was passed, administrative expenses grew the most among foundations that were previously low-expense, such that these foundations nearly

caught up to the level of the highest-expense foundations. The lower panel of Figure 8 shows giving before and after the reform as a function of the same Edition-1 administrative expenses. The decline in gifts was greatest among the low-expense foundations that experienced the greatest increase in their administrative expenses.

Figure 8: Heterogeneity by Initial Administrative Expenses



Notes: The figures display the evolution of log administrative expenses and gifts for foundations with different levels of initial administrative expenses. Both subfigures plot local-polynomial-smoothed outcomes against the log administrative expenses a foundation reported in Edition 1. The upper panel shows log administrative expenses in each edition before TRA69 (blue) and after (red). The pattern indicates that administrative expenses rose sharply at the time of the reform, with the largest increase occurring among foundations with the lowest initial level, consistent with the imposition of fixed costs. The lower panel shows the share of observations with a nonzero gift, averaged before the reform (blue) and after (red). Giving fell the most among foundations with the lowest initial level of administrative expenses. Standard error bands in both panels show differences between editions are generally only statistically significant when comparing editions before and after the reform. N=4446.

Estimation exploits the fact that foundations that had been operating with little overhead experienced the greatest increases in these expenses. I use the pre-TRA69 level of administrative expenses as an instrument for expense growth to test whether the foundations experiencing the largest increases in administrative expenses were also more likely to see a decline in gifts. Estimating equations have the two-stage least squares form:

$$gift_{it} = \beta * \hat{cost}_{it} + \alpha * post_t * W_i + \phi' X_{it} + \gamma_i + \delta_t + \gamma_i * t + \epsilon_{it}$$

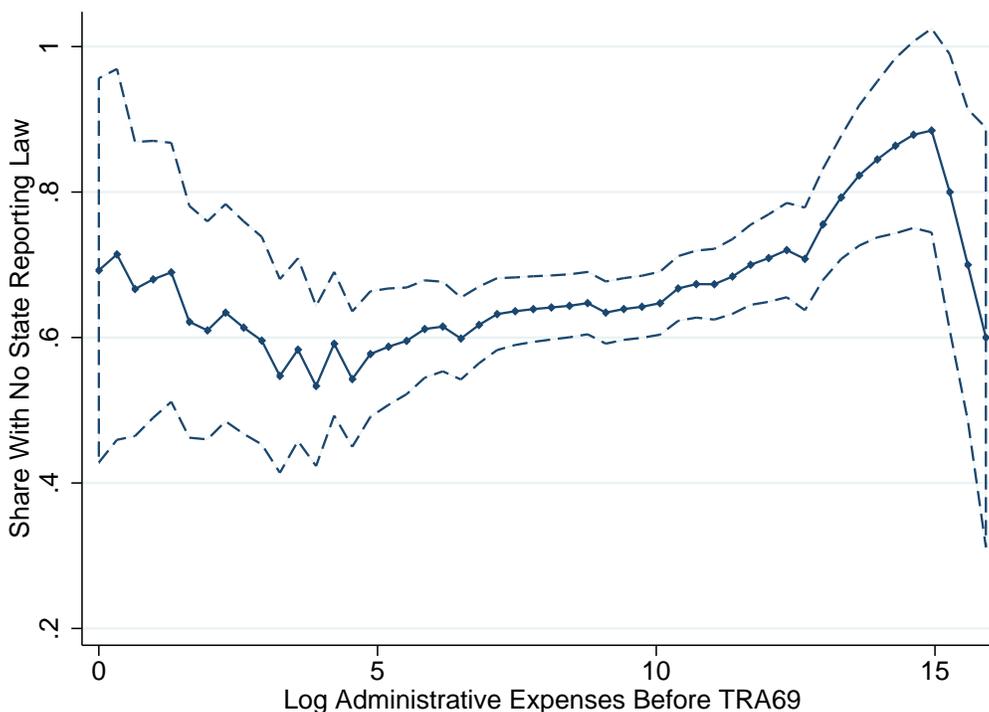
$$\hat{cost}_{it} = \alpha * post_t * Z_i + \pi * post_t * W_i + \nu' X_{it} + \mu_i + \theta_t + \omega_i * t + u_{it}$$

In the first-stage regressions, \hat{cost}_{it} is the log of (one plus) administrative expenses, and the instrument $post_t * Z_i$ must predict greater cost growth among certain foundations when TRA69 is imposed. For Z_i I use the maximum value of the log of (one plus) administrative expenses before the reform, and hence I expect a negative value for the coefficient α . W_i includes donor-managers and an indicator for having no state financial reporting law, the variables found to predict a fall in gifts. In the second stage regressions, the coefficient β on predicted administrative costs shows the impact of imposed costs on giving. The outcome $gift_{it}$ is again an indicator variable for receiving any gift.

Consistency of the two-stage least squares estimates depends on relevance and exogeneity of the instrument. Relevance is demonstrated through the strong predictive power of pre-reform administrative expenses. In this framework, exogeneity of the instrument can never be tested directly. Intuitively, exogeneity fails in this setting if donors to low-administrative-cost foundations responded to the reform in ways that differed from other donors for reasons unrelated to its effect on their foundations' administrative expenses. Because the level of administrative expenses is closely tied to the levels of charitable expenses and assets, one potential concern is that large and small foundations were affected differently. To address this concern I show regression results without controls for these variables and then with increasingly flexible controls and show that the results change very little. Another potential concern is that donors who used their foundations for private benefit may have managed them with less administrative expense, either because they wished to capture more of the resources or because they did not have to incur the expense of identifying worthwhile grantees. Some evidence against this concern is presented in Figure 9, which shows that the probability of having no state reporting requirement, a proxy for cheating, does not correlate strongly with the instrument. Using the last cross section preceding TRA69, a regression of log administrative expenses on a dummy for a state reporting law gives an estimate of -0.32 (with state-level clustered standard error of 0.34) with no controls and -0.04 (.16) when controlling for

log charitable expenses, log assets, and dummies for deceased donors. Thus, the relationship is not statistically significant, and the point estimate indicates that cheating foundations may have slightly larger administrative expenses.²¹

Figure 9: Weak Correlation of State Reporting Laws and Administrative Expenses



Notes: The figure displays the share of foundations not facing state reporting requirements as a function of each foundation’s maximum log administrative expenses before TRA69. Since the lack of a state reporting requirement is used as a proxy for misuse of foundations for noncharitable purposes, the weak correlation of this proxy with pre-reform administrative expenses offers suggestive evidence against the identification concern that misused foundations might have had lower administrative expenses. N=812.

