Does Additional Mandatory Reporting Alter Charity or Donor Behavior? —Examining the 2006 Pension Protection Act

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Abstract

The 2006 Pension Protection Act (PPA) mandated that charities earning unrelated business income (UBI) to make their Form 990-T tax filings public. Using this policy change, I use a difference-in-differences approach to see how charities and donors respond to the increased transparency. I find that approximately one in four organizations filing a Form 990-T at least once in the three years prior to the passage of the PPA create a subsidiary in the following two filing years. Subsidiary tax filings are not subject to disclosure; therefore, this finding indicates that non-profits can restructure their organizations in a manner allowing them to keep UBI generating activity private. While charities alter their organizational structure, I find no evidence of net changes in donor behavior towards charities, as total contributions and government grants received do not change in aggregate. My estimates are robust to a variety of different controls and specifications.

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Acknowledgements: I would like to thank Mark Isaac, Carl Kitchens, Luke Rodgers, Jens Grosser, participants at the 2019 Science of Philanthropy Initiative annual conference, the 2019 the Association for Research on Nonprofit Organizations and Voluntary Action research roundtables, and the Florida State University Quantitative Analysis Workshop for their helpful comments in the formative stages of this paper.

1 Introduction and Literature Review

Does additional mandatory financial disclosure by charities impact either donor behavior or charity organizational structure? Donors care about the activities that charities undertake. Much of the charitable giving literature shows that donors want their donations to go towards program services instead of management expenses or fund raising (Bowman, 2006; Gneezy et. al., 2014; Meer, 2014). Additionally, donors reward charities rated highly by third party rating services such as Charity Navigator with higher levels in donations (Gordon et. al., 2009). [1] Furthermore, charities have also been shown to change their behavior in response to mandated disclosure requirements and to the criteria of third party rating services.[2]

With the intention of increasing transparency of financial information for donors, the 2006 Pension Protection Act (PPA) mandated tax returns on charity unrelated taxable business income (UBI), filed on a Form 990-T, be publicly disclosed (United States Congress, 2006a). However, survey analysis finds only 35% of donors research a charity before donating (Hope Consulting, 2010). Therefore, it is unclear as to whether or not mandatory Form 990-T disclosure would affect donor behavior or lead to a change a charity's organizational structure. This paper seeks to answer how mandatory financial disclosure of additional financial documents impacted donors and charities. I do so through a difference-in-differences analysis of Sec 1225 of the PPA, mandating disclosure of the Form 990-T using the National Center for Charitable Statistics IRS Statement of Income files data.

Mandatory disclosure of the Form 990-T does appear to have altered charity organizational structure. Sec 1225 of the PPA only addresses Form 990-T filings, and not the filings of charity taxable subsidiary organizations (Yetman and Yetman 2008; Brody, 2012). As such, Yetman and

[1] This reward; however, is less significant for larger charities, more known than smaller, lesser known charities (Yörük, 2016). Additionally, Frumkin and Kim (2001) show that donors reward charity reputation and positioning more than efficiency.

[2] Doshi et. al. (2013) show that effective accountability in mandatory information disclosures will increase efficiency in a firm, either private or public. From the charity sector, Duff and Portillo (2017), show that being listed on the third-party rater "Charity Navigator" will result in a decrease in a charity's fund raising ratio by 0.43%, while program expense ratios increase by 1.02%. This is not surprising, as Charity Navigator looks at how funds are allocated in assigning ratings, rewarding program expenses and punishing other expenses (Charity Navigator, 2016). However, Charity Navigator (2016) does not use information from the Form 990-T in their evaluations of charities.

Yetman (2008) and Brody (2012) both hypothesized that subsidiary activity would increase, as Form 990-T filing organisations would have incentive to take on the cost of subsidiary creation in order to circumvent the PPA's disclosure requirements. I find evidence supporting these hypotheses. For the next two years after passage, nearly one out of every four charities who filed a Form 990-T at least once prior to the PPA created a new subsidiary organization.

Conversely, donors, in aggregate, do not appear to respond over the long-run to the new information provided by the disclosed Form 990-T. Using both difference-in-differences and event study empirical designs comparing organizations who filed a Form 990-T at least once in the three years prior to the passage of the PPA compared to those who never file a Form 990-T in the three years prior to the passage of the PPA, I find no meaningful changes in total contributions or receipt of government grants seven filing years after passage, with the exception of total contributions briefly increasing in 2007. Whether this lack of alteration in donation decision is caused by the increased number of subsidiaries, donors not using the information on the Form 990-T in their donation making process, or donors being indifferent towards UBI generating activity is unknown. However, I do not find any evidence supporting a change in donor behavior after controlling for the number of subsidiary organizations a charity has.

A large literaute shows that non-profits will shift expenses to avoid taxation (Yetman, 2001; Omer and Yetman, 2003; Hoffman, 2007; Omer and Yetman, 2007). Additionally, the philanthropy, public economics, and taxation literatures demonstrate the charities will manipulate their income and net assets to appeal more to donors, to file a Form 990-EZ instead of a Form 990, and to avoid audits mandated by certain states (Hoffman and McSwain, 2013; St. Clair, 2016; Marx, 2018; Homonoff et. al., 2020). My results contribute to the philanthropy, public economics, and accounting literatures by demonstrating a different way that charities change their organizational structure in response to regulation, the creation of taxable subsidiary organizations in response to mandatory Form 990-T disclosure. Additionally, my research provides the first data analysis on the charity reforms included in the PPA. In doing so, I further advance hypotheses put forward in the accounting literature that the structure of the PPA would result in the increase of charity subsidiary

organization usage.

2 Charity Reforms of the 2000s

The Pension Protection Act (PPA) was the first of two major changes to charity filing standards in the mid 2000s.[3] Sec 1225 of the PPA was included to ensure that charities could not hide financial information that their donors may find harmful (Joint Committee on Taxation, 2006). To better understand the charity reforms of the 2000s, specifically the legislation of interest Sec 1225 of the PPA, I describe the Form 990, Form 990-T, and unrelated business income (UBI) below.

Annually, charities must file their business activities with the IRS by submitting a Form 990 (IRS, 2017b).[4] All charities filing a Form 990 (including a Form 990-EZ or a From 990-N) must make the document available for public inspection. Some charities earn additional income from sources that are not directly related to their charitable mission, referred to as UBI by the IRS, which the federal government taxes at normal business income rates (IRS, 2019b). In order to be considered UBI, an activity must meet three specific criteria. The activity must be: a trade or business,[5] regularly conducted,[6] and not substantially related to the charity's tax exempt purpose[7] If the activity does not meet one these definitions, it is not considered UBI.[9] Activities exempted from being considered UBI include volunteer labor, activities conducted for the convenience of members

[3] The other major change being Form 990 redesign (IRS, 2008a). Form 990 reform was pursued in an effort to build more charity transparency (Coffman, 2007). Included in the changes was a differing schedule for disclosure of related organizations, which was compared to public disclosure of the Form 990-T (Coffman, 2007).

[4] The specific form filed between the Form 990, Form 990-EZ and Form 990-N depend upon organization size. For the purposes of this paper, I will be focusing on charities large enough to file the Form 990 outright.

[5] "Trade or business" refers to any activity conducted with the purpose of generating income. This can include selling goods or services, but is also broad enough to include any type of activity performed with the intent to make a profit (IRS, 2019e). Because of how broad this definition is, most organization activities meet this first requirement.

[6] "Regularly conducted" refers to activities that are frequently and continually conducted in a manner similar to other activities done commercially by enterprises subject to business taxes (IRS, 2019e). The activity must meet both parts of this definition to be considered regularly conducted.

[7] "Not substantially related" to the tax exempt purpose of the charity. This means that the activity does not contribute substantially to accomplishment of the reasoning why an organization is tax exempt in the first place, excluding fund raising (IRS, 2019e). [8] As an example, a gift shop at an art museum is not substantially related to the tax exempt purposes of that museum.

[9] The IRS offers an interactive instructional video demonstrating, among other things, how the same activity can be considered UBI in some situations but not others. Additionally, IRS has acknowledged that the process of determining what activities are considered income is difficult in Congressional testimony (McDowell, 2008).

