Balancing Acts: Executive Compensation, Governance, and Accountability in Nonprofit Organizations

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Chapter 1

General Introduction

A liberal democratic society thrives on the effective functioning and interplay of three sectors: the public sector, the for-profit sector, and the nonprofit sector. In resolving societal issues, the third sector typically strives to cover any residual matters not handled by the former two sectors and, therefore, is instrumental in meeting society's needs. Despite the rapid economic growth of Western economies, this has not resolved or, in some cases, accelerated social issues like wealth and income inequality, global warming, and access to education, health care, housing, and clean air. With public policy falling short of addressing or resolving societal challenges and corporate social responsibility and ESG efforts insufficient to mitigate negative externalities, nonprofits are tasked with bridging this gap while relying on public and private support. As a result, understanding nonprofit practices and dynamics contributes to a better understanding of society.

In the past decades, nonprofits have become increasingly professional and business-like. Extreme forms, like effective altruism and the rise of the social business, appeal to businessmen and consultants starting from the premise that 'good' can be measured, managed, and optimized. While it sounds appealing to optimize impact-per-euro spent, this trend fails to recognize that sustainable organizations require investments in overhead and that skipping checks and balances, transparency, and good governance induces risks of its own. Well-documented scandals during the COVID crisis involving cunning businessmen posing as savior-like philanthropists illustrate that well-governed nonprofit organizations are not built overnight.

What exactly constitutes good nonprofit governance is a research field in its own right. The non-distribution constraint under which nonprofits operate does not mean they do not generate profits; rather, it mandates that any surplus income must be reinvested to further their mission. A common misconception that often distorts how people perceive and engage with nonprofits. Nonprofits are not solely charitable operations that should operate with minimal expenses. Instead, nonprofits, like for-profit businesses, require financial sustainability, strategic management, and proper oversight to succeed in their

missions. Executive boards are responsible for ensuring that resources are allocated efficiently and ethically, balancing the organization's goals with operational needs. In this context, they navigate the complexities of governance, compliance, and accountability, particularly in ensuring that their operations align with their stated social missions.

The question of compensation in nonprofit organizations is a nuanced and often misunderstood issue, tied closely to these broader challenges of governance, accountability, and public perception in the sector. While nonprofit executives, like all nonprofit employees, are prohibited from extracting rents it does not mean they work for free — another common misconception. And, although teachers, nurses, and employees of homeless shelters may find intrinsic motivation in their work and often engage in 'labor donation' by accepting below-market pay, they still require fair compensation for talent and effort. The same likely goes for nonprofit executives. In the end, nonprofit organizations are buyers in the labor market, and, again, any amount of compensation for that labor that proportionately furthers the social mission should be warranted. Balancing the need for fair compensation and retainment of top talent with public expectations for minimal overhead is one of the many challenges nonprofit boards face. The question of how to set compensation in the nonprofit sector —and what levels are *desirable*, *reasonable*, or *optimal*— is central to this dissertation. These amounts may vary significantly, depending on whom you ask.

This dissertation consists of three empirical studies. The first study is conducted together with Anja de Waegenaere and investigates whether excessive nonprofit executive compensation relates to the labor contributions received by volunteers. Psychological mechanisms like distributive injustice, cognitive dissonance, and moral disillusionment may cause excessive compensation to deter volunteer engagement. This way, the first study provides insight into what levels of compensation are deemed *desirable* by the public.

The second study, which is solo-authored, asks whether nonprofit organizations avoid taxes when faced with a tax on high executive compensation. The focus is on whether

alternative compensation strategies become more popular and the study thereby highlights possible unintended consequences of such a policy. The study examines whether nonprofits engage in tax avoidance, leveraging a specific and arbitrary cutoff above which compensation is no longer considered *reasonable*.

The third study, also solo-authored, explores the role of compensation consultants in the nonprofit sector. Given the difficulty of setting executive pay, nonprofit boards may opt to engage an expert. What determines the likelihood of such a decision, and what is the impact on compensation and performance are the research questions in the third study. Incorporating the needs of nonprofits, perceptions of the public, and the reasonableness required by regulators, compensation consultants are tasked with navigating the way to *optimal* pay.

Overall, this dissertation contributes to the literature on nonprofit compensation and governance. Aside from its academic contributions, the implications of the three studies are relevant for both practitioners and regulators. Practitioners are informed of the complexities around nonprofit pay and can benefit from the insights of the first and the third study in particular. The second study provides policy-relevant implications for regulators worldwide, highlighting possible unintended consequences of taxing nonprofit executive pay.

The rest of this dissertation continues as follows. Chapter 2 presents the study "Excessive CEO Compensation and Volunteer Numbers in Nonprofit Organizations". Chapter 3 presents the study "Tax Avoidance by Nonprofit Organizations: Evidence from Reactions to Section 4960". Lastly, Chapter 4 presents the study "The Role of Compensation Consultants in the Nonprofit Sector". Collectively, these studies contribute to the understanding of how nonprofit organizations navigate the complex balancing act of setting executive compensation.

Chapter 2

Excessive CEO Compensation and Volunteer Numbers in Nonprofit Organizations

Co-author: Anja de Waegenaere

Abstract

This study investigates the impact of excessive executive compensation on volunteer engagement in nonprofit organizations. Using compensation data from IRS Form 990 and 513 news media articles on nonprofit compensation, we find that CEO compensation is adversely related to the number of future volunteers, but only when the compensation details receive media coverage. Our cross-sectional results are robust in charitable industries, among smaller organizations, and organizations with strong governance. We do not find evidence that compensation is related to volunteer numbers without media attention, except in the "Arts, Culture, and Humanities" industry. Our research uncovers novel implications of executive compensation within the nonprofit sector and highlights the crucial role of the media in communicating governance information to stakeholders.

2.1 Introduction

"I worry a lot more about The New York Times than I do about the IRS."

—*A Washington nonprofit compensation consultant*[1]

Literature on the consequences of excessive executive compensation typically focuses on financial consequences (e.g. Balsam & Harris, 2014; Brick, Palmon, & Wald, 2006). However, the effect on organizations' non-financial outcomes is under-explored. This study examines whether excessive executive compensation adversely affects the amount of labor contributions received by nonprofit organizations and whether this effect is exacerbated by news media attention.

Compared to the for-profit sector, nonprofits receive much less academic attention (Frydman & Jenter, 2010). This can be explained by the former setting being more economically relevant and having easier measures of performance (e.g. through stock prices). However, a recent study by Independent Sector, a leading nonprofit coalition, shows that the nonprofit sector contributed around $1.4 trillion (5.6%) to the United States gross domestic product (GDP) and provided approximately 8.7 million (6.5%) full-time equivalent jobs in 2022.[2] The time volunteers contribute yearly to these organizations is economically significant at an estimated $195 billion (NCCS, 2020). A recent study shows that donors consider volunteer commitment in assessing nonprofit effectiveness (Beck, Garven, & Yetman, 2023). What drives volunteer contributions is thus worth studying.

Higher CEO compensation is not always related to better performance in nonprofit organizations. Recent experimental work in accounting shows that below-market wages

[1] As quoted in The Chronicle of Philanthropy (September 16, 2012) accessed via https://www.philanthropy.com/article/some-boards-are-changing-the-way-they-pay-their-ceo-to-avoid-unwelcome-scrutiny/

[2] Source: 2023 Health of the U.S. Nonprofit Sector Annual Review, available via https://independentsector.org.

yield selection benefits for social-mission organizations (Chen, Pesch, & Wang, 2020). Also, there is some empirical evidence that high compensation levels or bonuses can negatively impact future monetary contributions from donors (e.g. Balsam & Harris, 2014, 2018). Because volunteers represent a unique stakeholder group, it is not evident that the findings of Balsam and Harris (2014) about donor reactions to compensation generalize to volunteer reactions. According to Liao-Troth (2001), volunteers are not just donors, but also insiders to the organization and resemble employees in many respects. Moreover, Smith (1994) argues that the decision to volunteer (or stop volunteering) depends on many factors, and Wilson (2012) calls for more research on volunteer dynamics. We contribute to the literature by asking whether high executive compensation can have adverse effects on the amount of non-monetary contributions (i.e. labor contributions) received by a nonprofit organization.

The theory of distributional injustice suggests that excessive compensation levels might invoke feelings of injustice or unfairness among employees, which could lead to a negative association between high executive compensation and volunteer labor contributions (Akerlof & Yellen, 1990). Also, as mentioned, donors have been found to punish nonprofits that pay excessive salaries (Balsam & Harris, 2014). Therefore, irrespective of whether we think of volunteers as unpaid employees or donors of labor, the overall expectation in this paper is that *if volunteers are aware of executive compensation*, excessive compensation leads to a reduction in volunteer engagement.

Using US data from tax filings of IRS Form 990, we find that excessive CEO compensation is negatively associated to the number of future volunteers, but only when the compensation details receive media coverage and only for certain sub-samples. Specifically, our results are robust for charitable industries, smaller organizations, and organizations with strong governance. In these subsamples, a one standard deviation increase in total CEO compensation in the media is associated with a reduction in the number of vol-

unteers of 13.4% to 19.9%. Except in the "Arts, Culture, and Humanities" industry, we do not find evidence that excess compensation is related to volunteer numbers without media attention, which suggests that volunteers may not be aware of compensation without media attention. Moreover, to allow for the possibility that *any level of compensation* received by the executives can be excessive (or undesirable) in the eyes of volunteers, we also test the relationship between total compensation and number of volunteers. We find evidence that volunteers reduce their labor contributions in response to compensation mentioned in the media, even if the level of compensation is not excessive in comparison to peers. While this may be due to a lack of sophistication, it could also reflect a general disapproval of executive compensation in the nonprofit sector.

Our results are robust for multiple measures of excess compensation, for including a range of control variables, and among several cross-sections of the sample. In further robustness checks, we rule out two concerns related to our dependent variable. First, we find that results are robust after omitting organizations that are likely to have estimated their volunteer numbers. Second, we show that results are similar if we use a change analysis. Moreover, we test whether organizations in our sample that receive media attention are inherently different from those that do not. Using a propensity score matched sample we rule out that this influences our results.

The contribution of this paper is twofold. First, we present previously undocumented negative performance implications of executive compensation in the nonprofit sector. Although donors have previously been shown to consider high compensation levels in donation decisions (Balsam & Harris, 2014), until now there has been no similar evidence regarding volunteers. Our study shows a negative association between CEO compensation in the media and volunteer engagement in charitable industries, among smaller nonprofit organizations, and among nonprofits with strong governance. We find that volunteers react to compensation in the media irrespective of whether such compensation is excessive

relative to what could be considered as normal compensation given the characteristics of the nonprofit. This suggests that executive compensation in the media could significantly hurt organizations relying on volunteer workers, even if compensation is not excessive.

Second, we contribute to the literature on volunteer dynamics. From previous literature, it is unclear to what extent volunteers are aware of their organization's governance practices and, if so, through which information channels. We find significant evidence that suggests that volunteers reduce their future labor contributions in response to CEO compensation, but only if the compensation is mentioned in the media. In line with recent findings of Felix, Khavis, and Pevzner (2024), this suggests that news media facilitates stakeholder awareness of nonprofit governance practices. This finding aligns with the idea that volunteers may not be very sophisticated stakeholders and are similar to individual donors in this regard. We thereby broaden our knowledge of volunteer dynamics.

2.2 Related Literature and Hypothesis Development

2.2.1 CEO compensation in the nonprofit sector

Accounting literature has critically examined compensation in the nonprofit sector. For example, compensation levels in the nonprofit sector are shown to be systematically lower than those in the for-profit sector (Ben-Ner, Ren, & Paulson, 2011; Frumkin & Keating, 2010; Oster, 1998). As a consequence, Leete (2000) finds the nonprofit sector to exhibit more wage equality. There are multiple explanations for this, generally referring to the setting that has several unique characteristics.

First, nonprofit organizations rely less on executive pay-for-performance due to the unavailability of share prices and a general lack of alternative measures that are both a good proxy for desired performance and easily measurable (Baker, 2002; Harris, Neely, & Parsons, 2022; Oster, 1998). Recent studies found mission fulfillment to be the main driver of compensation, although this is hard to quantify (Balsam & Harris, 2018; Sedatole, Swaney, & Yetman, 2018). Compared to the for-profit sector, fewer tools are available to the compensation committee to align the executive's interest with the nonprofit's mission.

Second, intrinsic rather than extrinsic motivation is of increased importance for nonprofit managers, making motivation by monetary means less attractive (Handy & Katz, 1998). Paying executives a below-market wage could also provide selection benefits to social-mission organizations (Chen et al., 2020). Hence, optimal pay levels might be lower in order to attract intrinsically motivated personnel.

Third, many governments restrict nonprofit organizations from setting compensation. In the U.S., the IRS requires compensation to be "reasonable". The rationale is straightforward: A nonprofit's mission is serving the public good and the level of executive pay is expected to serve this same goal. However, it is often unclear what level of compensation is reasonable. Since 2018, the U.S. has a 21% tax on compensation that exceeds $1 million (Maas, 2023). In practice, compensation is commonly determined based on peer analysis and under the advice of consultants (Maas, 2024) and can still far exceed $1 million.

2.2.2 CEO compensation and monetary donations

When compensation levels conflict with a nonprofit's mission, non-governmental stakeholders might also pressure nonprofits to tone it down. Donors might refrain from donating, not wanting to spend their money on expensive managers. Balsam and Harris (2014)

investigate the effect of CEO compensation on donations. Especially in nonprofits that are more charitable, they find that high compensation levels are associated with negative changes in donations. Individual donors are found to learn about compensation through media channels, while sophisticated donors seek out compensation information. Another study finds that the use of bonuses is associated with lower future donations (Balsam & Harris, 2018).

In a similar fashion, several earlier studies have established a link between administrative efficiency and donations, showing that a lower fraction of administrative spending generally leads to more contributions (Frumkin & Kim, 2001; Li, McDowell, & Hu, 2012; Parsons, 2007). Although research on donor behavior shows that donors might be less motivated to contribute to the organization when executive compensation is perceived to be high, it is not evident the same holds true for volunteers.

2.2.3 Why do volunteers volunteer?

Volunteering is not merely a non-cash form of donations. Although volunteers share some characteristics with donors, i.e., they contribute valuable resources, they represent a unique category of stakeholders.

For example, unlike donors, volunteers can be considered insiders to the organization and resemble employees in many respects. According to Liao-Troth (2001), volunteers and employees share similar job attitudes. Their relationship with the organization involves a similar psychological contract, they exhibit similar organizational commitment and perceive organizational justice in the same way. Beck et al. (2023) find that the number of volunteers committed to an organization provides a valuable signal to donors, implying this group is uniquely situated to judge the impact of their contribution.

At the same time, volunteers can have a myriad of different motivations than donors for providing volunteer work (Smith, 1994). Literature on volunteering has found that volunteers either derive non-monetary utility ('warm glow') from their work since they hold the organization's mission desirable (Tonin & Vlassopoulous, 2010), or contribute out of pure altruism (Lilley & Slonim, 2014; Ugur & Heermans, 2024), or both. Not surprisingly, volunteers are found to select into organizations depending on personal situations, demographics, and preferences (Segal & Weisbrod, 2002; Smith, 1994). Drawing from these various research areas, it becomes clear that our expectations for volunteer behavior can be enriched not only through insights derived from studies on donor behavior, but also those focused on employee behavior.

2.2.4 CEO compensation and volunteer contributions

In this study, we ask whether excessive CEO compensation levels affect volunteers' decisions to contribute their time to a nonprofit organization, where we define excessive CEO compensation as the difference between actual compensation and the level of compensation that would be perceived as "normal" in the eyes of volunteers.

We borrow from psychological and sociological literature on the theory of distributional injustice and relative deprivation (Akerlof & Yellen, 1990; Cowherd & Levine, 1992). Specifically, we posit that excessive executive compensation levels may evoke feelings of injustice or discomfort among volunteers. In the for-profit sector, labor economists have identified relative wages as an important factor in job satisfaction and quitting intentions of employees (e.g. Akerlof & Yellen, 1986, 1990; Rees, 1993). Also in our setting, an increased gap between executive pay and volunteer pay – the latter remaining zero – could lead to a decrease in volunteer retention. It can cause volunteers to quit or demand payment for their effort (Pennerstorfer & Schneider, 2010). Actually, Locke, Ellis, and

Smith (2003) identified "the feeling of being undervalued" as a major reason for volunteers to quit.

At the same time, volunteers can be seen as a type of donor. They might reduce their contributions in terms of effort due to a reduction in charitable confidence.[3] If compensation levels conflict with a nonprofit's mission in the eyes of the volunteer, this might cause cognitive dissonance or disillusionment. Cognitive dissonance is a well-established psychological phenomenon that occurs when a newly learned cognition (e.g. the level of CEO pay) is inconsistent with someone's priors (Harmon-Jones & Mills, 2019). The new knowledge can lead to psychological discomfort and, in our case, negatively affect a volunteer's willingness to donate their time to the organization. Disillusionment is "a feeling of disappointment resulting from the discovery that something is not as good as one believed it to be." (Oxford Languages Dictionary). Hornsey, Chapman, Mangan, La Macchia, and Gillespie (2021) find that people expect higher ethical standards from nonprofits and hence react more negatively to organizational transgressions from nonprofits due to disillusionment. Empirically, donors have been shown to reduce monetary contributions in response to executive compensation (Balsam & Harris, 2014).

Irrespective of whether we think of volunteers as employees or donors, the overall expectation is that *if volunteers are aware of executive compensation*, excessive compensation is related to lower future volunteer engagement. An explicit assumption in this line of argumentation is that volunteers are aware of executive compensation. From the literature, however, it is unclear to what extent volunteers are. It might depend on the degree of sophistication of the volunteer.[4] Even though volunteers are individuals (and thus not

[3]Based on survey data, Bowman (2004) and Bekkers and Bowman (2009) state that a decline in charitable confidence is unlikely to reduce volunteering. They conclude volunteering is symbolic rather than instrumental. However, in their study charitable confidence is an attitude towards nonprofits in general, while our study considers behavioral decisions towards a specific organization. Moreover, reductions in effort contributions to a specific organization might serve a symbolic role.

[4]With volunteer sophistication we envision a concept not unlike donor sophistication (see e.g. Yetman & Yetman, 2013).

sophisticated institutional actors), they are insiders to the organization and might become aware of compensation information via word-of-mouth or seek it out. In Hypothesis 1, we make no predictions regarding the channels through which volunteers become aware of compensation levels. Our first hypothesis is as follows:

HYPOTHESIS 1. *There is a significant negative association between excessive CEO compensation and future labor contributions from volunteers.*

As mentioned, from previous literature, it is not clear to what extent volunteers are aware of public information about managerial compensation and, if so, through which information channels.[5] The implicit assumption in Hypothesis 1 is that there is sufficient awareness about compensation levels among volunteers.

The information channels through which financial information reaches volunteers could be diverse. Considering the heterogeneity in corporate governance and volunteer management practices within the nonprofit sector (Hager, 2004), some volunteers are expected to become aware of the compensation internally. Others might seek out the information from the publicly available IRS form data, data aggregators such as GuideStar.org, (social) media, or word of mouth. However, media attention is expected to be a strong indicator of information awareness among volunteers. For example, Balsam and Harris (2014) find that monetary donations fall when an organization's CEO compensation is mentioned in the news, both among sophisticated and individual donors. Recent work by Felix et al. (2024) found that executive compensation spending increases when local newspapers close, showing the monitoring role of local news media.

[5]For the for-profit sector, Blankespoor, deHaan, and Marinovic (2020) argue that when awareness and acquisition costs are involved, public information might actually be considered costly private information. Similarly, in our setting, volunteers can only react to information they are aware of.

We argue that when news media reports about a nonprofit officer's compensation policy, regardless of the message, it provides a new information channel. We, therefore, expect that feelings of distributional injustice and cognitive dissonance, which may lead volunteers to reduce their labor contributions in response to excessive CEO compensation, will be more likely when the media reports on the CEO's compensation.

HYPOTHESIS 2. *There is a more negative association between excessive CEO compensation and future labor contributions from volunteers when the media reports on the CEO's compensation.*

We emphasize that we expect that volunteers' reactions to learning about CEO compensation in the media will depend on the extent to which the CEO's compensation is perceived as excessive *in the eyes of the volunteers*. For example, even a neutral or seemingly positive message (such as, for example, a reduction in bonus) could still trigger volunteers to reduce their labor contributions if they disapprove of the level of CEO compensation.

2.3 Research Design

2.3.1 Method

To test the hypotheses we use an autoregressive linear regression model that predicts future volunteer contributions using excess compensation as our test variable. We define excess compensation as the part of compensation that is excessive in the eyes of the

volunteer (explained later). We regress the future number of volunteers on excess CEO compensation using the model presented in Equation (1):

$$\begin{aligned} \ln(Volunteers_{it+2}) &= \beta_1 ExcessComp_{it} + \beta_2 Media_{it} + \beta_3 ExcessComp_{it} \times Media_{it} \\ &+ \sum_{j=1}^{k} \gamma_j Controls_j + \sum_{j=1}^{k} \delta_j Media_{it} \times Controls_j + FE + \varepsilon \end{aligned} \quad (1)$$

where k denotes the number of control variables included in the model. The dependent variable $\ln(Volunteers_{i\,t+2})$ is the natural logarithm of the number of volunteers working for organization i in year *t+2*. We employ a two-year lag period because Form 990 is typically filed up to 5 months after the end of the tax period (extensions are possible). Assuming that the accounting information that reaches the volunteer originates from these tax forms (either directly or indirectly), we allow some time for the information to be incorporated into their continuous decision to contribute effort. This is consistent with other studies that investigate reactions to information that becomes public via Form 990-data (see e.g. Balsam & Harris, 2018).

To proxy for excessive compensation, we aim to capture the part of compensation that volunteers might consider "in excess" of reasonable levels. To allow for alternative assumptions regarding what level of compensation is considered reasonable by volunteers, we use three different measures of excess compensation:

(a) First, to allow for the possibility that *any level of compensation* received by the executives can be excessive in the eyes of volunteers, we proxy for excess compensation using $Ln(TotalComp)_{it}$.

(b) Second, we include the Newton (2015) measure of CEO to employee pay-ratio. It could be that volunteers deem compensation excessive when it deviates from average employee pay at the organization. We call this variable $PayRatio_{it}$.

(c) Gaver and Im (2014) use a measure to proxy for excess compensation by creating industry-size comparison groups. Likewise, we split our sample along size deciles and five nonprofit industries and calculate the mean compensation of the industry-size comparison group. In this method, excess compensation is the difference between $ln(TotComp_{it})$ and their comparison group mean $ln(TotComp_{it})$. We call this excess value $RelativeComp_{it}$.[6]

(d) The final and most comprehensive measure of excess compensation is the approach of Garner and Harrison (2013). Equation (2) presents the Garner and Harrison (2013) model for predicted compensation of organization i in year t.[7] In this method excess compensation is the difference between an organization's compensation level and its normal level of compensation.[8] The normal level is the predicted value resulting from the OLS regression model (2), which includes controls based on organization size and type, state-fixed effects, and industry-year fixed effects. We call the residual value $ResidComp_{it}$.

[6]Results are similar when we use the Balsam and Harris (2018) method to define industry-size comparison groups based on size quartiles instead of size deciles.

[7]As volunteers might also incorporate organizational performance in their expected normal levels of compensation, we test and find that inferences do not change when controlling in the first stage for the program ratio and fundraising efficiency ratio, two common measures of performance in the nonprofit sector.

[8]Using first-stage residuals as an independent variable in the second stage is equivalent to (and, hence, yields the same statistical inferences) running a single regression including all predictors from both stages. However, the two-stage regression facilitates the interpretation of the effect of excessive compensation levels. Standard errors on the variables of interest in this methodology are unbiased (see Murphy & Topel, 1985), but to be conservative we bootstrap standard errors with 1,000 replications for regressions that include $ResidComp_{it}$.

$$\begin{aligned}\ln(TotComp_{it}) &= \beta_1 \ln(TotAssets_{it}) + \beta_2 \ln(Contributions_{it}) + \beta_3 Donative_{it} \\ &+ \beta_4 Donative_{it} \times \ln(Contributions_{it}) + FE + \varepsilon \end{aligned} \quad (2)$$

We use all four measures to proxy for excessive compensation. Because excess compensation in all four alternatives is a logged value, excess compensation will approximate percentage differences from normal levels. For example, a positive (negative) $ExcessComp_{it}$ of 0.5 is associated with an observation where total CEO compensation is 65% higher (39% lower) than normal levels.[9] We expect a negative association between $ExcessComp$ and future volunteers (Hypothesis 1).

To test whether the association of interest is more negative when CEO compensation is mentioned in the media (Hypothesis 2) we add $Media_{it}$ and the interaction effect $ExcessComp_{it} \times Media_{it}$. The variable $Media_{it}$ is a dummy that is equal to one if the organization is covered in at least one media article that specifically mentions the organization's top management salaries in either year t, year $t+1$, or year $t+2$. We expect organizations that are in the media to have more volunteers. The reason for this expectation is that we expect media scrutiny to be more likely in organizations with a high number of volunteers and volunteers more likely to join publicly visible organizations. The expected sign for $Media_{it}$ is thus positive. The interaction effect $ExcessComp_{it} \times Media_{it}$ is expected to have a negative coefficient. Consistent with Hypothesis 2, volunteers are expected to be more aware of the CEO compensation when it is featured in the media. A negative sign of the coefficient would indicate that in organizations that receive media coverage, excess compensation is more negatively related to future volunteers.

The model includes multiple control variables and the interaction of all those $Controls$ with $Media_{it}$. To control for the auto-regressive nature of the number of volunteers we

[9] $\ln(TotComp_{it}) - \ln(TotComp_{it}^{norm}) = \pm 0.5$ implies $ExcessComp_{it} = e^{\pm 0.5} TotComp_{it}^{norm}$.

control for $\ln(Volunteers_{it})$. We expect volunteer numbers to be relatively sticky. To control for the size of the organization $\ln(TotAssets_{it})$ and $\ln(TotAssets_{it})^2$ are included in the regression. We expect larger organizations to have more volunteers. Moreover, to proxy for labor intensity, we include $\ln(Employees_{it})$ and to capture different revenue types we include $\ln(GovGrants_{it})$, $\ln(Donations_{it})$, and $\ln(ProgServRev_{it})$. We expect a positive relationship with future volunteers for each of these variables. We also include $\ln(FundrExp_{it})$, since fundraising activities often employ or attract volunteers (O'Connor, 1997). We control for $ProgrRatio_{it}$ and $FundrRatio_{it}$ to control for organizational performance, which could be positively related to both compensation and volunteer employment. $ProgrRatio_{it}$ is a ratio of total program expenses to total expenses. $FundrRatio_{it}$ is a ratio of total fundraising revenues to total fundraising expenses. Next, we control for the commercial/donative nature of the organization by adding $Donative_{it}$, This variable is defined as an indicator variable that is equal to one if the organization receives more than half of its revenues from other sources than program services revenues, and zero otherwise. We expect organizations that are donative in nature to employ more volunteers. To control for the quality of corporate governance we add $CorpGov_{it}$, which is the corporate governance index based on 5 checkmarks as suggested by (Boland, Harris, Petrovits, & Yetman, 2020). Lastly, to control for the economic environment we include $Compet_{it}$ and GDP_{st}. Competition is defined as the natural logarithm of the number of nonprofits in the same industry, state, and size quartile. $GDP_{s(i)\,t+2}$ is the real GDP per capita in state s where organization i is located at year $t+2$ and proxies for the individual opportunity cost of volunteering. *Controls* are interacted with $Media_{it}$ when testing for moderation.