4.2.2 Results

Table 5 shows the results of IV regressions for administrative expenses. In the first stage, high administrative expenses strongly predict a smaller increase at the time of the reform. This is true, and if anything strengthened, when size controls are interacted with $post_t$. In the second stage, donors are seen to react negatively to the increase in administrative expenses. The coefficients imply that a one percent increase in administrative expenses reduces the probability of receiving a gift by about 5 percentage points. Comparison with the IV results shows that the OLS estimate

²¹The other proxy for cheating, donor-managers, is correlated with lower administrative expenses. This is not particularly surprising, as cost savings could be a motivation for managing one’s own foundation, whether it is being used primarily for private or public benefit. The variable for donor-managers is included as a control in regressions estimating the effect of administrative expenses.

(in column 7) is biased in the positive direction, as would be predicted by reverse causality of additional gifts increasing the size and expenses of the foundation.²²

²²Online Appendix Table B.7 shows the results of a placebo test using Editions 5-8 and testing for effects of a counterfactual reform between Editions 6 and 7. The absence of results like those in Table 5 provides evidence against alternative explanations such as mean reversion in administrative expenses.

Table 5: IV Estimation of Administrative Expenses and Effect on Giving

(a) First Stage - Growth of Administrative Expenses Decreases With Pre-TRA69 Level

	(1)	(2)	(3)	(4)	(5)
Post * Log Admin Before TRA69	-0.549*** (0.038)	-0.549*** (0.037)	-0.562*** (0.039)	-0.663*** (0.036)	-0.663*** (0.036)
Post * Donor-Managers		0.071 (0.073)	0.081 (0.072)	0.079 (0.074)	0.077 (0.073)
Post * No State Reporting Law		0.098 (0.159)	0.122 (0.171)	0.038 (0.188)	0.048 (0.190)
N	4,446	4,446	4,446	4,446	4,446
Adj. R-Squared	-0.016	-0.017	-0.016	-0.006	-0.003
F Statistic	208.5	214.4	205.5	345.4	336.8
Post * Year Established			X	X	X
Post * Log Assets and Charity Before TRA69				X	X
Post * Cubics in Log Assets and Charity Before TRA69					X

(b) Second Stage - Administrative Expenses Reduce Probability of a Gift

	(1)	(2)	(3)	(4)	(5)	(6)
	2SLS	2SLS	2SLS	2SLS	2SLS	OLS
Log Administrative Expenses	-0.049*** (0.015)	-0.050*** (0.015)	-0.047*** (0.016)	-0.046*** (0.015)	-0.047*** (0.015)	-0.007 (0.006)
Post * Donor-Managers		-0.061** (0.026)	-0.060** (0.026)	-0.061** (0.025)	-0.063** (0.026)	
Post * No State Reporting Law		-0.086* (0.045)	-0.084* (0.046)	-0.084* (0.046)	-0.081* (0.046)	
N	4,446	4,446	4,446	4,446	4,446	4,446
Adj. R-Squared	-0.479	-0.476	-0.473	-0.472	-0.474	-0.449
Post * Year Established			X	X	X	
Post * Log Assets and Charity Before TRA69				X	X	
Post * Cubics in Log Assets and Charity Before TRA69					X	

Notes: The table displays the results of regressions estimating the change in log administrative expenses upon enactment of TRA69 and the effect of this change on the probability of receiving a nonzero gift. Post is an indicator for editions after TRA69, Post * Log Admin Expenses is the interaction of this variable with the foundation's maximum level of log administrative expenses observed before TRA69, Donor-Managers is the count of managers with both first and last name matching a donor, No State Reporting Law is a dummy indicating that just before TRA69 the foundation was in a U.S. state that did not require it to file financial reports. The estimation sample is the balanced panel of private non-operating foundations that appear in Editions 1-3 and Editions 5-8. The first stage F statistic shows that the instrument Post * Log Admin Expenses is a strong predictor of log administrative expenses because these expenses rose most among previously-low-cost foundations. In the second stage, an increase in administrative expenses leads to a statistically significant decrease in the probability of receiving a gift. Robustness to covariates supports the argument that changes relate to initial expenses rather than size. All regressions include edition (time) dummies, foundation linear time trends, lagged log administrative expenses, dummies for deceased donors, and the interaction of Post with the deceased donor dummies. Column 7 shows OLS estimates for comparison. Standard errors are clustered by the state in which a foundation first appears.

Table 5 provides some additional evidence on the interpretation of the heterogeneous responses by foundations of different types (Table 4). In the first stage, both proxies (Donor-Managers and No State Reporting Law) are associated with larger increases in administrative expenses, though neither effect is statistically significant. In the second stage one can see that accounting for increased administrative expenses reduces the estimated change in giving among donor-managed foundations, and the estimates for foundations in nonreporting states are essentially unchanged. Thus, the reduction in gifts to these types of foundations is mostly *in addition* to the reductions they experience due to their large increases in administrative expenses. These results suggest the reform imposed additional costs on these types of foundations. For example, it could be that donor-managers keep administrative expenses low by volunteering their time, and that the unobserved volunteering time also increased after TRA69. In this case one would expect donor-managers to respond more strongly to a given increase in administrative expenses, but interactions of the proxies with the administrative expense variables have no significant effects on the results (see Online Appendix Table B.8), suggesting that donor-managed foundations and those in nonreporting states respond to administrative expenses in the same way as other foundations. The reform therefore appears to have imposed costs on these foundations that were uncorrelated with the observed increase in administrative expenses, such as the intended reduction in the ability to use them for the donor's private benefit.

4.3 Decomposition of the Response

Lastly, I present a decomposition of the effects between the different factors examined. I take the post-TRA69 means of the predicted change in administrative costs and the W_i variables of interest, then multiply these means by the respective coefficients to obtain the effect on gifts that is explained by each variable. I then divide each variable's effect by the total change in gifts, as estimated and displayed in column 2 of Table 3, to obtain the share of the total effect that is explained by each variable.

Table 6 presents the decomposition of the decline in giving. The growth of administrative expenses among previously-low-cost foundations explains over 50 percent of the decline in gifts. Donor-managers and state reporting laws explain about 9 and 20 percent, respectively, so that the three variables together explain about 79 percent of the decline in giving. While there is evidence suggesting successful deterrence of non-charitable behavior, the reform may have also done significant harm by imposing compliance costs that deterred legitimate charitable giving. Online Appendix Table B.9 shows that these results are robust to replacing $\log(\text{admin}+1)$ with $\log(\text{admin}+0)$, omitting lagged admin, and interacting the donor-managers and no-state-report variables. In all cases the share of the effect on gifts that is explained by the change in administrative expenses is

between 54 and 69 percent.