(such as a school cafeteria), the selling of donated merchandise, and bingo (IRS, 2019d).[10]

Organizations earning UBI can either file a Form 990-T tax return, or form a taxable subsidiary organization to perform all business generating UBI (Yetman and Yetman, 2008). The accounting literature has shown that substantial expense shifting occurs, moving expenses to the unrelated taxable income generating activities or to the taxable subsidiaries to reduce the charity's tax burden (Yetman, 2001; Omer and Yetman, 2003; Hoffman, 2007; Yetman and Yetman, 2008). [11] The PPA does not address subsidiary filings, meaning subsidiary filings are not required to be publicly disclosed (Yetman and Yetman 2008; Brody, 2012). Given the cost shifting findings and the difference in disclosure requirements, multiple authors expected the number of subsidiary organizations to increase after PPA passage (Yetman and Yetman 2008; Brody, 2012).

3 Theoretical Framework

To begin, I assume there are two types of charities j, those who partake in UBI generating activities Y and those who do not partake in UBI generating activities C, both of which can use taxable subsidiary organizations. I also assume there are a continuum of donors i who have individualized preferences on UBI generation by charities, and allocate their donations between the charity types as such. Donations and charitable activities are carried out in time t, with the donors being able to the activities from time t in time $t+1$, including gross and net UBI generation but not the activities generating those numbers. Additionally, donors cannot see total revenues received by the subsidiary organizations or expenses generated by the subsidiary organizations, but merely the revenue paid back to the charity in the form of UBI.

While charities partake in a variety of activities, to simplify the model, I assume all activities undertaken are to best attract donors and to lower the price for seeking donations. For example,

[10] Additional exemptions for public inspection exist, including a specific series of documents ranging from the return by a U.S. transferor of property to a foreign corporation to a report of employer-owned life insurance contracts (IRS, 2019c).

[11] Additionally, studies such as Brickley and Van Horn (2002) showed that for-profit and non-profit hospitals faced the same incentive scheme, despite non-profits paying less tax due to their exempt status and ability to cost shift driving their net UBI down.

while museum gift shop may sell unrelated items generating UBI, I assume that the net income from this transaction is going back into the museum to help finance its mission related activities, lessening the need to spend resources on other outside contributions. As such, I assume the charity faces the following donation maximization problem:

$$\text{Max } {}_j(D_j) - p_j * D_j$$

where ${}_j()$ represents a concave charity good production, $D_j = \Sigma_j(d_{j,i})$ represents donations to charity j which are the sum total of all individual i donations (d_j) to charity j, and p represents the cost to the charity in seeking further donations. Charities maximize their contributions such that:

$${}'_j(D_j) = p_j$$

Conversely, for the donors, I assume they face the following utility maximization problem:

$$\text{Max } U_i(X_i, Y_i, C_i) \text{ subject to } X_i + Y_i + C_i \leq W_i$$

where $U_i()$ represents a convex utility function, X_i represents consumer goods, Y_i represents donations to charities who generate UBI, C_i represents donations to charities who do not generate UBI and W_i represents the individual's income. Rearranging the problem, I can simplify the maximization problem in the context of maximizing solely on charitable giving decisions:

$$\text{Max } U_i(W_i - Y_i - C_i, Y_i, C_i)$$

Thus, the donor's utility maximization problem will be maximized when the marginal utilities of donating to both charity types are equal:

$$U'_C = U'_Y$$

I assume donors update their information based on the $t-1$ operational statements to adjust their donation behavior in time t, and I assume that the charities operate with this knowledge. Finally, I assume that charitable activities, the number of subsidiary organizations, and donation patterns by

both private and public sector donors are at an equilibrium level before the PPA is passed. Charities C_j not currently earning UBI will not be impacted directly by the PPA as their information set to donors will not change in the next time period. Therefore, the operational changes for charities j and changes to marginal utility for donors i will only be directly impacted by the change in information set for UBI earning charities Y_j.

Beginning with donors, if the donors are not pleased with the activities undertaken to generate UBI and the expenses associated with it, I expect decreasing marginal utility for donors, resulting in a decrease in donations received by charities earning UBI Y_j relative to charities not earning UBI C_j. Conversely, if donors are pleased with the increased transparency and are not bothered by the activities generating UBI, I expect increasing marginal utility for donors resulting in an increase in donations received by charities earning UBI Y_j relative to charities not earning UBI C_j. If donors are indifferent to the UBI operational information being made public, I expect the levels of donations between the two charity types to remain constant. [12]

Conversely, charities earning UBI Y_j face a choice. They can continue to operate as is and see how donors react. If donors experience negative utility from the release of their activities, the cost of acquiring donations p_j will increase. Conversely, donors may reward charities for their transparency, decreasing the cost of acquiring donations, or donors may not change their behavior keeping cost constant. However, charities earning UBI Y_j can pay $S > 0$ to establish a subsidiary organization, which will allow for the charity to move activities generating UBI to the subsidiary, increasing the subsidiary count but otherwise keeping the information set constant for donors. A risk neutral charity will be willing to pay this cost S if $E(\Delta P_j) > S$. [13]

[12] Note: the model can be updated to include a time cost of information component where no change in donation levels also can imply that the cost of information is too high for donors to pay.

[13] Supposing that charities are risk adverse, wanting to avoid any potential scandal, the willingness to pay S decreases to the certainty equivalence for $E(\Delta P_j)$.

4 Data

For my analysis, I use data from the National Center for Charitable Statics (NCCS)'s database of IRS Statistics of Income (SOI) Division Exempt Organizations Sample Files. This data is an archive all the Form 990 tax data collected specifically from 501(c)(3) organizations with $50,000,000 in assets in a given tax year (NCCS, 2013). As two of my outcomes are financial in nature, I drop all charities not using accrual accounting, charities who do not have their financial statements audited, and organizations marked as out of scope by the NCCS per recommendations in the literature and by the NCCS (Bowman et. al., 2012; Hoffman and McSwain, 2013; NCCS, 2013). In order to create a balanced panel, I drop all charities not found in the NCCS data over 2003-2012 . This leaves me with 10 years of 3,807 charity observations, or 38,070 total observations.

My outcome variables of interest are number of subsidiary organizations, log of total contributions, and log of government grants. I examine number of subsidiary organizations in order to analyze how charities changed their organizational structure in response to mandatory Form 990-T disclosure. The change in subsidiary level demonstrates any additional subsidiaries created as a result of the PPA's differing treatment of taxable subsidiary filings and filings for UBI. Due to changes in how subsidiary data was collected after the 2008 Form 990 redesign, I am only able to compare the number of subsidiary organizations through filing year 2007.[14] As the PPA immediately went into effect after signed into law, this gives me two filing years of outcomes for the number of subsidiary organizations. In measuring donor behavior, total contributions give an idea on how support for charities as a whole changed as a result of the mandatory disclosure of their Form 990-T, while government grants breaks down how much of the total contribution response specifically stems from government funding.

To explore the possibility of comparing charities filing a Form 990-T at least once in the three

[14]The way in which the IRS counts subsidiary organizations changes after 2007, with new data categories on number of total taxable partnerships, number of total taxable corporations or trusts and number of disregarded entities (IRS, 2008 b,c,d; IRS, 2019a). These had previously been under a single variable prior to 2008 (IRS, 2007a,b). As the count spikes dramatically after filing year 2008 for both Form 990-T always filers and never filers, I restrict my analysis on number of subsidiary organizations to filing year 2007.

years prior to PPA passage compared those who never file a Form 990-T in the same time frame, I construct a balance table for control variables, which can be found in Table 1. For any zero values before the log transformation, I assign a zero for the log transformed variable. A quick examination of Table 1 shows that organizations who do not file a Form 990-T prior to the PPA are on average smaller on every organizational financial category examined in this paper, matching the findings of Hines (1999) and Teasdale et. al. (2013). This continues after the PPA passage in 2006. However, Table 1 also shows that with the exception of fundraising expenses and end of year assets, no major financial operation variables significantly change in a difference in differences framework. Furthermore, the change in fundraising can likely be explained by the shifting of accounting expenses, as total expenses in aggregate do not change between the control and treatment group before and after PPA passage. As such, I do not find evidence in the raw data that non-filing charities cannot be a counterfactual to charities who filed a Form 990-T at least once prior to PPA passage.

5 Empirical Strategy

5.1 Difference-in-Differences Specification

Traditional OLS regression of number of subsidiary organizations, total contributions and government grants on PPA passage would likely yield biased estimates from either simultaneity or omitted-variable bias. As an example, charitable giving tends to be pro-cyclical with stock market growth, harming the ability to make causal claims on contributions before and after the passage of the PPA (List, 2011; List and Peysakhovich, 2011). Therefore, to understand how the mandatory Form 990-T disclosure causally impacted charity organizational structure, as well as donor behavior, I use a difference-in-differences framework.