Industry-year fixed effects are added to account for industry differences and time trends in total volunteering. Industry designations are determined as the ten major NTEE-groups following the National Taxonomy of Exempt Entities Common Codes (NTEE-CC) classification system, as is common in not-for-profit research (Feng, Ling, Neely, &

Roberts, 2014).[10] [11] All continuous variables are winsorized at the 1% level to reduce the impact of possibly influential outliers.

2.3.2 Data and sample selection

We use data from Form 990 filed with the IRS by tax-exempted organizations in the US from 2008-2014. This organization-level data is available online in the IRS Statistics of Income (SOI) Microdata files.[12] All tax-exempt organizations (excluding private foundations, churches, and state institutions) with gross receipts of over $200,000 or total assets of over $500,000 are required to file this Form 990.[13] The SOI database represents "over 90 percent of all nonprofit revenues" according to Yetman and Yetman (2013). It includes core financial data on executive compensation, donations, employees, and other measures. Despite limitations (Froelich & Knoepfle, 1996; Gordon, Khumawala, Kraut, & Meade, 2007) it is the primary and most reliable source of information for research in the nonprofit sector at the time of data collection (Feng et al., 2014). Our original dataset includes 101,443 organization-year observations for 20,568 unique nonprofits that are tax-exempt under IRS section 501(c)(3) and filed Form-990 between 2008 and 2014.[14] This

[10] We refrain from using organization-fixed effects in our regressions due to limited within-organization variation in our sample (see Zhou, 2001). Specifically, the power of our tests is constrained in that the panel is unbalanced with a limited number of years, only 615 observations receive media attention, and the main variables are sticky like compensation and the number of volunteers. Instead, we focus on cross-sectional variation and control for the number of volunteers in year t, which we expect to eliminate confounding time-invariant organizational factors.

[11] We do not use two-way clustering in our regression analyses, as our maximum of 5 years per organization is not sufficient to justify clustering standard errors by time (see Petersen, 2009).

[12] Publicly available data retrieved 11 January 2018 from https://www.irs.gov/statistics/soi-tax-stats-charities-and-other-tax-exempt-organizations-statistics.

[13] More specifically, those organizations granted tax-exemption under IRS sections 501(c)(3) until 501(c)(9).

[14] The reason to proceed using these years is an increased pressure by the IRS on nonprofits to report compensation figures since 2008 leading to greater transparency and more (reliable) data. Compensation data before 2008 is likely incomplete or unavailable for non-random subsamples, which could induce sample selection bias.

data set is augmented with compensation data filed through Schedule J of Form 990 in the same year. The compensation amount of interest is that of the highest compensated individual listed on either the main body of the form or on schedule J. Following previous research, from here, we assume this individual to be the CEO (Balsam & Harris, 2018; Garner & Harrison, 2013; Sedatole et al., 2018).[15] To ensure a meaningful comparison of compensation figures, an organization is excluded if the highest compensated employee is a former employee or works less than 20 hours a week, or if the average number of hours is stated as "part-time" or "unknown".[16]

Next, to capture active organizations that largely rely on public support, we exclude organizations that (1) report less than $20,000 in total expenses, (2) have less than 20 volunteers, or (3) report less than $5,000 or 1% of total revenues in donations and grants for the year. Also, we exclude observations in which the reported volunteer number does not vary in the 2008-2013 period. As volunteer numbers are self-reported, these observations are likely to either be an estimate or a volunteer number from a previous year that is not updated. Finally, we exclude observations of organizations that did not report any fundraising expense, yet reported more than $1,000,000 in donations or $10,000 in fundraising revenues. These organizations are likely to be under-reporting their fundraising expense, which, according to prior studies, is common among nonprofits (Keating, Parsons, & Roberts, 2008; Krishnan, Yetman, & Yetman, 2006). After accounting for missing values, this sample selection process results in 20,609 organization-year observations for 5,512 unique organizations in our main sample. Appendix C provides an overview of the selection procedure.

[15] A limited number of organizations (less than 1%) in the sample pay outside contractors for management services. However, excluding these organizations does not change any inferences.

[16] Note that we merge compensation information available from the main body of Form-990 (Part VII) and from Schedule J to find the highest compensated individual, as compensation specification on Schedule J is only required for individuals earning more than $150,000.

Our sample contains 501(c)(3) public charities that are "organized and operated exclusively for religious, charitable, scientific, literary, or educational purposes, for testing for public safety, to foster national or international amateur sports competition, for the prevention of cruelty towards children, women, or animals".[17] Table 1 provides an overview of the organizations classified by their NTEE group and reporting year. The biggest categories in our sample are 'Education' (30.8%), 'Human Services' (25.2%), and 'Health' (16.4%). Followed by 'Art, Culture and Humanities' (11.3%), and 'Public, Societal Benefit' (9.4%). The 'Other' category (6.9%) includes all other NTEE-major groups like environment and animals, international affairs, religion, and mutual/membership benefit.

The final sample distribution closely resembles that of the entire sector, except that it includes a relatively large number of education-related nonprofits. This can be due to sample selection choices as we require organizations to have at least 20 volunteers. We later also run our analyses without the education sector and split per industry to prevent any bias in our results. Fiscal years are more or less evenly distributed over the years 2008 to 2012.

[insert Table 1 about here]

Media coverage data is collected through Newsbank for the period 2008-2014. Newsbank is a database featuring more than 8,000 news sources from the United States. In our search, we include newspapers, journals, magazines, newsletters, web-only news sources, and college newspapers. For each organization, we search its name together with a combination of words that suggest a discussion on executive compensation. We are interested in articles that mention both the organization and the executive salary between 1/1/2008

[17] See "Tax-exempt status for your organization", 2019. Retrieved from https://www.irs.gov/pub/irs-pdf/p557.pdf.

and 1/1/2015.[18] In total, 513 media articles for 248 unique organizations were collected for our sample. Some excerpts of included media articles are in Appendix B. Note that these articles are not necessarily negative in tone. An organization's executive salary can also receive positive media attention, for example when it is abnormally low or when the executive takes a pay cut.[19]

We see the media articles as a shock to the attention to the compensation number, and so we expect media attention to increase the likelihood that volunteers learn about the level of CEO compensation, which in turn increases the likelihood that they adjust their labor contributions if they perceive the compensation as excessive or unfair. We do not rule out the possibility that article sentiment influences volunteer sentiment but also do not further explore it for two reasons. One is that not all articles are entirely about the focal organization, the articles could mention the organization's salary as a comparison or in a list with other organizations.[20] Second, because we have a limited number of observations with media articles, splitting the sample on tone or salience would harm the power of our tests.

Following the data collection outlined above, the compensation of 615 out of the 16,353 organization-year observations is mentioned in the media at least once in the years t to $t+2$. For these observations, the indicator variable $Media_{it}$ is coded as one.

[18] More specifically, using regular expression we search for news articles from 2008 to 2014 that have (1) the organization name (or its "doing business as"-name), plus (2) a within 5 words-combination of CEO/officer/director/executive and compensation/salary/bonus. We then manually check whether each media article addresses the correct organization and mentions its officer compensation in dollars. If not, they are deleted.

[19] Using the VADER sentiment analysis we find that 57 out of the 615 articles (9%) are tagged as having a negative tone. We find that excess compensation is significantly higher (0.334) for these observations compared to those with non-negative toned articles (0.190) which is in line with research that found that the media is more likely to write about excessive compensation (Core, Guay, & Larcker, 2008).

[20] Specifically, 35.6 percent of articles do not mention the focal organization in the first 9,000 characters of the article and 41.8 percent only mention the focal organization once in the first 9,000 characters of the article.

2.4 Results

2.4.1 Descriptive statistics

$ExcessComp(c)$ is determined as the residual of regression model (2), following the method employed by Garner and Harrison (2013). The regression results can be found in Table 2. The model is significant and explains 68.9% of the variation in total compensation in our sample. All variables are statistically significant. The *ResidComp* variable, resulting from taking the residual of the regression in Table 2 has a mean and median around 0, which is to be expected for the distribution of residuals (see Table 3). The maximum (2.758) and minimum (-2.402) values are far from 0, suggesting that there are organizations in the sample for which CEO compensation is multiple orders of magnitude away from 'expected' levels.

[insert Table 2 about here]

Table 3 shows the descriptive statistics of this study. The average observation has 11,896 volunteers (before winsorization), although the median number of volunteers is only 209. This suggests the variable is highly skewed to the right and indeed we observe some extremely large values that contribute to this. For example, during our sample period, the American Heart Association consistently reported 22 million volunteers every year. Other organizations with large volunteer bases include March of Dimes and the American Cancer Society which both report three million volunteers.[21] The industries with the highest median number of volunteers are the Human Services industry (400 median volunteers), and our Other category (361 median volunteers).

[insert Table 3 about here]

[21] These organizations may count a volunteer as soon as a person participates in one fundraising event. Winsorization handles the effect of these outliers in the analysis.

The mean CEO compensation in our sample is $399,173, while the median compensation is $260,406. This is similar to previous studies using the SOI files (Balsam & Harris, 2018). The mean and median of $PayRatio$ are 2.151 and 2.111 which is in line with Newton (2015). The mean of $PayRatio$ indicates that the average executive in our sample had a compensation of 8.6 times the average employee pay. As can be seen in Table 3 Panel B, the highest compensation numbers can be found in the Health industry with a mean (median) compensation of $759,860 ($330,924), followed by the Education industry with a mean (median) compensation of $449,204 ($330,924). These two industries pay higher executive salaries than the rest of the nonprofit sector and this corresponds with previous literature (Gaver & Im, 2014). In these industries, a larger share of revenues typically comes from program services instead of contributions or grants. A total of 615 organization-year observations (3.8%) have had news coverage about their top-level compensation in year *t*, *t+1*, or *t+2*. All industry categories have at least 91 observations with media coverage, except the Other category.

Appendix D shows the correlations between the variables included in any of the multivariate regressions. As expected, the number of volunteers is sticky in the short-term, with a correlation coefficient of 0.924 between $Volunteers_{it}$ and $Volunteers_{it+2}$ in the sample period. Not surprisingly, $Ln(TotComp)$ is significantly positively correlated (0.756) with $Ln(TotAssets)$, our measure for organization size. Out of the three revenue types (grants, donations, and program services) $Ln(TotComp)$ is most strongly correlated with $Ln(donations)$ (0.526). Notably, our four measures of excess compensation are positively correlated with each other (between 0.367 and 0.769). $PayRatio$ has the lowest correlations with the other measures, indicating it may pick up a slightly different take on what is $ExcessComp$. None of the variables in any of our specifications are significantly correlated enough to suspect multicollinearity issues. VIF tests for all tabulated regressions in this study show values below 5 for all non-interaction variables.

2.4.2 Main analyses

To test Hypothesis 1 and 2 about the cross-sectional relationship between excess compensation and the number of future volunteers we run the OLS-regression from Equation (1). The model allows us to test Hypothesis 1 for organization-years with and without media attention. Hypothesis 1 is confirmed for the subsample of nonprofits without media attention regarding the CEO's compensation if the coefficient β_1 is significant, while it is confirmed for the subsample of nonprofits with media attention if $\beta_1 + \beta_3$ is significant. Hypothesis 2 (there is a more negative association between Excess CEO compensation and future labor contributions from volunteers when the media reports on the CEO's compensation) is confirmed if coefficient β_3 on the interaction term $ExcessComp \times Media$ is negative and statistically significant.

[insert Table 4 about here]

We first test Hypothesis 1 on the full sample of 16,353 organization-years (5,018 unique nonprofit organizations) as well as on the subsamples of organization-years with and without media attention regarding the CEO's compensation. Both in the full sample and in the subsample with media attention we find no evidence that (excess) compensation is related to lower future volunteer numbers (see Table 4 . Contrary to our expectations, for nonprofits that do not receive media attention we find a weakly significant positive relationship between excess compensation and the number of volunteers for $ResidComp$.[22] Hence, we do not find evidence to support Hypothesis 1.

[22] In later analyses we show that the positive relationship between volunteers and excess compensation for nonprofits that do not receive media attention is only significant for nonprofits in the education industry. Moreover, in untabulated analyses, the positive relationship is insignificant if we drop Education from the full sample.

For Hypothesis 2, we find some weak evidence that excessive compensation relates to future volunteers more negatively when CEO compensation has been mentioned in the media. The coefficient β_3 is significantly negative for $Ln(TotComp)$.

The lack of robust evidence for our hypotheses may be caused by the highly heterogeneous nature of nonprofit organizations. Both the relationship between excessive compensation and willingness to volunteer (Hypothesis 1) and the potential mediating effect of media attention on this relationship (Hypothesis 2) may depend on specific characteristics of the nonprofit organization and its volunteers. In the next sections, we show that there is consistent evidence for Hypothesis 2 among smaller organizations, organizations with strong governance, and charitable industries.

Size and governance quality

We expect our hypothesized relationships to be more pronounced when feelings of distributional injustice or cognitive dissonance are more pronounced. In small organizations, feelings of distributional injustice could be stronger due to a smaller "distance" between volunteers and CEO. Also, in small nonprofits, it might be easier for volunteers to grasp what are "normal" levels of compensation, and therefore volunteers might be less inclined to rationalize excessive compensation. Both these arguments would make it more likely to see a negative association between excessive compensation and the future number of volunteers in small nonprofit organizations, compared to large nonprofits. Moreover, irrespective of size we expect stronger associations for organizations that have good corporate governance, as excessive pay may incite more cognitive dissonance for these organizations (i.e. volunteers may be expecting excessive compensation less). We examine these conjectures by studying both subsamples.[23]

[23] Aside from these subsample splits, we also split the sample on the median of the ratio of the donations-to-total revenue to capture charitable organizations and on the median of the ratio of volunteers-to-employees to capture volunteer reliance. There is no evidence for Hypothesis 1 and Hypothesis 2 in these subsamples.

Panel A of Table 5 presents results for the subsamples of small and large nonprofits, where the size split is based on the median of total expenses (19 million dollars). Panel B of Table 5 presents results for two subsamples based on governance quality, where the sample split distinguishes nonprofits with a perfect governance score of 17 out of 17 in the Boland et al. (2020) 17-factor composite index and those with an imperfect score.[24]

[insert Table 5 about here]

First, we discuss the results for the subsamples of small nonprofits and nonprofits with a perfect governance score. For each of the four compensation measures, the coefficient β_1 does not significantly deviate from zero, indicating that without media attention, excess compensation is not significantly related to future volunteers. In contrast, volunteer numbers do seem to relate to compensation after media attention. The coefficient β_3 of the interaction effect is negative and statistically significant in three (two) proxies of excess compensation in the small organizations (perfect governance) subsample. Hence, we find some evidence for Hypothesis 2 for small nonprofits and nonprofits with a perfect governance score. Moreover, in these two subsamples, $\beta_1 + \beta_3$ is negative and statistically significant for three out of four compensation measures. Hence, we infer that among small organizations and organizations with perfect governance scores, excess compensation is negatively related to future volunteers when the compensation is mentioned in the media, i.e., Hypotheses 1 is confirmed within these subsamples of organizations that are subject to media attention.[25] For example, when the media reports on compensation, an increase

[24] Apart from being a way to proxy for internal governance quality using public data, Boland et al. (2020) recognize that a perfect score on the index may also reflect social desirability by nonprofit managers as they may "know the "correct" answer". Either way, we expect more cognitive dissonance for these organizations. Inferences do not differ when changing this cutoff to a score of 15 or 16.

[25] In untabulated analyses we rule out a possible alternative explanation that the lower number of volunteers is because volunteers start to get paid after these news articles and become employees. We do not find that excess compensation is related to more future employees, with or without media attention.

of *TotComp* with one standard deviation is related to 13.4% less volunteers for small nonprofits and 19.9% less volunteers for nonprofits with a perfect governance score.[26]

In contrast, for large nonprofits, and for nonprofits with an imperfect governance score, we do not find evidence for Hypothesis 1 or Hypothesis 2. However, as was the case for the full sample, there is a weak positive association between excess compensation and the number of volunteers if compensation is not mentioned in the media (i.e. β_1 is positive and significant) for two of the four measures of compensation among large organizations and for one measure among nonprofits with imperfect governance. In the next section, we break down the sample by industry and show that this positive association is only significant for nonprofits in the Education industry.

Industry analysis

Because we expect that volunteer contributions are more likely to be negatively affected by excess compensation in industries that are relatively more charitable (and less service-oriented) in nature, we test our hypotheses on the subsamples corresponding to the five largest industries in the NTEE-CC broad category classification. Results are presented in Table 6. [27]

Unfortunately, the degrees of freedom in these tests reduce drastically as compared to the full sample, especially since only 3.8% of all observations receive media attention. However, we do observe industrial heterogeneity in our results. First, only in the "Human Services" industry, we find significantly negative coefficients for β_3 and $\beta_1 + \beta_3$ for all measures of excess compensation. We interpret this result as evidence for Hypothesis 1 in

[26] One standard deviation of *TotComp* equals .827 and (when compensation is mentioned in the media) corresponds with a percentage reduction in the number of volunteers of $1 - e^{0.827(\beta_1+\beta_3)} = 1 - e^{0.827(-0.174)} = 13.4\%$ for small organizations and $1 - e^{0.827(\beta_1+\beta_3)} = 1 - e^{0.827(-0.269)} = 19.9\%$ for nonprofits with perfect governance. The sums of the two coefficients are significantly different from 0 with a p-value of 0.007 and 0.001 respectively.

[27] We do not test within the "Other"-industry because the number of news articles in that sub-sample is too low (only 15 observations get media attention).

organizations that receive media attention and for Hypothesis 2 in the "Human Services" industry.

Second, we find that the unexpected positive relationship between (excess) compensation and future volunteers that we found in the full sample is only significant in the "Education" industry. A possible explanation could be that the highest-compensated employees in universities and colleges are not CEOs, but could instead be sports coaches.[28] If there is a positive association between the coach's compensation and the team's performance and if high-performing teams attract or need more volunteers, this could explain the positive association between (excess) compensation and the number of volunteers. Testing this conjecture is outside the scope of this paper.

Finally, all measures of excess compensation have negative coefficients for the number of future volunteers in the 'Arts, Culture, and Humanities' sub-sample when this number is not mentioned in the media, with three of the coefficients being statistically significant. We interpret this as evidence for Hypothesis 1 for organizations in this industry that do not receive media attention.[29] We find weak but insufficient evidence for Hypothesis 2 in this industry. We infer that (excess) compensation is related to fewer future volunteers in the "Arts, Culture, and Humanities" industry, even without media attention. This suggests executive pay may be more transparent in this industry. Indeed, Harris and Neely (2021) find that this industry ranks among the most transparent in the nonprofit sector.

[insert Table 6 about here]

[28] Manual inspection of the ten observations with the largest excess compensation with (without) media attention reveals that for five (five) of these, the highest compensated employee is a sports coach.

[29] In untabulated analyses we find that this effect is robust to the specifications discussed in sections 2.4.3.2 and 2.4.3.3, and robust to dropping $Media$ and $ExcessComp \times Media$, thereby confirming hypothesis 1 for the "Arts, Culture, and Humanities" industry.

2.4.3 Robustness checks

In Section 2.4.2 we showed that among small nonprofits, nonprofits with strong corporate governance, and nonprofits in more charitable industries there is evidence to confirm Hypothesis 2 (i.e., β_3 is significantly negative) and Hypothesis 1 for organizations with media attention (i.e., $\beta_1 + \beta_3$ is significantly negative). In this section, we present the results of several robustness tests to corroborate our results.

Reliability of volunteer numbers

First, as volunteer numbers are self-reported and outside the scope of audits (Duguay, Minnis, & Sutherland, 2020), we limit our sample by omitting observations that are likely to have estimated their volunteer numbers. We drop observations of organizations that in the sample period consistently report volunteer numbers that are divisible by 100, organizations that experience a year-to-year change in volunteers of tenfold or more (and had more than 100 volunteers, to begin with), and organizations that present the same number of volunteers at least three years in a row. After this rather aggressive sample reduction, we have 9,978 observations left. The results for small organizations, organizations with perfect governance, and the charitable industries are reported in Table 7 panel A.[30] For both organizations that are small or have perfect governance scores, we still find that $Compensation \times Media$ is negatively related to future volunteers for most compensation measures, i.e., Hypothesis 2 is still confirmed. Moreover, $\beta_1 + \beta_3$ is still negative and statistically significant for almost all compensation measures, while β_1 is not significant. Hence, in these subsamples, we still confirm Hypothesis 2, and Hypothesis 1 for organizations with media attention. In the charitable industries subsample we find no evidence for the studied relationships.

[30] With charitable industries we from here mean all industries except "Health" and "Education" which are generally considered more professional and service-oriented.

[insert Table 7 about here]

Change-specification

Second, we test for an alternative measure of our dependent variable: changes in volunteer numbers. In Table 7 panel B we define the dependent variable as $\ln(Volunteers_{i\,t+2})$ - $\ln(Volunteers_{i\,t})$ and drop $\ln(Volunteers_{i\,t})$ as a control variable. We again find a negative coefficient β_3 for small and well-governed organizations with media attention, consistent with Hypothesis 2, in all but one column. Moreover, $\beta_1 + \beta_3$ is negative and statistically significant for all but one measure of excess compensation, while β_1 is not significant for all four measures. For the charitable industries, our results are robust for two out of the four measures. Again, β_1 is not significant. Hence, we infer that in two of these three subsamples, excess compensation is negatively related to the change in volunteers when the compensation is mentioned in the media, while no association is found absent media attention.

Endogeneity of media attention

Finally, we rule out that our $Media$ variable captures organizations that are intrinsically different from other organizations. J. Core, Guay, and Verdi (2006) find that organizations that pay excess compensation are more likely to receive media attention. In Table 8 we present results within a sample of firms that are matched based on the *propensity of being subject to media attention*. Propensity scores (Rosenbaum & Rubin, 1983) are calculated as the predicted value of a logit regression with $Media_{it}$ as the outcome variable.[31] Observations are one-on-one nearest-neighbor matched based on propensity score within industry and size quartile and within a caliper of 0.2 times the standard deviation of the propensity score. The total number of matches is 1,208, of which 582 matched observations belong to the charitable industries. Despite the resulting small sample sizes, results con-

[31] Included predictors of media attention in this random-effects logit regression are $\ln(TotComp)$, $\ln(TotAssets_{it})$, $\ln(Contributions_{it})$, and $Donative_{it}$. We also include year and industry-fixed effects.

form with earlier findings for the full sample. Among charitable organizations, we again find a negative and significant coefficient β_3 for one out of four compensation proxies. Moreover, $\beta_1 + \beta_3$ is negative and significant for three measures of excess compensation. We thus rule out that our results are driven by organizations with media attention being significantly different from organizations without media attention. Given the resulting sample sizes, we cannot do similar matching procedures for small and perfect governance organizations.

[insert Table 8 about here]

2.5 Discussion

Overall, we present nuanced, but previously unevidenced, performance implications of high executive compensation levels in the nonprofit sector. We do not find consistent evidence to conclude that excessive compensation is related to lower future volunteers in our sample. We infer that either volunteers are not aware of executive compensation, or they do not incorporate it in their donation decision. Our subsequent analysis of organizations that receive media attention suggests that the former explanation is likely for at least a subset of nonprofits. Specifically, we find that for small organizations and organizations with good governance, future volunteer numbers are negatively related to excessive compensation. This suggests that these kinds of organizations receive less labor contributions in the future when excessive compensation is public knowledge. Moreover, we show that these relationships vary across industries. For instance, in the arts industry, volunteer numbers appear to be more sensitive to excessive compensation, even when media attention does not highlight executive pay.

Our results are robust to using multiple measures of excess compensation and volunteer numbers. One explanation of our results is that volunteers of said nonprofit organizations feel distributive injustice as a result of excess executive compensation. Previous research found that perceptions of pay-ratio fairness can invoke negative views of companies by employees and customers (Benedetti & Chen, 2018).

At the same time, we contribute to the literature on what (de)motivates volunteers in the first place, a research question that deserves more academic attention. Using a volunteer setting, this study contributes to the literature by showing signs of decreased labor contributions when volunteers learn of high CEO compensation. Whether these results are similar outside of the volunteer setting (i.e. does excessive compensation affect employee effort or quitting intentions?) is an interesting direction for future research.

From our results, we also infer that volunteers may not be aware of compensation without media attention. Consistent with recent findings in Felix et al. (2024), we highlight the role news media plays in disseminating information in the nonprofit setting, even if it is public information. Also, we conclude that volunteer numbers are associated with compensation in the media irrespective of whether such compensation is excessive. This suggests volunteers may not be able to distinguish reasonable from excessive. Both of these findings align with the idea that, on average, volunteers may not be very sophisticated stakeholders and are similar to individual donors in this sense. This challenges the assumption made by Beck et al. (2023) that volunteers represent a sophisticated stakeholder group.

Given the effort intensity of gathering and double-checking news articles based on content, the limitations of this study include a rather restrictive search for specific news articles which resulted in only 513 news articles for organizations in our sample period. Future research could employ a more complex data collection to include a larger dataset

of news articles or analyze their contents. Notwithstanding the small sample of media articles, we still find evidence of a negative association between excessive CEO compensation mentioned in the news and volunteer engagement.