Table 6: Decomposition of the Decline in the Probability of Receiving a Gift

		Post-TRA69 Variable Mean	Product	Share of Total Effect
Change in Log Administrative Expenses	-0.050*** (0.015)	2.961	-0.147	53.8
Post * Donor-Managers	-0.061** (0.026)	.389	-0.024	8.7
Post * No State Reporting Law	-0.086* (0.045)	.661	-0.057	20.9
N	4,446			
Adj. R-Squared	-0.476			

Notes: The table displays the results of a regression estimating the determinants of the decline in the probability of receiving a nonzero gift after TRA69. Post is an indicator for editions after TRA69, Change in Log Administrative Expenses is a foundation's average administrative expenses after TRA69 less its average expenses before TRA69, Donor-Managers is the count of managers with both first and last name matching a donor, and No State Reporting Law is a dummy indicating that just before TRA69 the foundation was in a U.S. state that did not require it to file financial reports. The estimation sample is the balanced panel of private non-operating foundations that appear in Editions 1-3 and Editions 5-8. Column (1) shows the second stage of regression 2 in Table 5. Each coefficient is multiplied by its post-TRA69 mean (column 2) to get the effect of that variable on gifts (column 3), which is then expressed as a percentage of the total effect (column 4). Results indicate that the growth of administrative expenses explains over 50 percent of the decline in gifts, while reporting laws and donor-managers together explain about 30 percent. Regressions include edition (time) dummies and foundation linear time trends. Standard errors are clustered by the state in which a foundation first appears.

Did the increased enforcement of the Tax Reform Act of 1969 raise welfare? It is difficult to make strong claims, but simplifying assumptions make a back-of-the-envelope calculation possible. Because increased administrative expenses can explain about half of the decrease in gifts, one might assume that this proportion represents the share of deterred gifts that were charitable. One can assume, following the arguments of Andreoni (2006) and Diamond (2006), that donor utility does not enter the social welfare function.²³ If one further assumes that charitable gifts have a constant marginal value of unity then the net benefit of charitable gifts is the difference between the gross amount and the cost of the income-tax deduction, with the latter scaled by the marginal cost of public funds. Cheating gifts carry the same cost as charitable gifts but have no benefit. The government's administrative cost of increased auditing was passed on to the foundations and can be assumed for simplicity to have had no effect on social welfare. Assuming away other effects on externality-producing behaviors (such as gifts to other charities), if giving to foundations fell

²³This assumption is perhaps most appropriate when studying gifts to foundations because their donors are wealthy individuals with low marginal utilities and small Pareto weights in concave social welfare functions (e.g. zero in the Rawlsian objective).

by X , the marginal tax rate of donors was τ , and the marginal cost of public funds is $\frac{4}{3}$, then the reform produced a savings of $\frac{1}{2}X \left(\frac{4}{3}\tau\right)$ at a cost of $\frac{1}{2}X \left(1 - \frac{4}{3}\tau\right)$, for a net benefit of $\frac{1}{2}X \left(\frac{8}{3}\tau - 1\right)$. The net benefit would be positive for $\tau > \frac{3}{8} = .375$. Unfortunately, donors' marginal tax rates are unobserved. The top rates at the time exceeded 70 percent, and donors most likely made gifts when their incomes and hence marginal tax rates were high, suggesting a positive effect on welfare. On the other hand, much of these donors' incomes may have come from capital gains, which were always taxed at rates below 40 percent. If the estimated parameters are truly indicative of the responsiveness of charitable gifts and cheating to enforcement then this rough calculation would suggest that the current level of enforcement might be excessive at today's lower income tax rates.

5 Conclusion

I study how regulations in the Tax Reform Act of 1969 affected private foundations and their donors. The analysis uses panel data compiled from editions of the Foundation Directory that spanned the decades before and after the landmark reform. At the time of enactment, gifts to regulated private foundations dropped precipitously, and the administrative expenses of foundations rose just as quickly. The analysis suggests that these simultaneous responses were not coincidental; donors are highly responsive to the cost of running a foundation. The evidence suggests that regulation successfully deterred gifts for noncharitable purposes, but the cost of complying with the regulation may have also deterred a large amount of giving that was charitable. Because charitable giving provides positive externalities, the net welfare effect of the reform may well have been negative, a cautionary tale generally for regulation in settings with externalities. While enforcement is undoubtedly necessary to prevent misuse of foundations for specious tax benefits, simplifying the rules could reduce the cost of running a foundation and increase charitable donations.

Acknowledgments

I am grateful for helpful comments from David Agrawal, Bruce Kogut, Wojciech Kopczuk, Jonathan Meer, David Munroe, Dan O'Flaherty, Joe Rosenberg, Maya Rossin-Slater, Bernard Salanié, Miguel Urquiola, and session participants at the National Tax Association Annual Conference. I gratefully acknowledge the financial support of the Sanford C. Bernstein & Company Center for Leadership and Ethics as well as a Nonprofit Research Fellowship from the National Bureau of Economic Research.

References

- Andreoni, James**, “Philanthropy,” *Handbook on the Economics of Giving, Reciprocity and Altruism*, 2006, *1*, 1201--1269.
- Auten, G.E., H. Sieg, and C.T. Clotfelter**, “Charitable giving, income, and taxes: an analysis of panel data,” *The American Economic Review*, 2002, *92* (1), 371--382.
- Auten, Gerald E., Charles T. Clotfelter, and Richard L. Schmalbeck**, *Does Atlas Shrug? The Economic Consequences of Taxing the Rich*, Harvard University Press,
- Bakija, Jon and Bradley T. Heim**, “How Does Charitable Giving Respond To Incentives And Income? New Estimates From Panel Data,” *National Tax Journal*, 2011, *64*(2), 615--50.
- Bond, Sharon**, “U.S. charitable giving estimated to be 307.65 billion in 2008,” Technical Report, Giving USA Foundation 2009.
- Brody, E.**, “Charitable Endowments and the Democratization of Dynasty,” *Arizona Law Review*, Fall 1997, *39* (3), 873--948.
- Clotfelter, C.T.**, *Federal tax policy and charitable giving*, University of Chicago Press, 1985.
- Deep, A. and P. Frumkin**, “The foundation payout puzzle,” *The Hauser Center for Nonprofit Organizations, Kennedy School of Government, Harvard University, Working Paper*, 2001.
- Diamond, Peter**, “Optimal tax treatment of private contributions for public goods with and without warm glow preferences,” *Journal of Public Economics*, 2006, *90* (4-5), 897--919.
- Fack, Gabrielle and Camille Landais**, *Charitable Giving and Tax Policy*, Oxford University Press, 2014.
- Fremont-Smith, M.R.**, *Foundations and government: State and Federal law and supervision*, Russell Sage Foundation, 1965.
- Giving USA Foundation**, “GIVING USA 2011: The Annual Report on Philanthropy for the Year 2010, EXECUTIVE SUMMARY,” Technical Report, www.givingusareports.org 2011.
- Gravelle, Jane G.**, “Minimum Distribution Requirements for Foundations: Proposal to Disallow Administrative Costs,” Congressional Research Service, Order Code RS21603 September 2003.
- Huck, Steffen and Imran Rasul**, “Matched fundraising: Evidence from a natural field experiment,” *Journal of Public Economics*, 2011, *95*, 351--362.