In order for this strategy to be valid, two assumptions must be met. The first assumption requires that PPA passage and impact on charity and donors is a plausibly exogenous shock. The PPA appears to have plausibly exogenous timing, as it was proposed on July 28th and signed into

law on August 17th (United States Congress, 2006). Furthermore, reporting laws were immediately put into place, requiring Form 990-T disclosure for filing year 2006 after the August 17th signing (United States Congress, 2006; IRS, 2017a,b). Therefore, the first assumption appears to be met.

The second assumption requires that filing and non-filing organizations must be on parallel trends with a reasonable assumption that the trends would remain parallel without PPA passage. Figure 1 plots the trends of both filing and non-filing organizations for my outcome variables of interest: number of charity subsidiary organizations, total contributions and government grants. Each variable appears to meet the parallel trends assumption. Furthermore, the parallel trend assumption will later be shown to not be violated in an event study framework. Therefore, given the timing of the PPA's path to passage and the lack of trend violations prior to passage, it appears that the assumptions are met for valid causal inference using a difference-in-differences framework.

Based on the structure of Sec 1225 of the PPA, I assign a treatment group of charities filing a Form 990-T in one of the three years prior to PPA passage with a control group for charities who never file a Form 990-T prior to PPA passage. In examining charity organizational structure, I analyze the pre and post PPA number of subsidiary organizations belonging to a charity filing a Form 990-T prior to the PPA passage relative to the control group of charities not filing a Form 990-T prior to the PPA. For the donor response measure, I analyze the log of total contributions and log of government grants received by a Form 990-T filing charity before and after PPA passage relative to the control group of non-filers. My difference-in-differences model takes the following form:

$$y_{it} = \alpha_i + \gamma_t + \delta PPA_{it} + X_{it}\beta + \epsilon_{it}$$

Here, y_{it} represents the outcome variables of interest; α_i represents individual charity fixed effects; and γ_t represents year fixed effects. Additionally, the matrix X_{it} represents control variables such as logged assets and liabilities at the beginning and end of year, as well as logged expenses including total and fundraising expenses. These organizational controls are necessary inclusions as they are directly correlated with my outcome variables, particularly contributions and fundraising.

The variable PPA_{it} represents an interaction between charities filing a Form 990-T prior to the passage of the PPA and filing years 2006-2012, the treatment period of mandatory Form 990-T disclosure. For number of subsidiary organizations, the PPA_{it} interaction term only represents filing years 2006 and 2007, due to the changes in the Form 990 outlined in the data section. Finally, ϵ_{it} represent standard errors robust to heteroskedasticity and clustered at the charity level. [15] The coefficient of interest in all regressions is δ, as this shows the average treatment effect of the PPA.

5.2 Event Study Specification

The differences-in-differences strategy outlined above provides an average treatment effect for the seven filing years following the PPA passage.[16] However, as the effect is an average over seven years, this specification renders it impossible to determine immediate actions that were undertaken by donors or charities after PPA passage. Additionally, my difference-in-differences specification does not allow me to determine the persistence of the immediate changes over time. To rectify these problems, I modify my difference-in-differences estimation framework to an event study framework of the following form:

$$y_{it} = \alpha_i + \gamma_t + \Sigma_{p \neq 1} \delta_p 1(t - PPA = p) + X_{it}\beta + \epsilon_{it}$$

where $PPPA$ refers to the 2006 passage of the PPA, and $1(t - PPA = p)$ refers to an indicator variable indicating when charity i is p years away from the mandatory disclosure treatment. As 2005, the year before PPA passage, is my base year for all treatments, I omit this year from treatment. In addition to providing insights on behavioral changes by the charities and donors, the event study specification allows me to test if individual years are violating the parallel trend assumptions directly.

[15] As recommended by Bertrand et. al. (2004).

[16] The exception outcome for this is number of subsidiary organizations, in which the difference-in-differences strategy provides the average treatment effect over the next two filing years.

6 Results

6.1 Charity Organizational Structure Results

Beginning with my results from the difference-in-differences analysis in Table 2, I find that charities change their behavior in terms of number of subsidiary organizations. Over the 2006 and 2007 filing years, Form 990-T filing organizations increased their number of subsidiaries by an average of 0.226 subsidiary organizations compared to organizations who do not earn UBI. As the pre-existing trend difference prior to filing year 2006 is roughly 0.805 subsidiary organizations, this increase represents an approximate 28.1% increase in number of subsidiary organizations, or approximately one out of every four Form 990-T filing organizations creating a new subsidiary organization per year in the two years after PPA passage. Unfortunately, due to differences in how subsidiary data was collected after the 2008 filing year redesign of the Form 990 (IRS, 2008a), it is impossible to tell if this magnitude difference was a temporary impact or if this difference continued to change over time.

My event study analysis graphed in Figure 2 demonstrates that estimates for 2003 (t-3) and 2004 (t-2) are statistically insignificant for number of subsidiary organizations. As such, I fail to identify violations of parallel pre-trends in organizational structure in my control and treatment groups. Furthermore, event study analysis demonstrates that Form 990-T filing organizations immediately began creating more subsidiaries after PPA passage and increased their number of subsidiary organizations at an increasing rate in the following year. In 2006 Form 990-T filing organizations increased their average number of subsidiaries by 0.162 over baseline, representing a 20.1% increase compared to pre-trend differences. New subsidiary creation increased in filing year 2007, as Form 990-T filing organizations increased their average number of subsidiaries by 0.336, representing a 41.7% increase in subsidiary organizations compared to pre-trend differences.

6.2 Donor Behavior Results

Starting again with the difference-in-differences results reported in Table 2, I find that revealing activities listed on the Form 990-T does not appear to have altered donor decisions in aggregate. Total contributions to Form 990-T filing charities have a near zero magnitude effect and are not statistically different from no change after PPA passage. Additionally, I do not find any statistical difference in government grants received by Form 990-T filing charities. Therefore, seven filing years after passage, there is a lack of evidence for a donor response to charities making their Form 990-T public.

The increase in number of subsidiary organizations could be a plausible explanation as to why donors do not change their donation behaviors, as operation information that would have been reported on a new public Form 990-T could have been shifted over to a subsidiary organization. I test this by adding a control for number of subsidiary organizations to my difference-in-differences equation. Due to data restrictions, the treatment effect years are restricted to filing years 2006 and 2007. These results are reported in Table 3. The addition of controls does not change the donor outcomes in any meaningful way, indicating that there was no change in donor behavior after controlling for the number of subsidiary organizations.

Turning to the results of my event study specification in Figure 2, I again fail to identify violations of parallel pre-trends for total contributions or government grants. The results from donors in total contributions and government grants show no statistical change in any time period after the PPA passed, with the exception of total contributions in 2007. As the latest financial information available to donors in 2007 would be the filing year 2006 Form 990 and Form 990-T, this finding indicates that donors initially increased their levels of contributions to UBI generating charities after PPA passage. However, the donors subsequently return their donation behavior to pre-PPA levels the following year and remain there throughout the duration of the sample.

7 Robustness Checks

7.1 Placebo Estimates

A potential concern with my observed result of Form 990-T filing organizations increasing their number of subsidiary organizations is simply a spurious correlation driven by serial correlation in charity observations, as discussed in Bertrand et. al. (2004). While my main results cluster standard errors at the charity level to control for serial correlation, to further ensure that my results are not driven by such serial correlation, I perform a 500 placebo regression analysis similar to Chetty et al. (2009). The results are shown in Figure 3, with the actual estimated coefficient well to the right of the empirical cdf of my placebo estimates. With a p-value of zero, I find no evidence that serial correlation is driving my result of increased numbers of subsidiary organizations in Form 990-T filing organizations after PPA Passage.

7.2 Event Study Coefficient Sensitivity Testing

My event study analysis shows that the parallel trends assumption is not violated at the 5% level for any of my outcome variables; however, as discussed in Rabachan and Roth (2019), this does not mean that the assumption of perfectly parallel trends are met. As such, there is potential concern that my results demonstrating an increase in number of subsidiary organizations is a result of incorrectly assumed linearly parallel trends. Rabachan and Roth (2019) develop a test examining how sensitive the results of an event study analysis are to deviations from linear parallel trends by identifying a deviation from linearity where the null hypotheses can be rejected. The authors label the described deviation M. In my case, the value of M where I use filing year 2007 plotting the Rabachan and Roth (2019) sensitivity analysis in Figure 4. The estimates become statistically indistinguishable from zero at a level near $M = 0.05$. In the context of my estimate, where I find a 41.7% increase in subsidiary usage, this estimate would require a deviation from parallel trend not picked up in the data equal to nearly 12% of the effect to render my estimates statistically indistinguishable from zero.