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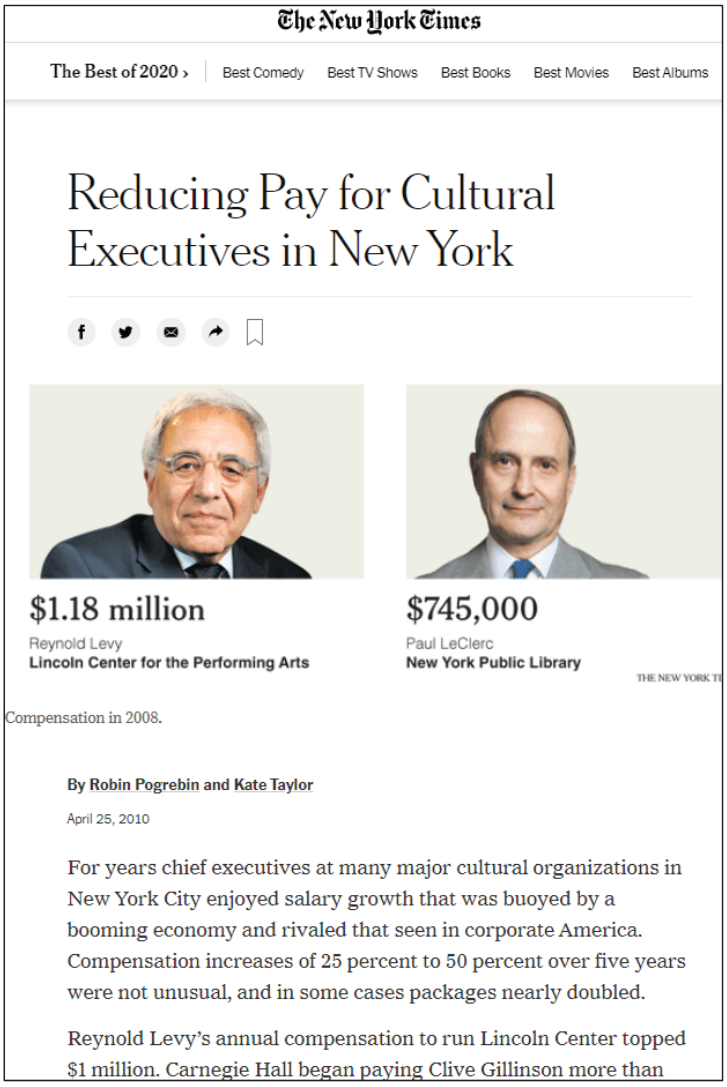
Appendix A – Variable Definitions

Variable Name	Description	Part of Form990 / alternative source
$Ln(Volunteers_{it+2})$	Natural logarithm of total volunteers in year *t+2*	Part I line 6
$Ln(TotComp_{it})$	Natural logarithm of the compensation of the highest compensated individual listed on either the main body of the form or on schedule J	Part VII col. D/E/F or Schedule J
$PayRatio_{it}$	Newton (2015) measure defined as the natural logarithm of (CEO pay / ((total salaries – CEO pay)/ number of employees))	imputed
$RelativeComp_{it}$	$Ln(TotComp_{it})$ minus the mean $Ln(TotComp_{it})$ of organizations in the organization's industry and size decile following Gaver & Im (2014)	imputed
$ResidComp_{it}$	Residual of first stage regression in Table 3 which estimates excess compensation following Garner & Harrisson (2013)	imputed
$Media_{it}$	Equal to 1 if the organization was featured in media that mentioned the officer salary in year *t*, *t+1*, or *t+2*	Newsbank – World News (U.S.)
$Ln(TotAssets_{it})$	Natural logarithm of end-of-year total assets	Part I line 20
$Ln(Contributions_{it})$	Natural logarithm of total contributions	Part I line 8
$Donative_{it}$	A dummy, equal to one if non-service related revenues account for more than 50% of total revenues	Part I line 8 Part I line 12
$Ln(Employees_{it})$	Natural logarithm of total employees	Part I line 5
$Ln(GovGrants_{it})$	Natural logarithm of total government grants	Part VIII line 1e
$Ln(Donations_{it})$	Natural logarithm of total contributions minus government grants	Part I line 8 Part VIII line 1e
$Ln(ProgServRev_{it})$	Natural logarithm of total program service revenues	Part VIII line 2g
$Ln(FundrExp_{it})$	Natural logarithm of total fundraising expense	Part IX line 25D
$ProgramRatio_{it}$	Total functional program service expenses divided by total expenses	Part IX line 25B Part IX line 25A
$FundrRatio_{it}$	Total fundraising revenues divided by total fundraising expenses (incl. direct and professional fundraising expenses)	Part VIII line 1c Part VIII line 8a Part VIII line 8b Part IX line 11eA Part IX line 25D
$CorpGov_{it}$	Score on the Corporate Governance Index5 (Boland et al., 2020)	5 items in form990
$Competition_{it}$	Natural logarithm of the number of nonprofits in the same industry, state and size quartile	IRS SOI tax stats statistics
$Ln(GDPperCapita_{st+2})$	Real GDP per capita	U.S. Department of Commerce

Appendix B – Some Examples of Media Articles



The New York Times

The Best of 2020 › | Best Comedy | Best TV Shows | Best Books | Best Movies | Best Albums

Reducing Pay for Cultural Executives in New York

$1.18 million

Reynold Levy
Lincoln Center for the Performing Arts

$745,000

Paul LeClerc
New York Public Library

THE NEW YORK TI

Compensation in 2008.

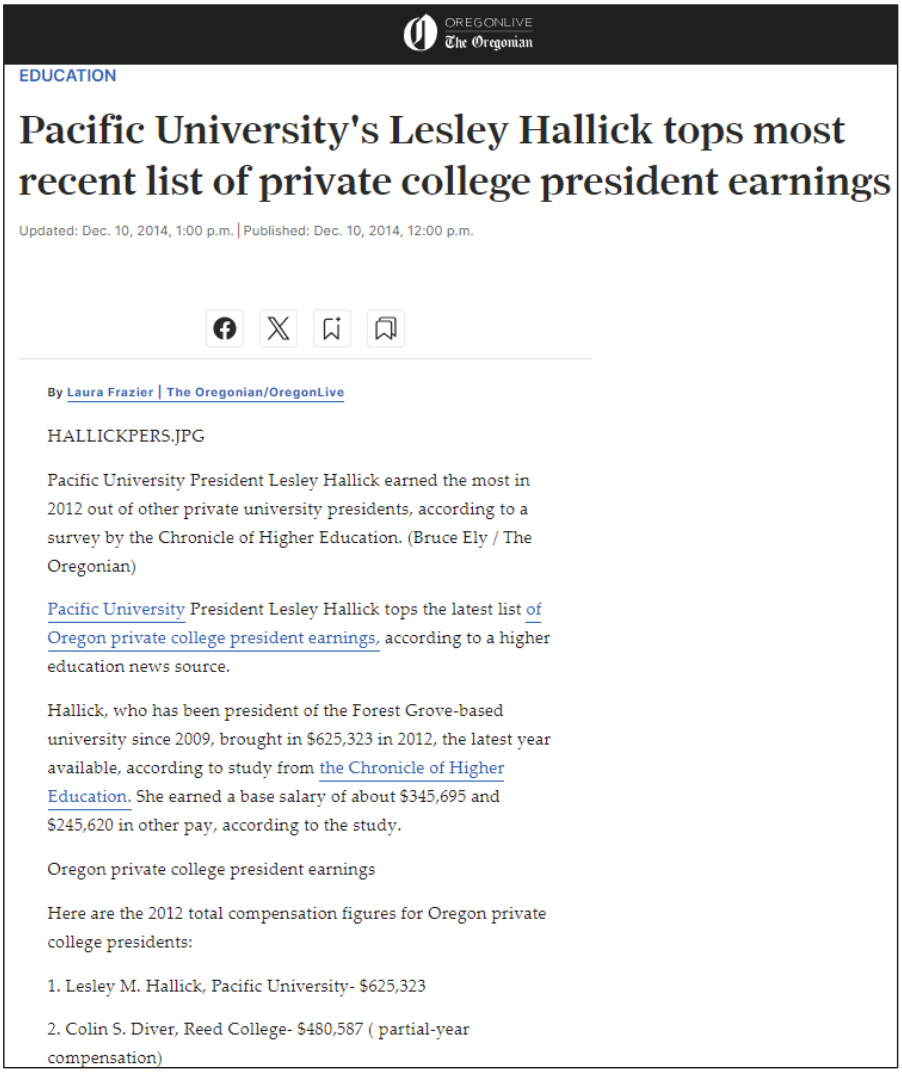
By Robin Pogrebin and Kate Taylor

April 25, 2010

For years chief executives at many major cultural organizations in New York City enjoyed salary growth that was buoyed by a booming economy and rivaled that seen in corporate America. Compensation increases of 25 percent to 50 percent over five years were not unusual, and in some cases packages nearly doubled.

Reynold Levy's annual compensation to run Lincoln Center topped $1 million. Carnegie Hall began paying Clive Gillinson more than

Excerpt of a news article among the 513 news articles included in the sample. Searched sources in Newsbank are newspapers, journals, magazines, newsletters, web-only news sources, and college newspapers. The requirements for news articles to be included in the sample are that the article specifically mentions the nonprofit organization and the salary of an executive or officer. News articles can have either a positive, neutral, or negative tone. This article source: The New York Times, 04/25/2010.



OREGONLIVE
The Oregonian

EDUCATION

Pacific University's Lesley Hallick tops most recent list of private college president earnings

Updated: Dec. 10, 2014, 1:00 p.m. | Published: Dec. 10, 2014, 12:00 p.m.

By Laura Frazier | The Oregonian/OregonLive

HALLICKPERS.JPG

Pacific University President Lesley Hallick earned the most in 2012 out of other private university presidents, according to a survey by the Chronicle of Higher Education. (Bruce Ely / The Oregonian)

Pacific University President Lesley Hallick tops the latest list of Oregon private college president earnings, according to a higher education news source.

Hallick, who has been president of the Forest Grove-based university since 2009, brought in $625,323 in 2012, the latest year available, according to study from the Chronicle of Higher Education. She earned a base salary of about $345,695 and $245,620 in other pay, according to the study.

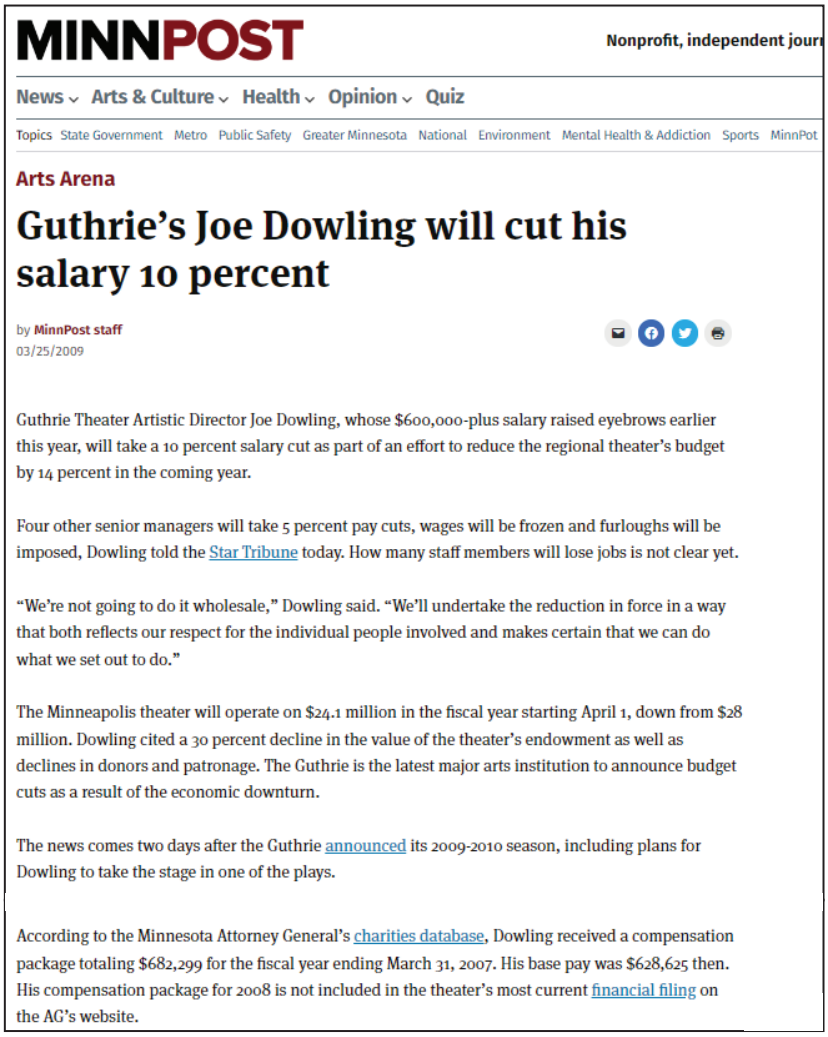
Oregon private college president earnings

Here are the 2012 total compensation figures for Oregon private college presidents:

1. Lesley M. Hallick, Pacific University- $625,323

2. Colin S. Diver, Reed College- $480,587 (partial-year compensation)

Excerpt of a news article among the 513 news articles included in the sample. Searched sources in Newsbank are newspapers, journals, magazines, newsletters, web-only news sources, and college newspapers. The requirements for news articles to be included in the sample are that the article specifically mentions the nonprofit organization and the salary of an executive or officer. News articles can have either a positive, neutral, or negative tone. This article source: The Oregonian, 12/10/2014.



MINNPOST

Nonprofit, independent jour

News Arts & Culture Health Opinion Quiz

Topics State Government Metro Public Safety Greater Minnesota National Environment Mental Health & Addiction Sports MinnPot

Arts Arena

Guthrie's Joe Dowling will cut his salary 10 percent

by MinnPost staff
03/25/2009

Guthrie Theater Artistic Director Joe Dowling, whose $600,000-plus salary raised eyebrows earlier this year, will take a 10 percent salary cut as part of an effort to reduce the regional theater's budget by 14 percent in the coming year.

Four other senior managers will take 5 percent pay cuts, wages will be frozen and furloughs will be imposed, Dowling told the Star Tribune today. How many staff members will lose jobs is not clear yet.

"We're not going to do it wholesale," Dowling said. "We'll undertake the reduction in force in a way that both reflects our respect for the individual people involved and makes certain that we can do what we set out to do."

The Minneapolis theater will operate on $24.1 million in the fiscal year starting April 1, down from $28 million. Dowling cited a 30 percent decline in the value of the theater's endowment as well as declines in donors and patronage. The Guthrie is the latest major arts institution to announce budget cuts as a result of the economic downturn.

The news comes two days after the Guthrie announced its 2009-2010 season, including plans for Dowling to take the stage in one of the plays.

According to the Minnesota Attorney General's charities database, Dowling received a compensation package totaling $682,299 for the fiscal year ending March 31, 2007. His base pay was $628,625 then. His compensation package for 2008 is not included in the theater's most current financial filing on the AG's website.

Excerpt of a news article among the 513 news articles included in the sample. Searched sources in Newsbank are newspapers, journals, magazines, newsletters, web-only news sources, and college newspapers. The requirements for news articles to be included in the sample are that the article specifically mentions the nonprofit organization and the salary of an executive or officer. News articles can have either a positive, neutral, or negative tone. This article source: MinnPost, 03/25/2009.

Appendix C – Sample Selection Process

	Organization-year observations	Unique Organizations
Form-990 data 2008-2014	101,443	20,568
Needed for leading data only	(30,089)	(1,476)
No compensation data	(9,290)	(2,470)
Officer working ≤ 20 hrs/wk	(13,401)	(1,982)
Inactive	(64)	(33)
Do not use volunteers	(20,450)	(5,902)
Zero variation in volunteer numbers	(2,076)	(677)
Do not receive donations	(5,978)	(1,437)
Unreliable fundraising expenses	(1,838)	(659)
Incomplete group return	(40)	(9)
Missing values	(1,864)	(905)
Final sample	**16,353**	**5,018**
Missing employee number or salaries expense	(777)	(247)
Final sample with *PayRatio* available	15,758	4,771

This table reports the sample selection process for data used in all later testing. Form 990 data is sourced from the SOI tax statistics microdata files. Tests with PayRatio as a measure of ExcessComp have a lower sample size due to data availability. When the number of organization-year observations deviates from 16,353 that is because the tests may be conducted on a subsample of this final sample.

Appendix D — Pearson Correlation Matrix

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1 $Volunteers_{it}$	1.000																				
2 $Volunteers_{it+2}$	0.924*	1.000																			
3 $Ln(Volunteers_{it+2})$	0.073*	0.071*	1.000																		
4 $TotComp_{it}$	0.020	0.019	0.163*	1.000																	
5 $Ln(TotComp_{it})$	0.033*	0.033*	0.184*	0.707*	1.000																
6 $PayRatio_{it}$	0.015	0.014	0.187*	0.481*	0.655*	1.000															
7 $RelativeComp_{it}$	-0.021*	-0.024*	0.044*	0.430*	0.525*	0.367*	1.000														
8 $ResidComp_{it}$	-0.013	-0.012	0.064*	0.444*	0.557*	0.395*	0.769*	1.000													
9 $Media_{i,t}$	0.079*	0.071*	0.115*	0.185*	0.198*	0.139*	0.076*	0.087*	1.000												
10 $Ln(TotAssets_{it})$	0.038*	0.037*	0.185*	0.477*	0.756*	0.493*	0.167*	0.000	0.168*	1.000											
11 $Ln(Employees_{it})$	0.033*	0.032*	0.259*	0.345*	0.557*	0.750*	-0.001	0.060*	0.143*	0.561*	1.000										
12 $Ln(GovGrants_{it})$	0.000	0.002	0.129*	0.168*	0.229*	0.261*	-0.060*	-0.006	0.077*	0.213*	0.395*	1.000									
13 $Ln(Donations_{it})$	0.062*	0.060*	0.352*	0.334*	0.526*	0.256*	0.108*	0.018	0.163*	0.670*	0.300*	0.175*	1.000								
14 $Ln(ProgServRev_{it})$	0.001	0.002	0.078*	0.234*	0.387*	0.497*	0.017	0.068*	0.069*	0.344*	0.680*	0.243*	0.008	1.000							
15 $Ln(FundraisingExp_{it})$	0.033*	0.032*	0.245*	0.165*	0.327*	0.201*	0.106*	-0.001	0.098*	0.439*	0.265*	0.186*	0.619*	0.066*	1.000						
16 $ProgramRatio_{it}$	-0.009	-0.009	0.124*	0.081*	0.098*	0.109*	-0.127*	-0.058*	0.032*	0.124*	0.209*	0.130*	0.078*	0.138*	-0.065*	1.000					
17 $FundraisingRatio_{it}$	0.042*	0.042*	-0.002	-0.052*	-0.152*	-0.096*	-0.053*	-0.011	-0.029*	-0.232*	-0.143*	-0.052*	-0.144*	-0.138*	-0.271*	0.008	1.000				
18 $Donative_{it}$	0.027*	0.027*	0.085*	-0.165*	-0.285*	-0.396*	0.009	0.000	-0.017	-0.201*	-0.524*	-0.005	0.232*	-0.618*	0.111*	-0.163*	0.095*	1.000			
19 $CorpGov_{it}$	0.039*	0.038*	0.180*	-0.013	0.112*	-0.021*	0.056*	-0.011	0.054*	0.188*	0.075*	0.094*	0.326*	-0.069*	0.293*	0.036*	-0.087*	0.175*	1.000		
20 $Competition_{it}$	0.020	0.020	0.033*	0.188*	0.212*	0.153*	0.080*	0.027*	0.005	0.081*	0.197*	0.062*	-0.028*	0.158*	0.005	0.109*	0.057*	-0.237*	-0.047*	1.000	
21 $Ln(GDPperCapita_{st+2})$	0.000	0.000	0.032*	0.100*	0.184*	0.001	0.111*	0.000	0.031*	0.117*	0.073*	0.082*	0.141*	0.038*	0.137*	-0.028*	-0.007	0.031*	0.073*	0.170*	1.000

*Pearson correlation coefficients of all variables used in this study. * indicates significance at the 0.01 level.*

Table 1 – Sample Distribution

NTEE-CC category		NTEE-CC Major groups	2008	2009	2010	2011	2012	Total	%
Art, Culture, Humanities		A	311	358	372	386	416	1,843	11.3
Education		B	803	932	1,018	1,096	1,193	5,042	30.8
Health		EFGH	414	490	532	531	715	2,682	16.4
Includes:	E- Health Care		308	374	406	410	581	2,079	
	F- Mental Health & Crisis Intervention		37	46	51	45	51	230	
	G- Voluntary Health Associations & Medical Disciplines		35	41	46	47	53	222	
	H- Medical Research		34	29	29	29	30	151	
Human Services		IJKLMNOP	692	758	830	866	974	4,120	25.2
Includes:	I- Crime & Legal-Related		10	12	11	10	12	55	
	J- Employment		24	32	38	41	46	181	
	K- Food, Agriculture & Nutrition		17	26	26	29	36	134	
	L- Housing & Shelter		46	56	69	78	89	338	
	M- Public Safety, Disaster Preparedness & Relief		2	4	4	5	7	22	
	N- Recreation & Sports		36	45	38	47	45	211	
	O- Youth Development		58	74	75	73	75	355	
	P- Human Services		499	509	569	583	664	2,824	
Public, Societal Benefit		RSTUVW	232	287	308	330	384	1,541	9.4
Includes:	R- Civil Rights, Social Action & Advocacy		4	5	4	4	8	25	
	S- Community Improvement & Capacity Building		18	25	32	31	38	144	
	T- Philanthropy, Voluntarism & Grantmaking Foundations		179	220	228	247	278	1,152	
	U- Science & Technology		18	20	23	24	27	112	
	V- Social Science		0	2	4	7	10	23	
	W- Public & Societal Benefit		13	15	17	17	23	85	
Other		CDQXYZ	173	206	224	248	274	1,125	6.9
Includes:	C- Environment		63	62	76	75	86	362	
	D- Animal-Related		58	72	68	73	77	348	
	Q- International, Foreign Affairs & National Security		40	44	48	64	69	265	
	X- Religion-Related		12	28	32	34	42	148	
	Y- Mutual & Membership Benefit		0	0	0	2	0	2	
	Z- Unknown		0	0	0	0	0	0	
Total			2,625	3,031	3,284	3,457	3,956	16,353	
%			16.05	18.53	20.08	21.14	24.19		100

This table provides the distribution of organizations included in the final sample across year and industry. The final sample distribution closely resembles that of the entire sector, except that it includes a relatively large number of education-related nonprofits. This can be due to sample selection choices, but is unlikely to influence inferences as we later also split the sample per industry.

Table 2 – First Stage Regression to determine $ResidComp_{it}$

VARIABLES	(1) DV= $Ln(TotComp_{it})$
$Ln(TotAssets_{it})$	0.254***
	(41.65)
$Donative_{it}$	-0.200*
	(-1.66)
$Ln(Contributions_{it})$	0.121***
	(17.31)
$Donative_{it} \times Ln(Contributions_{it})$	-0.112***
	(15.43)
$Constant$	6.273***
	(62.75)
Observations	16,353
Adj. R-squared	0.689
Industry*Year FE	YES
State FE	YES
Clustered SE per Org.	YES

*This table presents the estimates of the first-stage OLS regression on $Ln(TotComp_{it})$. $Ln(TotComp_{it})$ is the natural logarithm of total CEO compensation of organization i in year t. The model is completely adapted from Garner & Harrison (2013) where $Ln(TotAssets_{it})$ is the natural logarithm of total assets, $Donative_{it}$ is an indicator variable that is one if the organization receives the majority of their revenues from contributions, and $Ln(Contributions_{it})$ is the natural logarithm of the total contributions of the organization. Industry, time, and state fixed effects are included. The only slight deviation from Garner & Harrison (2013) is that we choose to interact industry and year fixed effects to remain consistent with later tests where we expect that time trends may differ per industry. The residual of this regression is saved as $ResidComp_{it}$ and used in later analyses as a measure of excess compensation. Robust t-statistics clustered at the organization level are in parentheses. ***, **, and * denote significance at the 0.01, 0.05, and 0.1 levels respectively.*

Table 3 – Summary Statistics

Panel A: Summary statistics (* indicates pre-winsorization)

Variable	*N*	*mean*	*SD*	*min*	*median*	*max*
$Volunteers_{it}$*	16,353	11,896.1	406,683.1	20	209	22,000,000
$Volunteers_{it+2}$*	16,353	12,821.2	450,159.4	20	230	33,000,000
$Ln(Volunteers_{it+2})$	16,353	5.609	1.582	2.996	5.438	9.680
$TotComp_{it}$*	16,353	399,173.7	584,702.9	0	260,406	18,800,000
$Ln(TotComp_{it})$	16,353	12.482	0.827	10.463	12.47	14.949
$PayRatio_{it}$	15,758	2.151	0.822	0.169	2.111	4.298
$RelativeComp_{it}$	16,353	-0.142	0.489	-1.378	-0.145	1.258
$ResidComp_{it}$	16,353	0.000	0.461	-2.402	-0.028	2.758
$Media_{i,t}$	16,353	0.038	0.190	0.000	0.000	1.000
$Ln(TotAssets_{it})$	16,353	17.766	1.724	12.626	17.921	21.926
$Ln(Employees_{it})$	16,353	5.307	2.039	0.000	5.580	9.509
$Ln(GovGrants_{it})$	16,353	7.939	7.031	0.000	11.379	18.941
$Ln(Donations_{it})$	16,353	14.971	1.773	10.494	15.041	19.268
$Ln(ProgServRev_{it})$	16,353	13.828	5.736	0.000	15.853	21.028
$Ln(FundrExp_{it})$	16,353	12.153	3.898	0.000	13.165	17.074
$ProgramRatio_{it}$	16,353	0.818	0.093	0.486	0.834	0.979
$FundrRatio_{it}$	16,353	0.359	0.771	-0.032	0.061	5.210
$Donative_{it}$	16,353	0.473	0.499	0.000	0.000	1.000
$CorpGov_{it}$	16,353	4.012	0.644	0.000	4.000	5.000
$Competition_{it}$	16,353	3.198	1.173	0.000	3.296	5.591
$Ln(GDPperCapita_{st+2})$	16,353	10.892	0.245	10.409	10.889	12.110

Panel B: Summary statistics per industry for main variables (* indicates pre-winsorization)

Variable	*N*	*mean*	*SD*	*min*	*median*	*max*
ARTS, CULTURE, HUMANITIES						
$Volunteers_{it+2}$*	1,843	483.5	875.9	20	240	13,001
$TotComp_{it}$*	1,843	326,490.5	306,015.5	7,850	247,679	3,987,474
$Media_{i,t}$	1,843	0.052	0.221	0	0	1
EDUCATION						
$Volunteers_{it+2}$*	5,042	648.5	1,990.4	20	172	37,194
$TotComp_{it}$*	5,042	449,204.8	543,493.5	6,666	330,924	7,580,453
$Media_{i,t}$	5,042	0.034	0.181	0	0	1
HEALTH						
$Volunteers_{it+2}$*	2,682	60,196.3	1,106,160	20	192	33,000,000
$TotComp_{it}$*	2,682	759,860.1	1,073,072	1	396,887	18,800,000
$Media_{i,t}$	2,682	0.054	0.226	0	0	1
HUMAN SERVICES						
$Volunteers_{it+2}$*	4,120	7,542.9	73,823.4	20	400	2,000,000
$TotComp_{it}$*	4,120	243,811.7	256,305.6	0	185,263	5,352,920
$Media_{i,t}$	4,120	0.022	0.147	0	0	1
PUBLIC SOCIETAL BENEFIT						
$Volunteers_{it+2}$*	1,541	4,090.9	38,252.8	20	200	1,209,491
$TotComp_{it}$*	1,541	265,497	243,606.6	9,197	199,137	4,111,335
$Media_{i,t}$	1,541	0.059	0.235	0	0	1

This table reports summary statistics for all variables used in the analysis. In panel B, the summary statistics of the main variables are presented per industry category. All continuous variables are winsorized at the 1st and 99th percentile before analysis.