- Internal Revenue Service**, “Internal Revenue Code 4942(j) (3),” Feb 1999. Part 7, Chapter 26, Section 6.
- Joulfaian, D.**, “Charitable Giving in Live and At Death,” *Does Atlas Shrug: The Economic Consequences of Taxing the Rich*, 2000.
- Khanna, J., J. Posnett, and T. Sandler**, “Charity donations in the UK: New evidence based on panel data,” *Journal of Public Economics*, 1995, 56 (2), 257--272.
- Labovitz, J.R.**, “The Impact of the Private Foundation Provisions of the Tax Reform Act of 1969: Early Empirical Measurements,” *The Journal of Legal Studies*, 1974, 3 (1), 63--105.
- Lawrence, Steven and Reina Mukai**, “Foundation Growth and Giving Estimates,” Technical Report, The Foundation Center 2011.
- Liles, K. and C. Blum**, “Development of the Federal Tax Treatment of Charities,” *Law & Contemp. Probs.*, 1975, 39, 6.
- Margo, Robert A.**, “Foundations,” in Charles T. Clotfelter, ed., *Who Benefits from the Nonprofit Sector*, University of Chicago Press, 1992, chapter 7, pp. 207--34.
- Marx, Benjamin M.**, “Dynamic Bunching Estimation and the Cost of a Regulatory Hurdle for Charities,” 2015. University of Illinois at Urbana-Champaign, mimeo.
- Meckstroth, A. and P. Arnsberger**, “Private Foundations and Charitable Trusts: A Decade of Charitable Giving and Growth, with Highlights of 1991 and 1992,” Technical Report, IRS Statistics of Income Bulletin 1996.
- Meer, Jonathan**, “Brother, can you spare a dime? Peer pressure in charitable solicitation,” *Journal of Public Economics*, 2011, 95, 926--41.
- , “Effects of the Price of Charitable Giving: Evidence from an Online Crowdfunding Platform,” *NBER Working Paper No. 19082*, 2013.
- Okten, C. and B.A. Weisbrod**, “Determinants of donations in private nonprofit markets,” *Journal of Public Economics*, 2000, 75 (2), 255--272.
- Ottoni-Wilhelm, Mark, Lise Vesterlund, and Huan Xie**, “Why Do People Give? Testing Pure and Impure Altruism,” *NBER Working Paper No. 20497*, 2014.
- Piketty, Thomas and Emmanuel Saez**, “Income Inequality in the United States, 1913-1998,” *Quarterly Journal of Economics*, 2003, 118(1), 1--39.

- Randolph, W.C.**, “Dynamic income, progressive taxes, and the timing of charitable contributions,” *The Journal of Political Economy*, 1995, 103 (4), 709--738.
- Smith, William H. and Carolyn P. Chiechi**, *Private Foundations Before and After the Tax Reform Act of 1969* Domestic Affairs Studies, Washington, D.C.: American Enterprise Institute for Public Policy Research, May 1974.
- The Council on Foundations, Inc.**, “Private Foundations and the 1969 Tax Reform Act,” in “Research Papers Sponsored By The Commission on Private Philanthropy and Public Needs,” Department of the Treasury, 1977.
- The Foundation Center**, *The Foundation Directory*, New York: Russell Sage Foundation, 1960.
- , *The Foundation Directory*, 1-8 ed., New York: Russell Sage Foundation, 1960-1986.
- , *The Foundation Directory*, New York: The Foundation Center, 1975.
- , “Highlights of Benchmarking Foundation Administrative Expenses: How Operating Characteristics Affect Spending,” Technical Report 2011.
- Troyer, Thomas A.**, “The 1969 Private Foundation Law: Historical Perspective on Its Origins and Underpinnings,” *The Exempt Organization Tax Review*, 2000, 27(1), 52--65.
- Whitten, M.**, “Large Nonoperating Private Foundations Panel Study, 1985-1997,” Technical Report, IRS Statistics of Income Bulletin 2001.
- Worthy, K.M.**, “Tax Reform Act of 1969: Consequences for Private Foundations, The,” *Law & Contemp. Probs.*, 1975, 39, 232.
- Yermack, D.**, “Deductio ad absurdum: CEOs donating their own stock to their own family foundations,” *Journal of Financial Economics*, 2009, 94 (1), 107--123.

Online Appendix A: Data Collection

Data were collected from the Foundation Directory, a publication of the nonprofit Foundation Center. These data are now posted on the journal website.

To begin the data collection process I purchased hard copies of Editions 1-15 (actually named Editions 1-12 and Editions 1991-1993) of the Foundation Directory, removed all pages, and scanned them at 400dpi using ABBYY FineReader 7.0. Appendix Figure B.1 shows a sample page image from Edition 1. I then used ABBYY's optical character recognition software to convert these image files to Rich Text format. Images were recognized as text using ABBYY FineReader 9.0, which had the highest recognition accuracy of the FineReader products available (but was not used for scanning on the advice of a frequent user). The user can train FineReader to recognize unusual characters, which allowed me to capture the Directory's symbols for deceased donors, publicly supplied information, and initial appearance in the Directory.

Text recognition was generally accurate, but a number of errors were made on a regular basis. For example, FineReader often used the wrong case for the letters i and j, misread parentheses as the letter j and slashes as the number 1, converted "E" into "£", and failed to recognize roman numerals and the trained symbols. Moreover, FineReader failed to replicate the blank lines between paragraphs that separated foundations in the Directory, combined separate lines of text onto one line, and inserted line breaks into the text at seemingly random locations. The rich text files therefore demanded assiduous cleaning and reformatting. I was able to automate a number of tasks using Visual Basic macros. For example, I used the bolding of foundation names to recreate the spaces between each foundation's entry so that a blank line of text would mark the end of one observation and beginning of another. I manually performed wildcard searches that could not be made sufficiently specific to isolate errors without finding some legitimate text, such as the searches for adjoining text and numbers that I used to remove headings and page numbers that had been combined with surrounding text. This work was obviously time-consuming, and I strongly encourage researchers planning to use optical character recognition software to test multiple programs on their source material to find the option that minimizes the length of this cleaning phase.

After cleaning the Rich Text files I saved them as plain text to be manipulated by Python script. Python offers a Regular Expressions module that enables the complex matching needed to convert text into data. I wrote one Python script that reorganized the text to facilitate line-by-line reading and another Python script to convert each line of text into data for the database. The first script deals with FineReader's poor recognition of line breaks by starting new lines when markers such as "**Donor:** " or "**Donors:** " appear, and it combines subsequent lines until the next marker is found. This ensures that each line of text corresponds to exactly one of the data fields supplied in the Directory. The second script uses more advanced Regular Expressions to search each data

field for text patterns that correspond to desired variables. For instance, a search for “\\$([0-9,]+) in ([0-9]+)*grants” would capture the phrases “\$1000 in grants” or “\$10,000 in 15 grants” and use the numbers in parentheses to populate the grant-amount and grant-number variables for that observation. The flexibility of Regular Expressions was necessary for such work because wording and formatting were not consistent throughout the text. I incorporated extensive error reporting in the code to point out when such inconsistencies were found and to reveal recognition flaws that escaped detection during the initial file cleaning.

