

Taxing the Way to Lower Pay: The Impact of Section 4960 Excise Tax on Nonprofit Compensation

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Abstract

We examine the effect on nonprofit (NPO) executive compensation of Internal Revenue Service code (IRC) section 4960 of the Tax Cuts and Jobs Act of 2017 (TCJA) which imposed a 21% excise tax on nonprofit employee compensation over \$1 million per covered individual. Using a difference-in-differences analysis on IRS Form 990 data for almost 40 thousand nonprofit employee-year observations from 2015 to 2020, we find a lower growth rate for treated employee compensation post section 4960. Our results are robust to the use of alternative treatment specifications as well as control samples, e.g., employees earning more than \$1 million but not covered under section 4960; medical professionals specifically exempt from section 4960. These findings suggest that tax policy can be used to reduce executive compensation, at least in the context of nonprofits, which are an important part of the economy that has been less studied than for profits.

Keywords: Nonprofit Organizations; Highly Compensated Employees; Executive Compensation; Excise Tax

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1. Introduction and Motivation

Internal Revenue Service code (IRC) section 4960, part of the Tax Cuts and Jobs Act of 2017 (hereafter TCJA), imposed a 21% excise tax on compensation over \$1 million per covered individual at applicable tax-exempt organizations. We study the impact of section 4960 on nonprofit executive pay. The nonprofit sector is an especially rich setting within which to study executive pay given that stakeholders in the charity sector are known to be sensitive to pay and perquisites which direct funds away from charitable mission activities (Balsam and Harris 2014; Gaver and Im 2014; Balsam and Harris 2018, Balsam, Harris and Saxton 2020). In fact, section 4960 has been touted by the media as “How tax reform will end the nonprofit executive pay scam”.¹ Another article in the popular press highlights: “Colleges that pay seven-figure salaries to coaches—dwarfing salaries paid to educators—are sometimes criticized for prioritizing athletics over academics. What if tax law made those coaches’ contracts even more expensive? Enter the newly finalized Section 4960 of the federal tax code.”²

Understanding the impact of section 4960 is also important given the size of the charity sector (Bolton and Mehran 2006). In 2019, the nonprofit sector contributed \$2.4 trillion in revenues and \$4.8 trillion in assets to the US economy (Internal Revenue Service 2022) and employed 14.4 million people in the U.S. (McKeever, Dietz, and Fyffe 2016).³ The nonprofit sector is also a setting where we might expect an especially salient response to legislation. The

¹ Novak, J. (2017) How tax reform will end the nonprofit executive pay scam. *CNBC* November 20. <https://www.cnbc.com/2017/12/20/tax-reform-smacks-down-excessive-nonprofit-executive-pay-commentary.html>

² McCann and Raiola (2021) Trump Tax Reform on Coaches’ Pay Leaves Tough Choices for Schools, *Sportico* February 11. <https://www.yahoo.com/lifestyle/trump-tax-reform-coaches-pay-105545657.html>

³ These are the most recent estimates from these sources.

payment of an excise tax by nonprofits may be viewed as undesirable by stakeholders. This may be because nonprofit donors look negatively on high executive pay (Balsam and Harris 2014) and/or because the excise tax is unavoidable for nonprofits paying over the threshold and therefore directs funds away from mission activities. Additionally, prior literature documents that nonprofit executives make labor donations to their employer by taking lower wages (Handy and Katz 1998; Preston 1989), suggesting they may be willing to take a pay cut to avoid the excise tax. These explanations, which we develop further below, suggest that section 4960 may at least partially curb nonprofit compensation.

Using an industry-diverse dataset of almost 40 thousand nonprofit executive-year observations from 2015 to 2020, we find evidence consistent with our conjectures. Section 4960 applies to the five-highest paid non-medical professional employees of the nonprofit (hereafter covered employees).⁴ The nonprofit is only affected, i.e., subject to the excise tax, if one or more of those employees is paid more than \$1 million in any year (hereafter treated employees).⁵ Consistent with our hypothesis, we find that compensation of treated employees grew by significantly less than that of control employees. These results are robust to alternative treatment specifications as well as alternative control groups. In addition, even though we estimate that healthcare organizations pay slightly more than half the excise tax, we find that our results are not limited to healthcare NPOs, i.e., they hold across healthcare and non-healthcare organizations.

⁴ Medical employees, regardless of income, are specifically exempt from the provision and thus are not considered covered. We identify medical employees by searching for key words in the employee's title such as "Physician", "Surgeon", "Cardiologist", "Cardiology", "Orthopedics", "Pulmonologist", "Radiologist", "Neurologist", "Oncologist", "Urologist", "Psychiatrist" and "Gastroenterologist".

⁵ As discussed more fully below, we conduct our analysis using employee year observations, requiring that NPOs have at least one treated and one control employee to potentially/partially control for NPO specific factors.

This study makes two main contributions to literature. First, we contribute to the literature on how tax law can be used to influence desired social outcomes, in this case reduce nonprofit executive compensation. Prior research examining a similar provision in for profits, section 162(m), suggests that it had minimal effect on compensation (Rose and Wolfram 2002) with the former Chairman of the Securities and Exchange Commission, Christopher Cox, asserted that section 162(m) belonged in the “museum of unintended consequences” (Cox 2006). By focusing on a newly passed tax provision affecting the nonprofit sector, we identify a setting where taxes have influenced executive compensation. Our finding that executive compensation for treated employees in nonprofits grew by less than that for control employees suggests that tax policy can help achieve desired social outcomes under the right circumstances.

Second, we contribute to the literature on nonprofit compensation. While nonprofits are prohibited from transferring profits to those who control the organization under the non-distribution constraint, they must still compete with other nonprofits and for-profits for talent. Therefore, nonprofits may not have any choice but to pay their employees well, limiting the effectiveness of laws that may be geared toward lowering employee compensation. For example, Dhole et al. (2015) find that a California law aimed at mitigating excessive nonprofit compensation failed to achieve its intended purpose and actually document higher growth in affected executive compensation compared to a control group. However, the distinction between Dhole et al.’s setting and ours is that the California law requires the board to approve and ensure compensation is “just and reasonable” while section 4960 imposes an actual cost, the 21% excise tax, on the covered employee’s organization. Our findings suggest that in response to section 4960, employees were willing to bear some of the costs of the new tax law by accepting lower compensation growth.

We continue in section two with our background and hypothesis development, followed in section three with a description of our model and sample. Section four presents our main results documenting the impact of Section 4960 on treated employee compensation, while section five presents our industry analysis. Section six provides our robustness tests. Finally, section seven contains our discussion and conclusions.