Table 4 – Future Volunteers (Full Sample)

	DV = $Ln(Volunteers_{it+2})$							
Comp. Measure	$Ln(TotComp_{it})$	$Ln(TotComp_{it})$	$PayRatio_{it}$	$PayRatio_{it}$	$RelativeComp_{it}$	$RelativeComp_{it}$	$ResidComp_{it}$	$ResidComp_{it}$
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$Compensation_{it}$	0.009	0.013	0.007	0.008	0.010	0.010	0.019	0.020*
	(0.753)	(1.054)	(0.692)	(0.842)	(0.879)	(0.884)	(1.533)	(1.84)
$Media_{it}$	0.034	2.227	0.034	0.836	0.034	1.265	0.033	1.685
	(1.200)	(0.590)	(1.200)	(0.213)	(1.204)	(0.330)	(1.161)	(0.48)
$Compensation_{it}$		-0.094*		-0.050		-0.023		-0.077
$\times Media_{it}$		(-1.730)		(-1.210)		(-0.431)		(1.57)
$\beta_1+\beta_3$		-0.081		-0.042		-0.015		-0.057
p-value of ($\beta_1+\beta_3=0$)		0.125		0.306		0.749		0.219
$Ln(Volunteers_{it})$	0.892***	0.891***	0.891***	0.890***	0.892***	0.891***	0.892***	0.892***
	(173.3)	(168.8)	(168.3)	(163.6)	(173.5)	(168.9)	(173.3)	(173.4)
$Ln(TotAssets_{it})$	-0.156***	-0.137***	-0.161***	-0.142***	-0.156***	-0.138***	-0.152***	-0.157***
	(-3.284)	(-2.805)	(-3.211)	(-2.738)	(-3.288)	(-2.813)	(-3.202)	(-3.289)
$Ln(TotAssets_{it})^2$	0.004***	0.003**	0.004***	0.003**	0.004***	0.003**	0.004***	0.004***
	(2.768)	(2.228)	(2.666)	(2.157)	(2.793)	(2.281)	(2.724)	(2.800)
$Ln(Employees_{it})$	0.022***	0.022***	0.030***	0.029***	0.023***	0.023***	0.022***	0.023***
	(4.773)	(4.661)	(3.843)	(3.686)	(4.867)	(4.774)	(4.755)	(4.828)
$Ln(GovGrants_{it})$	0.001	0.002	0.001	0.001	0.001*	0.002*	0.002*	0.001
	(1.584)	(1.640)	(1.217)	(1.294)	(1.646)	(1.717)	(1.660)	(1.630)
$Ln(Donations_{it})$	0.049***	0.051***	0.049***	0.051***	0.050***	0.052***	0.050***	0.050***
	(8.241)	(8.319)	(8.075)	(8.233)	(8.490)	(8.620)	(8.453)	(8.465)
$Ln(ProgServRev_{it})$	-0.005***	-0.004**	-0.006***	-0.005***	-0.005***	-0.004**	-0.005***	-0.005***
	(-2.782)	(-2.434)	(-3.248)	(-2.870)	(-2.773)	(-2.411)	(-2.824)	(-2.774)
$Ln(FundrExp_{it})$	0.004**	0.004**	0.004**	0.004**	0.004**	0.003*	0.004**	0.004**
	(2.080)	(1.988)	(2.087)	(1.963)	(2.051)	(1.932)	(2.114)	(2.065)
$ProgramRatio_{it}$	-0.020	-0.012	-0.041	-0.033	-0.015	-0.009	-0.016	-0.018
	(-0.306)	(-0.189)	(-0.603)	(-0.482)	(-0.236)	(-0.137)	(-0.249)	(-0.287)
$FundrRatio_{it}$	0.012	0.012	0.010	0.011	0.012	0.012	0.012	0.012
	(1.487)	(1.574)	(1.189)	(1.283)	(1.483)	(1.568)	(1.505)	(1.485)
$Donative_{it}$	-0.014	-0.009	-0.011	-0.007	-0.015	-0.011	-0.017	-0.016
	(-0.831)	(-0.497)	(-0.626)	(-0.368)	(-0.908)	(-0.610)	(-1.006)	(-0.916)
$CorpGov_{it}$	0.011	0.009	0.016*	0.015	0.011	0.009	0.011	0.011
	(1.252)	(1.063)	(1.739)	(1.565)	(1.235)	(1.042)	(1.257)	(1.239)
$Competition_{it}$	-0.010*	-0.010	-0.009	-0.008	-0.010*	-0.009	-0.010*	-0.010
	(-1.686)	(-1.585)	(-1.461)	(-1.302)	(-1.689)	(-1.558)	(-1.646)	(-1.643)
$Ln(GDPperCapita_{st+2})$	0.006	-0.000	0.005	0.000	0.007	0.001	0.009	0.007
	(0.244)	(-0.006)	(0.207)	(0.002)	(0.264)	(0.055)	(0.342)	(0.273)
$Constant$	1.245**	1.102**	1.398***	1.269**	1.691***	1.569***	1.683***	1.557***
	(2.449)	(2.118)	(2.602)	(2.305)	(3.037)	(2.752)	(3.033)	(2.743)
Controls $\times Media_{it}$	YES	YES	YES	YES	YES	YES	YES	YES
Industry×Year FE	YES	YES	YES	YES	YES	YES	YES	YES
Observations	16,353	16,353	15,758	15,758	16,353	16,353	16,353	16,353
R-squared	0.860	0.860	0.859	0. 859	0.860	0.860	0.860	0.860

*This table presents the results of an ordinary least squares regression analysis within the full sample. The variable $Compensation_{it}$ is measured as defined in the second row. The variable $Media_{it}$ is an indicator variable equal to one if the compensation of organization i is mentioned at least once in a news article in years t to t+2. The shaded row presents the test result of a two-sided Wald test to test for Hypothesis 1 among organizations with media attention(i.e. whether the sum of β_1 and β_3 is statistically different from 0). Robust t-statistics clustered at the organization level are in parentheses. ***, **, and * denote significance at the 0.01, 0.05, and 0.1 levels respectively.*

Table 5 – Future Volunteers (Sample splits)

Panel A: Size

	DV = $Ln(Volunteers_{it+2})$							
Subsample	Small Organizations				Large Organizations			
Comp. Measure	$Ln(TotComp_{it})$	$PayRatio_{it}$	$RelativeComp_{it}$	$ResidComp_{it}$	$Ln(TotComp_{it})$	$PayRatio_{it}$	$RelativeComp_{it}$	$ResidComp_{it}$
$Compensation_{it}$	-0.0002	0.011	0.006	0.007	0.030*	0.003	0.012	0.038**
	(-0.013)	(0.759)	(0.319)	(0.40)	(1.735)	(0.201)	(0.773)	(2.28)
$Media_{it}$	29.26**	26.294**	24.47**	28.52	1.504	-0.813	-0.443	0.816
	(2.396)	(2.182)	(2.065)	(1.42)	(0.222)	(-0.111)	(-0.062)	(0.13)
$Compensation_{it}$	-0.174***	-0.128**	-0.213***	-0.182	-0.075	-0.033	0.009	-0.070
$\times Media_{it}$	(-2.644)	(-2.439)	(-2.658)	(-1.49)	(-1.295)	(-0.682)	(0.161)	(-1.39)
$\beta_1+\beta_3$	-0.174***	-0.117**	-0.207**	-0.175	-0.044	-0.036	0.021	-0.032
p-value of ($\beta_1+\beta_3$=0)	0.007	0.021	0.032	0.146	0.322	0.523	0.510	0.493
Controls	YES	YES	YES	YES	YES	YES	YES	YES
Controls× $Media_{it}$	YES	YES	YES	YES	YES	YES	YES	YES
Industry×Year FE	YES	YES	YES	YES	YES	YES	YES	YES
Observations	8,177	7,695	8,177	8,177	8,176	8,063	8,176	8,176
R-squared	0.830	0.828	0.830	0.830	0.877	0.877	0.877	0.877

Panel B: Corporate Governance

Subsample	Perfect Governance Score				Imperfect Governance Score			
Comp. Measure	$Ln(TotComp_{it})$	$PayRatio_{it}$	$RelativeComp_{it}$	$ResidComp_{it}$	$Ln(TotComp_{it})$	$PayRatio_{it}$	$RelativeComp_{it}$	$ResidComp_{it}$
$Compensation_{it}$	-0.030	-0.017	-0.031	-0.016	0.016	0.012	0.015	0.022*
	(-0.666)	(-0.503)	(-0.667)	(-0.34)	(1.244)	(1.128)	(1.164)	(1.96)
$Media_{it}$	-7.918	-7.435	-7.352	-8.082	1.002	-0.991	-0.607	0.192
	(-1.067)	(-0.927)	(-0.939)	(-0.39)	(0.259)	(-0.237)	(-0.154)	(0.05)
$Compensation_{it}$	-0.239**	-0.184	-0.196	-0.294*	-0.079	-0.053	0.008	-0.048
$\times Media_{it}$	(-2.536)	(-1.303)	(-1.393)	(-1.89)	(-1.329)	(-1.252)	(0.147)	(-0.95)
$\beta_1+\beta_3$	-0.269***	-0.201	-0.227*	-0.310**	-0.063	-0.041	0.023	-0.026
p-value of ($\beta_1+\beta_3$=0)	0.001	0.144	0.086	0.027	0.276	0.322	0.675	0.597
Controls	YES	YES	YES	YES	YES	YES	YES	YES
Controls× $Media_{it}$	YES	YES	YES	YES	YES	YES	YES	YES
Industry×Year FE	YES	YES	YES	YES	YES	YES	YES	YES
Observations	1,588	1,547	1,588	1,588	14,763	14,209	14,763	14,763
R-squared	0.893	0.893	0.893	0.893	0.853	0.853	0.853	0.853

This table presents the results of an ordinary least squares regression analysis within four subsamples. The small/large split is done based on the median size of total expenses. The Governance score split is based on the Boland et al. (2020) governance index using 17 checkboxes on Form 990. A perfect governance score means that the organization ticked all 17 boxes that are consistent with good governance. An imperfect governance score means that the organization ticked at most 16 of those boxes (inferences do not differ when changing this cutoff at most 15 or at most 14). Again, the variable $Compensation_{it}$ *is measured as defined in the second row. The variable* $Media_{it}$ *is an indicator variable equal to one if the compensation of organization i is mentioned at least once in a news article in years t to t+2. The shaded row presents the test result of a two-sided Wald test to test for Hypothesis 1 among organizations with media attention(i.e. whether the sum of* β_1 *and* β_3 *is statistically different from 0). The control variables included are the same as in Table 4. Robust t-statistics clustered at the organization level are in parentheses. ***, **, and * denote significance at the 0.01, 0.05, and 0.1 levels respectively.*

Table 6 – Future Volunteers (Industry Analysis)

Industry	(1) Arts, Culture, and Humanities				(2) Education			
Compensation Measure	$Ln(TotComp_{it})$	$PayRatio_{it}$	$RelativeComp_{it}$	$ResidComp_{it}$	$Ln(TotComp_{it})$	$PayRatio_{it}$	$RelativeComp_{it}$	$ResidComp_{it}$
$Compensation_{it}$	-0.072**	-0.031	-0.094***	-0.072**	0.075***	0.020	0.065***	0.073***
	(-2.079)	(-0.868)	(-2.591)	(-2.09)	(3.602)	(1.025)	(3.095)	(3.78)
$Media_{it}$	25.95*	29.142*	22.79	24.81	-9.930	-9.789	-10.36	-10.34
	(1.670)	(1.960)	(1.585)	(1.14)	(-1.383)	(-1.117)	(-1.444)	(-1.25)
$Compensation_{it}$ × $Media_{it}$	-0.183	-0.342**	-0.157	-0.162	-0.099	-0.129	-0.091	-0.094
	(-1.088)	(-2.019)	(-0.982)	(-0.83)	(-0.794)	(-0.997)	(-0.969)	(-0.89)
$\beta_1+\beta_3$	-0.255	-0.373**	-0.251	-0.234	-0.024	-0.109	-0.026	-0.021
p-value of ($\beta_1+\beta_3=0$)	0.125	0.021	0.107	0.234	0.846	0.395	0.778	0.836
Controls	YES	YES	YES	YES	YES	YES	YES	YES
Controls× $Media_{it}$	YES	YES	YES	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES	YES	YES	YES
Observations	1,843	1,819	1,843	1,843	5,042	4,843	5,042	5,042
R-squared	0.796	0.797	0.797	0.796	0.851	0.851	0.851	0.851

Industry	(3) Health				(4) Human Services			
Compensation Measure	$Ln(TotComp_{it})$	$PayRatio_{it}$	$RelativeComp_{it}$	$ResidComp_{it}$	$Ln(TotComp_{it})$	$PayRatio_{it}$	$RelativeComp_{it}$	$ResidComp_{it}$
$Compensation_{it}$	-0.027	-0.005	-0.016	-0.018	-0.034	0.033*	-0.021	-0.018
	(-1.205)	(-0.213)	(-0.743)	(-0.87)	(-1.108)	(1.741)	(-0.670)	(-0.67)
$Media_{it}$	15.17	16.257	14.21	15.27	17.83**	16.275*	17.08**	17.52
	(0.986)	(1.054)	(1.048)	(0.80)	(2.420)	(1.809)	(2.175)	(1.59)
$Compensation_{it}$ × $Media_{it}$	0.0423	-0.001	0.0486	0.0382	-0.177**	-0.151**	-0.210**	-0.189
	(0.349)	(-0.014)	(0.522)	(0.32)	(-2.250)	(-2.309)	(-2.090)	(-1.60)
$\beta_1+\beta_3$	0.016	-0.006	0.033	0.020	-0.211***	-0.119*	-0.231**	-0.207*
p-value of ($\beta_1+\beta_3=0$)	0.896	0.951	0.718	0.857	0.003	0.061	0.016	0.072
Controls	YES	YES	YES	YES	YES	YES	YES	YES
Controls× $Media_{it}$	YES	YES	YES	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES	YES	YES	YES
Observations	2,682	2,476	2,682	2,682	4,120	4,039	4,120	4,120
R-squared	0.842	0.842	0.842	0.842	0.855	0.855	0.855	0.855

Industry	(5) Public Societal Benefit			
Compensation Measure	$Ln(TotComp_{it})$	$PayRatio_{it}$	$RelativeComp_{it}$	$ResidComp_{it}$
$Compensation_{it}$	0.024	-0.046	-0.011	0.039
	(0.575)	(-1.126)	(-0.256)	(0.90)
$Media_{it}$	-26.78**	-21.984**	-27.32***	-28.43
	(-2.583)	(-2.209)	(-2.876)	(-1.44)
$Compensation_{it}$ × $Media_{it}$	-0.448*	0.012	-0.215	-0.445
	(-1.894)	(0.086)	(-1.088)	(-1.58)
$\beta_1+\beta_3$	-0.424*	-0.034	-0.226	-0.406
p-value of ($\beta_1+\beta_3=0$)	0.069	0.819	0.245	0.156
Controls	YES	YES	YES	YES
Controls× $Media_{it}$	YES	YES	YES	YES
Year FE	YES	YES	YES	YES
Observations	1,541	1,489	1,541	1,541
R-squared	0.882	0.882	0.882	0.882

*This table presents the results of an ordinary least squares regression analysis within the five largest industry subsamples. Again, the variable $Compensation_{it}$ is measured as defined in the second row. The variable $Media_{it}$ is an indicator variable equal to one if the compensation of organization i is mentioned at least once in a news article in years t to t+2. The shaded row presents the test result of a two-sided Wald test to test for Hypothesis 1 among organizations with media attention (i.e. whether the sum of β_1 and β_3 is statistically different from 0). The control variables included are the same as in Table 4. Robust t-statistics clustered at the organization level are in parentheses. ***, **, and * denote significance at the 0.01, 0.05, and 0.1 levels respectively.*

Table 7 – Robustness Checks

Panel A: After removing observations that possibly use an estimated volunteer number

DV = $Ln(Volunteers_{it+2})$												
Subsample	Small Organizations & Non-Estimators				Perfect Governance Score & Non-Estimators				Charitable industries & Non-Estimators			
Comp. Measure	$Ln(TotComp_{it})$	$PayRatio_{it}$	$RelativeComp$	$ResidComp_{it}$	$Ln(TotComp_{it})$	$PayRatio_{it}$	$RelativeComp$	$ResidComp_{it}$	$Ln(TotComp_{it})$	$PayRatio_{it}$	$RelativeComp$	$ResidComp_{it}$
$Compensation_{it}$	-0.007	0.016	0.009	0.000	-0.042	0.002	-0.010	-0.024	-0.013	0.006	-0.006	-0.003
	(-0.300)	(0.762)	(0.317)	(0.01)	(-0.635)	(0.044)	(-0.139)	(-0.37)	(-0.520)	(0.329)	(-0.233)	(-0.10)
$Media_{it}$	5.133	47.76	-70.12	-0.065	44.07*	43.15*	53.07**	0.141	2.534	3.998	2.723	0.034
	(0.125)	(1.014)	(-1.239)	(-0.54)	(1.717)	(1.800)	(2.017)	(1.03)	(0.233)	(0.364)	(0.254)	(0.67)
$Compensation_{it}$ × $Media_{it}$	-0.378***	-0.281***	-0.639***	-0.657**	-0.251**	-0.224	-0.412**	-0.276*	-0.093	-0.057	-0.074	-0.073
	(-4.495)	(-4.171)	(-3.002)	(-2.13)	(-2.402)	(-1.605)	(-2.193)	(-1.85)	(-1.044)	(-0.710)	(-0.639)	(-0.94)
$\beta_1+\beta_3$	-0.385***	-0.263***	-0.630***	-0.657**	-0.293***	-0.222*	-0.422**	-0.300**	-0.106	-0.051	-0.080	-0.076
p-value of ($\beta_1+\beta_3=0$)	0.000	0.000	0.003	0.028	0.001	0.088	0.014	0.027	0.211	0.517	0.476	0.300
Controls	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Controls× $Media_{it}$	YES	YES	YES	NO	YES	YES	YES	NO	YES	YES	YES	NO
Ind×Year FE	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Observations	4,570	4,321	4,570	4,570	1,031	1,018	1,031	1,031	5,441	5,349	5,441	5,441
R-squared	0.824	0.822	0.824	0.824	0.888	0.889	0.890	0.889	0.852	0.852	0.852	0.852

Panel B: Alternative dependent variable (change analysis)

DV = $(Ln(Volunteers_{it+2}) - Ln(Volunteers_{it}))$												
Subsample	Small Organizations				Perfect Governance Score				Charitable industries			
Comp. Measure	$Ln(TotComp_{it})$	$PayRatio_{it}$	$RelativeComp$	$ResidComp_{it}$	$Ln(TotComp_{it})$	$PayRatio_{it}$	$RelativeComp$	$ResidComp_{it}$	$Ln(TotComp_{it})$	$PayRatio_{it}$	$RelativeComp$	$ResidComp_{it}$
$Compensation_{it}$	0.000	0.012	0.005	0.006	-0.023	-0.002	-0.022	-0.017	-0.011	0.006	-0.018	-0.002
	(0.026)	(0.915)	(0.294)	(0.46)	(-0.585)	(-0.070)	(-0.558)	(-0.44)	(-0.683)	(0.443)	(-1.104)	(-0.13)
$Media_{it}$	29.45**	26.561**	24.61**	28.70	-6.337	-6.077	-5.802	-6.535	0.231	1.456	0.800	-0.050
	(2.376)	(2.170)	(2.049)	(1.44)	(-1.068)	(-0.963)	(-0.933)	(-0.50)	(0.044)	(0.271)	(0.155)	(-0.01)
$Compensation_{it}$ × $Media_{it}$	-0.178***	-0.126**	-0.213***	-0.187	-0.267***	-0.135	-0.208*	-0.258**	-0.185***	-0.105	-0.077	-0.161**
	(-2.744)	(-2.427)	(-2.720)	(-1.53)	(-2.992)	(-1.147)	(-1.732)	(-1.99)	(-2.604)	(-1.641)	(-0.813)	(-2.21)
$\beta_1+\beta_3$	-0.178***	-0.114***	-0.208***	0.180	-0.499***	-0.137	-0.230**	-0.275***	-0.196***	-0.099	-0.095	-1.163**
p-value of ($\beta_1+\beta_3=0$)	0.005	0.024	0.007	0.164	0.000	0.230	0.045	0.025	0.004	0.116	0.306	0.023
Controls	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Controls× $Media_{it}$	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Ind×Year FE	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Observations	8,177	7,695	8,177	8,177	1,588	1,547	1,588	1,588	8,629	8,439	8,629	8,629
R-squared	0.078	0.082	0.078	0.078	0.094	0.091	0.095	0.094	0.076	0.077	0.075	0.076

This table presents the results of two ordinary least squares regression analyses within three subsamples. In panel A, observations are deleted for which it is likely that the organization does not keep a precise volunteer number administration. In panel B, we test for an alternative dependent variable specification. Again, the variable $Compensation_{it}$ *is measured as defined in the second row. The variable* $Media_{it}$ *is an indicator variable equal to one if the compensation of organization i is mentioned at least once in a news article in years t to t+2. The shaded row presents the test result of a two-sided Wald test to test for Hypothesis 1 among organizations with media attention(i.e. whether the sum of* β_1 *and* β_3 *is statistically different from 0). The control variables included are the same as in Table 4. Robust t-statistics clustered at the organization level are in parentheses. ***, **, and * denote significance at the 0.01, 0.05, and 0.1 levels respectively.*

Table 8 – Propensity Score Matched Samples

	DV = $Ln(Volunteers_{it+2})$							
Subsample	Full Sample				Charitable Industries			
Comp. Measure	$Ln(TotComp_{it})$	$PayRatio_{it}$	$RelativeComp_{it}$	$ResidComp_{it}$	$Ln(TotComp_{it})$	$PayRatio_{it}$	$RelativeComp_{it}$	$ResidComp_{it}$
$Compensation_{it}$	0.067	0.033	0.062	0.080	-0.037	-0.037	-0.001	0.006
	(1.245)	(0.562)	(1.154)	(1.412)	(-0.396)	(-0.408)	(-0.009)	(0.068)
$Media_{it}$	3.003	0.380	2.061	2.227	-3.007	-1.975	-3.028	-3.701
	(0.537)	(0.067)	(0.361)	(0.392)	(-0.327)	(-0.206)	(-0.328)	(-0.401)
$Compensation_{it}$	-0.156**	-0.085	-0.076	-0.151**	-0.195*	-0.111	-0.102	-0.194
$\times Media_{it}$	(-2.050)	(-1.218)	(-1.030)	(-1.990)	(-1.660)	(-1.040)	(-0.733)	(-1.625)
$\beta_1+\beta_3$	-0.089*	-0.052	-0.013	-0.071	-0.232***	-0.148**	-0.103	-0.188**
p-value of ($\beta_1+\beta_3=0$)	0.095	0.201	0.793	0.162	0.001	0.022	0.281	0.014
Controls	YES	YES	YES	YES	YES	YES	YES	YES
Controls $\times Media_{it}$	YES	YES	YES	YES	YES	YES	YES	YES
Industry×Year FE	YES	YES	YES	YES	YES	YES	YES	YES
Observations	1,208	1,192	1,208	1,208	582	582	582	582
R-squared	0.874	0.873	0.873	0.873	0.896	0.896	0.896	0.896

*This table presents the results of ordinary least squares regression analyses within a propensity score-matched sample and the propensity score-matched sample within the charitable industries. Propensity scores are calculated as the predicted value of a random-effects logit regression with $Media_{it}$ as the outcome variable and $Ln(TotComp_{it})$, $Ln(TotAssets_{it})$, $Ln(Contributions_{it})$, $Donative_{it}$, year dummies, and industry dummies as predictor variables. Observations are one-on-one nearest-neighbor matched based on propensity score within industry and size quartile and within a caliper of 0.2 times the standard deviation of the propensity score. Given the resulting sample sizes, we cannot do similar matching procedures for small and perfect governance organizations. Again, the variable $Compensation_{it}$ is measured as defined in the second row. The variable $Media_{it}$ is an indicator variable equal to one if the compensation of organization i is mentioned at least once in a news article in years t to t+2. The shaded row presents the test result of a two-sided Wald test to test for Hypothesis 1 among organizations with media attention(i.e. whether the sum of β_1 and β_3 is statistically different from 0). The control variables included are the same as in Table 4. Robust t-statistics clustered at the organization level are in parentheses. ***, **, and * denote significance at the 0.01, 0.05, and 0.1 levels respectively.*

Chapter 3

Tax Avoidance by Nonprofit Organizations: Evidence from Reactions to Section 4960

Abstract

Do nonprofit organizations engage in tax planning? I investigate nonprofit tax avoidance practices by leveraging the introduction of IRC Section 4960, an excise tax on remuneration over one million dollars introduced in the Tax Cuts and Jobs Act. I posit that nonprofits use tax-avoiding strategies to preserve mission funds while retaining executive talent. Using a difference-in-difference design, I find that in affected nonprofits, compensation growth slows, and the likelihood and value of non-taxed arrangements increase. Specifically, affected nonprofits are more likely to redesign pay by entering into or expanding loan agreements with officers and more likely to provide perks. Affected organizations are also more likely to delegate management services. As these other arrangements are more covert, the unintended consequences of taxing compensation may include reduced transparency and comparability in nonprofit executive pay.

3.1 Introduction

Nonprofits are exempted from paying income taxes and, until recently, have had little need for tax planning. On the question of whether nonprofits avoid taxes, prior work has relied on small samples of organizations with unrelated business income that provided tax forms on request (Yetman, 2001; Omer and Yetman, 2007). By leveraging the introduction of Section 4960 of the IRC, an excise tax on remuneration over $1,000,000 introduced in the Tax Cuts and Jobs Act (TCJA) in the United States, the current paper presents the first large-scale empirical investigation into nonprofit tax avoidance practices.[1]

Although paying taxes can be considered pro-social behavior (Kanagaretnam et al., 2018), and nonprofits are also operated for a pro-social purpose, I do not expect nonprofits to disregard tax planning.[2] Nonprofit boards may be concerned with pro-social behavior and the reputational costs of tax planning, but primarily they also care about preserving mission funds. Theoretically, boards should work towards the social mission of the nonprofit, which may not necessarily align with the interests of the federal state that pockets and spends taxes. Therefore, I expect nonprofits to engage in tax planning.

The introduction of Section 4960 is a great setting to investigate the question of whether nonprofit boards engage in tax planning. Starting from the first of January, 2018 onwards, all employees receiving more than one million dollars in compensation

[1]To clarify, in this paper, I use the terms 'nonprofit' and 'tax-exempt organization' interchangeably. Tax exemption is a status granted by the Internal Revenue Service (IRS) under the Internal Revenue Code (IRC) which makes organizations exempt from federal income taxes and makes donations to them tax-deductible for donors. The term nonprofit refers to the legal incorporation of the organization and hence does not necessarily mean it applied for tax-exempt status. Most nonprofit organizations are tax-exempt organizations, and, ignoring government entities and political entities, all tax-exempt organizations are nonprofit organizations. Data from Form 990, filed only by tax-exempt organizations, is the most used data source for contemporary archival accounting research on nonprofits (Feng et al., 2014).

[2]No universally accepted definitions of 'tax avoidance' and 'tax planning' exist. However, I use these two terms interchangeably to refer broadly to the "reduction of explicit taxes", as is most common in accounting literature (Hanlon and Heitzman, 2010). Any intentional tax avoidance strategy, whether the strategy involves real activities management or accounting discretion, would fall under this definition, irrespective of aggressiveness.

are considered "covered employees" if they belong to the top-5 highest-paid employees of the organization. Organizations are required to pay a 21 percent tax on every dollar above the one million dollar threshold.[3] With the TCJA, the excise tax came into law directly and included no exceptions for compensation contracts established before this date, which provides an external shock-setting to study the reactions of nonprofits. If retaining executive talent is crucial to the organization's success, the board has to decide between (1) bearing the cost of the tax, (2) passing it down to the executive by lowering compensation, or (3) avoiding the tax. In this paper, I investigate the practice of providing alternative arrangements (i.e. loans, perks, and outsourcing) with officers that could allow nonprofits to retain executive talent while avoiding the 21 percent tax charge.

Using nonprofit data from Form 990 on 248,060 organization-year observations, Schedule J data on 805,435 compensated individuals, and Schedule L data on 113,987 loans, this paper documents that nonprofits employ multiple strategies to avoid or reduce the impact of Section 4960 excise tax. First, I find that covered individuals experience lower compensation and their compensation growth slows after the effective date of the tax. Second, the change in compensation is negatively related to the likelihood of having a loan agreement with the covered employee after the introduction of the tax. I interpret this to mean that loans serve as a substitute for compensation since the tax. Third, the results show that the change in compensation to covered employees is negatively related to the change in total due amounts of loans to the covered employee after the introduction. This again suggests that loans are used as an alternative to compensation, at least by a subset of my sample.

[3]In this paper, I find that the aggregate Section 4960 tax burden on the sector constitutes an estimated $1.61 billion in excise taxes on executive compensation in 2018, making this tax significantly more impactful than any other tax levied on nonprofits. As a comparison, the total yearly tax revenues on unrelated business income, the second largest tax burden on the sector, is around $648 million (Yetman, 2023).