All financial records and names of foundations, donors, officers, and managers have been verified to have been correctly read from the hard copies. I have verified the accuracy of the extraction for Edition 1 by reconciling the data with the Directory’s state-by-state tabulations of assets, gifts, grants, and expenses. I did not repeat this process for other editions because the Directory’s tabulations themselves contained rounding errors and quirky (unlisted) exclusions. Instead I repeated the recognition process for all editions using OmniPage Professional optical character recognition software and checking all discrepancies in the fields of interest.

Last, I merged editions to make the data longitudinal. Data extracted from each edition of the Directory were written to a tab-delimited file that could be uploaded in Stata. Having obtained 15 cross sections, I then used time-invariant foundation characteristics to construct a panel with unique foundation ID numbers using Johannes Schmieder’s sequential merge Stata code `seqmerge.ado` (available at <http://sites.google.com/site/johannesschmieder/stata>). A foundation was matched to one in an earlier edition if they shared the same name as well as either the state, establishment year and state, director names, donor names, or address. I dropped observations that were exact duplicates of those in a prior edition, which mostly occurred in 1991 when the Foundation Center first began publishing the Directory on an annual basis (well after the period included in this study).

A comparison to data collected from Form 990-PF supports the accuracy of the Foundation Directory data. Using 990-PF data for 1989-1991, the earliest years available through the Urban Institute’s National Center for Charitable Statistics, I was able to match 8392 foundations in the most recent compiled editions of the Foundation Directory. The correlations between the variables in each data set were 98 percent for income, 95 percent for charitable expenses, and 85 percent for assets. The correlation for assets is likely lower due to differences in reporting of gross versus net assets.

Online Appendix B: Additional Figures and Tables

Figure B.1: Sample Image from Edition 1 of the Foundation Directory

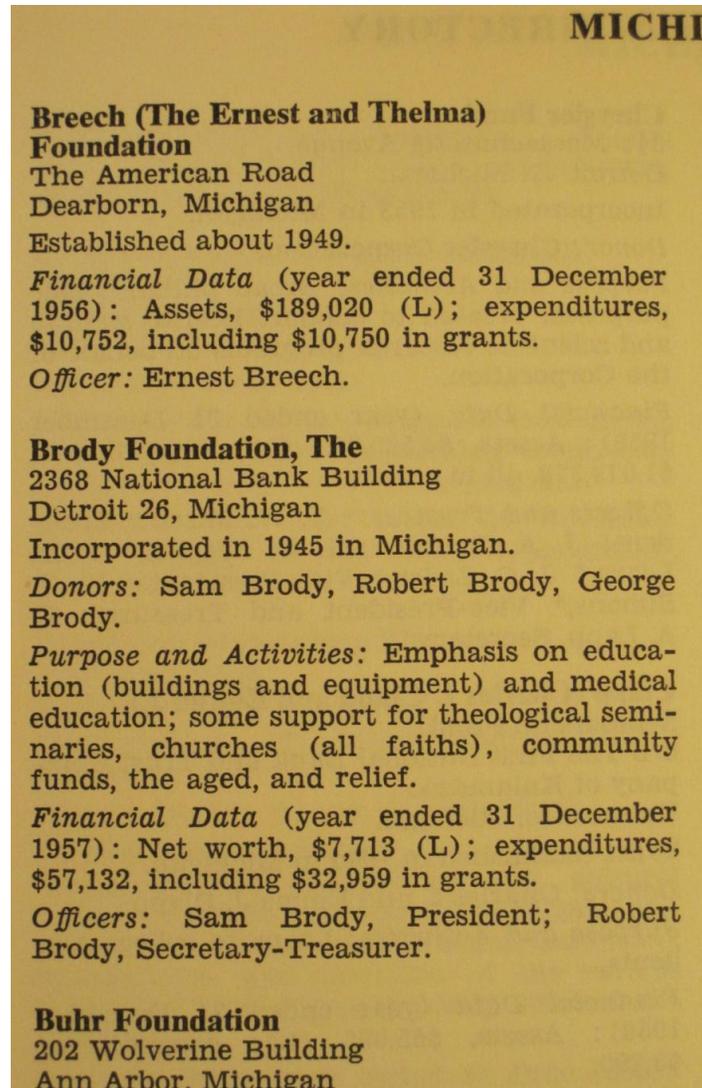
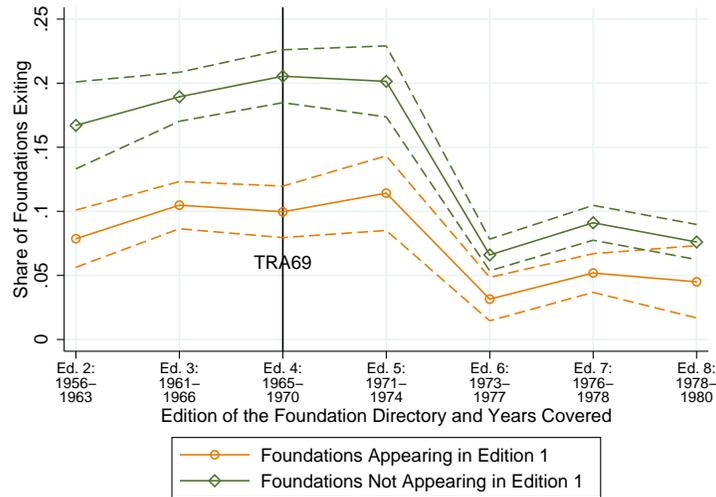
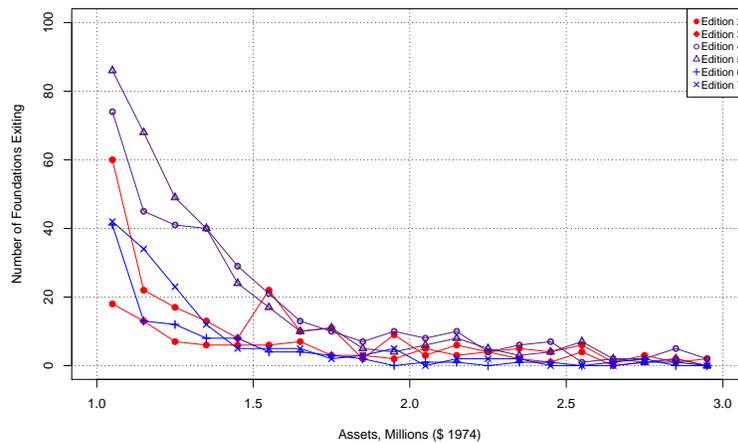