2. Background and Hypotheses Development

2.1 Background

Section 4960 added an excise tax if tax-exempt organizations paid remuneration above \$1 million in a given year to a covered employee. The House Ways and Means Committee's explanation for introducing section 4960 was to limit the diversion of nonprofit resources into excessive compensation and make the tax system "fairer for all businesses."⁶

The process of calculating the excise tax requires three stages: (1) determining if the organization is an applicable tax-exempt organization (ATEO), (2) identifying covered employees, and (3) calculating the excise tax. First, organizations exempt under section 501(a), including 501(c)(3) organizations, the focus of our study, are considered ATEO.⁷ Second, the ATEO must maintain a list of covered employees even if no executives make greater than \$1 million. Each year, beginning with the 2017 tax year, ATEO must identify their top 5 highest compensated employees, each of which is considered covered. A covered employee is then considered covered forever, even with breaks in their employment with the organization. Finally, the ATEO must calculate the amount of excise tax owed. The excise tax is owed on annual

⁶ <https://www.congress.gov/115/crpt/hrpt409/CRPT-115hrpt409.pdf>

⁷ While not included in our study, farmers' cooperative organizations organized under section 521(b)(1), organizations with income excluded from taxation under section 115(1), and political organizations under section 527(i)(1) are also considered ATEO.

remuneration paid to covered employees in excess of \$1 million. Remuneration includes general wages, but specifically excludes 402A(c) Roth contributions and remuneration paid to a licensed medical professional for the performance of medical services. Remuneration from related organizations is also included in the total remuneration and can trigger the excise tax even if neither organization pays total remuneration greater than \$1 million. In this case, each organization pays their pro-rata share of the excise tax. For example, organization A pays a covered employee \$900,000 and organization B pays the same employee \$200,000. The total remuneration of \$1.1 million triggers an excise tax of \$21,000, with organization A paying \$17,182 and organization B paying \$3,818.⁸

2.2 Hypothesis Development

Nonprofits face competing incentives regarding how much to pay their employees. They compete with other nonprofits as well as for-profit corporations in the market for talent.⁹ However, donors scrutinize compensation, reducing donations in response to what they perceive as overly generous or excessive amounts paid (Balsam and Harris 2014). Thus, nonprofits must balance their need to attract talent against donor reaction. In perhaps the best illustration of this tradeoff, Balsam and Harris (2018) find that incentive pay is negatively associated with future donations and grants, despite being positively associated with future performance.

⁸ Beyond remuneration, excess parachute payments can also trigger an excise tax. Parachute payments to covered employees that are contingent on separation and have an aggregate present value greater than or equal to 3 times the base amount trigger a 21% excise tax on the excess amounts. ATEO must also report these excess parachute payments on Form 4720.

⁹ While nonprofits compete with for-profits for talent, they are at a distinct disadvantage vis-à-vis for-profits based on their inability to offer stock-based compensation. This leads to the possibility that potential employees sort themselves (Oyer and Schaefer 2005) based upon their risk preferences and willingness to take lower compensation, i.e., labor donation, as discussed above.

While for-profits and nonprofits have different stakeholders (e.g. shareholders versus donors), prior research suggests that stakeholders punish both types of organizations for excessive pay. In for-profits, high pay has been linked to a larger percentage of say-on-pay votes against executive compensation (Balsam et al. 2016). Additional studies have documented that for-profit shareholder activism has led to a reduction in CEO pay (Ertimur, Ferri and Muslu 2011). Despite this, IRC section 162(m), which limits the corporate tax deduction of executive compensation to \$1 million per covered executive in for-profit firms, was actually found to increase total compensation of covered executives (Halperin, Kwon, and Rhoades-Catanach 2001; Perry and Zenner, 2001; Murphy 2013). In nonprofits, excessive pay (Balsam and Harris 2014; Gaver and Im 2014), as well as incentive pay (Balsam and Harris 2018), have been found to be associated with reduced donations. Taken together, while there are costs involved with paying high compensation for both for-profit (Balsam et al. 2016; Ertimur et al 2011) and nonprofit organizations (Balsam and Harris 2014; Gaver and Im 2014), there are also reasons to expect that nonprofit organizations will have a different response to section 4960 than what was observed at for-profit firms following 162(m).

First, there is a difference between having to pay an excise tax and forgoing a tax deduction. It is well documented that for-profit firms employ tax strategies that have led researchers like Graham (1996) and Blouin, Core, and Guay (2010) to conclude that corporate marginal tax rates are often lower than the explicit statutory rate (Shevlin 1990; Graham 1996). This suggests that the loss of a deduction at a typical for-profit firm is less than the value of the deduction at the statutory tax rate. Furthermore, prior research posits that compensation and other types of tax preferences, such as tax shelters, can be substitutes for one another (Graham et al., 2004; Desai and Dharmapala, 2009), suggesting that for-profit firms can reduce the cost of

the lost tax deduction from excess executive compensation using strategies unavailable to nonprofits.

While intended as a complement to section 162(m) in for-profits, the “million-dollar cap” under section 4960 differs in its application given that nonprofits do not traditionally pay taxes. Moreover, in contrast to a for-profit deduction, the excise tax under section 4960 is a flat tax that cannot be reduced through tax strategies. Therefore, a nonprofit will pay an excise tax of 21% of each dollar above the threshold, while the cost to a for-profit for each dollar above the threshold is a maximum of 21% and often less. That is, for-profits exceeding the \$1 million threshold are only forgoing potential tax deductions, whereas nonprofits exceeding the threshold must actually pay a flat 21% excise tax. Thus, the avoidance of an excise tax could put more downward pressure on compensation than the threat of forgoing a deduction.

Second, labor donation theory suggests nonprofit executives donate a portion of their labor by taking lower wages (Handy and Katz 1998; Preston 1989). This line of research suggests that nonprofit executives self-select into organizations and accept lower than market wages in return for the opportunity to provide goods with positive social externalities (Handy and Katz, 1998; Preston, 1989). Consistent with this theory, several empirical studies document that nonprofit executives earn less than their for-profit counterparts even after controlling for organizational characteristics (Roomkin and Weisbrod, 1999, Ballou and Weisbrod, 2003, Hallock, 2004).¹⁰ As paying an excise tax limits a nonprofit’s ability to use those funds to fulfill its mission, labor donation theory suggests that nonprofit executives may increase their labor donation to minimize or help offset the excise tax.

¹⁰ Not all studies find evidence of labor donation. For example, Mocan and Tekin (2003) find situations where nonprofits pay more than their for-profit counterparts. However, most studies (Handy and Katz 1998, Roomkin and Weisbrod 1999, Ballou and Weisbrod 2003, Hallock 2004) examining managers find evidence of labor donation.

These explanations suggest section 4960 may at least partially curb the compensation of treated employees. And while we cannot say that the employee will bear the full burden of the excise tax in the form of a pay cut, we expect the employee to bear some of the burden. This leads to our hypothesis, stated in the alternative:

Hypothesis: Treated employees will have smaller increases (or larger decreases) in pay following section 4960.