In subsequent analyses at the organization level, I find that organizations with at least one covered employee provide more perquisites and increase the number of perks after the excise tax, compared to organizations that do not have covered employees. These affected organizations are also more likely to delegate management services. Both of these results indicate that nonprofits endeavor to avoid the excise tax.

Taken together, my findings indicate that nonprofits engage in tax planning. Moreover, the excise tax on compensation in the nonprofit sector, although successful in reducing executive compensation, may have unintended consequences. The use of alternative non-taxed strategies increases and, as these other arrangements are more covert, the unintended consequences of taxing compensation may thus include less transparent and less comparable executive compensation. This is an important finding because transparency is a crucial factor for the sector in maintaining the trust of the public (Harris and Neely, 2021). While compensation transparency changed positively with the new nonprofit tax form in 2008, the 2018 TCJA has had the opposite effect.

The TCJA has received some academic attention recently. Two recent working papers Balsam et al. (2023) and Feng et al. (2023) investigate the effect of the Section 4960 excise tax on compensation, compensation growth, and CEO turnover of nonprofits. They conclude that the tax law was effective in constraining executive compensation. Liew and Murphy (2024) focus on the hospital industry and find that differential treatment of nonprofit and for-profit hospitals in the TCJA has impacted industry dynamics. I add to our understanding of the impact of the TCJA on the nonprofit sector in a significantly different way. While these three papers focus on the intended consequences of Section 4960, like changes in compensation, I focus on the avoidance of this tax as a phenomenon with possible unintended consequences.

This paper also contributes to the literature on nonprofit taxation in general, further uncovering the question of how boards weigh stakeholder interests versus societal interests. Literature on tax avoidance by nonprofit organizations has mainly focused on the tax on so-called unrelated business income (UBI) (Yetman, 2001; Omer and Yetman, 2007). However, properly studying these UBI reporting practices requires Form 990-T, which is not available publicly but had to be requested from the filer instead. So far, this has hindered a large sample analysis of nonprofit tax avoidance. Second, although empirical results in these small samples were suggestive of nonprofit tax avoidance by overstating taxable expenses, they never had a clean exogenous shock setting and were not able to discern whether any expense misreporting was intentional or unintentional. In this paper, I investigate nonprofit tax avoidance in the full sample of e-filers, representing over 90 percent of the total nonprofit sector, and exploit the introduction of a new tax burden to treated organizations. The study of the research question, whether nonprofits avoid taxes, is relevant. As Yetman (2023) puts it: "By uncovering how nonprofits interact with tax rules, we gain an understanding of how those laws can enhance or reduce nonprofits' abilities to solve societies' pressing needs which is, in the end, the goal of the nonprofit form."

3.2 Related Literature and Hypothesis Development

3.2.1 Institutional background

The income tax exemption for nonprofit organizations does not mean that these organizations never pay any taxes. For instance, some nonprofits pay taxes on activities outside their charitable mission, like the tax on unrelated business income, property tax, or tax on excess benefits to disqualified persons. For the first time, however, a tax is introduced

that affects the entire nonprofit sector. The tax does so without regard for whether the taxed compensation is in the best interest of the social mission. Section 4960 is introduced as part of the 2017 TCJA and designed to curb excessive compensation of for example hospital CEOs and university sports coaches.

Although the TCJA, signed into law on December 22, 2017, by Donald Trump, includes some other changes to the tax law applicable to nonprofit entities, like stricter rules on calculating UBI and a tax on investment income of universities, the section 4960 excise tax on remuneration (from here 'the tax') has had by far the largest impact on the third sector (Adams, 2021). It went into full effect immediately for tax years starting after December 31, 2017, and included no exceptions for compensation contracts established before this date, which provides an external shock-setting to study the reactions of nonprofits.

Section 4960's 21 percent tax rate is applicable on any compensation over $1,000,000 to any officer that is a 'covered employee', an employee who is among the top-5 highest compensated employees in the current tax year or any tax year after 2017 (Internal Revenue Service, 2018). This means that once employees are covered, employees remain covered.[4] The excise tax is to be paid by Applicable Tax Exempt Organizations (ATEOs), which includes all organizations tax-exempt under Section 501(a), Section 521(b)(1), Section 115(1), or Section 527(e)(1). It thus also covers the largest subset of tax-exempt organizations, the 501(c)(3) charitable organizations, which fall under the tax exemption in Section 501(a). The setting provides a great large-population setting to test whether nonprofits avoid taxes.

In essence, the tax mimics the Section 162(m) non-deductibility of compensation in the for-profit sector but, in contrast, the law explicitly applies to all forms of direct

[4]Excise tax is also to be paid on parachute payments that exceed three times the five-year average compensation of an employee, irrespective of whether the total compensation exceeds $1,000,000. From here this study ignores the excise tax on parachute payments since involuntary termination is undetectable in the data, and excise tax on parachute payments is likely less prevalent.

compensation from tax-exempt organizations and not just fixed salary. No exceptions are made for compensation contracts that were agreed on before the enactment of the tax. Before developing the hypothesis, I first briefly review the literature on the 162(m) non-deductibility in the for-profit sector, which had a similar goal as the new excise tax, and the literature on tax avoidance in the nonprofit sector.

3.2.2 Taxes on remuneration in the for-profit sector

When introduced in 1993, Section 162(m) limited the corporate tax deduction for compensation paid to the CEO and the next four highest-paid executives of a publicly traded company to $1 million per executive per year. Previous literature has shown that the limit on the deductibility had little effect on the total compensation figures in the for-profit sector (Hall and Liebman, 2000; Balsam and Yin, 2005). The limitation did result in firms changing the form of compensation to "performance-based" compensation that was still deductible (Perry and Zenner, 2001; Rose and Wolfram, 2002; Balsam and Yin, 2005; Balsam and Ryan, 2007). In a more recent study of the unavoidable introduction of new Austrian fiscal pressure on the total value of compensation by Bornemann et al. (2023) the authors find that, although the tax implications do not reduce total compensation, the fiscal pressure was borne by shareholders. Similarly, a recent change to the 162(m) limit in the TCJA has not led to a change in for-profit compensation practices in the US (De Simone et al., 2022). The authors conclude that "taxes are not a first-order effect of executive pay and that tax regulation could be relatively ineffective at curbing executive compensation"(De Simone et al., 2022, p. 2376). Overall, the extant literature on the for-profit sector finds that, historically, regulators have had limited success in curbing executive compensation via taxation.

3.2.3 Tax avoidance by nonprofits

Literature on tax avoidance by nonprofit organizations is scarce and has mainly focused on the tax on unrelated business income (UBI) (Yetman, 2023). Yetman (2001) finds that educational and medical nonprofits shift expenses towards these taxable activities, and thus away from the tax-exempt activities. They find no evidence of charitable nonprofits doing so. Later investigations also show such expense shifting for associations (Hofmann, 2007) and show that this form of tax avoidance increases with tax rates (Omer and Yetman, 2007).

However, studying UBI reporting practices requires Form 990-T information, which is not available publicly through an electronic database. Instead, researchers have relied on hand-collected and voluntarily surrendered tax forms. This has hindered large random sample analysis of nonprofit tax avoidance. Second, although empirical results in these small samples suggest nonprofit tax avoidance by overstating taxable expenses, it does not exploit a clean setting to discern whether misreporting was intentional (Omer and Yetman, 2007). In this paper, I examine nonprofit tax avoidance in the entire population of nonprofits, use a large random sample of e-filing organizations, and leverage the implementation of a new tax burden on treated organizations.

3.2.4 Hypothesis Development

Depending on social norms, paying taxes can be considered as pro-social organizational behavior (Kanagaretnam et al., 2018; Górecki and Letki, 2021), which aligns with the pro-social nature of nonprofits. However, nonprofit organizations strive to spend the highest possible part of their funds on their mission. In other words, "social and financial incentives interact"(Liu et al., 2014). Therefore, I do not expect nonprofits to disregard tax planning. Nonprofit boards are expected by their constituents to work towards the social mission of

the organization. Paying taxes reduces the funds available to work toward the mission, and although tax revenues may benefit a social purpose, this purpose does not one-on-one align with the mission of the organization. The desire to retain executive talent pressures boards to strike a balance between paying competitive remuneration packages and minimizing the loss of donor funds through excise taxes on compensation. Tax avoidance would be a solution.

At the same time, there might be reputational costs related to tax avoidance (Gallemore et al., 2014; Graham et al., 2014; Austin and Wilson, 2017; Lanis et al., 2022). Bad CSR or scandals hurt the trustworthiness of nonprofit organizations (Lin-Hi et al., 2015; Chapman et al., 2023) and trustworthiness is an essential asset of the average nonprofit organization (Becker et al., 2020). At the same time, reductions in public trust in the third sector as a whole may hurt its public license to operate. Researchers have found that on average nonprofit boards function in a more ethical climate in which altruism and benevolence are more salient than for-profit boards (Brower and Shrader, 2000). It is very well possible that boards may not opt for tax avoidance out of fear of reputational costs or out of principle.

However, recent academic work has recognized that "good" organizations can behave unethically when they prioritize their mission above all. For example, de Bruin Cardoso et al. (2023) recently developed a theory of the "NGO halo effect" that explains unethical behavior by NGO employees through moral justification, moral superiority, and moral naivety. Similarly, in a recent review, Chapman et al. (2023) call for more research on the causes of nonprofit misbehavior, like moral licensing and "ends justify the means" thinking, suggesting boards may sideline the previously mentioned reservations with respect to tax avoidance.

Therefore, I expect boards to place a higher weight on the benefits compared to the costs of tax avoidance, leading to the following study hypothesis:

Nonprofits engage in tax planning to avoid paying the Section 4960 *excise tax.*

3.3 Identifying Section 4960 Avoidance strategies

From Form 990 or other publicly available nonprofit data, it is not possible to observe tax expenses or taxes paid by nonprofits. However, it is possible to observe changes in the adoption of possible tax avoidance strategies. To test the hypothesis, this paper first identifies three possible ways for nonprofits to circumvent paying the excise tax. These strategies can, at least in part, substitute for taxable compensation expenses. The identification of these strategies draws on previous research related to for-profit firms and the 162(m) non-deductibility, as well as professional articles from CPA journals and internet sources specific to the Section 4960 tax.

3.3.1 Loans

In the for-profit sector, loans to executives are prohibited by the Sarbanes-Oxley Act, but, prior to that, such related party transactions had been used extensively (Kahle and Shastri, 2004) and studied in the accounting literature (Kahle and Shastri, 2004; Kohlbeck and Mayhew, 2010). Bebchuk and Fried (2003) recognize executive loans as a vehicle of compensation with "camouflage benefits" in their seminal work on how the design of compensation contracts is both a solution to and a consequence of agency conflict. More recently, Hope et al. (2019) found that excessive independent director compensation is associated with related party transactions, like loans, and suggest these transactions are a

reflection of agency problems. In a professional CPA journal, the Journal of Accountancy, Adams (2021) suggests that nonprofits might look at split-interest loan agreements as a possible vehicle for implicit compensation.

An example of a split-interest loan agreement would be an employee life insurance that involves the employer borrowing from an insurance company to pay premiums on a life insurance policy for an employee. This loan is secured by the policy itself.[5] This arrangement offers employers a way to provide life insurance as part of compensation without immediate cash outlay, while employees receive coverage benefits. Other solutions involving a loan construction could involve using it to carry deferred compensation to future periods where compensation is not over $1 million, for example when the employee has left the organization, by forgoing the principal in those later periods. Or providing the executive with a mortgage that, if at market-conform terms, would not trigger tax charges. In sum, loan arrangements between the executive and the company provide for a vehicle to possibly reduce the tax burden by either shifting taxable compensation to future periods or avoiding it altogether. Reporting of loans to disqualified persons (which includes executives) is required on Schedule L of Form 990 and this data is thus publicly available for all e-filing organizations.

3.3.2 Perks

A second and more popular method of compensating executives without triggering the Section 4960 excise tax is perquisites (from here: perks). As perks are not considered in

[5]Nettleton (2021) describes such a contract between the University of Michigan and sports coach Jim Harbaugh as follows: "The contract between UM and Harbaugh includes below-market split-dollar term loan advances in the amount of $2 million per year. This allowed Harbaugh to obtain a sizeable life insurance policy. Under the policy's terms, Harbaugh can recognize the cash value of the life insurance policy by borrowing directly from it. Upon death, the proceeds of the life insurance policy will be used to repay UM for the loans. under the coaching contract, and any remainder will go to Harbaugh's estate. All tax-free. Proceeds from the loans are not taxable, and they are not considered remuneration under section 4960."(Nettleton, 2021, P. 136)

4960 as remuneration and do not trigger W-2 personal income taxes for the executive, perks can be a method of tax avoidance. Perks at nonprofit organizations can include but are not limited to discretionary spending accounts, first-class travel, travel for companions, housing allowance, payments for business use of personal residence, or social club dues. Balsam et al. (2020) find that approximately 25% of nonprofits provide perks to executives. They find that perks are generally viewed unfavorably by donors and are less common in nonprofits with greater external monitoring. In this paper, I expect treated organizations to be more likely to pay perks after the enactment of the excise tax.

On Form 990 Schedule J, organizations have to indicate which benefits/perks they provide to their employees. For this, Part 1, question 1a on the schedule has eight checkboxes including things like "First-class or charter travel", "Housing allowance or residence for personal use", and "Personal services (such as maid, chauffeur, chef)". This data is thus publicly available for all e-filing organizations.

3.3.3 Management Outsourcing

The third and last strategy I investigate is the delegation of management services. Outsourcing of the management function may be used as an operational strategy to avoid paying executive compensation. More drastic compared to the other two strategies, this strategy could circumvent paying excise taxes by reducing the need to have executives on the organization's payroll. When the cost of hiring executives as employees goes up due to the excise taxes I expect it to make outsourcing of management services more attractive. Irrespective of whether the hired services are performed by managers who used to be (or still are) on the payroll or whether the delegation replaces managers with new management, I expect more outsourcing of management activities after the enactment of the excise tax for treated organizations. Public available data exists on whether or not an

organization delegates management duties. Form 990 Part IV question 3 reads "*Did the organization delegate control over management duties customarily performed by or under the direct supervision of officers, directors, or trustees, or key employees to a management company or other person?*". Although it is not entirely clear what delegation of management duties entails in practice and only a small fraction of organizations are observed to do so, in this paper, management delegation is the third investigated strategy to avoid the Section 4960 excise tax.

3.4 Research Design

3.4.1 Compensation model specifications

Before testing the hypothesis, I first test with a difference-in-difference (DiD) regression analysis whether, after the effective date of the tax, individuals who are covered employees are experiencing differential (changes in) compensation compared to individuals who are not covered by the excise tax. I expect lower compensation and lower compensation growth for treated individuals after the tax implementation. This would align with employees bearing part of the tax, but also with nonprofits avoiding the tax. In other words, tax avoidance would involve reducing or limiting taxable compensation. To test for this, I employ the OLS regression equation (1):

$$\begin{aligned}(\Delta)Comp_{it} &= \beta_1 Treated_{it} + \beta_2 POST_t + \beta_3 Treated_{it} \times POST_t \\ &\quad + \sum_{k=1} \beta_k Control_k + FE + \varepsilon. \end{aligned} \tag{1}$$

where $(\Delta)Ln(Comp_{it})$ is the (change in) total compensation of officer i in year t. The indicator variable $Treated_{it}$ is an indicator that is equal to one if individual i is a covered employee according to Section 4960. To be a covered employee according to Section 4960, an employee belongs to the five most compensated employees and earns more than $1 million annually, or fulfilled these two criteria in any year since 2017. Since compensation paid for medical services is excluded from total compensation for Section 4960, I do not consider medical employees covered individuals.[6] The indicator variable $POST_t$ equals one if year t started on January 1, 2018 or later. The coefficient on interaction term $Treated_{it} \times POST_t$ captures the differential (change in) $Ln(Comp_{it})$ for treated individuals in the post-Section 4960 period. The hypothesis predicts a negative coefficient on this interaction term consistent with the excise tax limiting compensation (growth) for covered employees.

The set of control variables in equation 1 consists of individual-level and organization-level variables. To capture time-invariant individual characteristics and test for serial correlation of compensation, the model is auto-regressive and includes $Ln(Comp_{it-1})$ which is the natural logarithm of the total compensation of individual i in year t.[7] Next, it controls for $TotCompRank_{it}$, the relative rank of the individual in terms of total compensation within the organization-year, which proxies for their importance to the organization.

[6]More specifically, I consider a third criterion to be a covered employee: there should be no indication that the compensation includes compensation for medical services. To do so, $Treated_{it}$ is coded as zero if the official title of the individual includes any of the following: "m.d.", "md", "doctor", "physician", "pediatrician", "medical pro", "medical physicist", "surgeon", "oncologist", "cardiologist", "neurologist", "radiologist", "pathologist", "urologist", "nephrologist", "psychologist", "psychiatrist", "ophthalmologist", "anesthesiologist", "anesthetist", "neonatologist", "gynecologist", "obstetrician", "clinician", "internist", "practitioner", "endocrinologist", "dermatologist", "gastroenterologist", "dentist", "orthodontist", "allergist", "hematologist", "therapist", "anesthesiologist", "nurse", "physiatrist", "pharmacist", "chiropractor", "podiatrist", "optometrist", "radiographer", "paramedic", "dietitian", "audiologist".

[7]Including individual fixed effects instead of or in addition to lagged compensation, a different method to account for time-invariant individual characteristics, produces similar results in Table 4.

The organization-level control variables included in equation 1 follow prior literature that models nonprofit compensation (Balsam and Harris, 2018).[8] To proxy for organization size, the model includes $Ln(Assets_{jt})$ which is the natural logarithm of total assets of organization j. Larger organizations pay more compensation. The model controls for the organization's revenue mix by including $RevConcentr_{it}$, $Ln(Psr_{jt})$, $Ln(Contr_{jt})$, and $Ln(GovGrants_{jt})$. Organizations relying on donations and government grants pay lower compensation on average compared to organizations generating revenue from services provided. I also include $ProgramRatio_{jt}$, the ratio of program expenses to total expenses, a performance measure to control for administrative efficiency. To control for corporate governance quality the model includes $Ln(BoardSize_{jt})$, $PercIndep_{jt}$ and $GovIndex17_{jt}$, which are the natural logarithm of the number of directors, the percentage of independent directors, and the score on the 17-point governance measure discussed in Boland et al. (2020) respectively. Next, I add the six compensation setting methods from Schedule J as indicator control variables: $WrittenContract_{jt}$, $CompCommittee_{jt}$, $Approval_{jt}$, $CompConsult_{jt}$, $CompSurvey_{jt}$, and $Other990_{jt}$. Finally, the compensation model includes $ExcessCash_{jt-1}$ as excess endowments are found to exacerbate agency problems and increase officer pay (Core et al., 2006; Balsam et al., 2020). When modeling for the change in compensation as the dependent variable, all control variables are also in the change form except for $Compensation_{t-1}$.[9]

Model 1 includes year-fixed and organization-fixed effects to account for time-specific factors and organization-specific factors respectively. Taking into account the possibility that time-invariant individual characteristics may not be fully captured with

[8]The only differences with the compensation model of Balsam and Harris (2018) is that I also include $GovIndex17_{jt}$, a simple measure of nonprofit governance. I do not include net income and competition.

[9]inferences do not change but the R-squared drops significantly when controlling for the change in $Compensation_{t-1}$ instead of for the level of $Compensation_{t-1}$.

$Ln(Comp_{it-1})$, I also run the model with individual fixed effects instead of organization-fixed effects.[10]

3.4.2 Loan model specifications

Next, I test whether strategic alternatives to taxable compensation are more common among individuals and organizations subject to the tax after the effective date. I test whether treated individuals who have increases (decreases) in compensation are less (more) likely to receive a loan from the organization after the implementation of the excise tax. I expect that the loan likelihood ($Loan_{it}$) and change in loan value ($\Delta Ln(LoanValue_{it})$) are more inversely related to changes in compensation for treated individuals (i.e. loans provide a more likely alternative to compensation for these employees). I test for loan likelihood with logistic regression model (2) and for loan value with OLS regression model (3):

$$\begin{aligned} Loan_{it} &= \beta_1 Treated_{it} + \beta_2 POST_t + \beta_3 Treated_{it} \times POST_t + \beta_4 \Delta Ln(Comp_{it}) \\ &\quad + \beta_5 Treated_{it} \times \Delta Ln(Comp_{it}) + \beta_6 POST_{it} \times \Delta Ln(Comp_{it}) \\ &\quad + \beta_7 Treated_{it} \times POST_{it} \times \Delta Ln(Comp_{it}) + \sum_{l=1} \beta_l Control_l + FE + \varepsilon \end{aligned} \tag{2}$$

[10]Previous studies looking at nonprofit compensation typically include year and industry fixed effects only (Core et al., 2006; Newton, 2015; Balsam and Harris, 2018). However, recognizing that time-invariant organizational or individual factors may warrant higher or lower compensation I include those fixed effects instead of industry-fixed effects. The number of organizations changing industry is very small and including industry fixed effects in either model does not change inferences.

$$\begin{aligned}\Delta Ln(LoanValue_{it}) &= \beta_1 Treated_{it} + \beta_2 POST_t + \beta_3 Treated_{it} \times POST_t + \beta_4 \Delta Ln(Comp_{it}) \\ &+\beta_5 Treated_{it} \times \Delta Ln(Comp_{it}) + \beta_6 POST_{it} \times \Delta Ln(Comp_{it}) \\ &+\beta_7 Treated_{it} \times POST_{it} \times \Delta Ln(Comp_{it}) + \sum_{l=1} \beta_l Control_l + FE + \varepsilon \end{aligned} \tag{3}$$

where $Treated_{it}$ is again an indicator that is equal to one for individuals who are covered employees as explained above and $POST_t$ is again an indicator for the post-implementation period. To find out whether loans are used as a substitute or complement to compensation I include $\Delta Ln(Comp)_{it}$. To test whether the use of loans changes for covered employees after the tax I include the three-way interaction $Treated_{it} \times POST_t \times \Delta Ln(Comp_{it})$. I expect the three-way interaction coefficient to be negative, reflecting the expectation that loans act more as a substitute for compensation of covered employees after the effective date, which would be in line with the hypothesis of this study that nonprofit organizations engage in tax avoidance.

The control variables included in equation 2 and 3 are more difficult to determine and I rely on for-profit research on loans and other related party transactions. I control for $LnAssets_{jt}$ since larger firms are more likely to do related party transactions (Hope et al., 2019) and I control for $Ln(BoardSize_{jt})$, $PercIndep_{jt}$ and $GovIndex17_{jt}$ as corporate governance mechanisms affect both compensation and related party transactions (Gordon et al., 2004; Hope et al., 2019). Additionally, I include $CompConsult_{jt}$ as I expect organizations that employ compensation consultants to be more likely to make loans. In the changes model, the control variables are also in change form. Due to the fixed effect structure (see below) individual-level or organization-level time-invariant controls are unnecessary.

Given the zero-inflated nature of loan data, the sample for model 3 only includes employees that receive a loan in year t or *t-1*. Both model 2 and model 3 include year-fixed effects and organization-fixed effects. As unobserved individual characteristics may drive the likelihood and value of loans and compensation from the organization, I also run the model with individual fixed effects instead of organization-fixed effects. This tighter specification disregards any individual who always or never receives a loan or has no variation in $\Delta Ln(LoanValue_{it})$. This way model 2 captures the probability of individuals having a loan in year t, conditional on the individual having a loan at least once in the observation period.

3.4.3 Perks and outsourcing model specifications

In the next section, the unit of analysis is at the organization level. At the organization level, I test whether treated organizations, i.e. nonprofits with at least one treated individual, are more likely to provide perks for their employees after the effective date. This would align with organizations looking for alternative ways to compensate covered individuals under the new tax regime.

Similarly, also at the organizational level, I test whether treated organizations are more likely to outsource management services. I test whether organizations with at least one treated individual, are more likely to delegate management services to external parties ($Delegation_{jt}$). Model (4) tests for the treatment effect on the number of perks ($Perks_{jt}$)

provided by treated organizations and model (5) tests for the treatment effect on the likelihood of management delegation by treated organizations:

$$\begin{aligned}(\Delta)Perks_{jt} &= \beta_1 TreatedOrg_{it} + \beta_2 POST_t + \beta_3 TreatedOrg_{jt} \times POST_t \\ &\quad + \sum_{m=1} \beta_m Controls_m + FE + \varepsilon. \end{aligned} \tag{4}$$

$$\begin{aligned}(\Delta)Delegation_{jt} &= \beta_1 TreatedOrg_{jt} + \beta_2 POST_t + \beta_3 TreatedOrg_{jt} \times POST_t \\ &\quad + \sum_{m=1} \beta_m Controls_m + FE + \varepsilon. \end{aligned} \tag{5}$$

where $TreatedOrg_{jt}$ is an indicator variable which is one if organization j has at least one treated employee in year t and $POST_t$ is again an indicator for the post-implementation period. To test the hypothesis that nonprofits avoid taxes the interaction variable $TreatedOrg_{jt} \times POST_t$ captures the treatment effect on the number of perks and the likelihood of management delegation in treated organizations. I expect the coefficient of $TreatedOrg_{jt} \times POST_t$ to be positive in both models 4 and 5.

The control variables included in equation 4 are based on prior work on nonprofit executive perks Newton (2015); Balsam et al. (2020). I control for size with $LnAssets_{jt}$ as larger organizations are found to be more likely to use perks. I control for governance quality by including $Ln(BoardSize_{jt})$, $PercIndep_{jt}$ and $GovIndex17_{jt}$ and I once again include $CompConsult_{jt}$ as I expect organizations with larger boards, poorer governance, and organizations that employ compensation consultants to be more likely to pay perks. Consistent with both Balsam et al. (2020) and Newton (2015) I also control for

$ProgramRatio_{jt}$ and $Charitable$, which is equal to one minus the ratio of program service revenues to total revenues. Lastly, I also add $Delegation_{jt}$ as the strategies I investigate could serve as alternatives.

The control variables in equation 5 are more difficult to determine as no studies to date model nonprofit management outsourcing. Model 5 controls for the same organization level controls as the perks model, which also largely aligns with model 1, as I expect that the decision to outsource depends a lot on the type of nonprofit and the way the nonprofit is governed. Lastly, I also add $Perks_{jt}$ as the strategies I investigate could serve as alternatives. Both model 4 and model 5 include year-fixed effects and industry-fixed effects. Because of insufficient variation in the dependent variables within organizations for these models I refrain from using organization-fixed effects in these two models (e.g. 96.96% and 99.07% of observations have the same *Perks* and *Delegation* respectively in year t compared to year *t-1*). Therefore, I focus on between-organization variation in perks and delegation practices, which is in line with previous studies on perks (Newton, 2015; Balsam et al., 2020).

Throughout the paper, I adjust all standard errors for clustering at the organization-year level to account for cross-sectional dependence (Gow et al., 2010) and report two-sided p-values. Outliers are managed by winsorizing all continuous variables at the 1 percent and 99 percent thresholds before all multivariate analyses.

3.4.4 Data and sample

I use data from IRS Form 990 about tax years 2013-2019 published by electronic filers and made available by the IRS for public inspection via the AWS website.[11] Form 990 e-filers represent more than 90% of total expenses by the total population of Form 990 filers since 2014 (Ely et al., 2023). I restrict the sample to organizations that file both Form 990 and Schedule J on compensation.[12] In total, this database includes 1,659,430 records of Form 990 filings concerning tax years 2013 to 2019, which is the last available year at the time of writing. Data about compensated individuals on Schedule J (1,335,827 unique records) and loans to individuals on Schedule L (100,936 records) is extracted from the same data source. Lastly, I collect National Taxonomy of Exempt Entities (NTEE) categorization data from the NCCS business master file.