Figure B.2: Heightened Exit Among Newer Foundations Before Reform



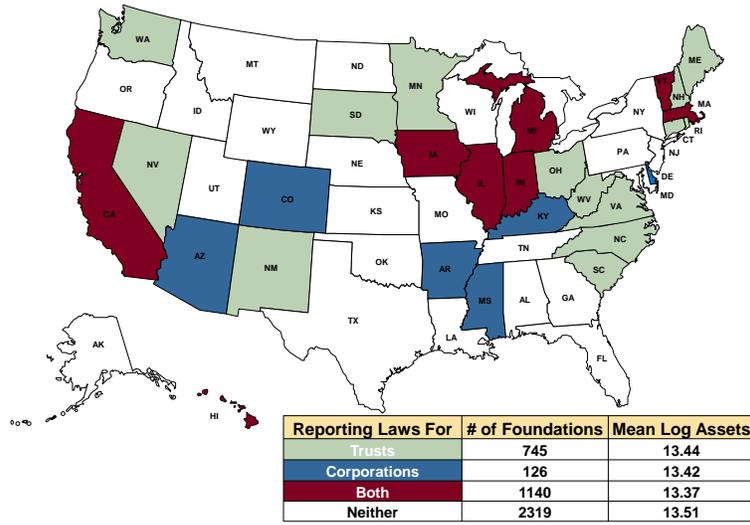
Notes: The figure displays the number of private non-operating foundations appearing for the last time with assets over \$1 million (in constant 1974 dollars) as a share of the total number of the same type in each edition of the Foundation Directory. The observed decline in exit occurred primarily among new foundations that did not appear in the first edition of the Foundation Directory, consistent with a reduction in churning. N=14,487.

Figure B.3: Exit By Small Foundations During Market Decline From 1973 to 1975



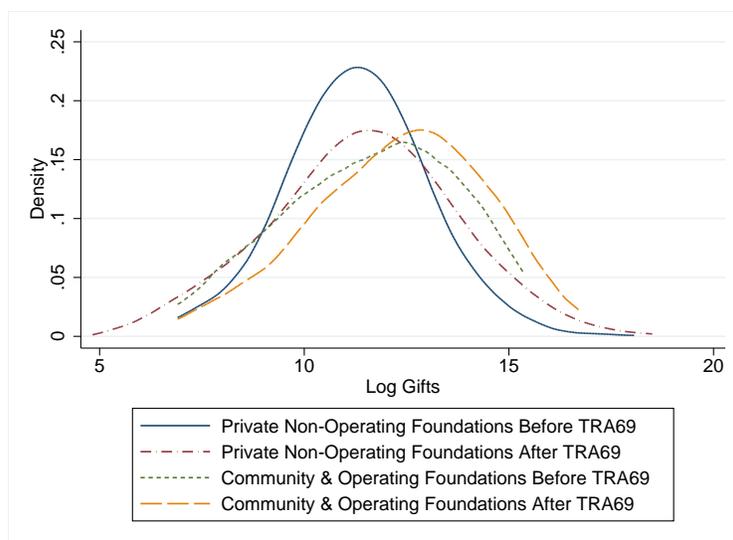
Notes: The figure displays the distribution of real assets among foundations exiting from the sample with assets over \$1 million (in constant 1974 dollars) in each edition of the Foundation Directory. Lines are provided for editions before TRA69 (red), during and immediately after the reform (purple), and several years later (blue). During the reform years, exit is heightened among the smallest foundations. The result suggests that poor investment performance in the early 1970s drove exit rates at the time of TRA69. N=21,825.

Figure B.5: Variation in State Financial Reporting Requirements Before TRA69



Notes: The figure displays financial reporting laws by state prior to TRA69, per Fremont-Smith (1965). Whether a foundation was subject to financial reporting requirements before TRA69 depended on state of establishment and whether a foundation was established as a corporation or as a trust.

Figure B.4: Distributions of Gift Amounts Before and After TRA69



Notes: The figure displays kernel density estimates of the distribution of log gifts. For the control group of community and operating foundations, the distribution shifted slightly to the right over time. The upper portion of the distribution for treated foundations also shifted to the right, but the lower portion shifted left, providing suggestive evidence of some effect on amounts given (in addition to the effect on the share receiving any gift). Estimation uses the Epanechnikov kernel with bandwidth 1. N=1,720.

Table B.1: Entry and Exit Estimation Robustness to Choice of Control Group

	(1)	(2)	(3)	(4)
	Entering - LPM	Entering - Probit	Exiting - LPM	Exiting - Probit
<i>Private Nonoperating vs. Community Foundations:</i>				
Post * Private Foundation	-0.150*** (0.037)	-0.120*** (0.032)	-0.035 (0.033)	-0.041 (0.053)
Private Foundation	0.124*** (0.043)	0.091*** (0.035)	0.071** (0.032)	0.081 (0.051)
N	11,761	11,761	11,761	11,761
<i>Private Nonoperating vs. Operating Foundations:</i>				
Post * Nonoperating Foundation	-0.125*** (0.040)	-0.063 (0.050)	-0.034** (0.016)	-0.044 (0.047)
Nonoperating Foundation	0.168*** (0.031)	0.126*** (0.027)	0.108*** (0.013)	0.161*** (0.041)
N	11,800	11,800	11,800	11,800

Notes: The table displays the results of regressions estimating relative changes in the entry and exit rates of newly-regulated foundations after TRA69. Regressions have the same form as those in Table 2, but in the top panel the control group is restricted to community foundations, and in the bottom panel the control group is restricted to operating foundations. Results are generally consistent with those in Table 2.

Table B.2: Lack of Differential Exit By Foundation Type After TRA69

	(1)	(2)	(3)	(4)
Edition 5 * Donor-Managers	0.008 (0.010)			
Edition 5 * Managers in Donors' Family		0.008 (0.006)		
Edition 5 * Has Human Donors			0.008 (0.015)	
Edition 5 * No State Reporting Law				0.019 (0.021)
N	10,829	10,829	10,829	10,829
Adj. R-Squared	0.075	0.075	0.076	0.075

Notes: The table displays the results of linear probability model regressions estimating the share of foundations exiting from the sample with assets over \$1 million (in constant 1974 dollars) just after TRA69. Edition 5 is an indicator for Edition 5 of the Foundation Directory, the first full edition after TRA69, "Donor-Mangers" is the count of managers with both first and last name matching a donor, "Managers in Donors' Family" is the count of managers with only the last name matching a donor's, "Has Human Donors" is an indicator for donors that are people (not companies), and "No State Reporting Law" is a dummy indicating that just before TRA69 the foundation was in a U.S. state that did not require it to file financial reports. Results indicate that none of the foundation types of interest were significantly more or less likely to exit after TRA69 was enacted. Regressions include edition (time) dummies. Standard errors are clustered by the state in which a foundation first appears.