7.3 Removal of Partial Compilers

The number of organizations filing a Form 990-T increases annually in my analysis with the exception of filing year 2011 to filing year 2012. This includes some charities previously filing a Form 990-T in the treatment group moving out of UBI generating activity and some organizations who were not generating UBI in the control group moving into UBI generating activity. [17] I will discuss these dynamics in greater detail in the next section; however, to ensure that my results are not driven by organizations changing their business practices surrounding UBI generation, I rerun my analysis with organizations who either always file a Form 990-T or never file a Form 990-T in my data. These results are reported in Appendix A in Figures 5 - 8 and Tables 4 - 6. Overall, my results in analyzing always filers and never filers are consistent with those that I found in analyzing the full data sample.

8 PPA & Unrelated Business Income

Discussion of the PPA is incomplete without discussing unrelated business income (UBI) generating activities, as this area is most impacted by the requirement of public disclosure of Form 990-T filings. [18] My analysis on UBI is reported in Appendix B. Beginning with the plot of average charity UBI on the left-hand side in Figure 9, it appears that there is some underlying market trend in charities earning UBI prior to PPA passage, compared to those who did not. This is both driven by an increased number of charities filing a Form 990-T in 2004 and 2005, as well as market trends compared to a control group that has zero UBI by legal definition. Therefore, my difference-in-differences strategy will not produce valid causal estimates, rendering the rest of this section a discussion of descriptive results rather than causal ones. However, as argued in Rambachan and Roth (2019), there still can be insights gleamed in comparing groups violating

[17] While their charity operations may have changed, I do not change control / treatment group classification for any charity.

[18] Given my results on increased subsidiary organization usage, it is important to highlight how subsidiary income is treated in terms of UBI. Any gross subsidiary income paid back to the charity in the form of royalties, etc. is treated as UBI and taxed as such. However, subsidiary income not returned to the charity is taxed as income by the subsidiary organization and is not considered UBI (Woll, 2018).

parallel trend assumptions.

Plotting the raw data in Figure 9 demonstrates that average UBI earned by organizations in my treatment group[19] increases up until PPA passage, where average UBI appears to plateau if not outright decline. Some of this decline in the raw data is attributable to a decrease in number of charities within the treatment group filing a Form 990-T, with 1,819 charities filing a Form 990-T in filing year 2006 and only 1,687 charities filing a Form 990-T in filing year 2012. Conversely, average UBI generated by charities who did not previously file a Form 990-T increases annually after PPA passage. This appears to be driven by an increasing number of organizations who previously never filed a Form 990-T entering into unrelated business income generating market spaces, with the number of new filers increasing from 107 to 489 over filing years 2006 to 2012.

I apply my difference-in-differences framework to the log of gross UBI and report the results in the first two columns of Table 7. In analyzing all charities, levels of UBI decrease by 161% compared to baseline averages for Form 990-T filing organizations. Furthermore, my event study analysis plotted in Figure 10 further bolsters these findings, showing a dramatic decrease compared to non-filers in average UBI earned by charities who filed a Form 990-T at least once prior to PPA passage. Finally, as I have a monotonically decreasing violation of parallel trends, I conduct a Rambachan and Roth (2019) sensitivity analysis, similar to the analysis described in my robustness section to see how much my results are driven by the underlying pre-trend. The sensitivity analysis for filing year 2007 is plotted on the left-hand side of Figure 11. In analyzing all charities, I find that no further deviation from monotonically decreasing parallel trend violations returns filing year 2007 to statistically equivalent average UBI received compared to the 2005 baseline.

To determine if changes in UBI generating activities is driven largely by the entry and exit of charities from UBI generating markets, I restrict my sample to charities either always or never filing a Form 990-T. Examining the raw data plot of always filers compared to never filers on the right-hand side of Figure 9, it appears that UBI generation essentially plateaus after PPA passage, with the exception of the years of the Financial Crisis in 2008 and 2009. Never filers, by

[19]Organizations filing a Form 990-T at least once in the three filing years before PPA passage

legal definition, have near zero gross unrelated business income reported across the sample. As mentioned previously, the number of charities filing a Form 990-T increases annually in my dataset up until 2011. Therefore, the data suggests any changes to average UBI levels for the control and treatment group are driven by a change in organizations partaking in UBI generating activities, with organizations who had previously filed a Form 990-T some years prior to the passage of the PPA exiting UBI generating activities and those who previously were not filers entering into UBI generating activities.

Applying my difference-in-differences and event study frameworks to the dataset on always filing and never filing charities provide correlations supporting this hypothesis. Again examining the difference-in-differences specification in the second two columns of Table 7, I find no change in levels of UBI generated. This provides further evidence that average levels of UBI are not changing; however, the firms who are competing in this market space are. Furthermore, event study analysis on always filers and never filers plotted on the right hand side of Figure 10, the only years showing a statistical change in UBI are in 2008 and 2009, in the midst of the Financial Crisis. Finally, examining the Rambachan and Roth (2019) sensitivity analysis on the right-hand side of Figure 11, I find no statistical difference in UBI earned compared to the 2005 baseline at any level deviation from monotonically decreasing parallel trend violations. Therefore, while I cannot conclude that the passage of the PPA causally changed the revenue strategies of some charities by pushing some charities out of UBI generating activities and encouraging others to engage in UBI generating activities, I can conclude that the PPA passage at least coincided with a fundamental change in the composition of charities generating UBI.

9 Discussion

My results demonstrate that charities responded to the PPA in creating new taxable subsidiary organizations. My analysis indicates a robust finding of an approximate 28.1% increase in number of subsidiary organizations in the 2006 and 2007 filing years from Form 990-T filers. This trans-

lates into roughly one-in-four Form 990-T filing organization creating a new taxable subsidiary per year in the two years after the PPA passed. These results provide a mechanism for the hypothesis put forward in Yetman and Yetman (2008) and Brody (2012) that Form 990-T filing organizations would shift their activities generating unrelated taxable income onto taxable subsidiary organization after the passage of the PPA. As I do not have specific data on the composition of charity gross UBI, testing this hypothesis is left to future research. Additionally, I find evidence that PPA passage coincides with charities previously filing a Form 990-T ceasing UBI generating operations and charities not previously filing a Form 990-T beginning operations generating UBI. As my identifying assumptions are not met for UBI generation, this evidence is not causal.

Conversely, my results indicate that any alteration to donor decisions based on the public availability of the Form 990-T were temporary. In the seven filing years after passage, there is no statistical difference in total contributions, or government grants. Furthermore, the only change observed in donor behavior stems from a 2007 increase total contributions after including charities who do not file a Form 990-T annually, which returns back to baseline levels the year after and remain there throughout the sample. I am unable to determine if the increased number of subsidiaries caused a lack of change in donation behavior; however, in controlling for the number of subsidiaries through filing year 2007, I find no change in contribution levels or in government grants.

As such, I find evidence of a short term increase in donations to Form 990-T filing organizations after the PPA, but no evidence of long-term changes to donor behavior, potentially due to charities circumventing disclosure requirements through creating a subsidiary organization. If the goal of Sec 1225 of the PPA was to make UBI more transparent, my results indicate that annually, one-in-four charity organizations filing a Form 990-T prior to PPA passage found it worth the legal cost to establish subsidiary organizations that could potentially allow the parent charity to circumvent Form 990-T reporting requirements. This tactic appears to have worked, as donations to charities earning UBI prior to the passage of the PPA do not decrease in my analysis. However, as only 35% of donors research charities prior to donating, it is not entirely clear that donors would have

changed their behavior even without charities undertaking these actions (Hope Consulting, 2010). Furthermore, if the donors would have changed their behavior as a result of seeing UBI generating activities, the establishment of subsidiary organizations should have acted as an imperfect signal to donors to change their behavior in a similar manner. Yet, donors do not change their contribution behavior in aggregate throughout my sample. As such, it is unclear why the charities undertook the cost of creating a subsidiary organization. This behavioral conundrum is left to be solved in future research.

10 Conclusion

In this paper, I analyze how charities and donors respond to increased tax filing transparency requirements. In addition to providing the data analysis of Sec 1225 of the PPA, my findings add to the charitable giving literature for both donor response and charity response to mandatory disclosure. The Pension Protection Act (PPA) of 2006 required charities earning unrelated business income (UBI) to publicly disclose these tax returns (Johnson, 2006). Furthermore, the US Congress Joint Committee on Taxation (2006) justified this measure's inclusion in order to ensure charities could not hide financial information that they would find harmful. However, I demonstrate through a difference-in-differences analysis that approximately one in four charities who had generated generate UBI in the three years prior to the passage of the PPA created new taxable subsidiary organizations each year for the next two filing years.