The initial sample of this study consists of 1,335,827 Schedule J records. I use this sample for the sector-level descriptives below. Organization data from Form 990 and loan data from Schedule L are matched to the individual-year observations of Schedule J. There are 100,936 total loans to interested persons recorded on Schedule L in the sample period. After textual cleaning of officer names, I was able to match 10,676 of these records as loans to 8,138 individual-year observations of 3,265 compensated individuals.[13] These

[11]The 'e-filer data' is published by the IRS in XML format. I collect it from the AWS data bucket https://s3.amazonaws.com/irs-form-990 which has since moved to https://registry.opendata.aws/irs990/. In mapping the raw XML data and constructing the datasets I gratefully acknowledge the open source code of the Nonprofit Open Data Collective on GitHub (https://github.com/Nonprofit-Open-Data-Collective), and Jesse Lecy of the National Center of Charitable Statistics in particular. I have relied on the 'concordance'-file between April 2023 and September 2023 to construct the initial datasets.

[12]Schedule J of Form 990 is required for tax-exempt organizations to provide detailed information about compensation over $150,000, certain non-taxable benefits, supplemental non-taxable benefits, and their compensation practices and policies for certain officers, directors, trustees, key employees, and highest compensated employees. Although the majority of my sample consists of Section 501(c)(3) tax-exempted charitable organizations, I do not exclude organizations tax-exempt via other parts of Section 501(c) or Section 4947(a)1 as these organizations are still subject to the Section 4960 excise tax.

[13]The loan data from Schedule L is at the loan level and includes loans from and to 'interested persons or organizations'. I only investigate loans to interested persons and thereby disregard loans to the company of an employee, for example, or loans from the individual to the organization.

include individuals who have multiple loan agreements at the same time and individuals who have loan agreements in multiple years.

To construct the sample for the individual-level analysis, I start from the initial sample and drop all observations with missing data for the individual-level analysis to get a final sample of 805,435 individual-year observations.

For the organization-level analysis, I start from the initial sample again and keep one observation per organization per year after collapsing organization-level data. After dropping observations with missing data for the organization-level analysis, this results in a sample of 331,008 unique organization-year observations.

3.4.5 Sector-level descriptive statistics

This section focuses on the impact of Section 4960 on the third sector as a whole and reports on the estimated aggregate tax burden on nonprofits and a preliminary assessment of general compliance. It provides some valuable background information needed to understand and interpret later analyses.

Tax burden

By calculating 21% of the total amount of compensation exceeding $ 1 million of all applicable individuals I find that the aggregate tax burden on the third sector constitutes an estimated $1.61 billion ($1.86 billion) in excise taxes on excess executive compensation in 2018 (2019). Table 1 provides an overview of the aggregate amounts of affected organizations and individuals, and the average tax burden per organization and individual.

[Insert Table 1 about here]

However, this estimate of aggregate tax burden might be understated as: (1) this only includes e-filer data and I have no data on, nor do I extrapolate for, paper filers, (2) I do not include the tax burden on parachute payments as I do not identify involuntary terminations, (3) I completely dismiss medical professionals if their title suggests so, although part of their compensation may be within the scope of the excise tax. On the other hand, the count may include medical professionals if their role does not suggest that they provide medical services. Irrespective, this conservative estimate of the impact of the tax rule highlights its significant impact on the nonprofit sector.

Compliance

The IRS reports having collected $125 million in excise taxes in calendar year 2019, the first year of collection.[14] Although this constitutes 89.8% of all taxes collected on Form 4720 filings in 2019, the IRS has reported concerns around compliance: "On-going review of filing data shows there continues to be a high volume of exempt organizations that paid compensation of over $1 million to at least one covered employee but did not report IRC Section 4960 excise tax on Form 4720, Return of Certain Excise Taxes Under Chapters 41 and 42 of the Internal Revenue Code."(Internal Revenue Service, 2023) I concur with this assessment, given my estimate above. The $125 million collected in 2019 is in stark contrast to the estimated $1.64 billion aggregate tax burden of tax year 2018. Also, the number of organizations that paid excise taxes (380) is far off from my estimated 4,261 tax-burdened organizations in 2018.

[Insert Table 2 about here]

The low level of compliance is also observed by the low percentage of applicable organizations that check the checkbox on Form 990 that asks whether the organization is

[14]The IRS reports aggregate data on "excise taxes reported by charities, private foundations, and split-interest trusts on form 4720" via their Statistics of Income (SOI) website: https://www.irs.gov/statistics/soi-tax-stats-charities-and-other-tax-exempt-organizations-statistics.

"[...]subject to the Section 4960 tax on payment(s) of more than $1,000,000 in remuneration or excess parachute payment(s) during the year?" (item 15 of Part V). In Table 2, I observe that 85% (81%) of sample ATEOs do not check the 4960-checkbox that the excise tax is applicable in 2018 (2019), even though I code them as having at least one covered individual (i.e. they are a $TreatedOrg$). I conclude many organizations are not compliant but do not know whether they are so due to unawareness or intent.[15] In the next part, I test my hypothesis that nonprofit organizations engage in tax planning.

3.5 Results

This section presents the empirical analysis to test the study hypothesis that 'nonprofits engage in tax planning to avoid paying the Section 4960 excise tax'. Section 3.5.1 first investigates the effect of the excise tax on total compensation. Then, I analyze whether loans to individuals become more likely and larger in size. Next, in 3.5.2, I investigate two additional tax avoidance strategies: perks and delegation. Due to the structure of the data, these two strategies are examined at the organizational level. The order of the three investigated strategies is not based on any particular rationale.

3.5.1 Individual-level analysis

Compensation

First I regress the compensation and change in compensation on the variables $Treated$, $POST$, and the interaction of $Treated$ and $POST$. This difference-in-difference method

[15] Treated organizations that are subject to the tax may not tick this box because (1) the organization is unaware of the existence of the tax, (2) the organization is aware but fails to comply, or (3) by mistake.

tests for the treatment effect on the treated around the effective date of the tax.[16] Variable descriptions are presented in Appendix A.

The results in Table 4 indicate that the compensation growth of covered employees slowed after the introduction of the excise tax. This replicates results in recent working papers by Balsam et al. (2023) and Feng et al. (2023). Although they use slightly different sample selection procedures and regression specifications, results and interpretations are similar.[17] These working papers conclude the tax is effective in reducing compensation in the sector. In my study, however, these results serve as the context for subsequent analyses since a slowdown in compensation growth for these employees is also consistent with tax avoidance. The question is whether the employee is indeed the one bearing the burden of the tax or whether organizations find different ways to compensate the employee. Since nonprofit boards are likely interested in retaining talented executives, below I analyze whether changes in compensation for covered employees correlate with other changes in the relationship with their employer.

[Insert Table 4 about here]

Loans

The next analysis tests whether loans are used as a way to avoid the tax and provide more covert (and possibly deferred) compensation to employees. First, before the multivariate analysis at the individual level, I compare the average total due amounts of loans to officers by treated organizations versus untreated organizations in Figure 1 panel a. Treated organizations are organizations with at least one treated employee. Around the

[16] In untabulated analyses I do not find any indication that the parallel trend assumption is violated for these regressions. i.e. For both $Ln(Comp)$ and $\Delta Ln(Comp)$ the average untreated and treated observations follow similar trends before the introduction of the excise tax.

[17] Specifically, my model differs in the choice of control variables. For example, Balsam et al. (2023) include fundraising expenses, relative equity, and operating margin, I follow previous literature (as described in section 3.4) and include more governance-related controls like $PercIndep$ and the 6 compensation setting methods.

introduction of the excise tax, I find that the value of loans to officers (pane 2) is steadily increasing for treated organizations, i.e. organizations that face the new tax. However, this does not seem significantly more than for untreated organizations. The average due amount of loans outstanding (pane 1) does increase faster for treated organizations. Also *within* treated organizations, loans to persons who are on Schedule J increase at a higher rate than loans to persons who are not (pane 3).

As mentioned compliance is low and the IRS believes many nonprofits are still unaware of the tax. That is why, in Figure 1 panel b I look at organizations that indicate that they pay the Section 4960 tax. These organizations can be expected to be aware of the tax. The difference in loans to officers is more profound for these organizations. Figure 1 panel b shows a differential increase in loans (pane 1), loans to persons (pane 2), and loans to officers (pane 3) of tax-paying organizations. I interpret this as model-free evidence that there is an indication that treated organizations, and especially organizations that comply with the Section 4960 tax, could be resorting to loans to compensate their employees after the effective date.

[Insert Figure 1 about here]

In testing the loan model, I opt for a two-step methodology given the zero-inflated nature of the final sample (99% of individuals are not receiving any loans). In the first regression, a logit regression, I regress $Loan$ (an indicator variable that is equal to one if the employee receives at least one loan) on the $Treated$, $POST$, and $\Delta Ln(Comp)$ variables and their interactions.[18] The coefficient of the three-way-interaction $Treated \times POST \times \Delta Ln(Comp)$ indicates the differential effect of the policy on the relationship between compensation changes and loans for treated individuals after the policy implementation.

[18]In untabulated analyses I do not find any indication that the parallel trend assumption is violated for this analysis. i.e. For both $Perks$ and $\Delta Perks$ the average untreated and treated observations follow similar trends before the introduction of the excise tax.

This three-way interaction model allows me to test whether the likelihood of receiving a loan from the organization becomes stronger related to a slowdown in compensation (i.e. whether loans and compensation act more as substitutes) for treated individuals.

See Table 5. Columns (1) and (2) present the results of the model without controls and the model with controls and year and industry fixed effects. The model with the year and industry fixed effects has a pseudo R-squared of 0.091 which closely resembles that of the literature of related party transactions (Kahle and Shastri, 2004; Hope et al., 2019). I find no evidence in columns (1) and (2) that loans are negatively related to changes in compensation for treated individuals since 2018.

When including individual fixed effects to account for unobserved individual characteristics in column (3) of Table 5 I find that changes in compensation and the likelihood of getting a loan are negatively related for treated employees after the effective date of the excise tax.[19] Specifically, the coefficient for $Treated \times POST \times \Delta Ln(Comp)$ is -1.276. This implies that for treated individuals after the implementation of the tax, the relationship between changes in compensation and the likelihood of receiving a loan is significantly more negative. This means that compensation and loans act as substitutes for treated employees in the post period, consistent with Hypothesis 1.

In columns (4) through (6), also in Table 5, the change in the value of the loan to the covered employee is negatively related to the change in compensation after the introduction of the excise tax. The sample reduces to 6,706 individuals as the test is conditional on that the employee receives a loan in year *t* or *t-1*. In the fixed effect models in columns (5) and (6), the change in loan values is negatively related to the change in compensation for treated individuals after the effective date. The statistically significant coefficient for $Treated \times POST \times \Delta Ln(Comp)$ is -3.550, indicating that for treated individuals, after

[19]Note that the sample size decreases significantly due to the tight fixed effect structure in column (3) as individuals without variation in the *Loan* and *POST* variables are not included in the analysis anymore.

the policy implementation, a decrease in compensation is associated with an increase in the value of loans received. This again shows that loans are used as an alternative to compensation for treated individuals under the new tax regime.

[Insert Table 5 about here]

Robustness: Alternative definition of control groups

As treated and untreated individuals may not be similar in many respects, I next use an alternative sample of individuals that all have a total compensation between $500,000 and $1,500,000. The treatment variable is defined as before. Although the sample size reduces, Table 6 presents results that are similar to the results in Table 4 on compensation. As expected, compensation and compensation growth are smaller for covered employees who earn just above the $1 million threshold. With respect to loans, the robustness test in Table 6 finds an insignificant result on the relationship between $Treated \times POST \times \Delta Ln(Comp)$ and the likelihood of issuing a loan. It does find a significant relationship between $Treated \times POST \times \Delta Ln(Comp)$ and the value of loans. This means that around the $1 million mark, there is no evidence that loans are immediately issued, but employees who have loans see the value of those loans increase if their compensation does not.

[Insert Table 6 about here]

3.5.2 Organization-level analysis

In this section, I move the analysis to the organization level to test how organizations with at least one covered individual ($TreatedOrg$) act differently from non-treated or-

ganizations.[20] Table 2 displays the summary statistics of treated organizations versus non-treated organizations in tax year 2018, the first year after the introduction. Unsurprisingly, treated organizations are larger organizations with more employees and better governance. The average treated organization in 2018 has 2.03 covered individuals (i.e. employees with $Treated$ equal to 1) and owes $382,708 in estimated excise taxes. Compared to non-treated organizations, treated organizations provide more perks and loans to officers on average and are more likely to delegate management services.

Perks

To test whether treated organizations provide more perks, I regress the number of perks ($Perks$) and the change in the number of perks ($\Delta Perks$) on $TreatedOrg$, $POST$ and $TreatedOrg \times POST$.[21] Given that $Perks$ is a count variable, I use a poisson regression and an OLS regression for $Perks$ and $\Delta Perks$ respectively.[22] In line with the hypothesis, results in table 7 indicate that treated organizations provide more perks to their employees and a larger increase in perks after the introduction of the excise tax.

[Insert Table 7 about here]

Management Services

On Form 990, Part VI, question 3 states: *"Did the organization delegate control over management duties customarily performed by or under the direct supervision of officers,*

[20] As mentioned, compliance is low and it might be that a large share of organizations is not aware of the tax in the first two years after the introduction. To allow for this possibility, untabulated analyses confirm that the organization-level results in Table 7 and Table 8 are robust to replacing $TreatedOrg$ with an indicator $Checkbox2018$ (to capture "aware" organizations that checked the $Checkbox4960$ in 2018).

[21] In untabulated analyses I do not find any indication that the parallel trend assumption is violated for this analysis. For both $Perks$ and $\Delta Perks$ the averages for untreated and treated observations follow similar trends before the introduction of the excise tax.

[22] Using a linear OLS regression produces similar results as those in Table 7 columns (1) and (2) but would be inappropriate due to the nature of the dependent variable. The Poisson regression handles the count data structure of $Perks$ more effectively by modeling the probability of occurrence of events (number of perks) as a function of explanatory variables.

directors, or trustees, or key employees to a management company or other person?". To test whether treated organizations are more likely to delegate management ($Delegation$) or are more likely to change from no delegation to delegation ($\Delta Delegation$), I regress both on $TreatedOrg$, $POST$ and $TreatedOrg \times POST$.[23] Conform expectations, results in Table 8 indicate that treated organizations are more likely to delegate management services or introduce management delegation after the introduction of the excise tax.

All in all, I conclude that tax-avoiding strategies have become more popular among tax-burdened organizations after the effective date of the tax. I interpret this as evidence of tax avoidance among nonprofit organizations.

[Insert Table 8 about here]

3.5.3 Additional analysis: Cross-Sectional Heterogeneity

Given the heterogeneity of the sector, Table 9 provides further insights by splitting the sample based on various organizational characteristics. This allows examination of how tax avoidance strategies might differ across distinct subsamples. Specifically, I split the sample based on organizational categorizations (charitable vs. service-oriented, hospital vs. non-hospital[24], high vs. low nonprofit competition), governance factors (high vs. low governance index, audit vs. no audit, compensation consultant vs. no compensation consultant), and on $Checkbox4960$.

The interaction terms of interest and their statistical significance differ noticeably across the cross-sections. Particularly, in Panel A, less charitable organizations, and better-governed organizations are more likely to consider loans as an alternative to compensation

[23] In untabulated analyses I do not find any indication that the parallel trend assumption is violated for this analysis. For both $Delegation$ and $\Delta Delegation$ the averages for untreated and treated observations follow similar trends before the introduction of the excise tax.

[24] Inferences are the same when subsampling the "Health" industry instead of the hospitals.

post-treatment. This suggests this strategy might be more common in more professionalized organizations. Furthermore, loans are found to be used as a substitute for compensation by organizations that do not tick *Checkbox*4960 in 2018. This finding is at odds with the "unawareness"-explanation of low compliance with the excise tax and suggests that at least part of the non-compliant organizations may actually be aware of the excise tax.

On the other hand, charitable organizations, organizations with weaker governance, and organizations with low competition are more likely to consider perks as an alternative to compensation. This is consistent with the idea that perks, which encompass a variety of benefits, are a more flexible and accessible method of compensation restructuring.

Tax avoidance via management delegation is found in the non-hospital, good-governance, and high-competition subsamples. Also, treated organizations with compensation consultants are found to become more likely to use management delegation. This implies that more professionalized organizations are more likely to go for this option.

Audited organizations are found to engage in all tax avoidance methods examined, suggesting that the presence of auditors does not act as a deterrent to tax avoidance.

These results underline the importance of considering cross-sectional heterogeneity when studying the nonprofit sector. Specifically, organizations' characteristics such as revenue sources, competition, and governance can materially impact how boards respond to regulatory changes aimed at curbing excessive compensation. While tax avoidance is detected in every subsample of Table 9, the preferred methods to do so differ across the sample.

3.6 Discussion

Although paying taxes can be considered pro-social organizational behavior and nonprofits are operated for a pro-social purpose, I expect and find that nonprofits avoid excise taxes on executive compensation. This aligns with boards deciding that the benefits of preserving mission funds and retaining executive talent outweigh the possible costs of tax avoidance. My results contribute to the literature on nonprofit taxation, which has received limited attention until now (Yetman, 2023).

The results of this study also highlight some unintended consequences of the excise tax on executive compensation. Although compensation amounts reported on Schedule J indeed show a slowdown of compensation growth for covered employees earning more than $1 million, I document that loans to these employees, although uncommon, may be used as a substitute. Affected organizations are also more likely to provide perks or outsource management services to avoid the tax. These alternative compensation methods are more covert and less salient to the readers of Form 990, and other stakeholders. For example, the value of these loans, their conditions, and how much will be forgiven are not clear. The unintended consequences of taxing compensation may therefore include less transparent and less comparable executive compensation in the nonprofit sector. This could be harmful to the sector as a whole, given that transparency and comparability can affect public trust. At the same time, public trust in nonprofit governance is a crucial factor in efficient and effective fundraising. Negative publicity and scandals can damage nonprofit financial (see Chapman et al., 2023) and non-financial outcomes (e.g. Maas and De Waegenaere, 2022). This empirical study thus adds nuance to the discussion of the effectiveness of the Section 4960 excise tax. Although a slow in compensation growth among nonprofits seems like the law achieved its intended consequences, it also aligns with tax avoidance behavior which can have unintended side effects.

One of the limitations of this study is that loans, perks, and delegation are rather uncommon, and therefore the final samples exploit variation among and within a small subset of the nonprofit sector. Results may not generalize to the entire nonprofit sector or outside the United States. For many organizations, these alternative compensation methods may not be an option.

The fact that this is the first study looking at nonprofit loans and the delegation of management also means that I am the first to employ the empirical model specifications for these outcome variables. Due to the novel nature of these models, sensitivity to alternative modeling choices has been provided as much as possible.

Another limitation is the use of regular expressions and rules-based text cleaning to clean employee names on Schedule J and Schedule L. Although careful in my approach, such 'fuzzy matching' may lead to matching fewer individuals and underestimating the number of loans to Schedule J employees. The second limitation is that assessing whether or not an employee is a covered employee includes identifying medical professionals. As mentioned earlier, over- or under-identifying medical professionals may lead to over- or under-estimating the tax burden related to those employees. Finally, in using the e-filer dataset I am restricted to data up until and including tax year 2019 at the moment of writing, which means I have access to data of only two tax years after the introduction of the tax. The investigation into long-term effects is an opportunity for future research.

Another avenue for future research is the general role, function, and desirability of related party transactions like loans in the nonprofit sector. We know little about this potential governance problem. Also, the delegation of management services is something that lacks academic attention. Why nonprofits would delegate management services and the potential effects of this choice provide interesting future research questions.

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Appendix A: Variable Definitions

Variable Name	Description
POST	Tax year started on 1 Jan 2018 or later. (indicator)
	Individual level
Treated	Covered employee according to Section 4960: employees with compensation over $1 million or that were covered in the past three years, excluding employees that provide medical services. (imputed)
Ln(Comp)	Natural log of total compensation of individual. (SchJ)
Δ Ln(Comp)	Ln(Comp) in year *t* minus Ln(Comp) in year *t-1*.
Loan	The individual has at least one loan outstanding to the individual. (indicator)(SchL)
Ln(LoanValue)	Natural log of due amount of loans outstanding to individual *i*. (SchL)
Δ Ln(LoanValue)	Ln(LoanValue) in year *t* minus Ln(LoanValue) in year *t-1*.
TotCompRank	Individual rank based on total compensation on organization's SchJ. (SchJ)
	Organization level
TreatedOrg	Organization has at least one covered employee in year *t*. (indicator)
NrCoveredIndiv	Number of covered employees in year *t*.
Checkbox4960	The organization indicates that it is subject to the excise tax. (indicator)(F990, Part V-Q15)
TotTaxBurden	Total estimated tax burden for the organization in the given year.
NrLoans	The total number of loans to individuals. (SchL)
Perks	Number of perks provided to Sch J persons in year *t*. Discrete variable ranging from 0-8. (SchJ)
Δ Perks	Change in the number of perks compared to year t-1.
Delegation	The organization delegates management services to an external party. (F990)
ΔDelegation	The organization delegates management services but did not do so in t-1.
Ln(Assets)	Natural log of total assets at the end of the year. (F990)
Ln(Empls)	Natural log of total employees. (F990)
RevConcentr	Sum of squared fractions of the four nonprofit revenue streams. (F990)
Ln(Psr)	Natural log of the total value of program service revenues. (F990)
Ln(Contr)	Natural log of the total value of contributions received. (F990)
Ln(GovGrants)	Natural log of the total value of government grants received. (F990)
ProgramRatio	Ratio of program expenses to total expenses. (F990)
GovIndex17	Government index score on 17 indicators. (F990)
Ln(BoardSize)	Natural log of the number of voting members on the board. (F990)
PercIndep	Percentage of the board that is an independent director. (F990)
CompConsult	Compensation consultants used by org. (indicator)(SchJ)
Ln(ExcessCash)	Natural log of total cash plus savings and liquid investments – restricted net assets. (F990)
WrittenContract	The organization has a written employment contract for the CEO. (indicator)(SchJ)
CompCommittee	The organization uses a compensation committee to set CEO compensation. (indicator)(SchJ)
Approval	The organization requires board approval for CEO compensation. (indicator)(SchJ)
CompConsult	The organization uses a compensation consultant to set CEO compensation. (indicator)(SchJ)
CompSurvey	The organization uses a compensation survey or study to set CEO compensation. (indicator)(SchJ)
Other990	The organization uses Form 990 of other org to set CEO compensation. (indicator)(SchJ)
Charitable	A variable that captures the charitable orientation. Measured as $1-(Psr/TotRev)$. (F990)
Hospital	The organization operates one or more hospitals. (indicator)(F990)
Competition	The number of nonprofits in the same industry, size quartile, and metropolitan area. (F990)(Census)
Audit	The financial statements were audited by an independent auditor. (F990)
Checkbox2018	The organization indicates in 2018 that it is subject to the excise tax. (indicator)(F990)

Table 1 Sector-Level Analysis

(a) Panel a: Tax year 2018

NTEE-5 Industry	Total Nr Orgs	Total Burdened Orgs	Total Burdened Indiv	Avg Tax/Org	Avg Tax/Indiv	Total tax burden
Arts	2,439	60	73	$214,838	$176,579	$12,890,280
Education	7,495	292	488	$355,237	$213,662	$103,729,204
Health	9,587	2,807	5,973	$422,090	$200,153	$1,184,809,156
Human	16,741	457	679	$314,878	$211,928	$143,899,383
Other	13,728	628	937	$267,669	$179,398	$168,096,446
Unknown	319	17	25	$207,151	$140,863	$3,521,582
Total	50,309	4,261	8,175	$379,475	$199,166	$1,616,946,176

(b) Panel b: Tax year 2019

NTEE-5 Industry	Total Nr Orgs	Total Burdened Orgs	Total Burdened Indiv	Avg Tax/Org	Avg Tax/Indiv	Total tax burden
Arts	2,599	72	86	$163,136	$136,579	$11,745,792
Education	7,946	315	524	$356,857	$214,716	$112,410,081
Health	9,843	2,948	6,607	$472,396	$211,116	$1,392,622,818
Human Services	17,831	465	761	$329,254	$201,187	$153,103,157
Other	14,697	675	1,038	$271,238	$176,436	$183,085,920
Unknown	372	30	51	$253,539	$149,141	$7,606,167
Total	53,288	4,505	9,067	$413,002	$205,465	$1,860,574,080

This table reports estimates of the 2018 and 2019 aggregate tax burden of Section 4960 excise tax and disaggregation by NTEE industry. Burdened organizations are organizations that have at least one burdened individual, who is a covered employee with total remuneration over $1 million. Due to the carry-over rule of 'covered employee' status from previous tax years, non-burdened organizations may have covered employees who do not earn over $1 million in the current tax year.