Table B.3: Robustness of Effects of TRA69 On Private Foundations

	(1)	(2)	(3)	(4)	(5)	(6)
	log(gifts+10,000)	log gifts	any gift	log exps	log charity	log admin
<i>Weight: Inverse Probability of Inclusion</i>						
Post * Private Foundation	-0.809**	-3.000**	-0.242**	-0.005	0.315	1.247**
	(0.311)	(1.129)	(0.098)	(0.208)	(0.373)	(0.493)
N	4,830	4,830	4,830	5,635	5,635	5,635
<i>Weighted: Log Assets Before TRA69</i>						
Post * Private Foundation	-0.990***	-3.490***	-0.275***	0.033	0.452	0.916**
	(0.275)	(0.771)	(0.064)	(0.146)	(0.426)	(0.363)
N	4,830	4,830	4,830	5,635	5,635	5,635
<i>No Foundation Time Trends</i>						
Post * Private Foundation	-1.115***	-4.581***	-0.381***	0.010	0.104	0.834***
	(0.180)	(0.668)	(0.058)	(0.063)	(0.236)	(0.254)
N	4,830	4,830	4,830	5,635	5,635	5,635
<i>Private Nonoperating vs. Community Foundations</i>						
Post * Private Foundation	-1.247***	-2.901***	-0.175**	0.165	0.034	1.337**
	(0.307)	(0.921)	(0.069)	(0.141)	(0.149)	(0.582)
N	4,626	4,626	4,626	5,397	5,397	5,397
<i>Private Nonoperating vs. Operating Foundations</i>						
Post * Private Foundation	-0.700*	-3.893***	-0.359***	-0.075	0.798	0.637*
	(0.347)	(1.014)	(0.087)	(0.229)	(0.824)	(0.317)
N	4,650	4,650	4,650	5,425	5,425	5,425

Notes: The table displays the results of regressions estimating relative changes in the finances of newly-regulated foundations after TRA69, each row providing a variation on the specification in Table 3. In the first row each foundation is weighted by the inverse probability of appearing in the balanced sample, as predicted from a local linear regression in Edition-1 log assets. In the second row each foundation is weighted by Edition-1 log assets. In the third row foundation time trends are no longer included. In the fourth row operating foundations are excluded, so that treated foundations are only compared to community foundations, and in the fifth row the comparison is with operating foundations. The results are generally comparable to those in Table 3.

Table B.4: Effects of TRA69 On Private Foundation Gifts and Expenses

	(1)	(2)	(3)	(4)	(5)	(6)
	expenses, p5	expenses, p10	charity, p5	charity, p10	admin, p5	admin, p10
Post * Private Foundation	0.070 (0.111)	0.064 (0.102)	0.271* (0.146)	0.252* (0.132)	0.755** (0.288)	0.577** (0.260)
N	5,635	5,635	5,635	5,635	5,635	5,635
Adj. R-Squared	0.753	0.754	0.689	0.694	0.756	0.760

Notes: The table displays the results of regressions estimating relative changes in the finances of newly-regulated foundations after TRA69. Specifications follow those in Table 3. The outcomes are functions of total, charitable, and administrative expenses. For each expense variable, outcomes are defined as $\log(\text{expense} + pX)$, where pX is the X th percentile of nonzero values in the data. Estimates for the fifth and tenth percentiles of each variable give results similar to those in columns 4-6 of Table 3. These estimates provide evidence that the main results are not driven by observations with very low expenses.

Table B.5: Decline in the Probability of Receiving a Gift by State Reporting Law

	(1)	(2)	(3)	(4)
	All Fdns	All Fdns	Incorp Only	Incorp Only
Post * Donor-Managers * No State Reporting		-0.165*** (0.051)		
Post * No State Reporting Law	-0.085* (0.044)	-0.030 (0.049)		
Post * Donor-Managers	-0.070*** (0.027)	0.054 (0.044)	-0.088*** (0.026)	0.002 (0.027)
Post * No State Report for Incorporated			-0.115** (0.045)	-0.067 (0.053)
Post * Donor-Managers * No State Report for Incorporated				-0.117*** (0.043)
N	4,446	4,446	3,360	3,360
Adj. R-Squared	-0.449	-0.447	-0.455	-0.454

Notes: The table displays the results of regressions estimating post-TRA69 relative changes in the share of different types of regulated foundations receiving gifts. Post is an indicator for editions after TRA69, Donor-Mangers is the count of managers with both first and last name matching a donor, No State Reporting Law is a dummy indicating that just before TRA69 the foundation was in a U.S. state that did not require it to file financial reports, and No State Report for Incorporated is a dummy indicating that the state did not require financial reports from incorporated foundations, which may be measured with less error than the No State Reporting Law that includes laws for living trusts. The estimation sample is the balanced panel of private non-operating foundations that appear in Editions 1-3 and Editions 5-8, with the additional restriction to incorporated foundations in regressions (3) and (4). Results indicate that gifts decreased most among donor-managers for whom reporting requirements were new. Regressions include edition (time) dummies and foundation linear time trends. Standard errors are clustered by the state in which a foundation first appears.

Table B.6: No Evidence of Incorporation or Relocation in Response to State Reporting Law

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Incorporate Unbalanced	Incorporate Unbalanced	Incorporate Balanced	Incorporate Balanced	Leave Unbalanced	Leave Unbalanced	Leave Balanced	Leave Balanced
No State Reporting Law for Incorporated	-0.048* (0.024)	-0.039 (0.027)	-0.017 (0.036)	-0.012 (0.040)				
Donor-Managers * No State Law for Incorp.		-0.051 (0.037)		-0.040 (0.046)				
Reporting Law In Current State					-0.007* (0.004)	-0.007* (0.004)	-0.003 (0.005)	-0.006 (0.005)
Donor-Managers * Reporting Law						0.005 (0.010)		0.013 (0.014)
Donor-Managers		0.099*** (0.032)		0.100** (0.042)		0.000 (0.003)		-0.002 (0.003)
Constant	0.703*** (0.020)	0.682*** (0.022)	0.749*** (0.030)	0.724*** (0.034)	0.014*** (0.004)	0.014*** (0.004)	0.006* (0.004)	0.007* (0.004)
N	1,769	1,769	741	741	3,594	3,594	2,223	2,223
Adj. R-Squared	0.001	0.007	-0.001	0.008	0.000	-0.000	0.001	0.002

Notes: The table displays the results of regressions testing whether state reporting laws predict incorporation or relocation. State reporting law variables follow those in the previous table but are defined so that avoidance of these laws would predict a positive coefficient in rows 1-4. Columns 1-4 show results of regressions with incorporation as the outcome, and sample includes private foundations in Edition 3 in either the unbalanced (columns 1-2) or balanced (columns 3-4) panel. Foundations in states with no reporting laws for incorporated foundations are no more likely to incorporate. Columns 5-8 show results of regressions with the outcome of moving to a different state in the next Edition, and sample includes private foundations in Editions 1-3 in either the unbalanced (columns 5-6) or balanced (columns 7-8) panel. Foundations in states with reporting laws are no more likely to relocate. Standard errors are robust to heteroskedasticity.