Taxable subsidiary organization filings are exempt from the disclosure requirements from the PPA; therefore, the newly created subsidiary organizations offer a potential way to undermine the intention of public Form 990-T disclosure. As the data does not appear to be comparable before and after the Form 990 redesign in 2008, it is impossible to state if this was a one time effect or an ongoing phenomenon. Therefore, my findings provide evidence that charities established the mechanisms necessary to shifting UBI generating activities to taxable subsidiaries, as hypothesized by Yetman and Yetman (2008) and Brody (2012). However, due to data limitations, I cannot

confirm that the hypothesized shifting of activities is occurring. This question is left to future research.

Nevertheless, I find that neither donors, nor government grant agencies decreased donations to Form 990-T filing organizations after they disclosed their UBI tax returns. In fact, total contributions increased in 2007 before returning to trend baseline levels throughout the sample. Conversely, I see no change in government grants throughout the sample. Finally, in controlling for number of subsidiary organizations, I still find no change in total contributions or in government grants. Therefore, any change in donor behavior was transitory in nature.

These results establish a behavioral conundrum. If the charities correctly predicted that donors would change their contribution patters as a result of Form 990-T's being publicly available, the creation of subsidiary organizations should have acted as an imperfect signal to donors that charities are undertaking a costly action to avoid making operation data public, effectively eliminating the benefit of creating new subsidiary organizations. As donors do not change their contribution patterns, it is unclear if the information was too costly to obtain, or if donors are not concerned with UBI generating activities. If this is the case, then charities should not have created new subsidiary organizations. I plan on examining this behavioral conundrum further in future research.

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11 Figures

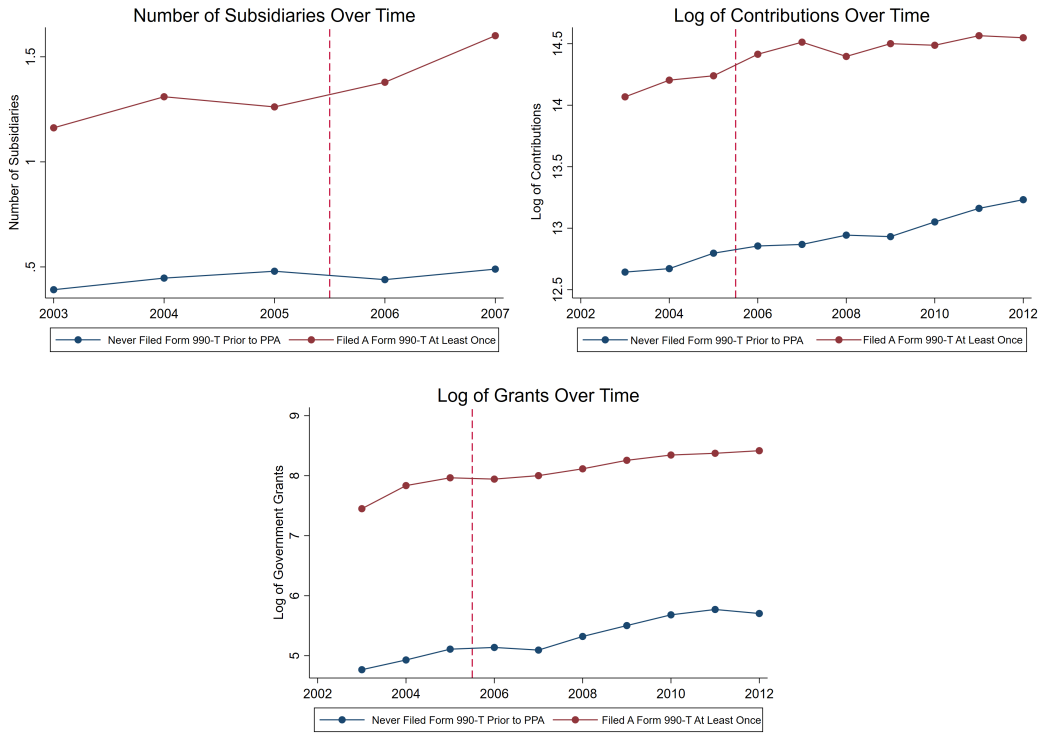


Figure 1: Mean Plots of Outcome Variables, 2004-2012 [Subsidiaries 2004-2007]

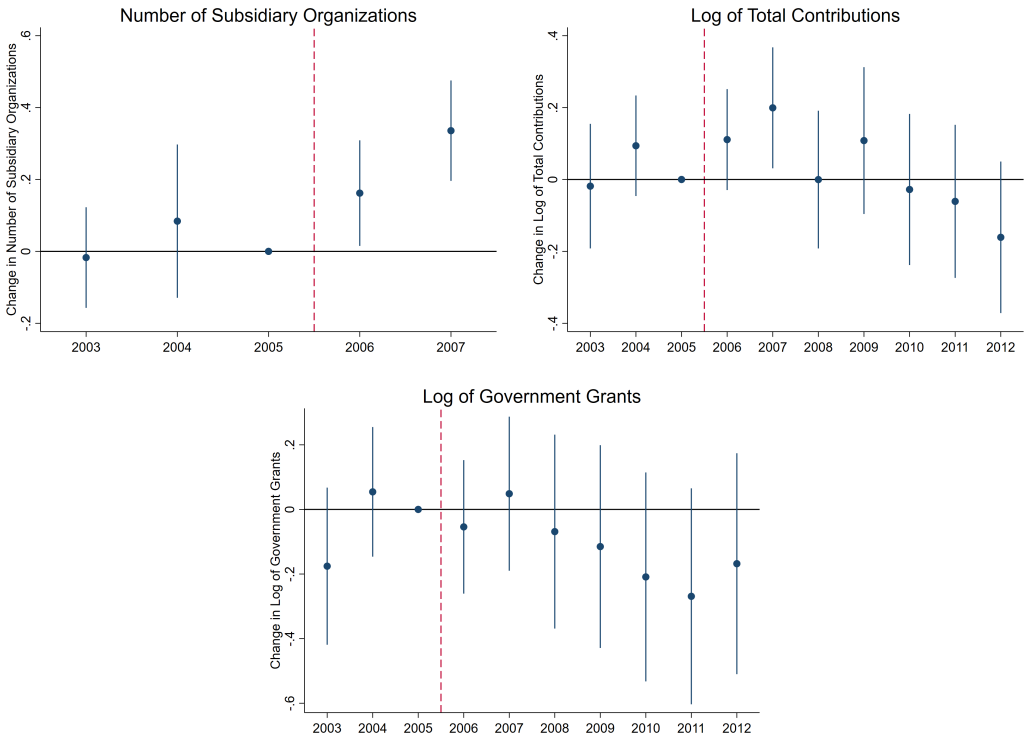


Figure 2: Event Study Diagrams

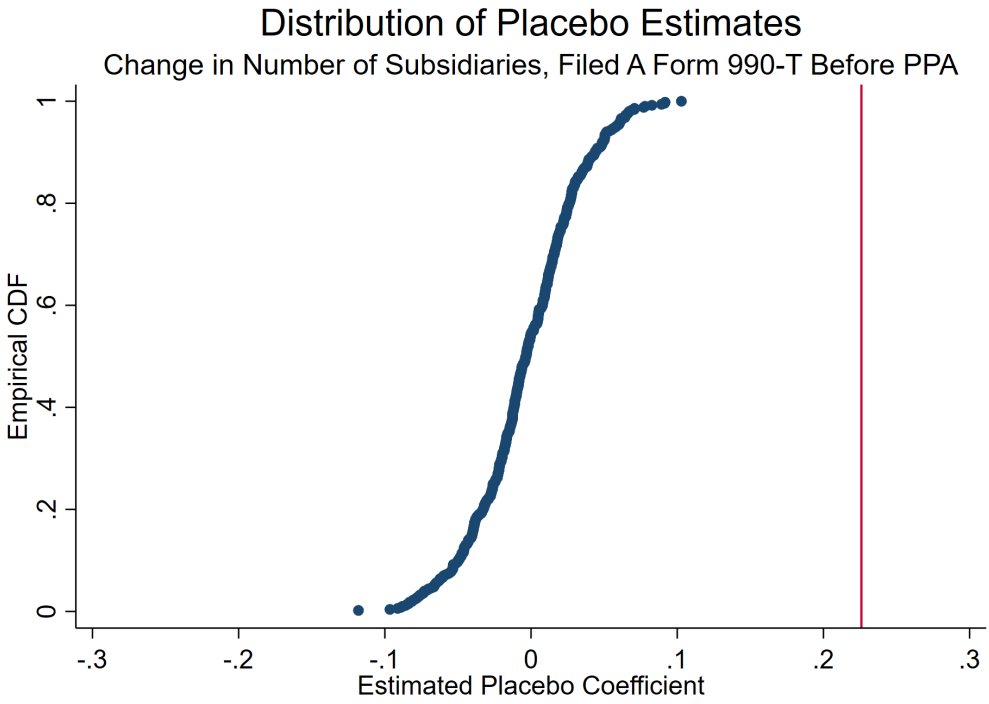


Figure 3: Distribution of Placebo Estimates, Number of Subsidiary Organizations.