Table 2 Individual-Level Univariate Statistics (full sample)

	Treated =0 (n=769,009)	*Treated* =1 (n=36,426)		
	mean	mean	t	p
Comp	$330,639	$1,532,967	-487.91	0.000***
ΔLn(Comp)	0.04	0.13	-35.57	0.000***
TotCompRank	5.30	2.12	234.02	0.000***
Loan	0.01	0.01	-8.42	0.000***
NrLoans[a]	1.33	1.35	-0.38	0.703
Ln(LoanValue)[a]	11.42	13.36	-14.92	0.000***
ΔLn(LoanValue)[a]	1.83	2.31	-1.72	0.085*

*This table presents summary statistics of treated versus non-treated individuals. Treated individuals are employees covered by the tax if the tax was in effect in the respective year. Due to the carry-over rule of 'covered employee' status from previous tax years, this can include employees who do not earn over $1 million in the current tax year. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$, [a] The statistics of these three variables pertain to 5,545 (416) treated (untreated) observations with at least one loan.*

Table 3 Organization-Level Univariate Statistics for (2018 only)

	TreatedOrg=0 (n=40,881)	*TreatedOrg*=1 (n=3,861)		
	mean	mean	t	p
NrCoveredIndiv	0.01	2.03	-85.56	0.000***
Checkbox4960	0.00	0.15	-25.50	0.000***
TotalTaxBurden	0.00	384,179	-32.95	0.000***
NrLoans	0.05	0.15	-4.01	0.000***
Perks	0.15	0.51	-21.78	0.000***
ΔPerks	-0.00	0.01	-1.75	0.079*
Delegation	0.09	0.10	-3.10	0.002***
ΔDelegation	0.01	0.01	-4.04	0.000***
Ln(Assets)	15.75	17.40	-31.50	0.000***
RevConcentr	0.77	0.85	-24.13	0.000***
Ln(Psr)	12.03	14.42	-21.15	0.000***
Ln(Contr)	8.92	8.59	2.75	0.006***
Ln(GovtGrant)	4.25	3.68	5.46	0.000***
ProgramRatio	0.67	0.75	-14.75	0.000***
Ln(BoardSize)	2.54	2.55	-1.29	0.196
PercIndep	86.95	66.79	36.66	0.000***
GovIndex17	13.73	14.13	-11.74	0.000***
CompConsult	0.12	0.38	-32.04	0.000***

*This table presents summary statistics of treated versus non-treated organizations in 2018. Treated organizations are organizations that have at least one treated individual. Due to the carry-over rule of 'covered employee' status from previous tax years, non-treated organizations may have covered employees who do not earn over $1 million in the current tax year. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$*

Table 4 Individual-Level Analysis: Compensation

	Ln(Comp) (1)	Ln(Comp) (2)	Ln(Comp) (3)	ΔLn(Comp) (4)	ΔLn(Comp) (5)	ΔLn(Comp) (6)
Treated	1.673***	0.307***	0.492***	0.116***	0.256***	0.397***
	(0.004)	(0.004)	(0.007)	(0.002)	(0.003)	(0.005)
POST	-0.002	0.005***	0.106***	0.003***	0.005***	0.085***
	(0.002)	(0.001)	(0.002)	(0.000)	(0.001)	(0.002)
Treated × POST	-0.116***	-0.131***	-0.170***	-0.104***	-0.108***	-0.132***
	(0.004)	(0.004)	(0.005)	(0.004)	(0.004)	(0.004)
$\ln(\text{Comp}_{t-1})$		0.848***	0.188***		-0.124***	-0.687***
		(0.002)	(0.005)		(0.001)	(0.005)
Ln(Assets) or ΔLn(Assets)		0.004***	0.007***		0.007***	0.002*
		(0.001)	(0.001)		(0.001)	(0.001)
RevConcentr or ΔRevConcentr		0.002	0.006		0.001	-0.001
		(0.004)	(0.004)		(0.003)	(0.003)
Ln(Psr) or ΔLn(Psr)		0.000	0.001***		0.001**	0.001
		(0.000)	(0.000)		(0.001)	(0.001)
Ln(Contr) or ΔLn(Contr)		0.000	0.000		0.000	0.000
		(0.000)	(0.000)		(0.000)	(0.000)
Ln(GovGrant) or ΔLn(GovGrant)		0.000*	-0.000*		0.000*	-0.000
		(0.000)	(0.000)		(0.000)	(0.000)
ProgramRatio or ΔProgramRatio		-0.015***	-0.015***		-0.013**	-0.008
		(0.004)	(0.004)		(0.006)	(0.005)
Ln(BoardSize) or ΔLn(BoardSize)		0.003	0.014***		-0.001	0.002
		(0.003)	(0.003)		(0.003)	(0.002)
PercIndep or ΔPercIndep		-0.000**	-0.000***		-0.000**	-0.000
		(0.000)	(0.000)		(0.000)	(0.000)
GovIndex17 or ΔGovIndex17		-0.000	0.001*		-0.000	0.000
		(0.000)	(0.000)		(0.001)	(0.001)
Ln(ExcessCash) or ΔLn(ExcessCash)		0.000***	-0.000*		0.000	-0.000
		(0.000)	(0.000)		(0.000)	(0.000)
WrittenContract or ΔWrittenContract		0.000	0.001		-0.003*	-0.003*
		(0.002)	(0.002)		(0.002)	(0.001)
CompCommittee or ΔCompCommittee		0.003	0.008***		0.001	0.003
		(0.002)	(0.002)		(0.002)	(0.002)
Approval or ΔApproval		-0.001	0.000		0.004**	0.004**
		(0.002)	(0.002)		(0.002)	(0.002)
CompConsult or ΔCompConsult		-0.002	0.005*		-0.003*	-0.006***
		(0.002)	(0.003)		(0.002)	(0.002)
CompSurvey or ΔCompSurvey		-0.001	0.001		-0.001	-0.001
		(0.002)	(0.003)		(0.002)	(0.002)
Other990 or ΔOther990		0.002	0.002		-0.002	-0.002
		(0.002)	(0.003)		(0.002)	(0.002)
Constant	12.566***	1.871***	10.042***	0.036***	1.600***	8.653***
	(0.003)	(0.031)	(0.071)	(0.000)	(0.016)	(0.057)
Fixed Effects	no	year&org	year&indiv	no	year&org	year&indiv
Clustered SE by Org	YES	YES	YES	YES	YES	YES
N	805,435	799,336	717,635	805,435	799,336	717,635
Adj R-squared	0.317	0.898	0.936	0.011	0.071	0.325
R-squared	0.317	0.904	0.953	0.011	0.131	0.507
F-value	61406	30724	1369	951	487	1856

This table presents the results of a difference-in-difference ordinary least squares regression analysis of the treatment effect on

the treated. The unit of analysis is at the level of the compensated individual. The outcome variables are the natural log of total compensation and the change therein. Treated indicates that an individual is a covered individual under Section 4960 and has a total compensation over $1 million. POST is an indicator variable equal to one for years after the effective date of the tax. Organization-clustered robust standard errors are in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 5 Individual-Level Analysis: Loans to Officers

	Loan (1)	Loan (2)	Loan (3)	ΔLoanValue (4)	ΔLoanValue (5)	ΔLoanValue (6)
Treated	0.425***	0.768***	0.488	0.476	-1.107*	0.178
	(0.159)	(0.215)	(0.303)	(0.612)	(0.633)	(0.783)
POST	-0.046	-0.144	-0.043	0.200	-4.488***	-8.261***
	(0.043)	(0.095)	(0.195)	(0.215)	(0.479)	(0.496)
Treated×POST	0.205	0.331*	-0.240	-0.476	0.394	-0.369
	(0.129)	(0.186)	(0.379)	(0.850)	(0.824)	(0.723)
ΔLn(Comp)	0.845***	0.603***	0.271	3.038***	2.895***	1.489*
	(0.157)	(0.134)	(0.229)	(0.631)	(0.710)	(0.799)
Treated×ΔLn(Comp)	-0.207	-0.473	0.152	0.103	1.348	2.268
	(0.339)	(0.334)	(0.431)	(1.680)	(1.621)	(1.550)
POST×ΔLn(Comp)	0.090	0.024	1.235***	0.076	-0.589	-0.379
	(0.241)	(0.216)	(0.411)	(1.087)	(1.092)	(1.201)
Treated×POST×ΔLn(Comp)	-0.395	-0.140	-1.429*	-2.165	-2.490	-3.810*
	(0.498)	(0.484)	(0.817)	(2.343)	(2.155)	(2.057)
Ln(Assets) or ΔLn(Assets)		0.060	0.022		1.103	0.503
		(0.144)	(0.148)		(0.677)	(0.685)
Ln(BoardSize) or ΔLn(BoardSize)		- 0.131	0.294		-0.772	-1.030
		(0.241)	(0.368)		(1.171)	(1.188)
PercIndep or ΔPercIndep		-0.009**	-0.012**		-0.030	-0.008
		(0.004)	(0.006)		(0.022)	(0.021)
GovIndex17 or ΔGovIndex17		-0.023	0.030		0.088	0.059
		(0.047)	(0.079)		(0.222)	(0.216)
CompConsult or ΔCompConsult		0.179	0.316		-1.379***	-1.578***
		(0.164)	(0.334)		(0.498)	(0.523)
Constant	-5.030***			-0.356***	2.051***	4.361***
	(0.053)			(0.124)	(0.319)	(0.323)
Fixed Effects	no	year&org	year&indiv	no	year&org	year&indiv
Clustered SE by Org	YES	YES	YES	YES	YES	YES
N	805,435	36,943	5,369	6,706	6,371	5,842
Adj R-squared				0.010	0.144	0.090
Pseudo R-squared	0.002	0.010	0.015			
F-value				8.6	13.0	23.6
Reg type	logit	logit	logit	OLS	OLS	OLS

This table presents the results of a three-way difference-in-difference logit and ordinary least-squares analyses of the treatment effect on the relationship between compensation and loans to the treated individual. The unit of analysis is at the level of the compensated individual. The outcome variable Loan is an indicator variable that is one if the individual has a positive due amount of a loan from the organization. Treated indicates that an individual is a covered individual under Section 4960 and has a total compensation over $1 million. POST is an indicator variable equal to one for years after the effective date of the tax. Organization-clustered robust standard errors are in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 6 Individual-Level Robustness: Compensation and Loans (Alternative sample)

	Subsample of Individuals with *Comp* between $500,000 and $1,500,000			
	Compensation		Loans	
	Ln(Comp) (1)	ΔLn(Comp) (2)	Loan (3)	ΔLn(LoanValue) (4)
Treated	0.294***	0.275***	0.479	0.547
	(0.004)	(0.004)	(0.402)	(1.003)
POST	0.148***	0.116***	-0.887*	-9.183***
	(0.003)	(0.003)	(0.487)	(1.115)
Treated×POST	-0.110***	-0.101***	-0.255	-0.543
	(0.004)	(0.004)	(0.459)	(1.139)
ΔLn(Comp)			-0.283	1.618
			(0.482)	(1.478)
Treated×ΔLn(Comp)			1.056	2.713
			(0.886)	(2.354)
POST×ΔLn(Comp)			2.140*	1.650
			(1.192)	(2.688)
Treated×POST×ΔLn(Comp)			-2.835*	-6.651*
			(1.573)	(3.408)
Control Variables	YES	YES	YES	YES
Fixed Effects	year&indiv	year&indiv	year&indiv	year&indiv
Clustered SE by Org	YES	YES	YES	YES
N	112,915	112,915	1,056	1,327
Adj R-squared	0.830	0.633		0.111
Pseudo R-squared			0.037	
F-value	624.0	1261.6		7.2
Reg type	OLS	OLS	logit	OLS

This table presents the results of a robustness test to the tests in Table 4 and 5, columns 3 and 6. The analysis is run for a subsample of individuals with compensation between $500,000 and $1,500,000. The unit of analysis is at the level of the compensated individual. The outcome variable Loan is an indicator variable that is one if the individual has a positive due amount of a loan from the organization. Treated indicates that an individual is a covered individual under Section 4960 and has a total compensation over $1 million. POST is an indicator variable equal to one for years after the effective date of the tax. Organization-clustered robust standard errors are in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 7 Organization-Level Analysis: Number of Types of Perks to Officers

	Perks (1)	Perks (2)	ΔPerks (3)	ΔPerks (4)
TreatedOrg	0.336***	0.261***	-0.007**	-0.005*
	(0.020)	(0.020)	(0.003)	(0.003)
POST	-0.065***	-0.121***	-0.001	0.001
	(0.007)	(0.011)	(0.001)	(0.002)
TreatedOrg×POST	0.029**	0.038**	0.014***	0.013**
	(0.015)	(0.015)	(0.005)	(0.005)
Delegation or ΔDelegation		-0.147***		0.006
		(0.044)		(0.006)
Ln(Assets) or ΔLn(Assets)		0.203***		0.002
		(0.015)		(0.001)
Ln(BoardSize) or ΔLn(BoardSize)		0.329***		-0.002
		(0.023)		(0.004)
PercIndep or ΔPercIndep		-0.004***		-0.000***
		(0.000)		(0.000)
GovIndex17 or ΔGovIndex17		0.047***		0.003***
		(0.007)		(0.001)
ProgramRatio or ΔProgramRatio		-0.411***		-0.002
		(0.036)		(0.006)
CompConsult or ΔCompConsult		0.312***		0.029***
		(0.022)		(0.006)
Charitable or ΔCharitable		-0.274***		-0.000
		(0.043)		(0.000)
Constant	-1.840***	-6.205***	-0.001	-0.003**
	(0.014)	(0.231)	(0.000)	(0.001)
Fixed Effects	no	year&industry	no	year&industry
Clustered SE by Org	YES	YES	YES	YES
N	248,060	248,060	248,060	248,060
Adj R-squared			0.0002	0.001
Pseudo R-squared	0.002	0.023		
F-value			2.468	3.630
Reg type	Poisson	Poisson	OLS	OLS

*This table presents the results of difference-in-difference Poisson and ordinary least squares regression analyses of the treatment effect on the treated. The unit of analysis is at the level of the organization. The outcome variable Perks is a discrete variable that can take integer values that range from 0 to 8. TreatedOrg indicates that an organization has at least one treated individual. POST is an indicator variable equal to one for years after the effective date of the tax. Organization-clustered robust standard errors are in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$*

Table 8 Organization-Level Analysis: Likelihood of Management Delegation

	Delegation (1)	Delegation (2)	ΔDelegation (3)	ΔDelegation (4)
TreatedOrg	0.055	0.181***	0.464***	0.020
	(0.053)	(0.061)	(0.101)	(0.111)
POST	-0.040***	-0.076***	-0.120*	-0.212**
	(0.011)	(0.018)	(0.063)	(0.104)
TreatedOrg×POST	0.232***	0.240***	0.413***	0.688***
	(0.043)	(0.045)	(0.147)	(0.157)
Perks or ΔPerks		-0.258***		0.008
		(0.042)		(0.145)
Ln(Assets) or ΔLn(Assets)		0.017**		0.308***
		(0.007)		(0.077)
Ln(BoardSize) or ΔLn(BoardSize)		-0.333***		-0.577**
		(0.027)		(0.261)
PercIndep or ΔPercIndep		0.003***		0.020***
		(0.001)		(0.005)
GovIndex17 or ΔGovIndex17		-0.192***		-1.877***
		(0.005)		(0.029)
ProgramRatio or ΔProgramRatio		1.427***		-0.601
		(0.055)		(0.435)
CompConsult or ΔCompConsult		-0.105**		0.816***
		(0.048)		(0.189)
Charitable or ΔCharitable		-0.513***		0.009
		(0.095)		(0.009)
Constant	-2.317***	-0.842***	-5.253***	-6.311***
	(0.017)	(0.161)	(0.037)	(0.184)
Fixed Effects	no	year&industry	no	year&industry
Clustered SE by Org	YES	YES	YES	YES
N	248,060	248,060	248,060	248,060
Pseudo R-squared	0.000	0.104	0.004	0.192
Reg type	logit	logit	logit	logit

This table presents the results of difference-in-difference logistic regression analyses of the treatment effect on the treated. The unit of analysis is at the level of the organization. The outcome variable Delegation is an indicator variable that is one if the organization delegates management services to an external party. TreatedOrg indicates that an organization has at least one treated individual. POST is an indicator variable equal to one for years after the effective date of the tax. Organization-clustered robust standard errors are in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 9 Additional Analysis: Cross-Sectional Heterogeneity in Tax Avoidance

Panel A: Loan

Subsample	Charitable		Hospital		GovIndex17		Competition		Audit		CompConsult		Checkbox2018	
	High	Low	Yes	No	High	Low	High	Low	Yes	No	Yes	No	Yes	No
Treated×POST	-1.351	-2.226**	-1.732	-1.103	-1.757*	0.371	-2.081	-1.575	-1.565*	-	-0.351	-1.973	-0.750	-2.074**
×ΔLn(Comp)	(1.569)	(1.032)	(2.031)	(0.936)	(0.993)	(2.321)	(1.304)	(1.002)	(0.844)	-	(1.079)	(1.500)	(2.015)	(0.357)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-	Yes	Yes	Yes	Yes
Year & Indiv FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-	Yes	Yes	Yes	Yes
Clustered SE by Org	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-	Yes	Yes	Yes	Yes
N	1,496	3,585	644	4,716	3,219	1,723	2,439	2,530	4,777	410	2,093	3,013	618	4,573
(Ps.) R-squared	0.052	0.019	0.085	0.016	0.021	0.024	0.022	0.023	0.016	-	0.033	0.016	0.084	0.019

Panel B: Perks

Subsample	Charitable		Hospital		GovIndex17		Competition		Audit		CompConsult		Checkbox2018	
	High	Low	Yes	No	High	Low	High	Low	Yes	No	Yes	No	Yes	No
TreatedOrg×POST	0.109***	0.012	0.173**	0.041**	0.023	0.071**	-0.003	0.086***	0.042***	-0.100	0.040*	0.069***	-	-
	(0.028)	(0.019)	(0.076)	(0.017)	(0.017)	(0.033)	(0.021)	(0.022)	(0.016)	(0.094)	(0.021)	(0.025)	-	-
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-	-
Year & Industry FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-	-
Clustered SE by Org	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-	-
N	124,030	124,030	11,358	236,702	123,510	124,550	101,415	146,645	222,093	25,967	38,644	209,416	-	-
(Ps.) R-squared	0.026	0.033	0.019	0.023	0.028	0.022	0.035	0.025	0.028	0.014	0.027	0.020	-	-

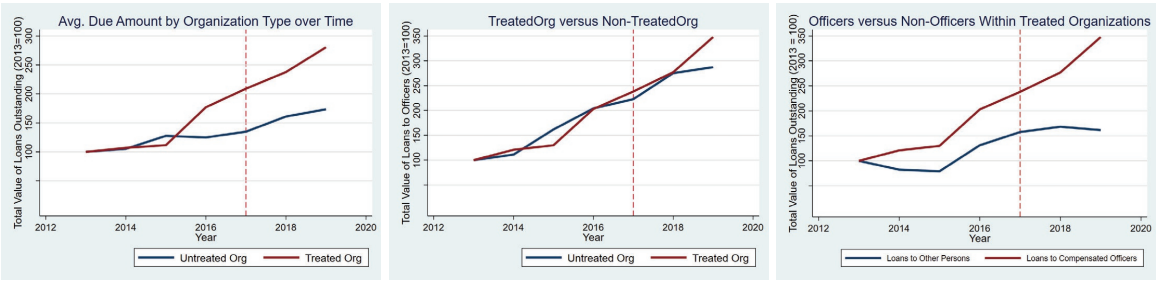
Panel C: Delegation

Subsample	Charitable		Hospital		GovIndex17		Competition		Audit		CompConsult		Checkbox2018	
	High	Low	Yes	No	High	Low	High	Low	Yes	No	Yes	No	Yes	No
TreatedOrg×POST	0.211***	0.243***	0.014	0.268***	0.818***	0.071	0.337***	0.098	0.221***	0.231	0.450***	0.167***	-	-
	(0.082)	(0.055)	(0.123)	(0.052)	(0.117)	(0.050)	(0.067)	(0.067)	(0.046)	(0.276)	(0.104)	(0.051)	-	-
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-	-
Year & Industry FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-	-
Clustered SE by Org	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-	-
N	124,030	124,030	11,358	236,702	123,510	124,550	101,415	146,645	222,093	25,967	38,644	209,416	-	-
(Ps.) R-squared	0.079	0.117	0.156	0.106	0.199	0.074	0.147	0.069	0.128	0.030	0.124	0.104	-	-

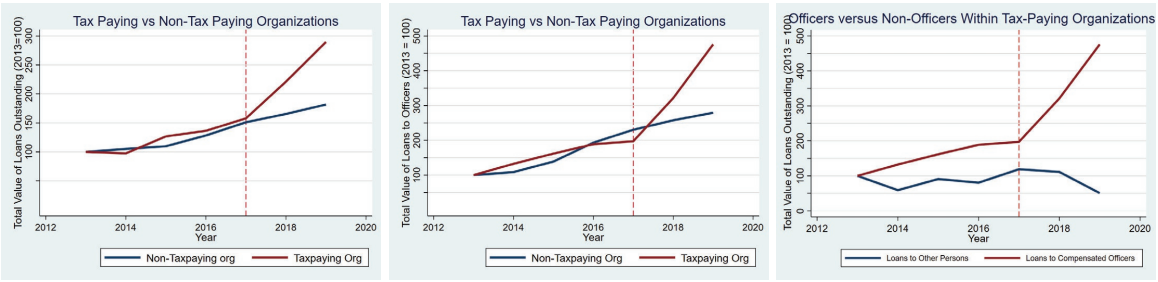
This table presents the results of regression analyses of the complete models 2, 4, and 5 across multiple cross-sections. The sample is split based on the following organizational characteristics. High/low charitable means that an organization has an above/below median share of revenues not coming from program services. Hospital indicates that the organization operates one or more hospital facilities. GovIndex17 is split on the median score. Competition is split on the median number of nonprofits in the same industry, size quartile, and metropolitan area. Audit is an indicator of whether the financial statements were audited by an independent auditor. The loan analysis of the subsample of individuals of unaudited organizations is dropped due to insufficient statistical power. CompConsult indicates whether the organization employed a compensation consultant. Checkbox4960 is an indicator of whether the organization indicated on the 2018 Form 990 that it is subject to the excise tax. The perks and delegation analysis in the final columns are dropped as there are no untreated organizations that tick the checkbox. Organization-clustered robust standard errors are in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Figure 1

(a) *Average total value of loans to officers by treated/untreated organizations*



(b) *Average total value of loans to officers by tax-paying/non-paying organizations*



Treated organizations are organizations with at least one treated employee. Tax-paying organizations are organizations that have indicated they pay Section 4960 excise tax in 2018 (i.e. Checkbox4960 equals one). Panel a presents the average total due amounts of loans to officers by treated organizations versus non-treated organizations (panel a pane 1), the average total due amounts of loans to compensated officers by treated organizations versus non-treated organizations (panel a pane 2), and the average total due amounts of loans to compensated and non-compensated officers within treated organizations (panel a pane 3). Panel b presents the average total due amounts of loans to officers by excise tax-paying organizations versus non-excise tax-paying organizations (panel b pane 1), the average total due amounts of loans to compensated officers by excise tax-paying organizations versus non-excise tax-paying organizations (panel b pane 2), and the average total due amounts of loans to compensated and non-compensated officers by excise tax-paying organizations (panel b pane 3).

Chapter 4

The Role of Compensation Consultants in the Nonprofit Sector

Abstract

This paper examines the determinants and consequences of the use of nonprofit compensation consultants. First, it documents the prevalence of compensation consultants in the third sector. Next, it investigates the determinants of a hiring decision and finds that smaller boards, less independent boards, insider CEOs, and longer-tenured CEOs make boards more likely to hire compensation consultants. Compensation consultants are also more likely to be hired when there is a new outsider CEO. The engagement of compensation consultants is shown to significantly increase total compensation, its components, and compensation contract complexity. This study does not find evidence of performance improvements. The findings shed light on whether the practice of engaging compensation consultants generally conforms with the effective monitoring narrative or the rent-extraction narrative but do not provide conclusive evidence ruling out either narrative. In doing so, the study contributes to a nuanced understanding of compensation consultants' role in shaping nonprofit compensation strategies and offers both academic and practical insights.

4.1 Introduction

In the last decades, nonprofit organizations have become more business-like (Maier et al., 2016). With it, the use of compensation consultants has become common among large charitable organizations in the US. Recent literature finds that around 28-38% of large US nonprofits hire compensation consultants to advise on executive remuneration (Balsam and Harris, 2018; Babenko et al., 2021). However, little is known about (1) what motivates nonprofit boards of directors or trustees to retain a compensation consultant and (2) what the consequences are of doing so. This paper seeks to provide a deeper understanding of the dynamics around nonprofit compensation consultants.

Tension exists surrounding the motivations and efficacy of such a hiring decision. Although compensation consultants are supposed to provide an independent assessment, aiding a board's monitoring function, critics argue conflicted consultants are contracted by management to shore up compensation packages or legitimize excess compensation. In the for-profit sector, studies have found mixed evidence of compensation consultants with conflicts of interest increasing excess pay (Conyon et al., 2009; Goh and Gupta, 2010; Murphy and Sandino, 2010; Goh and Gupta, 2010; Chu et al., 2018). However, the nonprofit sector is inherently different. Nonprofits have fewer tools to align the interests of the executive, a more complex set of shareholders, performance measures that are more difficult to determine, and an increased emphasis on intrinsic motivation. All of these factors may strengthen the case for hiring compensation consultants. On the other hand, critics question whether the money spent on consulting services and the subsequent increased pay packages align with the social mission of nonprofit organizations, which are characterized by weaker corporate governance (Newton, 2015). This paper explores the determinants and consequences of the use of compensation consultants in the nonprofit

sector to shed light on this phenomenon. It is the first to comprehensively assess the role and importance of compensation consultants in the sector.

Two conflicting narratives exist on why compensation consultants are hired. On the one hand, compensation consultants are supposed to provide an independent assessment, aiding a board's monitoring function. This is the *effective monitoring narrative*. Setting executive pay is particularly difficult in nonprofit organizations due to diverse stakeholder pressures, a lack of good performance measures, and an increased emphasis on intrinsic motivation. This creates a value case for compensation consultants whose specialist opinion can make a difference for the board in designing an optimal pay package.

On the other hand, corporate governance is weaker in nonprofits (Newton, 2015) and compensation consultants typically advise increases in pay based on a benchmark of better-paid peers (Goh and Gupta, 2010). Some warn of 'leap-frogging' or compensation 'ratcheting' as a result. This knowledge can incentivize management, or the CEO in particular, to pressure boards to hire compensation consultants. This is the *rent-extraction narrative*.

The current study uses US nonprofit data on more than two million individuals listed on Schedule J of Form 990 over the 2010-2020 period. The determinants analysis suggests a myriad of reasons for hiring compensation consultants. Smaller boards, less independent boards, insider CEOs, and longer-tenured CEOs make boards more likely to hire compensation consultants showing that compensation consultants are more likely to be hired when monitoring is increasingly difficult. Another important reason to hire compensation consultants is whether there is a CEO turnover, especially if the new CEO is an outsider.

The analysis of consequences, using a propensity score matching technique, reveals that the use of compensation consultants is related to higher and more complex pay. On

average, all components of pay are positively affected. Also, there is no evidence that the use of compensation consultants improves future nonprofit performance.

Although there is ample evidence on the contracting of compensation consultants in the for-profit sector (Conyon et al., 2009; Murphy and Sandino, 2010; Cadman et al., 2010; Goh and Gupta, 2010; Chu et al., 2018; Murphy and Sandino, 2020), there is no academic evidence on the motives and consequences of hiring compensation consultants in the nonprofit sector, an inherently different setting. Nonprofit compensation setting is characterized by lower compensation levels, the absence of objective performance measures like stock prices or profits, and weaker corporate governance mechanisms due to the absence of ownership. Compensation rigging is thus a real danger. For example, recent work shows that regulation targeted at reducing the ability of CEOs to influence their own pay can be effective in the nonprofit sector (Babenko et al., 2021). On the other hand, these characteristics of the nonprofit sector also provide for a situation where an independent compensation consultant can provide added value to the board.

Until now, some nonprofit literature has included the use of compensation consultants as a control variable and found that it is correlated with higher CEO compensation (Babenko et al., 2021) and more variable compensation (Balsam and Harris, 2018). However, to date, there is no study detailing the prevalence of hiring compensation consultants or what motivates organizations to do so. Nor is there any research examining whether compensation consultants are valuable to organizations or can be leveraged by management for self-serving purposes. I add to this literature by providing an extensive analysis of the determinants and effects of hiring compensation consultants in the nonprofit sector.

Moreover, this study is one of the first studies to explore the eFiler database, published by the IRS in XML format, at scale and sets the tone for future nonprofit accounting archival research.

4.2 Related Literature and Hypothesis Development

As of 2008, the IRS released new regulations related to nonprofit executive compensation that require tax-exempt organizations to disclose more detailed information about the compensation of their highest-paid executives and key employees on their annual Form 990 filing. To improve transparency and accountability, the new regulations require that nonprofits disclose detailed information on the compensation of their directors, officers, and five highest-paid employees, including base pay, bonuses, and other forms of compensation. The regulations also require nonprofits to disclose the process used to determine executive compensation, such as the use of benchmarking data or the involvement of an independent compensation committee or compensation consultant. I employ this data to understand the role of a compensation consultant in the nonprofit sector. In this chapter I discuss the relevant background literature on nonprofit compensation and the role of compensation consultants. Further in this chapter, the hypotheses of this study are developed.

4.2.1 Nonprofit compensation setting

The compensation setting in the third sector is different from the compensation setting in the for-profit sector for several reasons. First, regulators or tax authorities may set specific guidelines and restrictions. For example, the Internal Revenue Service (IRS) in the U.S. requires executive remuneration in the nonprofit sector to be in line with the value of the services provided to the organization. Any amount in excess of such market value is regarded as an "excess benefit transaction" and subject to excise taxes. The creation of "rebuttable presumption of reasonableness" procedures is key in making sure compensation is in line. Aside from regulatory compliance, literature has shown that stakeholders may also punish organizations that pay excess compensation to their officers

by adjusting their contributions (Balsam and Harris, 2014; Maas and De Waegenaere, 2021). Having procedures in place to set compensation is thus an important task for boards to get right.