3. Models and Sample

3.1 Models

To test our hypothesis empirically, we construct a difference-in-differences design which incorporates an indicator variable, *TREATED*, for employees covered by section 4960's \$1 million dollar threshold. Specifically, *TREATED* employees are one of the top five highest paid (non-medical professional) individuals at each organization (i.e., covered), who earn over \$1 million in total compensation in any one of our sample years.¹¹ We then interact *TREATED* with *POST*, a dummy variable equal to one for observations with fiscal years beginning after December 31, 2017, when section 4960 became effective. The coefficient on the interaction between these variables isolates the impact of section 4960 on treated employee compensation and is our variable of interest.

¹¹ Consistent with the TCJA "once covered always covered provision" we are careful to identify executives as covered for all years after they are first identified as a covered executive. However, covered executives are not *TREATED* if their compensation never exceeds \$1 million in any given year. In robustness analysis we vary this threshold, e.g., lowering the threshold to \$900,000 to identify executives potentially affected, finding consistent results as discussed below.

To test our hypothesis, which predicts that treated employee compensation will be adversely affected by section 4960, we run the following model on our sample of employee-year observations:

$$\begin{aligned} \Delta \ln(\text{Total Compensation})_{ijt-1 \text{ to } ijt} = & \beta_0 + \beta_1 \text{TREATED}_i + \beta_2 \text{POST}_t + \beta_3 \text{TREATED}_i * \text{POST}_t + \beta_4 \\ & \Delta \ln(\text{Total Assets})_{jt-1 \text{ to } jt} + \beta_5 \Delta \ln(\text{Employees})_{jt-1 \text{ to } jt} + \beta_6 \Delta \ln(\text{Board Members})_{jt} + \beta_7 \\ & \Delta \ln(\text{Governance Index})_{jt-1 \text{ to } jt} + \beta_8 \Delta \ln(\text{Program Ratio})_{jt-1 \text{ to } jt} + \beta_9 \Delta \ln(\text{Fundraising} \\ & \text{Expense})_{jt-1 \text{ to } jt} + \beta_{10} \ln(\text{Org Age})_{jt} + \beta_{11} \Delta \ln(\text{Revenue Concentration})_{jt-1 \text{ to } jt} + \beta_{12} \\ & \Delta \ln(\text{Relative Equity})_{jt-1 \text{ to } jt} + \beta_{13} \Delta \ln(\text{Operating Margin})_{jt-1 \text{ to } jt} + \beta_{14} \Delta \ln(\text{Program Service} \\ & \text{Revenue})_{jt-1 \text{ to } jt} + \beta_{15} \Delta \ln(\text{Public Donations})_{jt-1 \text{ to } jt} + \beta_{16} \Delta \ln(\text{Government Grants})_{jt-1 \text{ to } jt} \\ & + \beta_{17} \Delta \ln(\text{Unrestricted Cash})_{jt-1 \text{ to } jt} + \beta_{18} \text{Total Compensation Rank}_{ijt} + \text{Firm} \\ & \text{Fixed Effects} + \text{Year Fixed Effects} + \alpha \end{aligned} \quad (1)$$

The subscripts i, j , and t refer to the individual employee, firm, and year, respectively.

Following Perry and Zenner (2001), we use log change in compensation [$\Delta \ln(\text{Total Compensation})$] as the dependent variable, i.e., the change in the natural log of total compensation for employee i as reported on Form 990, Schedule J, from time $t-1$ to t . Our hypothesis that treated employees' compensation is adversely affected by the enactment of section 4960 is supported if we find a negative coefficient on $\text{TREATED} * \text{POST}$.

Following prior research, we include control variables including organization size, governance, efficiency, fundraising, composition of revenues, i.e., donations, program service and grants as determinants of compensation (Oster 1998; Frumkin and Keating 2010; Baber et al. 2002; Grasse et al. 2014; Newton 2015). Specifically, we include the natural log of the change in total assets as well as the natural log of the change in total employees to control for changes in size.¹² To control for governance, we include the change in the natural log of the number of board members (Aggarwal, Evans, and Nanda 2012), as well as the change in the summation of 16 governance metrics found to be important in the nonprofit context (increasing in good

¹² All change variables in this section are measured from year $t-1$ to year t .

governance) following Harris et al. (2015).¹³ Organizational efficiency is controlled for using the change in program ratio, defined as the ratio of program service to total expenses; and fundraising is represented by the change in logged fundraising expenses. We include three measures of financial vulnerability, each from Tuckman and Chang (1991), to control for the possibility that organizational financial health influences changes in compensation. The first is the change in revenue concentration defined as the sum of the squared proportion that each of five revenue sources (donation and grants, program service revenue, membership dues, sales of unrelated goods, and investment income) contributes to total revenue. The second and third are the change in relative equity, defined as (total assets-total liabilities)/total revenues, and change in operating margin, defined as (total revenues-total expenses)/total revenues. To control for the impact on compensation of the three major revenue sources received by the organizations in our sample we include the change in the natural log of program service revenues, public donations, and government grants. Drawing on Core, Guay and Verdi (2006), who find that nonprofits with excess endowments pay higher compensation, we include the change in unrestricted cash. Additionally, we include *Total Compensation Rank*, defined as the employee i 's rank by total compensation in year t for organization j , to control for possible differences in how position affects compensation changes.¹⁴

The effect of outliers is addressed by winsorizing continuous variables at the 1 and 99% thresholds.¹⁵ We include firm and year fixed effects to control for non-observable firm and time characteristics. Finally, standard errors are clustered by organization to adjust for residual

¹³ The governance variables include policies (whistleblower, conflict of interest, document destruction, executive salary approval, meeting minutes, and 990 review), relationships between officers, 990 accessibility, document changes, and material asset diversions.

¹⁴ Ideally, we would include position fixed effects, but the diversity of titles in nonprofit organizations precludes that as an option. Controlling for the compensation rank of each executive is a proxy for title.

¹⁵ Model (1) findings are consistent when using robust regression (Leone et al 2019) in lieu of winsorization.

correlation among observations belonging to the same nonprofit organization in our sample. All variables are defined in Appendix A.

3.2 Sample

We start with data from Form 990 Schedule J (executive compensation disclosure) to identify covered employees and their total compensation.¹⁶ We then obtain data for the three years prior to (years $t-3$ to $t-1$), and two years after (years t and $t+1$) section 4960 went into effect, which we retrieved from the Open990 tax Form 990 electronic file data. For our difference-in-difference design we require that organizations have data for at least one year prior to and one year after section 4960 going into effect. A major concern in implementing a difference-in-difference design in a setting where the treatment group is determined by compensation amount, is that the types of firms paying over \$1 million to their top employees are fundamentally different than those that don't. For this reason, we include only firms that have both a treated and untreated executive to address endogeneity related to the decision and ability of a firm to pay at least one employee over \$1 million. While conservative, this approach coupled with firm fixed effects allows us to use the firms as their own control, isolating the effect of executive-level treatment in our analysis. We delete employee-year observations where the absolute value of the yearly change in compensation is greater than 50% to avoid including observations during an employee transition year.¹⁷ As presented in Table 1, these data screens, coupled with deductions for missing lead and lag year data, as well as variables necessary for our models, yield a final sample of 39,543 employee-years. This sample includes 6,739 treatment observations where the employee is covered under section 4960 and received total compensation

¹⁶ Schedule J is required when a nonprofit pays one or more individuals at least \$150,000 a year.