Note: P-Value = 0.000, actual value of $\hat{\beta}$ represented by the red line on the graph.

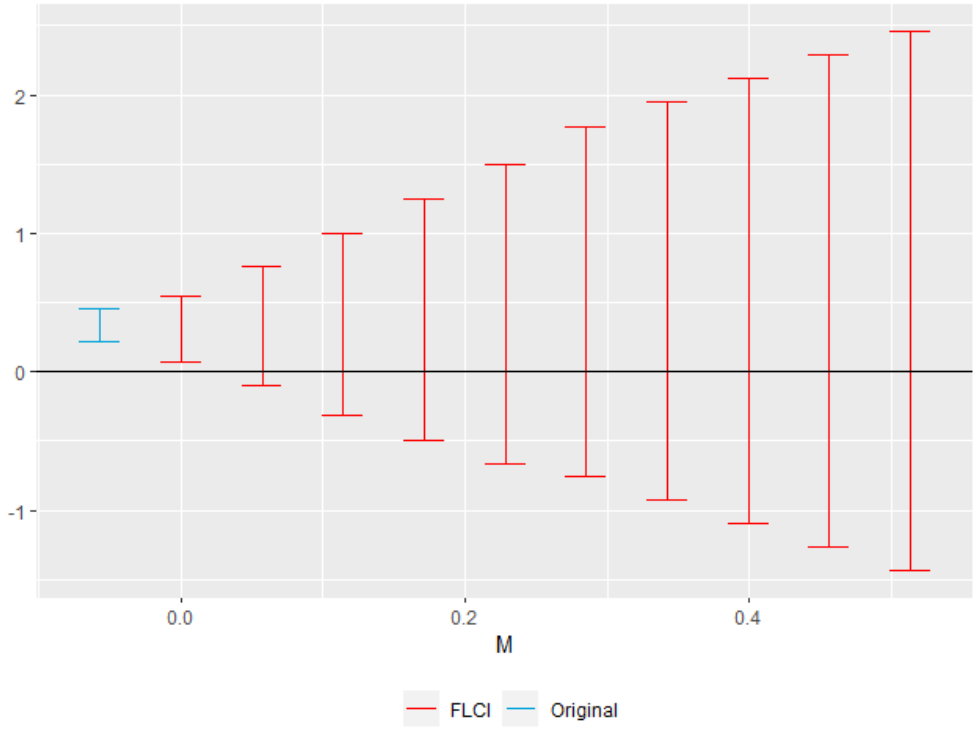


Figure 4: Rambachan and Roth (2019) Coefficient Sensitivity Test: Number of Subsidiaries

12 Tables

Table 1: Balance Table: 2003-2012 Charities

	Years Before PPA Passage				Years after PPA Passage				
	All Charities	Non-Filer	File 990-T	Difference	All Charities	Non-Filer Pre PPA	File 990-T Pre PPA	Difference	Diff in Diff
Log Assets BOY	18.851	18.520	19.140	0.620***	19.155	18.816	19.453	0.637***	0.017
	(1.055)	(0.941)	(1.065)	(1.055)	(0.985)	(0.774)	(1.052)	(0.011)	(0.021)
Log Assets EOY	18.951	18.629	19.232	0.603***	19.195	18.848	19.499	0.650***	0.047*
	(0.938)	(0.721)	(1.012)	(0.017)	(1.011)	(0.822)	(1.063)	(0.012)	(0.021)
Log Liabilities BOY	17.102	16.360	17.752	1.392***	17.466	16.731	18.109	1.378***	-0.013
	(2.800)	(3.343)	(2.004)	(0.051)	(2.669)	(3.178)	(1.905)	(0.032)	(0.059)
Log Liabilities EOY	17.201	16.472	17.840	1.369***	17.509	16.773	18.154	1.381***	0.012
	(2.722)	(3.268)	(1.196)	(0.049)	(2.669)	(3.166)	(1.923)	(0.032)	(0.058)
Log Total Expenses	17.726	17.050	18.317	1.267***	18.027	17.370	18.603	1.233***	-0.034
	(1.707)	(1.736)	(1.440)	(0.030)	(1.596)	(1.580)	(1.371)	(0.018)	(0.034)
Log Fundraising Expenses	7.681	7.258	8.052	0.793***	5.133	4.871	5.363	0.492***	-0.302*
	(6.840)	(6.657)	(6.975)	(0.128)	(6.261)	(6.122)	(6.372)	(0.077)	(0.144)
N	3,807	1,777	2,030	3,807	3,807	1,777	2,030	3,807	3,807

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Notes: Columns 1-3, 5-7 standard deviations in parentheses. Columns 4, 8 and 9 standard errors in parentheses. N represents number of charities in the panel.

† Data on number of subsidiaries after 2008 not included in this table as the way the Form 990 counted number of subsidiaries change with the new Form 990 creation in 2008.

Table 2: Difference-in-Differences: All Charities Filing in 2003-2012

	# Subsidiaries †		ln(Tot. Contr.)		ln(Grants)	
990-T Filers * PPA	0.220***	0.226***	0.017	-0.000	-0.066	-0.078
	(0.058)	(0.060)	(0.076)	(0.076)	(0.116)	(0.116)
Year Fixed Effects	✓	✓	✓	✓	✓	✓
Charity Fixed Effects	✓	✓	✓	✓	✓	✓
Operation Controls		✓		✓		✓
N	3,807	3,807	3,807	3,807	3,807	3,807

Standard errors, clustered by charity and robust to heteroskedasticity, in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Notes: Each number in N represents number of charities in a 10 year panel.

† Number of Subsidiaries only measured through 2007 as data collection changed after the 2008 Form 990 redesign.

Table 3: Difference-in-Differences: 2003-2007 Donor Outcomes Controlling for Charity Number of Subsidiaries

	ln(Tot. Contr.)		ln(Grants)	
990-T Filers * PPA	0.124	0.121	0.041	0.036
	(0.070)	(0.070)	(0.095)	(0.101)
Year Fixed Effects	✓	✓	✓	✓
Charity Fixed Effects	✓	✓	✓	✓
Operation Controls	✓	✓	✓	✓
Subsidiary Control		✓		✓
N	3,807	3,807	3,807	3,807

Standard errors, clustered by charity and robust to heteroskedasticity

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Notes: Each number in N represents number of charities in a 5 year panel.

13 Appendix

13.1 Appendix A — Analysis Over Charities who Always File or Never File Form 990-T

13.1.1 Figures

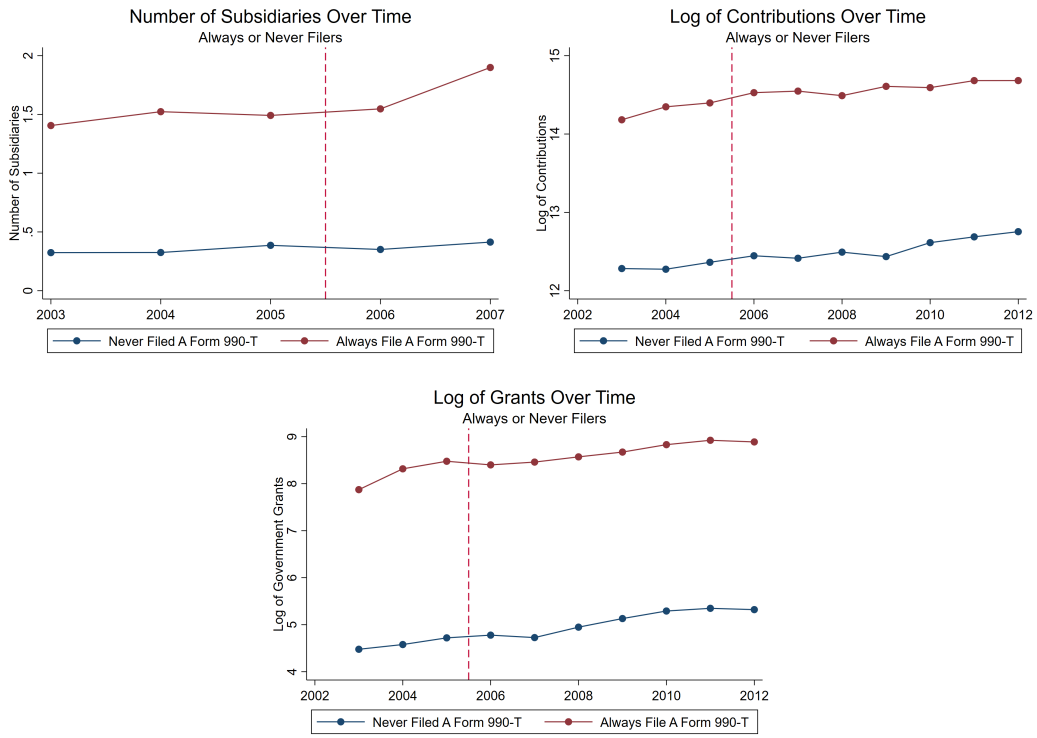


Figure 5: Mean Plots of Outcome Variables, 2004-2012 [Subsidiaries 2004-2007]