Table B.7: Placebo Test of IV Estimation of Administrative Expenses and Effect on Giving

(a) First Stage - Growth of Administrative Expenses Does Not Decrease With Pre-TRA69 Level

	(1)	(2)	(3)	(4)	(5)
Post * Log Admin Before TRA69	0.013 (0.039)	0.020 (0.038)	0.023 (0.040)	0.009 (0.040)	0.010 (0.041)
Post * Donor-Managers		0.093 (0.074)	0.088 (0.075)	0.086 (0.073)	0.070 (0.073)
Post * No State Reporting Law		-0.088 (0.143)	-0.093 (0.139)	-0.093 (0.139)	-0.104 (0.139)
N	2,223	2,223	2,223	2,223	2,223
Adj. R-Squared	-0.944	-0.941	-0.943	-0.948	-0.924
F Statistic	0.1	0.3	0.3	0.0	0.1
Post * Year Established			X	X	X
Post * Log Assets and Charity Before TRA69				X	X
Post * Cubics in Log Assets and Charity Before TRA69					X

(b) Second Stage - Administrative Expenses Do Not Reduce Probability of a Gift

	(1)	(2)	(3)	(4)	(5)
Log Administrative Expenses	0.028 (1.737)	0.012 (1.057)	-0.048 (0.834)	3.603 (15.095)	2.419 (8.505)
Post * Donor-Managers		0.018 (0.121)	0.026 (0.094)	-0.284 (1.333)	-0.142 (0.602)
Post * No State Reporting Law		0.069 (0.115)	0.066 (0.098)	0.406 (1.699)	0.327 (1.035)
N	2,223	2,223	2,223	2,223	2,223
Adj. R-Squared	-2.051	-2.031	-2.006	-146.756	-67.010
Post * Year Established			X	X	X
Post * Log Assets and Charity Before TRA69				X	X
Post * Cubics in Log Assets and Charity Before TRA69					X

Notes: The table displays the results of a falsification test of the regressions in Table 5. The sample is restricted to Directory Editions 5-8, which follow the reform, Post is redefined as a placebo dummy for Editions 7 and 8, and pre-reform covariates are redefined using their values in Editions 5 and 6. The first stage is no longer significant in these regressions, and administrative expenses are not found to decrease gifts.

Table B.8: Test of Interactions Between Administrative Expenses and Proxies

(a) First Stage - Growth of Administrative Expenses Does Not Decrease With Pre-TRA69 Level

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Post * Log Admin Before TRA69	-0.549*** (0.037)	-0.663*** (0.036)	-0.561*** (0.051)	-0.677*** (0.055)	-0.619*** (0.064)	-0.709*** (0.081)	-0.625*** (0.076)	-0.718*** (0.094)
Post * Donor-Managers	0.071 (0.073)	0.077 (0.073)	-0.135 (0.364)	-0.141 (0.385)			-0.110 (0.353)	-0.125 (0.373)
Post * No State Reporting Law	0.098 (0.159)	0.048 (0.190)			-0.639 (0.479)	-0.436 (0.476)	-0.609 (0.455)	-0.403 (0.445)
Post * Log Admin * Donor-Managers			0.026 (0.040)	0.028 (0.044)			0.022 (0.038)	0.025 (0.041)
Post * Log Admin * No State Report					0.100 (0.069)	0.066 (0.074)	0.095 (0.066)	0.061 (0.070)
N	4,446	4,446	4,446	4,446	4,446	4,446	4,446	4,446
Adj. R-Squared	-0.017	-0.003	-0.017	-0.002	-0.016	-0.002	-0.016	-0.002
F Statistic	214.4	336.8	65.8	73.0	117.3	170.4	99.0	106.0
Post * Year Established		X		X		X		X
Post * Cubics in Log Assets and Charity Before TRA69		X		X		X		X

(b) Second Stage - Administrative Expenses Do Not Reduce Probability of a Gift

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Log Administrative Expenses	-0.050*** (0.015)	-0.047*** (0.015)	-0.049*** (0.016)	-0.048*** (0.015)	-0.048** (0.020)	-0.048*** (0.018)	-0.046** (0.022)	-0.047** (0.020)
Log Admin * Donor-Managers			0.003 (0.020)	0.003 (0.019)			0.003 (0.019)	0.003 (0.018)
Log Admin * No State Report					-0.005 (0.030)	0.001 (0.031)	-0.008 (0.030)	-0.001 (0.031)
Post * Donor-Managers	-0.061** (0.026)	-0.063** (0.026)	-0.070** (0.034)	-0.072** (0.032)			-0.066* (0.034)	-0.068** (0.033)
Post * No State Reporting Law	-0.086* (0.045)	-0.081* (0.046)			-0.084 (0.067)	-0.091 (0.070)	-0.071 (0.066)	-0.078 (0.069)
N	4,446	4,446	4,446	4,446	4,446	4,446	4,446	4,446
Adj. R-Squared	-0.476	-0.474	-0.476	-0.476	-0.480	-0.476	-0.477	-0.475
Post * Year Established		X		X		X		X
Post * Cubics in Log Assets and Charity Before TRA69		X		X		X		X

Notes: The table displays the results of regressions adding additional interaction terms to the specifications in Table 5. For ease of comparison, columns 1 and 2 repeat the first and last columns of the 2SLS estimates in Table 5. In columns 3-4 and 7-8, interactions of the administrative expense variables with the donor-managers variable allow heterogeneous responses in administrative expenses (subtable 1) and gifts (subtable 2). Low-expense donor-managed foundations experience smaller increases in administrative expenses than low-expense, non-donor-managed foundations, but the interaction terms are insignificant in both stages and have little influenced on estimated effects of gifts by donor-managed foundations. Interactions between administrative expenses and state-reporting-law dummies (columns 4-8) are also insignificant and unimpactful. The results suggest donor-managed foundations and those in nonreport states respond to administrative expenses in the same way as other foundations.

Table B.9: Robustness of Decomposition

	(1) log(admin+0) coefficients	Share of Total Effect	(2) w/o lagged admin coefficients	Share of Total Effect	(3) interaction coefficients	Share of Total Effect
Change in Log Administrative Expenses	-0.075*** (0.022)	69.1	-0.050*** (0.013)	54.1	-0.051*** (0.012)	54.8
Post * Donor-Managers	-0.056* (0.032)	8.0	-0.064** (0.028)	9.1	0.071 (0.045)	-10.0
Post * No State Reporting Law	-0.106** (0.052)	25.6	-0.083* (0.044)	20.1	-0.022 (0.048)	5.3
Post * Donor-Managers * No State Report					-0.178*** (0.049)	18.7
N	4,277		4,446		4,446	
Adj. R-Squared	-0.478		-0.448		-0.442	

Notes: The table displays alternative specifications of the decomposition in Table 6. In (1), log(admin+1) is replaced with log(admin+0), and the sample therefore excludes observations with zero administrative expenses. In (2) lagged (log) administrative expenses are not included as a regressor. In (3), the donor-manager and no-state-report variables are interacted. Across specifications, the change in administrative expenses explains 54-69 percent of the change in gifts and the proxy variables explain 13-33 percent of the change.