¹⁷ We find robust results when we alternatively drop observations with change in compensation greater than 75% as well as when we drop observations with change in base pay only greater than 50%.

above \$1,000,000 in at least one year of our sample period. Our control group is made up of 32,804 employee-years where total compensation is always below \$1,000,000.

To illustrate the effect of section 4960, we use Form 990 Schedule J (executive compensation disclosure) data to estimate the excise tax owed by nonprofits in our sample. As presented in Table 2, panel A, we estimate that in 2019 alone, nonprofits owed over \$446 million in excise tax. To come to this figure, we aggregated 2019 compensation for 2,436 treated employees who earned approximately \$2.13 billion in remuneration over \$1 million, leading to our estimate of \$446.4 million in excise taxes.

Panel B of Table 2 presents a comparison of average total compensation for treated versus control employees. Here, we note that mean total compensation for our treated employees is just above \$1.4 million. Consistent with our control group consisting of employees whose total compensation is always below \$1 million; the mean compensation of this group is approximately \$430 thousand.

Table 2, Panel C presents descriptive statistics for the 5,213 organization-year observations used in our main sample. Mean (median) total assets of the organizations is about \$1.4 billion (\$414 million). Similarly, the mean number of employees and board size are 3,384 employees and about 22 members, respectively. With respect to operating revenues and expenses, mean program service revenue is about \$459 million with \$3.3 million in fundraising expense.

Panel D of Table 2 provides comparisons of total compensation before and after section 4960 for our treatment and control groups. Here we find a larger decrease in compensation growth of treated executives from 6.1% in the pre- to 2.0% in the post-period compared to the untreated group. i.e., 5.2% to 3.7%. That is, total compensation growth decreased by 4.0% of

total compensation for treated employees while only decreasing about 1.6% of total compensation for untreated employees.¹⁸ The differences in the decline of compensation growth between the two groups is statistically significant (chi-squared comparison statistic p-value < 0.001). Thus, these univariate findings provide preliminary support for our hypothesis, that treated employees experience larger decreases/smaller increases in total compensation post-section 4960 than their untreated counterparts.

4. Results

4.1 Change in Compensation

Table 3 presents our main results. Column I provides the results from estimating model (1) without fixed effects, while column II includes firm and year fixed effects, as well as standard errors clustered by firm. Both models are statistically significant (Prob > F = 0.000), with the adjusted R² increasing from 1.3% to 7.6% with the inclusion of firm and year fixed effects. The negative and significant coefficient on our test variable, *TREATED*POST*, in both columns, indicates that relative to the control group, treated executives post section 4960 experience a smaller increase in total compensation, consistent with our hypothesis. The coefficient on *TREATED*POST* in both columns is -0.025 indicating that, after controlling for known compensation covariates, total compensation for treated employees grew by 2.5% less than that of the control group.¹⁹ Using the sample mean total compensation of \$1.42 million (see Table 2, Panel B) for treated employees, this translates to about \$35,500 (2.5%*\$1.42 million) less compensation than the treated employees would have received in the absence of section

¹⁸ These numbers seem a little off, e.g., 6.1% less 2.0% leads to a decrease of 4%, due to rounding.

¹⁹ We note that while incorporating the organization and year fixed effects in column 2 does not change the coefficient on the test variable it does change the coefficient on the main effects of *TREATED* and *POST*.

4960. As an estimate of the proportion of the excise tax burden, this would suggest that 40% is absorbed by the average treated executive.²⁰ We also observe an insignificant coefficient on *TREATED* indicating that the increase in compensation for treated executives did not differ from the increase in compensation for control executives in the pre-period. We more formally analyze the parallel trends assumption below.

Before moving on, a discussion of the signs and significance of the coefficients on our control variables is appropriate. While the coefficients on *Treated* are insignificantly different from zero in both columns, those on *Post* are negative and significant in both columns. This negative and significant coefficient is consistent with a lower growth in compensation post TCJA for both treated and control executives, and consistent with what we observed in our univariate analysis presented in Table 2, Panel D. Turning to our other controls, we find positive and significant coefficients on $\Delta \ln(\text{Total Assets})$ and $\Delta \ln(\text{Employees})$ in column 1, which is consistent with growing nonprofits increasing pay for the top employees at a faster rate. However, once we incorporate firm fixed effects those coefficients become indistinguishable from zero. Similarly, we observe negative and significant coefficients on $\Delta \text{Relative Equity}$ and $\Delta \text{Operating Margin}$ in column 1, coefficients that become statistically insignificant in column 2 once we incorporate firm fixed effects. Only *Total Compensation Rank*, which is negative and significant, is consistently significant in columns 1 and 2, albeit the level of significance declines from 10 to 5 percent with the inclusion of the firm fixed effects.

4.2 Parallel Trends

A critical assumption of difference-in-differences models is parallel trends, which assumes in the absence of treatment, there is no difference between the treatment and control

²⁰ $\$35,500 / [(1.42\text{million} - \$1\text{million}) * 21\%] = 40\%$

group. Prior studies such as Basu and Liang (2019) use pre-period analysis to provide confidence of the validity of the parallel trends assumption in their setting. In our study, this would mean that trends in total compensation changes are insignificantly different between our treatment and control groups prior to the implementation of section 4960. To address this concern, we expand Model 1 to include indicator variables for each year ($t-3$, $t-2$, t , $t+1$), as well as interaction terms between *TREATED* and each year. We omit year $t-1$ to avoid over-specifying the model. This analysis allows us to examine differences in the change in total compensation between our treated and control groups in each individual year. Significant results for our interaction terms in the pre-period would suggest a parallel trends violation. As shown in Table 4, and as expected given the results in Table 3, both models are statistically significant ($\text{Prob} > F = 0.000$), with the adjusted R^2 increasing from 1.3% to 7.6% with the inclusion of firm and year fixed effects. We observe statistically insignificant coefficients on *TREATED*Time_{t-3}* and *TREATED*Time_{t-2}* providing comfort that our use of a difference-in-differences design is appropriate.²¹ As expected, we do find negative and significant coefficients on *TREATED*Time_t* and *TREATED*Time_{t+1}*, consistent with treated executives experience slower growth in compensation in the first and second years post TCJA and section 4960 implementation.

4.3 Alternative Treatment Variable

In addition to our main analyses which defines *TREATED* as executives with over \$1 million in pay, we alternatively define *TREATED* as executives with over \$900 thousand in total pay as these executives may be affected in the future.²² Consequently this expands our treatment

²¹ While we do observe a positive and marginally significant coefficient on *Time_{t-3}* in column 1, that coefficient becomes statistically insignificant with the inclusion of the year fixed effects in column 2.