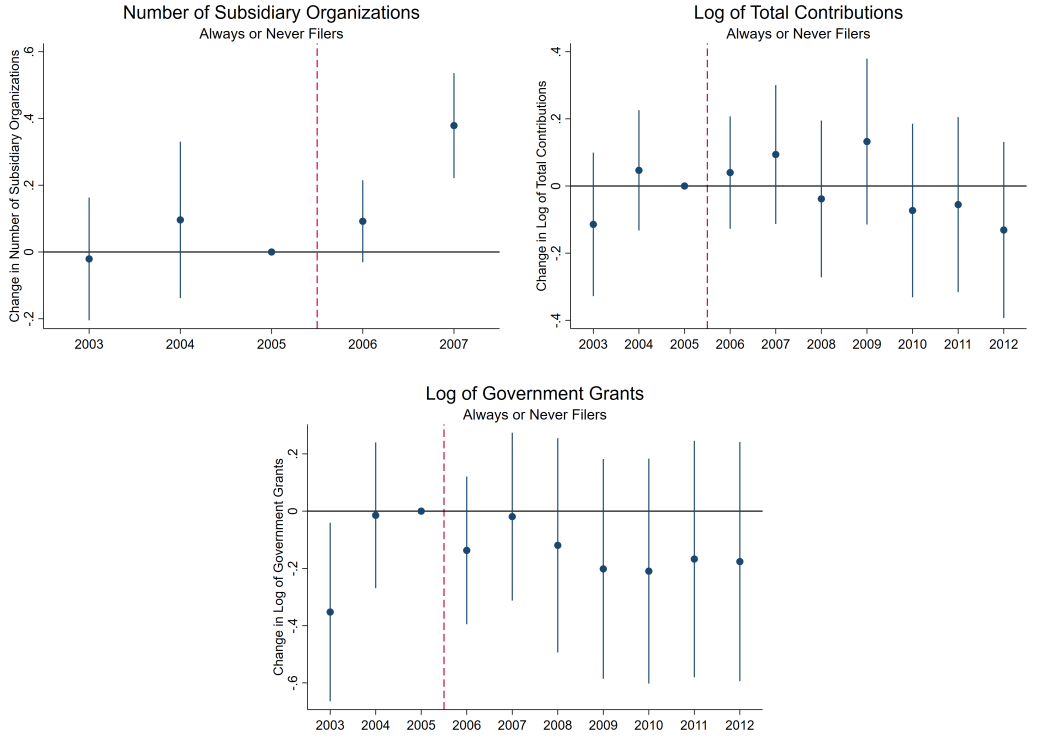


Figure 6: Event Study Diagrams

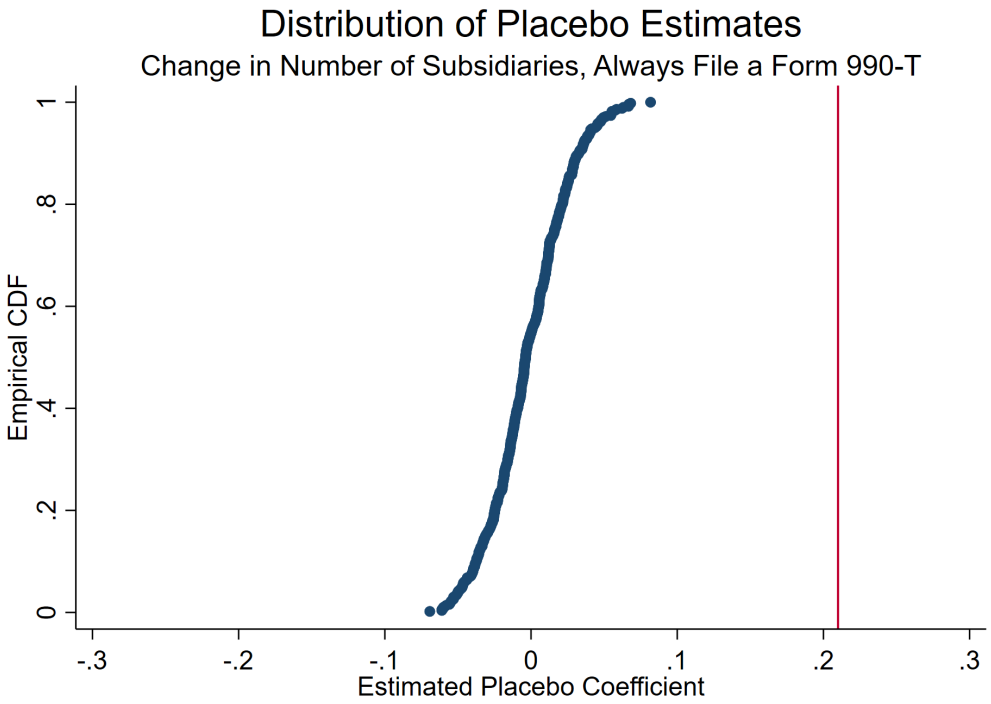


Figure 7: Distribution of Placebo Estimates
Note: P-Value = 0.000 for # of Subsidiaries.
Actual value of $\hat{\beta}$ represented by the red line on the graph.