²² In examining for-profits, Perry and Zenner (2001) also use \$900,000 as an alternative treated group in their analysis of section 162(m) compensation.

sample from 6,739 to 8,124.²³ The results of this re-specification are presented in Table 5. Both models continue to be statistically significant ($\text{Prob} > F = 0.000$), with the adjusted R^2 increasing from 1.3% to 7.9% with the inclusion of firm and year fixed effects. Consistent with our hypothesis and the results in Table 3, we find treated executives experience a smaller increase in total compensation relative to the control group post section 4960.

4.4 Alternative Control Groups

By design, the employees in the main study control group differ significantly from our treated employees on at least one dimension – compensation. Thus, we examine two alternative control groups whose employees are closer in compensation to that of our treated employees. The results for these alternative control groups are presented in Table 6. Column I compares treated executives to non-covered employees earning more than \$1 million in total compensation at any time during the sample period.²⁴ Column II compares treatment employees to medical professionals (who are explicitly excluded from section 4960) with total compensation over \$1 million at any time. Both of these samples are considerably smaller than our primary sample because to be included in the column I sample the NPO must pay more than five employees over \$1 million, and to be included in the column II sample the NPO must employ at least one medical professional earning over \$1 million, effectively limiting this test to health care providers. Nonetheless, in column I we still have 1,830 (1,694) treatment (control) employee-years for a total sample of 3,524, in column II we have 1,183 (955) treatment (control) employee-years for a total sample of 2,138. Even though these sample sizes are significantly

²³ Similarly, our control sample increased from 32,804 to 37,228.

²⁴ Please note that covered employees are the top five highest paid non-medical professionals in fiscal years beginning on or after January 1, 2017 (even though the excise tax does not apply to the following fiscal year). Consequently, an employee can earn more than \$1 million and still not be covered if the organization has more than five non-medical professionals earning more than him/her.

smaller both models continue to be statistically significant (Prob > F = 0.000), with the adjusted R^2 being higher 14.3% in column 1 and 17.7% in column 2 (both columns include firm and year fixed effects). Using these alternative samples, we continue to find significant negative coefficients ($p < 0.01$ and $p < 0.05$ respectively) on *TREATED*POST*, indicating that treated executives post section 4960 experience smaller increases in total compensation than their non-treated counterparts, providing additional support for our hypothesis.

5. Industry Analyses

Panel A of Table 2 shows that a disproportionate percentage of the sample, and majority of estimated excise taxes are from health care nonprofits. To verify that our results are not limited to healthcare nonprofits, we rerun our analysis individually on two subsamples, health care nonprofits and non-health care (i.e., all other) nonprofits. As shown in table 7, the results for both subsamples (we present results with firm and year fixed effects) continue to be statistically significant (Prob > F = 0.000), with the adjusted R^2 being 8.9%. Most importantly, we continue to find lower increases in compensation for treated, relative to control, employees in both Healthcare and non-Healthcare nonprofits ($p < 0.01$ in both subsamples). That is, the finding that compensation increases for treated employees are lower post section 4960 is not solely a health care story. The only coefficient we find troublesome is the negative and significant coefficient on *TREATED* in column 2, which suggests that compensation for highly paid employees was decreasing at a slower rate than that for control employees pre TCJA. Despite this, we do continue to find a negative and significant coefficient on *TREATED*POST*, indicating an incremental decrease in the compensation growth rate for treated employees in non-healthcare NPOs post TCJA.

6. Robustness tests

In untabulated analyses we confirm the robustness of our results to various model specifications. Our first robustness test excludes the firms' first tax year beginning after December 31, 2017 for the simple reason that TCJA passed at the end of 2017, and thus compensation for the subsequent year may have already been agreed upon. We continue to find that compensation for treated executives increased by less than that for control executives in the post period. Our second robustness test excludes non-December 31 tax years, as the further their tax year end from December 31, and the passage of TCJA, the greater the NPOs' ability to shift compensation into the final period unaffected by the excise tax. For example, an NPO with a fiscal year ending in June had the ability to shift compensation by moving it earlier into the fiscal year ending June 2018 (unaffected year) rather than the year ending June 2019 (affected year). This would have the effect of making compensation in the pre-period look greater and the subsequent increases smaller, leading to the potential conclusion that compensation increases for treated employees were lower post TCJA, when in fact all the NPO did was shift compensation forward. Our results are robust to the exclusion of NPOs with non-December 31 tax years. Our final robustness test excludes 2020, which was unique in that it was the first year affected by the COVID-19 pandemic. Our results are robust to rerunning our analysis excluding 2020 and an alternative specification where we exclude observations with fiscal year ends after March 1, 2020 once again finding robust results. In sum, our robustness tests provide additional comfort that our findings are driven by intentional reductions in compensation growth for treated executives.

7. Discussion and conclusions

This study examines the effect of IRC section 4960 under TCJA, which imposed a 21% excise tax on nonprofit organizations for covered employee compensation over \$1 million

dollars. Using data from IRS Form 990 filings, we find treated employee compensation grew by less than non-treated employee compensation post section 4960.

Our findings contribute to the literature on the use of tax law to influence desired social outcomes by documenting an instance where taxes for compensation over a \$1 million constrains compensation. By studying this setting, we also contribute to the nonprofit compensation literature, which highlights nonprofits' need to balance competition for talent with the negative public perception of excess pay (Balsam and Harris 2014). Although prior research finds previous attempts to limit nonprofit executive pay ineffective (Dhole et al, 2015), we identify a setting where nonprofit compensation is constrained by levying a direct cost (a 21% excise tax) on nonprofits paying employees over \$1 million.

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Appendix A: Variable Definitions

Variable	Definition
$TREATED_t$	= 1 for employee-years for covered employees (five highest paid non-medical professionals) who earn in excess of \$1,000,000 in total compensation in any year from year t-3 to t+1; 0 otherwise.
$POST_t$	= 1 for executive-years for fiscal years beginning after December 31, 2017; 0 otherwise.
$\Delta \ln(Total\ Compensation)_{t-1\ to\ t}$	= the change in logged total compensation from t-1 to t.
$\Delta \ln(Total\ Assets)_{t-1\ to\ t}$	= the change in logged total assets from t-1 to t.
$\Delta \ln(Employees)_{t-1\ to\ t}$	= the change in logged total number of employees from t-1 to t.
$\Delta \ln(Board\ Members)_t$	= the change in the natural log of the total number of board members.
$\Delta Governance\ Index_{t-1\ to\ t}$	= the change in the sum of 16 governance measures from Part VI, increasing in good governance, from t-1 to t.
$\Delta Program\ Ratio_{t-1\ to\ t}$	= the change in the ratio of program service expenses to total expenses from t-1 to t.
$\Delta \ln(Fundraising\ Expense)_{t-1\ to\ t}$	= the change in logged fundraising expenses from t-1 to t.
$\ln(Org\ Age)_t$	= the natural log of the number of years since the organization's exempt status was granted.
$\Delta Revenue\ Concentration_{t-1\ to\ t}$	= the change in the $\Sigma(\text{revenue source} / \text{total revenues})^2$ from t-1 to t.
$\Delta Relative\ Equity_{t-1\ to\ t}$	= the change in total assets less total liabilities scaled by total revenues from t-1 to t.
$\Delta Operating\ Margin_{t-1\ to\ t}$	= the change in the ratio of total revenues less total expenses scaled by total revenues from t-1 to t.
$\Delta \ln(Program\ Service\ Revenue)_{t-1\ to\ t}$	= the change in logged program service revenues from t-1 to t.
$\Delta \ln(Public\ Donations)_{t-1\ to\ t}$	= the change in logged public donations from t-1 to t.
$\Delta \ln(Government\ Grants)_{t-1\ to\ t}$	= the change in logged government grants from t-1 to t.
$\Delta \ln(Unrestricted\ Cash)_{t-1\ to\ t}$	= the change in logged unrestricted cash (total cash plus savings and temporary cash investments) from t-1 to t.
$Total\ Compensation\ Rank_t$	= the employee's rank by total compensation in year t for organization i.

Table 1: Sample Selection

Selection Criteria	Executive-years	Organization-years
Observations within the t-3 to t+1 event window surrounding effective date of Section 4960 and with at least one year in each the pre and post period	422,004	138,333
Less observations with change in compensation > 50%	(8,681)	(696)
Less observations with missing data necessary for our models	(122,674)	(36,387)
Less observations for organizations without a treated and control observation	(251,106)	(96,037)
Total Executive-years for our analyses	39,543	5,213
<i>Treatment group: Covered executives with > \$1m in Total Compensation at any time</i>	6,739	
<i>Control Group: Executives with Total Compensation < \$1m always</i>	32,804	

Table 1 presents the results of our sample selection criteria on the primary sample used for analysis. Nonprofit financial and compensation data are from the Open990 tax Form 990 electronic files.

Table 2: Descriptive Statistics*Panel A: Estimated Excise Tax Incurred by Industry in 2019*

Industry	Number of Organizations	Number of Executives	Excise Tax Sum	Excise Tax %
Health Care	644	1,246	\$241,974,569	54%
Education	167	324	\$80,609,259	18%
Missing – NTEE Code	113	211	\$42,063,044	9%
Public & Societal Benefit	122	167	\$20,719,984	5%
Community Improvement & Capacity Building	69	99	\$15,247,917	3%
Mutual & Membership Benefit	19	33	\$8,773,356	2%
Science & Technology	292	40	\$5,737,048	1%
Arts, Culture and Humanities	37	44	\$4,685,175	1%
Voluntary Health Associations & Medical Disciplines	28	50	\$3,783,776	1%
Philanthropy, Voluntarism & Grantmaking Foundations	13	16	\$3,260,226	1%
Recreation & Sports	24	28	\$2,892,623	1%
Human Services	25	28	\$2,892,623	1%
All Others	124	150	\$13,792,841	< 1% each
Total	1,677	2,436	\$446,432,442	100%

Panel B: Executive-level Compensation Comparison

Executive-Level	Treatment Executives (n=6,739)	Control Executives (n=32,804)	T-test p-value
<i>Total Compensation</i>	1,418,578	430,343	0.000***
<i>ΔLn(Total Compensation)</i>	0.04	0.04	0.126
<i>Total Compensation Rank</i>	2.77	10.79	0.000***

Panel C: Organization Level Descriptive Statistics

Organization-Level (n=5,213)	Mean	Median	Std Dev.	Min	Max
<i>Total Assets</i>	1,405,467,275	413,503,532	3,120,682,611	1,197,636	24,607,104,000
<i>ΔLn(Total Assets)</i>	0.06	0.05	0.12	-0.37	0.47
<i>Employees</i>	3,384	960	6,633	0	53,313
<i>ΔLn(Employees)</i>	0.03	0.02	0.09	-0.29	0.33
<i>Board Members</i>	21.80	16.00	18.14	4.00	131.00
<i>ΔLn(Board Members)</i>	0.00	0.00	0.09	-0.35	0.27
<i>Program Ratio</i>	0.66	0.83	0.36	0.00	1.00
<i>ΔProgram Ratio</i>	0.00	0.00	0.03	-0.14	0.09
<i>Governance</i>	14.15	14.00	1.16	6.00	16.00
<i>ΔGovernance</i>	0.01	0.00	0.47	-1.00	1.00
<i>Fundraising Expense</i>	3,256,046	0	11,524,285	0	101,363,676
<i>ΔLn(Fundraising Expense)</i>	0.01	0.00	0.40	-2.60	2.46
<i>Revenue Concentration</i>	2.03	0.93	6.44	0.31	60.87
<i>ΔRevenue Concentration</i>	0.04	0.00	2.61	-14.90	17.46
<i>Relative Equity</i>	1.52	0.88	2.47	-2.85	14.47
<i>ΔRelative Equity</i>	0.03	0.01	0.53	-2.08	2.83
<i>Operating Margin</i>	0.05	0.05	0.16	-0.70	0.46
<i>ΔOperating Margin</i>	-0.01	0.00	0.12	-0.55	0.46
<i>Program Service Revenue</i>	459,206,378	132,288,548	917,905,083	0	10,429,006,471
<i>ΔLn(Program Service Revenue)</i>	0.05	0.05	0.15	-0.64	0.66
<i>Direct Donations</i>	22,718,850	62,006	83,548,001	0	689,843,000
<i>ΔLn(Public Donations)</i>	0.01	0.00	2.63	-12.16	12.17
<i>Government Grants</i>	19,391,886	0	85,259,172	0	753,290,934
<i>ΔLn(Government Grants)</i>	0.19	0.00	2.78	-11.75	14.96
<i>Unrestricted Cash</i>	73,710,954	14,044,928	167,284,484	0	1,318,814,884
<i>ΔLn(Unrestricted Cash)</i>	0.00	0.00	3.11	-16.75	16.47

See Appendix A for variable definitions.

Panel D: Mean Total Compensation Before and After Section 4960

	Mean $\Delta \text{Ln}(\text{Total Compensation})_{t-1 \text{ to } t}$		
	<i>POST</i> = 0	<i>POST</i> = 1	Difference <i>p</i>-value
<i>Treatment Executives</i>	0.061	0.020	0.040
	<i>N</i> = 3,578	<i>N</i> = 3,161	0.000***
<i>Control Executives</i>	0.052	0.037	0.016
	<i>N</i> = 15,430	<i>N</i> = 17,374	0.000***
Difference <i>p</i>-value	0.009 0.000***	-0.017 0.000***	
<i>Test: Change in Compensation for Treated vs. Control Executives</i>			0.024 0.000***

Table 2 presents summary statistics for the sample used in our analysis. Panel A presents excise taxes estimates in 2019 for each industry, where the excise tax is estimated by aggregating remuneration above \$1 million for each treated executive and multiplying by 21%. Panel B provides variable means for the treatment and control samples and test differences in means. Panel C provides univariate comparisons of total compensation before and after section 4960 for our treatment and control groups.