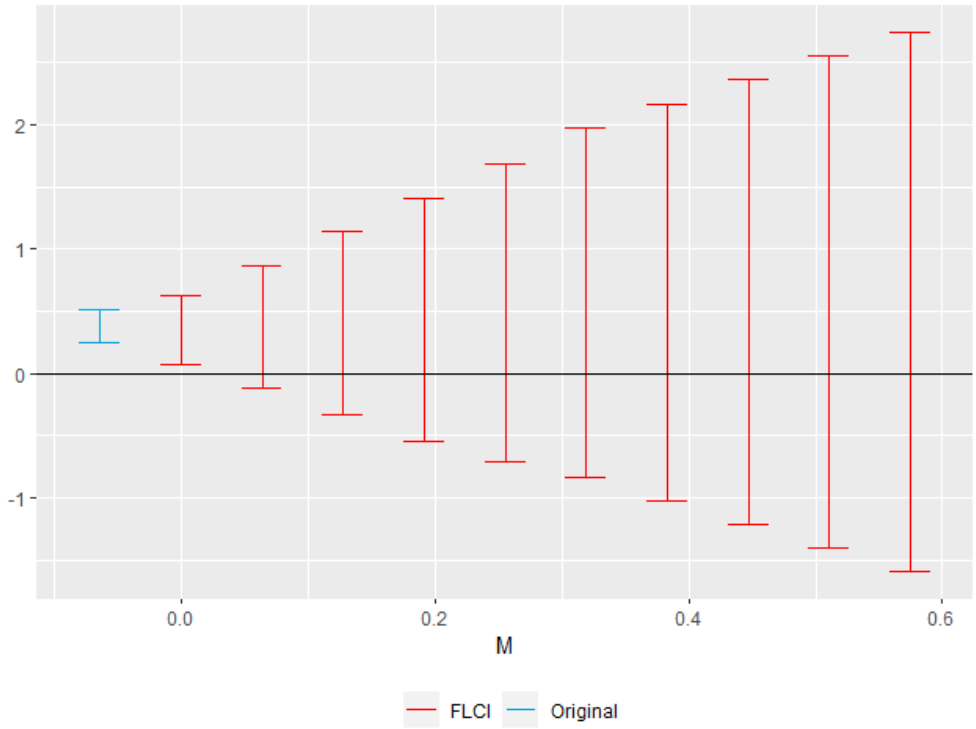


Figure 8: Rambachan and Roth (2019) Coefficient Sensitivity Test

13.1.2 Tables

Table 4: Balance Table: 2003-2012 Charities, Always or Never File Form 990-T

	Years Before PPA Passage				Years after PPA Passage				
	All Charities	Never File	Always File	Difference	All Charities	Never File	Always File	Difference	Diff in Diff
Log Assets BOY	18.872	18.435	19.276	0.841***	19.164	18.714	19.581	0.867***	0.026
	(1.100)	(0.896)	(1.117)	(0.024)	(1.040)	(0.725)	(1.112)	(0.015)	(0.027)
Log Assets EOY	18.968	18.540	19.364	0.825***	19.202	18.744	19.627	0.883***	0.058*
	(0.995)	(0.675)	(1.076)	(0.0231)	(1.061)	(0.763)	(1.121)	(0.015)	(0.027)
Log Liabilities BOY	17.135	16.165	18.033	1.868***	17.474	16.520	18.359	1.839***	-0.029
	(2.921)	(3.610)	(1.641)	(0.065)	(2.824)	(3.456)	(1.636)	(0.041)	(0.076)
Log Liabilities EOY	17.224	16.271	18.108	1.837***	17.517	16.557	18.406	1.849***	0.012
	(2.857)	(3.538)	(1.584)	(0.064)	(2.832)	(3.454)	(1.658)	(0.041)	(0.075)
Log Total Expenses	17.743	16.887	18.536	1.649***	18.045	17.208	18.820	1.612***	-0.037
	(1.796)	(1.783)	(1.401)	(0.038)	(1.689)	(1.623)	(1.344)	(0.023)	(0.043)
Log Fundraising Expenses	7.532	6.765	8.242	1.477***	4.978	4.483	5.437	0.954***	-0.523**
	(6.853)	(6.493)	(7.013)	(0.160)	(6.229)	(5.992)	(6.408)	(0.096)	(0.180)
N	2,418	1,163	1,255	2,481	2,481	1,163	1,255	2,481	2,481

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Notes: Columns 1-3, 5-7 standard deviations in parentheses. Columns 4, 8 and 9 standard errors in parentheses. N represents number of charities in the panel.

† Data on number of subsidiaries after 2008 not included in this table as the way the Form 990 counted number of subsidiaries change with the new Form 990 creation in 2008.

Table 5: Difference-in-Differences: 2003-2012, Always File or Never File Form 990-T

	# Subsidiaries †		ln(Tot. Contr.)		ln(Grants)	
990-T Filers * PPA	0.213***	0.210***	0.039	0.019	-0.030	-0.025
	(0.064)	(0.063)	(0.091)	(0.092)	(0.142)	(0.142)
Year Fixed Effects	✓	✓	✓	✓	✓	✓
Charity Fixed Effects	✓	✓	✓	✓	✓	✓
Operation Controls		✓		✓		✓
N	2,481	2,481	2,481	2,481	2,481	2,481

Standard errors, clustered by charity and robust to heteroskedasticity, in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Notes: Each number in N represents number of charities in a 10 year panel.

† Number of Subsidiaries only measured through 2007 as data collection changed after the 2008 Form 990 redesign.

Table 6: Difference-in-Differences: 2003-2007 Donor Outcomes Controlling for Charity Number of Subsidiaries

	ln(Tot. Contr.)		ln(Grants)	
990-T Filers * PPA	0.080	0.080	0.040	0.040
	(0.084)	(0.085)	(0.125)	(0.125)
Year Fixed Effects	✓	✓	✓	✓
Charity Fixed Effects	✓	✓	✓	✓
Operation Controls	✓	✓	✓	✓
Subsidiary Control		✓		✓
N	2,418	2,418	2,418	2,418

Standard errors, clustered by charity and robust to heteroskedasticity

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Notes: Each number in N represents number of charities in a 5 year panel.

13.2 Appendix B - Log Gross Unrelated Business Income

13.2.1 Figures

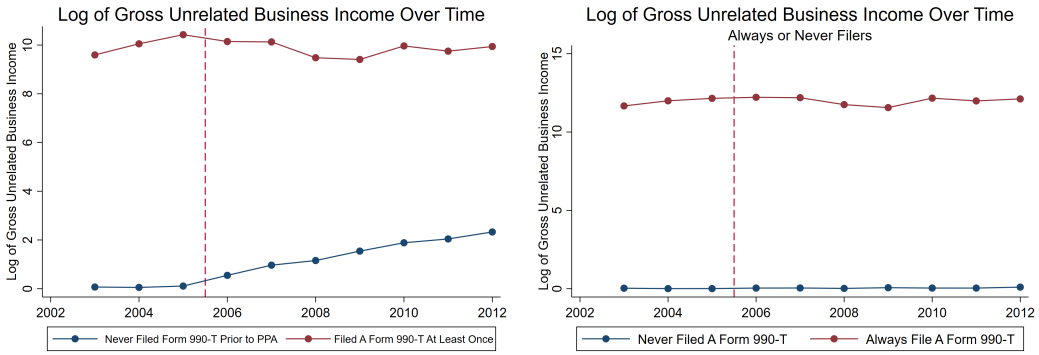


Figure 9: Mean Plot of Log Gross Unrelated Business Income

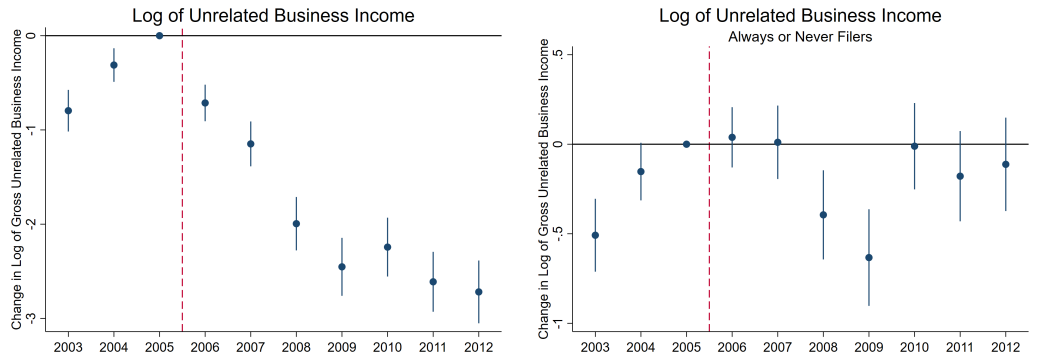
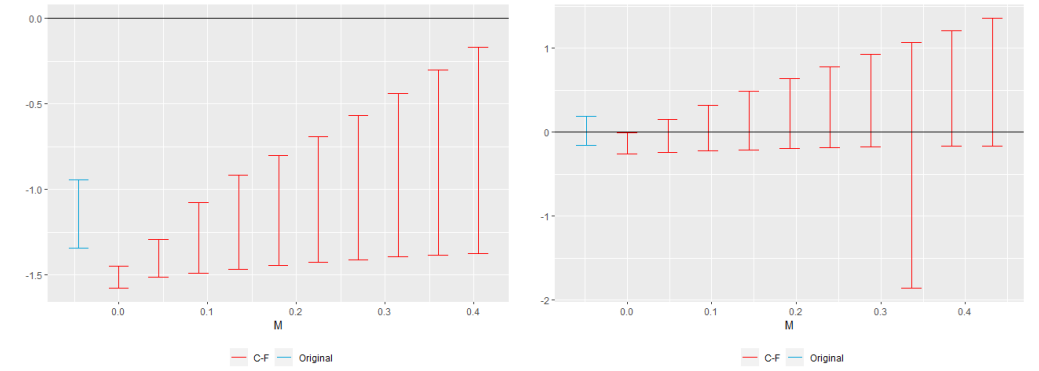


Figure 10: Event Study Log Unrelated Business Income



(a) All Charities (b) Always File or Never File

Figure 11: Rambachan and Roth (2019) Coefficient Sensitivity Tests

13.2.2 Tables

Table 7: Difference-in-Differences: Log Gross Unrelated Business Income

	All Charities		Always or Never Filers	
990-T Filers * PPA	-1.613***	-1.610***	0.026	0.052
	(0.110)	(0.110)	(0.084)	(0.081)
Year Fixed Effects	✓	✓	✓	✓
Charity Fixed Effects	✓	✓	✓	✓
Operation Controls		✓		✓
N	3,807	3,807	2,481	2,481

Standard errors, clustered by charity and robust to heteroskedasticity, in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Notes: Each number in N represents number of charities in a 10 year panel.