Table 3: Change in Compensation in Response to Excise Tax

Dependent Variable: $\Delta \ln(\text{Total Compensation})_{t-1 \text{ to } t}$	I	II
	Coefficient (t-statistic)	Coefficient (t-statistic)
$TREATED_t$	0.004 (1.14)	0.000 (0.04)
$POST_t$	-0.015*** (-7.17)	-0.021*** (-3.54)
$TREATED*POST_t$	-0.025*** (-5.26)	-0.025*** (-5.26)
$\Delta \ln(\text{Total Assets})_{t-1 \text{ to } t}$	0.047*** (4.13)	0.024 (1.63)
$\Delta \ln(\text{Employees})_{t-1 \text{ to } t}$	0.046*** (3.26)	0.027 (1.52)
$\ln(\text{Board Members})_t$	-0.003 (-0.24)	0.009 (0.54)
$\Delta \text{Program Ratio}_{t-1 \text{ to } t}$	-0.026 (-0.60)	-0.017 (-0.34)
$\Delta \text{Governance Index}_{t-1 \text{ to } t}$	-0.001 (-0.26)	-0.002 (-0.67)
$\Delta \ln(\text{Fundraising Expense})_{t-1 \text{ to } t}$	0.000 (-0.12)	-0.002 (-0.52)
$\Delta \text{Revenue Concentration}_{t-1 \text{ to } t}$	0.001 (1.44)	0.000 (0.14)
$\Delta \text{Relative Equity}_{t-1 \text{ to } t}$	-0.006** (-2.44)	-0.003 (-1.25)
$\Delta \text{Operating Margin}_{t-1 \text{ to } t}$	-0.023** (-2.19)	-0.016 (-1.42)
$\Delta \ln(\text{Program Service Revenue})_{t-1 \text{ to } t}$	0.011 (1.40)	0.007 (0.83)
$\Delta \ln(\text{Public Donations})_{t-1 \text{ to } t}$	0.000 (0.34)	0.000 (0.14)
$\Delta \ln(\text{Government Grants})_{t-1 \text{ to } t}$	0.000 (0.85)	0.000 (0.72)
$\Delta \ln(\text{Unrestricted Cash})_{t-1 \text{ to } t}$	0.000 (0.14)	-0.000 (-0.59)
$\text{Total Compensation Rank}_t$	-0.001** (-2.11)	-0.001* (-1.80)
Constant	0.053*** (17.94)	0.061*** (11.48)
Firm & Year Fixed Effects	No	Yes
Standard errors clustered by firm	Yes	Yes
N	39,543	39,543
Adjusted R ²	0.013	0.076

Table 3 presents result for estimates of Model (1), which test the effect of section 4960 on the change in executive compensation. Columns I and II provide estimates without and with firm and year fixed effects, respectively. See Appendix A for variable definitions. T-statistics in are presented in parentheses, and statistically significance is noted as follows: * p < 0.10, ** p < 0.05, *** p < 0.01.

Table 4: Change in Compensation in Response to Excise Tax – Parallel Trends Model

Dependent Variable: $\Delta \ln(\text{Total Compensation})_{t-1 \text{ to } t}$	I	II
	Coefficient (t-statistic)	Coefficient (t-statistic)
$TREATED_t$	0.005 (1.15)	0.001 (0.18)
$Time_{t-3}$	0.008* (1.76)	-0.026 (-0.40)
$Time_{t-2}$	0.001 (0.46)	-0.015 (-0.46)
$Time_t$	-0.015*** (-4.22)	-0.010 (-0.30)
$Time_{t+1}$	-0.012*** (-3.67)	-0.002 (-0.03)
$TREATED * Time_{t-3}$	0.006 (0.59)	0.007 (0.72)
$TREATED * Time_{t-2}$	-0.006 (-0.85)	-0.004 (-0.55)
$TREATED * Time_t$	-0.026*** (-3.57)	-0.025*** (-3.39)
$TREATED * Time_{t+1}$	-0.027*** (-3.53)	-0.027*** (-3.48)
All additional control variables included in Model (1)	Included	Included
Constant	0.052*** (16.21)	0.058*** (3.87)
Firm & Year Fixed Effects	No	Yes
Standard errors clustered by firm	Yes	Yes
N	39,543	39,543
R ² (Adjusted)	0.013	0.076

Table 4 presents a validation of the parallel trends assumption, where temporal differences in the treatment and control groups are compared for each year in t-3 to t+1. The variable *Time* is an indicator variable corresponding with the year indicated by the subscript t-n. Columns I and II provide estimates without and with firm and year fixed effects, respectively. See Appendix A for variable definitions. T-statistics in are presented in parentheses, and statistical significance is noted as follows: * p < 0.10, ** p < 0.05, *** p < 0.01.

Table 5: Change in Compensation in Response to Excise Tax: *Alternative Treatment Group*
– Executives earning \$900,000 or more

Dependent Variable: $\Delta \ln(\text{Total Compensation})_{t-1 \text{ to } t}$	I	II
	Coefficient (t-statistic)	Coefficient (t-statistic)
$TREATED_t$	0.002 (0.59)	-0.003 (-0.63)
$POST_t$	-0.015*** (-8.22)	-0.020*** (-3.73)
$TREATED*POST_t$	-0.021*** (-5.20)	-0.021*** (-5.00)
$\Delta \ln(\text{Total Assets})_{t-1 \text{ to } t}$	0.048*** (4.73)	0.021 (1.57)
$\Delta \ln(\text{Employees})_{t-1 \text{ to } t}$	0.042*** (3.31)	0.015 (0.94)
$\ln(\text{Board Members})_t$	-0.005 (-0.41)	0.002 (0.14)
$\Delta \text{Program Ratio}_{t-1 \text{ to } t}$	-0.009 (-0.23)	-0.004 (-0.09)
$\Delta \text{Governance Index}_{t-1 \text{ to } t}$	-0.001 (-0.60)	-0.003 (-0.97)
$\Delta \ln(\text{Fundraising Expense})_{t-1 \text{ to } t}$	0.000 (-0.12)	-0.002 (-0.64)
$\Delta \text{Revenue Concentration}_{t-1 \text{ to } t}$	0.000 (1.17)	0.000 (0.16)
$\Delta \text{Relative Equity}_{t-1 \text{ to } t}$	-0.006** (-2.51)	-0.003 (-1.11)
$\Delta \text{Operating Margin}_{t-1 \text{ to } t}$	-0.022** (-2.22)	-0.013 (-1.26)
$\Delta \ln(\text{Program Service Revenue})_{t-1 \text{ to } t}$	0.013* (1.80)	0.005 (0.64)
$\Delta \ln(\text{Public Donations})_{t-1 \text{ to } t}$	0.000 (-0.44)	0.000 (-0.11)
$\Delta \ln(\text{Government Grants})_{t-1 \text{ to } t}$	0.000 (-0.54)	0.000 (-0.42)
$\Delta \ln(\text{Unrestricted Cash})_{t-1 \text{ to } t}$	0.000 (0.11)	-0.000 (-0.49)
$\text{Total Compensation Rank}_t$	-0.001** (-2.14)	-0.001* (-1.81)
Constant	0.053*** (18.42)	0.061*** (11.48)
Firm & Year Fixed Effects	No	Yes
Standard errors clustered by firm	Yes	Yes
N	45,352	45,352
Adjusted R ²	0.013	0.079

Table 5 presents robustness for our main hypothesis, where the treatment variable is redefined to include executives with annual remuneration of \$900,000 or more. Columns I and II provide estimates without and with firm and year fixed effects, respectively. See Appendix A for variable definitions. T-statistics in are presented in parentheses, and statistically significance is noted as follows: * p < 0.10, ** p < 0.05, *** p < 0.01.

Table 6: Change in Compensation in Response to Excise Tax: *Alternative Control Samples*

Dependent Variable: $\Delta \ln(\text{Total Compensation})_{t-1 \text{ to } t}$	I	II
	<i>Non-Covered > \$1m</i>	<i>Medical Professionals > \$1m</i>
	Coefficient (<i>t</i> -statistic)	Coefficient (<i>t</i> -statistic)
$TREATED_t$	-0.002 (-0.12)	0.013 (1.40)
$POST_t$	-0.045 (-1.53)	-0.016 (-0.79)
$TREATED*POST_t$	-0.037*** (-2.82)	-0.029** (-2.15)
$\Delta \ln(\text{Total Assets})_{t-1 \text{ to } t}$	-0.019 (-0.25)	-0.006 (-0.09)
$\Delta \ln(\text{Employees})_{t-1 \text{ to } t}$	-0.056 (-0.71)	0.007 (0.11)
$\ln(\text{Board Members})_t$	0.035 (0.54)	-0.010 (-0.19)
$\Delta \text{Program Ratio}_{t-1 \text{ to } t}$	-0.329 (-1.49)	-0.277* (-1.75)
$\Delta \text{Governance Index}_{t-1 \text{ to } t}$	-0.005 (-0.45)	0.011 (1.28)
$\Delta \ln(\text{Fundraising Expense})_{t-1 \text{ to } t}$	-0.020 (-1.40)	-0.019*** (-2.82)
$\Delta \text{Revenue Concentration}_{t-1 \text{ to } t}$	0.001 (0.25)	-0.002 (-1.37)
$-\Delta \text{Relative Equity}_{t-1 \text{ to } t}$	-0.012 (-1.44)	-0.032 (-1.45)
$\Delta \text{Operating Margin}_{t-1 \text{ to } t}$	-0.048 (-0.56)	0.077 (0.77)
$\Delta \ln(\text{Program Service Revenue})_{t-1 \text{ to } t}$	-0.002 (-0.04)	-0.053 (-1.14)
$\Delta \ln(\text{Public Donations})_{t-1 \text{ to } t}$	0.002 (1.36)	0.000 (-0.10)
$\Delta \ln(\text{Government Grants})_{t-1 \text{ to } t}$	0.002 (0.76)	-0.001 (-0.28)
$\Delta \ln(\text{Unrestricted Cash})_{t-1 \text{ to } t}$	-0.001 (-0.62)	-0.002** (-2.14)
$\text{Total Compensation Rank}_t$	-0.005*** (-3.06)	-0.010*** (-6.98)
<i>Constant</i>	0.116*** (4.14)	0.095*** (5.82)
Firm & Year Fixed Effects	No	Yes
Standard errors clustered by firm	Yes	Yes
N	3,524	2,138
Adjusted R ²	0.143	0.177

Table 6 presents robustness for our main hypothesis, where we estimate model (1) using different control groups. Column I uses non-covered executives (outside the top five highest paid) with compensation over \$1 million and Column II uses medical professionals with compensation over \$1 million. See Appendix A for variable definitions. T-statistics in are presented in parentheses, and statistically significance is noted as follows: * p < 0.10, ** p < 0.05, *** p < 0.01.

Table 7: Change in Compensation in Response to Excise Tax: *Industry Analyses*

Dependent Variable: $\Delta \ln(\text{Total Compensation})_{t-1 \text{ to } t}$	I	II
	<i>Healthcare</i>	<i>All Others</i>
	Coefficient (<i>t</i> -statistic)	Coefficient (<i>t</i> -statistic)
$TREATED_t$	0.003 (0.51)	-0.016** (-2.17)
$POST_t$	-0.020** (-2.05)	-0.020** (-2.35)
$TREATED*POST_t$	-0.028*** (-3.95)	-0.020*** (-2.99)
$\Delta \ln(\text{Total Assets})_{t-1 \text{ to } t}$	0.051** (2.14)	0.002 (0.10)
$\Delta \ln(\text{Employees})_{t-1 \text{ to } t}$	0.035 (1.33)	0.045 (1.60)
$\ln(\text{Board Members})_t$	-0.018 (-0.72)	0.058** (2.16)
$\Delta \text{Program Ratio}_{t-1 \text{ to } t}$	-0.087 (-1.32)	-0.025 (-0.30)
$\Delta \text{Governance Index}_{t-1 \text{ to } t}$	-0.001 (-0.25)	-0.005 (-0.90)
$\Delta \ln(\text{Fundraising Expense})_{t-1 \text{ to } t}$	-0.001 (-0.22)	0.005 (0.88)
$\Delta \text{Revenue Concentration}_{t-1 \text{ to } t}$	0.000 (0.08)	0.000 (-0.33)
$\Delta \text{Relative Equity}_{t-1 \text{ to } t}$	-0.008 (-1.59)	0.001 (0.36)
$\Delta \text{Operating Margin}_{t-1 \text{ to } t}$	-0.019 (-0.82)	-0.011 (-0.61)
$\Delta \ln(\text{Program Service Revenue})_{t-1 \text{ to } t}$	0.008 (0.46)	0.011 (0.95)
$\Delta \ln(\text{Public Donations})_{t-1 \text{ to } t}$	0.000 (-0.22)	0.000 (-0.04)
$\Delta \ln(\text{Government Grants})_{t-1 \text{ to } t}$	0.000 (-0.06)	-0.001 (-1.41)
$\Delta \ln(\text{Unrestricted Cash})_{t-1 \text{ to } t}$	-0.000 (-0.39)	-0.000 (-0.35)
$\text{Total Compensation Rank}_t$	-0.001* (-1.78)	-0.003*** (-2.84)
<i>Constant</i>	0.058*** (7.45)	0.082*** (8.25)
Firm & Year Fixed Effects	Yes	Yes
Standard errors clustered by firm	Yes	Yes
N	16,025	17,314
Adjusted R ²	0.089	0.089

Table 7 presents robustness for our main hypothesis examining whether our results are driven by the largest industry (healthcare). Column I presents estimates of model (1) for the healthcare industry only and Column II for all other industries. See Appendix A for variable definitions. T-statistics in are presented in parentheses, and statistically significance is noted as follows: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.