Second, agency conflict in nonprofit organizations is a more intricate problem than in for-profit organizations. Given the non-distribution constraint mentioned earlier, the principal in the principal-agent relationship is not a shareholder, but instead a large and diverse set of stakeholders including but not limited to beneficiaries, donors, patients, debt holders, volunteers, or society at large. The coordination of corporate governance in such a "multiple principal" framework is largely delegated to the board of directors or trustees (Jegers, 2009). As a result, good performance measures are hard to determine, which makes compensation setting in nonprofits particularly difficult (Harris et al., 2022). In contrast to firms, nonprofits do not have the primary objective to realize profits, nor do nonprofits have shareholders. Therefore, these organizations lack the option to set performance targets based on share prices or accounting profits. Recent studies find that "mission fulfillment" is a main driver of bonus compensation, although this is hard to quantify (Balsam and Harris, 2018; Sedatole et al., 2018). The nonprofit sector has fewer tools at its disposal than the for-profit sector to align the interests of the executive with the organization's objectives.

Third, nonprofit managers have been documented to place greater emphasis on intrinsic rather than extrinsic motivation, making monetary incentives less appealing (Handy and Katz, 1998). As a result, social-mission organizations may benefit from offering below-market wages to executives, as it can attract individuals who are intrinsically motivated (Chen et al., 2020). Therefore, optimal pay levels for nonprofits may be lower, and thereby disproportionately appeal to personnel driven by intrinsic rewards.

Overall, these specific issues complicate the compensation-setting practices of nonprofit boards, which creates a valid opportunity for compensation consultants to add value.

4.2.2 Compensation consultants

Compensation consultants are tasked to provide independent advice to the board of directors on pay-setting practices. Typically, such consulting services include a comparative analysis of compensation packages in peer firms, taking into account things like the industry, firm size, and complexity. Apart from advising on the amount of compensation, compensation consultants can consult on the structure of the compensation contract. Acquiring such services benefits the board (or the compensation committee) for one simple reason: Board members are often busy individuals and most likely not experts on optimal pay contract design. Compensation consultants, on the other hand, have knowledge and expertise in the area and specialize in designing contracts that align the goals of executives and organizations. As setting executive compensation is a major task in the monitoring function of the board, seeking expert help with this is rational as long as the fees paid for such service are lower than the expected reduction in agency costs (as meant by Jensen and Meckling (1976)). Indeed, recently, via Say-on-Pay voting patterns in public firms shareholders are found to value the advice of compensation consultants (Murphy and Sandino, 2020).

Understandably, most studies on compensation consultants focus on the effect of consultants on CEO compensation. In the for-profit sector, firms with compensation consultants pay higher CEO compensation levels (Armstrong et al., 2012; Chu et al., 2018) and more bonus pay (Goh and Gupta, 2010). Actually, Murphy and Sandino (2020) find that the explanation for this is that new incentive plans are often "layered" over existing pay packages when compensation consultants are hired, making contracts more complex.

Also in nonprofit organizations, the presence of compensation consultants is positively related to executive compensation levels (Balsam and Harris, 2018; Babenko et al., 2021). Anecdotally, in an interview with Detroit Free Press, a Birmingham-based nonprofit compensation consultant is quoted saying "I can't recall any project, where we would come and say you need to cut someone's pay".[1] Overall, it seems that on average hiring compensation consultants benefits the executive team as well as the board.

If the engagement of compensation consultants typically leads to an increase in executive pay, this introduces the question of whether executives have an incentive to pressure the board to acquire such consultancy services for rent-extraction purposes. Especially in organizations with weak governance, powerful nonprofit executives could exert power to have compensation consultants hired. Research has shown that governance in nonprofit organizations is on average weaker than in for-profits and managers take advantage (Newton, 2015).

Adding to this "rent-extraction" narrative is the fact that the consultants in turn may also have incentives to not be truly independent. A conflict of interest can be caused by the wish to be retained by management for a continuance of the engagement or other types of consultancy services. Previous accounting studies in the for-profit sector have found mixed evidence of compensation consultants with conflicts of interest increasing excess pay (Conyon et al., 2009; Murphy and Sandino, 2010; Goh and Gupta, 2010). For example, Goh and Gupta (2010) provides evidence of opinion shopping for higher executive pay by FTSE 350 firms. Similarly, Murphy and Sandino (2010) use consulting fee data to empirically find evidence of compensation consultants with conflicts of interest. On the other hand, both Conyon et al. (2009) and Cadman et al. (2010) find that there

[1]Detroit Free Press (2019). "Southeast Michigan nonprofit CEO pay has jumped. Here's why." Retrieved from: https://eu.freep.com/story/money/business/2019/08/23/nonprofit-ceo-salary/1836964001/

is little evidence that incentives for "cross-selling" and "repeat business" lead to greater CEO pay or adverse contract design.

There is no academic research on conflicted compensation consultants in the nonprofit sector yet. However, Du et al. (2018) observes that "[...] it is common practice for nonprofit hospital boards, through hospital human resource departments, to annually contract independent administrator compensation consulting groups to rationalize the fair market value compensation of high-level hospital administrators. However, there are conflicting incentives for consultants to recommend compensation increases for these hospital administrators as this will incentivize subsequent renewal of the consulting engagement." Therefore, a closer look at the determinants and consequences of the board's decision to retain consulting services is warranted.

To summarize, two conflicting narratives exist on why compensation consultants are hired. On the one hand, compensation consultants are supposed to provide an independent assessment, aiding a board's monitoring function. This is the 'effective monitoring narrative'. On the other hand, critics argue conflicted consultants are contracted by management to shore up compensation packages or legitimize excess compensation, from here this is referred to as the 'rent-extraction narrative'. In the following section, I develop hypotheses on the determinants and consequences of compensation consultants. Hypotheses 1 through 4 provide a better understanding of the determinants, while hypotheses 5 and 6 investigate the consequences. Specifically, testing of hypotheses 4 and 6 offer insights into which narrative prevails (or is more likely) in the nonprofit sector, and under what circumstances.

4.2.3 Hypothesis Development

First and foremost, the complexity of an organization is likely to influence the decision to hire a compensation consultant. When organizations expand, they become more complex. Size is not only an important determinant of the amount of CEO compensation (Frumkin and Keating, 2010), which increases the benefit of getting the number right, but size also likely reduces the relative costs of hiring a compensation consultant. Moreover, setting performance targets is difficult in nonprofit organizations, especially for large and complex organizations for which capturing mission fulfillment likely requires a broad set of measures (Poister, 2008; Balsam and Harris, 2018; Treinta et al., 2020). Despite this tension, I expect complexity to be positively related to the propensity to hire a compensation consultant. Irrespective of narrative, I predict more complex and larger organizations to experience higher benefits and lower relative costs of doing so.

Hypothesis 1: *More complex organizations are more likely to hire compensation consultants.*

The number of available peers may also influence the choice to hire a consultant. On the one hand, peer selection might be easier when a CEO has more peers, reducing the need to hire a consultant. On the other hand, consultants may be able to provide more value when there are more peers to pick as a benchmark. I expect the number of peers to positively influence the probability of hiring a compensation consultant. This determinant of the acquisition decision would fit with both the 'effective monitoring' and the 'rent extraction' theories.

Hypothesis 2: *Organizations with more peers are more likely to hire compensation consultants.*

Compensation consultants typically formulate advice based on extensive benchmarking and analysis of pay at peer organizations. Benchmarking is a useful tool to gauge the market wage of an executive (Bizjak et al., 2008). Anticipating that consultants will use benchmarking, CEOs with higher-paid peers may be more inclined to pressure boards to hire compensation consultants. In other words, a rent-seeking CEO is more likely to seek the help of consultants if compensation is low compared to peers or if there are more peers to cherry-pick from for comparison. At the same time, better-paying peer organizations may reflect increased labor market demand and may lead effective boards to avoid the risk of losing a CEO by underpaying. This determinant of the acquisition decision would fit with both the 'effective monitoring' and the 'rent extraction' theories.

Hypothesis 3: *Organizations with higher paying peers are more likely to hire compensation consultants.*

As the decision to retain compensation consultants is a governance decision made (or at least approved) by the board, the quality of corporate governance likely plays a role. If it reflects good governance practices, we would expect governance quality to predict the hiring decision. However, we know empirical literature about companies that firms with weaker governance are found to be more likely to hire compensation consultants (Voulgaris et al., 2010; Armstrong et al., 2012). The 'effective monitoring' ('rent extraction') narrative suggests that organizations with stronger governance are more (less) likely to hire compensation consultants. While the expectations in the first three hypotheses are straightforward and do not depend on which narrative prevails, this one does. I formulate the hypothesis in a way that leaves open whether strong governance makes the acquisition more or less likely.

Hypothesis 4: *Organizations with stronger governance are more (less) likely to hire compensation consultants.*

I expect organizations with compensation consultants to have more complex pay packages, in line with empirical literature in the for-profit sector (Murphy and Sandino, 2020; Albuquerque et al., 2024). Consistent with a more complex pay package, I expect the variable component to be larger (bonus), while I do not expect a decrease in fixed pay (salary). This aligns with the idea that when compensation committees try to align the executive's incentives with the organization's by increasing variable pay, CEOs typically demand a risk premium for increased compensation risk (Murphy, 1999). Extant empirical literature has already found that pay is higher (Babenko et al., 2021) and bonus pay is more likely in nonprofits that use compensation consultants (Balsam and Harris, 2018). Although these studies used compensation consultants as control variables and this study uses a more comprehensive method of examining this relationship, my predictions are in line with these studies. These predictions do not depend on whether we believe the effective monitoring narrative or the rent-extraction narrative but may align with both.

Hypothesis 5: *Organizations with compensation consultants have higher CEO pay, more variable pay, and more complex pay packages.*

If better-aligned and more competitive pay packages help the organization to retain or attract talented executives (the 'effective monitoring' narrative), I would expect organizations with compensation consultants to have better future performance. On the other hand, if the hiring of compensation consultants reflects managerial rent-seeking behavior or short-termism organization performance may be inversely related to the presence of compensation consultants.

Hypothesis 6: *Organizations with compensation consultants have better (worse) future performance.*

4.3 Data and Sample

4.3.1 Sample

The data used in this study is collected from Form 990 filed by tax-exempt organizations with the Internal Revenue Service (IRS) and publicly available via the eFiler database. This source contains financial data on all US nonprofits that electronically file their tax returns. Although it does not have data on all nonprofits, especially in the early years of the sample, it is the most extensive source of nonprofit data and covers more than 90% of the sector's total expenses since 2014 (Ely et al., 2023).[2] The data is augmented using the compensation data from Form 990 Schedule J from the same source. Since 2008, this specific part of Form 990 is required to be filed whenever an organization has at least one employee earning $150,000 or more annually. Schedule J also includes information on the compensation setting policies used by the organizations to determine executive compensation, including the use of compensation consultants which is of particular interest for this study.

This study uses e-filer data for the years 2010-2020. After merging Schedule J data on individuals with the data from the rest of Form 990, the initial sample consists of 2,115,122 unique individual-organization-year observations for 529,766 unique organization-years and 92,523 unique organizations. In constructing the sample I first clean and parse all names and titles and remove individuals without a name. Individuals appearing multiple times on the same form are collapsed into one unless they are complete duplicates, in which case one observation is kept. This process leaves 2,035,653 individual-organization-year

[2]The 'e-filer data' was published by the IRS via an AWS bucket and later via the Data Commons Data Lake. In mapping the raw XML data, I gratefully acknowledge the work of the Nonprofit Open Data Collective on GitHub (https://github.com/Nonprofit-Open-Data-Collective) and Jesse Lecy of the National Center of Charitable Statistics in particular. I have relied on the 'irs990efile'-package and the 'efile-rdb-tables'-package between April 2023 and May 2025.

observations for which I determine who the CEO is based on the title on Schedule J.[3] If the title does not indicate a CEO, the individual with the highest total compensation from the organization is considered the CEO, which is an approach consistent with prior research (Frumkin and Keating, 2010). I drop organization-years with more than one CEO and all individuals that are not the CEO. Last, I exclude organizations with negative assets, expenses, or revenues or have missing data in any of the main variables used in this study. The final sample includes 316,996 organization-year observations for 63,477 unique organizations. The observations cover the years 2011-2020 as a one-year lag is needed in constructing several variables.

[insert Table 1 about here]

Table 1 provides an overview of the sample composition and shows that sample observations are spread over all NTEE categories and years. The growth in the number of observations over time corresponds with the increase in electronic filers and the increase in nonprofits.

[insert Figure 1 about here]

4.3.2 Descriptive statistics

Figure 1 provides an overview of the popularity of hiring compensation consultants over time and by NTEE classification. As can be seen from Figure 1, the use of compensation consultants is dependent on industry classification and is most prevalent in the 'Health' industry. While the popularity of hiring compensation consultants remains stable for all other industries, there has been a slight decrease in the popularity of compensation consultants in the health industry.

[3]This is also the sample among which I calculate organization-level variables like Competition.

[insert Table 2 about here]

Table 2 provides descriptive statistics for the samples of organization-year observations with and without compensation consultants. Given the large sample size, the difference in means on all variables is statistically significant. Specifically, it shows that organizations where compensation consultants are hired are on average larger, more complex, have better governance, and pay higher CEO compensation.

4.4 Determinants

4.4.1 Determinants model

I investigate the determinants of retaining compensation consultants to test the first four hypotheses. A logistic multiple regression model similar to Armstrong et al. (2012), Murphy and Sandino (2010), and Chu et al. (2018) is adopted. The choice of the board to hire compensation consultants is modeled as a function of explanatory variables that proxy for the hypothesized motives to hire compensation consultants and a set of control variables in model (1):

$$\begin{aligned} COMP\_CONS_{it} =& \beta_1 COMPLEXITY_{it} + \beta_2 NR\_PEERS_{it-1} + \beta_3 PEER\_DIFF_{it-1} \\ &+ \beta_4 GOVERNANCE_{it} + \sum_{j=1}^{k} \gamma_j CONTROL_j + FIXED\ EFFECTS + \varepsilon \end{aligned} \tag{1}$$

The variable $COMP\_CONS_{it}$ is an indicator variable that is equal to one if organization i retains an independent compensation consultant in year t. The organization is required to disclose that information in Schedule J of Form 990. The instructions to the form describe an independent compensation consultant as: "a person outside the organization who advises the organization regarding the top management official's compensation package, holds himself or herself out to the public as a compensation consultant, performs valuations of nonprofit executive compensation on a regular basis, and is qualified to make valuations of the type of services provided."[4] With *COMP_CONS* as a dependent variable I test what factors increase or decrease the propensity of an organization hiring a compensation consultant. To answer the similar but different question of what determines whether an organization hires a consultant for the first time, I also test this model within a subsample of organizations that did not hire a consultant in year *t-3* to *t-1*.

The test variable *COMPLEXITY* is employed to test hypothesis 1. It is measured in four ways. First, organization COMPLEX_SIZE is measured as the natural logarithm of the value of total assets at the end of the accounting period. Next, I measure COMPLEX_OPER as the natural logarithm of the sum of employees and volunteers, scaled by the natural logarithm of total expenses, a measure capturing the labor intensity of the organization's operations. COMPLEX_STAKEH is measured as an index of the number of different resource dependencies as nonprofit complexity increases with the number of stakeholders and resource dependencies to manage (Wellens and Jegers, 2014). Froelich (1999) states that "each income stream requires considerable management effort for ongoing success". Specifically, I create an index between 0-5 indicating how many of the following types of stakeholders the organization depends on: Contributions, government

[4]The instructions go on to describe independence: "The consultant is independent if he or she doesn't have a family relationship or business relationship with the top management official, and if a majority of his or her appraisals are performed for persons other than the organization, even if the consultant's firm also provides tax, audit, and other professional services to the organization." Note that *COMP_CONS* could be equal to zero for organizations that retain a compensation consultant who is not independent.

grants, program service revenues, volunteers, and employees. Lastly, I construct a measure of reporting complexity, which is equal to the number of Form 990 schedules the organization has to file according to Part IV of the form and call it COMPLEX_REPORT. I expect *COMPLEXITY* to positively influence the propensity to hire a compensation consultant.

The test variable *NR_PEERS* is measured as the total number of active nonprofits in the same year, with the same NTEE Core Code (NTEE-CC), and in the same Census Core Based Statistical Area (CBSA). The NTEE categorization is the most commonly used categorization of nonprofit organizations into 26 major groups. The NTEE-CC codes further split these major categories into specific activity areas. The CBSA is determined based on the organization's ZIP code. $PEER\_DIFF_{it-1}$ measures the difference between the CEO compensation of organization i and the average CEO compensation of a set of comparable peer organizations in year *t-1*. I expect the difference with average peer organization CEO compensation to positively influence the propensity to hire a compensation consultant.

Finally, I measure *GOVERNANCE* in multiple ways. In measuring nonprofit governance, the first measure is GOV_INDEX17, which is a sum index of 17 indicators weighted by their annual cross-sectional standard deviation as done by Newton (2015). A higher value on this index indicates better governance.[5] The second proxy for governance quality is GOV_PERC_INDEP_BOARD which is the percentage of independent board members. A higher percentage of independent board members reflects better governance. According to the 'effective monitoring' ('rent-extraction') narrative I expect a positive (negative)

[5]The results are robust to using a simple sum index of the seventeen binary indicators and to using a simple sum index of the five governance indicators in Boland et al. (2020): whether the organization has an audit committee, a majority independent board, no outsourcing of management functions, approval of executive salaries, and whether key information is available on the organization's website.

relationship between *GOVERNANCE* and the propensity to hire a compensation consultant.

The control variables in model (1) include organizational and individual characteristics. Insofar as data availability allows and is appropriate for the nonprofit setting, I follow Chu et al. (2018) in selecting the rest of the independent variables. At the organization level, I include BOARD_SIZE, ROA, COMPETITION and the five other CEO pay-setting method options of schedule J, which are COMMITTEE (whether the organization has a compensation committee), CONTRACT (whether the CEO has a written employment contract), SURVEY (whether the organization uses a compensation survey or study), BENCHMARK (whether the organization benchmarks pay with the Form 990 of other organizations), APPROVAL (whether approval by the board or compensation committee is needed). The coefficients on these indicator variables indicate whether these methods are used as complements or substitutes for hiring consultants. As many organizational characteristics and outcomes in the nonprofit sector differ with revenue composition, I also include DONATIONS, GOV_GRANTS, PROG_SERV_REV, and INV_REV. CEO characteristics included in the model are CEO_NEW, CEO_INSIDER, CEO_GENDER, and CEO_TENURE. Throughout this paper, all continuous variables are winsorized at the 1% and 99% cutoffs to limit the effect of outliers. Appendix A provides a more extensive description per variable.

4.4.2 Analysis of determinants

Table 3 columns (1), (3), and (5) show the logistic regression results with year-fixed and industry-fixed effects for the full sample, the subsample without consultants in *t-1*, and the subsample without consultants in *t-3* until *t-1*, respectively. This conditional sampling also enables the investigation into what determines organizations to hire a compensation

consultant for the first time in four years. As in previous literature, with industry-fixed effects, these regressions allow a cross-sectional analysis of what factors determine consultant use (Armstrong et al., 2012). Tabel 3 columns (2), (4), and (6) show the logistic regression results with year-fixed and organization-fixed effects for the full sample, the subsample without consultants in *t-1*, and the subsample without consultants in *t-3* until *t-1*, respectively. This more stringent analysis aims to help understand when organizations decide to engage compensation consultants. Below, I discuss the results of these determinants analyses.

[insert Table 3 about here]

Table 3 columns (1), (3), and (5) provide mixed support for Hypothesis 1 regarding organization *COMPLEXITY*. The propensity to hire compensation consultants is increasing with organization size and reporting complexity, but not with labor intensity and stakeholder diversity, the other two measures of *COMPLEXITY*. Stakeholder complexity is even found to be negatively related to the propensity to use compensation consultants. One explanation for this is that certain stakeholders may not appreciate the hiring of consultants from their contributed resources. Another possible explanation is that the additional monitoring due to multiple stakeholders reduces the importance of optimally aligned compensation contracts.

Next, the determinants test does provide support for Hypothesis 2 and 3 that the availability and the average pay of peer CEOs are positively related to the use of compensation consultants. As expected, this aligns with the idea of a stronger need for consultants in more competitive labor markets but also with the view that CEOs may be more inclined to suggest such a move when average peer pay is higher.

Hypothesis 4, on whether good corporate governance increases or decreases the use of consultants, requires a more nuanced answer. The results indicate that one governance

measure, GOV_INDEX17, is positively related to the choice to use compensation consultants, while GOV_PERC_INDEP_BOARD negatively influences the choice. To understand this, a critical look at these measures for corporate governance is needed. While the GOV_INDEX17 captures the presence of a broad range of governance practices (Boland et al., 2020), the variable GOV_PERC_INDEP_BOARD is a more straight-forward proxy for the monitoring-ability of the board. I infer that while the use of consultants decreases with the monitoring ability of the board, it is positively related to the presence of other governance mechanisms. This suggests that firms with comprehensive governance structures may use consultants as a way to complement their existing practices, whereas those with strong board oversight might rely less on external advice. In Subsection 4.6.1 I further investigate how different facets of governance interact with each other in the decision to hire compensation consultants to gain deeper insights. Therefore, I do not yet reject or confirm Hypothesis 4.

The control variables provide some unique insights into the reasons for hiring compensation consultants. First, the other five compensation setting methods are strongly positively correlated with the use of compensation consultants. This means these methods are either employed by the consultants or in conjunction with the consultants. Second, the CEO-specific variables in the determinants model suggest that compensation consultants are more likely to be hired in organizations that have a CEO turnover, where the CEO is an insider, and who have longer CEO tenure. The interaction between CEO_NEW and CEO_INSIDER suggests that consultants are less likely to be hired at CEO turnover if the new CEO is an insider to the organization. This makes sense, as (1) there may already be a labor contract in place that provides a starting point, and (2) the organization can more easily assess the competitive pay of someone they are familiar with. One other noticeable finding is the higher coefficient of CEO_NEW in columns (3) and (5). This

suggests that CEO turnover is especially likely to trigger the hiring of a compensation consultant for the first time.

In Table 3 columns (2), (4), and (6) I analyze the determinants of when an organization decides to hire a consultant by adding organization-fixed effects. With respect to Hypothesis 1, the results align with the idea that complexity is a reason to start hiring consultants. Both COMPLEX_SIZE and COMPLEX_REPORT are positively related to consultant use. Notably, COMPLEX_STAKEH is not negatively related to consultant use in these tests which means that a multitude of stakeholders is not a reason to not start hiring consultants. Next, Hypothesis 2 is not confirmed as the number of peers is not positively related to the hiring decision. Hypothesis 3, however, is confirmed as the difference in compensation with peer organizations is a strong predictor of whether and when organizations decide to hire compensation consultants. If peers earn more than the CEO, the organizations is more likely to hire a compensation consultant. For the governance measures, GOV_INDEX17 and GOV_PERC_INDEP_BOARD, I again find conflicting evidence of whether good governance is related to consultant use. As mentioned, I investigate this further in Subsection 4.6.1.

In conclusion, the important factors determining the use of compensation consultants are organization size, low monitoring ability of the board, the difference in compensation with CEO peers, and CEO characteristics and turnover. Also when controlling for organization-fixed effects, within-organization variation suggests that organizations are more likely to hire or start hiring consultants when they become more complex, the boards become less independent, get an insider CEO, or CEO tenure increases. These findings align with board capture and 'rent extraction' by the CEO but, at the same time, also align with the premise that the compensation consultant is needed to design a pay package that effectively mitigates the agency problem induced by such characteristics.

4.5 Consequences

4.5.1 The consequences for compensation contract design

In the second part of this study, I investigate the consequences of hiring a compensation consultant. The empirical investigation into the consequences of hiring consultants suffers from the endogeneity issue in that the researcher only observes the outcome of a decision-making process (i.e. the choice to hire/not hire). However, the data does not show the consequences of the alternative choice, the counterfactual, and covariates could explain both the outcome and the choice. Therefore, to tackle this selection issue and in line with previous research (Armstrong et al., 2012; Chu et al., 2018; Murphy and Sandino, 2020), I use a propensity score matching (PSM) technique to create a sample of organizations based on their propensity to hire a compensation consultant (Rosenbaum and Rubin, 1983; Tucker, 2010). Treated organizations are matched with untreated organizations that have propensity scores within a caliper of 0.5 times the standard deviation in propensity scores and are in the same NTEE major group and size quartile. Propensity scores are the predicted value of the regression in model 1. In untabulated tests, I confirm that the treatment and control groups are comparable on the covariates. This comparability reduces the bias in estimating the treatment effect on the outcome variable.

I investigate Hypothesis 5 ("organizations with compensation consultants have higher CEO pay, more variable pay, and more complex pay packages") with model 2 within the matched sample. This is the second stage of the PSM procedure.

$$COMPENSATION_{it} = \beta_1 COMP\_CONS_{it} + \sum_{j=1}^{k} \gamma_j CONTROL_j + FIXED\ EFFECTS + \varepsilon \tag{2}$$

The dependent variable of interest *COMPENSATION* is measured in multiple ways. I investigate the effect on TOT_COMP, its components, and compensation complexity. The three component variables are TOT_SALARY which is the total fixed salary, TOT_BONUS, the total variable compensation, and TOT_OTH_COMP which includes benefits, deferred compensation, and other compensation. For CONTRACT_COMPLEX, I use a measure of pay complexity used in Albuquerque et al. (2024) measured as a count of the number of the above five components in CEO pay plus one if the organization provides perquisites. The maximum value of CONTRACT_COMPLEX is six. The organizational and board characteristics that act as control variables in the consequences regressions follow prior literature on nonprofit executive compensation (Newton, 2015; Balsam and Harris, 2018). I control for SIZE, DONATIONS, GOV_GRANTS, PROG_SERV_REV, FUNDR_EXP, GOV_INDEX17, GOV_PERC_INDEP_BOARD, BOARD_SIZE, COMMITTEE, CONTRACT, SURVEY, BENCHMARK, APPROVAL, and COMPETITION, all of which are described in Appendix A. I also control for the CEO characteristics described earlier.

[insert Table 4 about here]

The results in Table 4 confirm Hypothesis 5 that the use of compensation consultants increases total CEO pay and all its components. Additionally, contract complexity, i.e. the number of different components included in pay, is also higher when compensation consultants are hired. From the test, it follows that the use of compensation consultants increases total compensation by 31.7% on average.[6] If the consultant is hired for the first time after at least three years, the effect is a more modest 20.2%.[7] Either way, this effect is considerable as it equates to about one-third to half of a standard deviation in total compensation.

[6] ($e^{0.276} \approx 1.317$)
[7] $e^{0.184} \approx 1.202$

The coefficients of control variables in Table 4 mostly comply with the expected directions from previous literature. For example, the percentage of independent board members is negatively related to executive compensation. Also, female CEOs are found to earn significantly less than male CEOs. Although I do not control for many personal characteristics like CEO education or CEO age which likely reduce the gap, the results suggest a gender pay gap in CEO compensation in the nonprofit sector in line with smaller nonprofit studies (L'Herrou and Tynes, 2020; Lee and Lee, 2021).

4.5.2 The consequences for organizational performance

I test Hypothesis 6 ("organizations with compensation consultants have better (worse) future performance") with model 3 below.

$$PERFORMANCE_{it+2} = \beta_1 COMP\_CONS_{it} + \sum_{j=1}^{k} \gamma_j CONTROL_j + FIXED\ EFFECTS + \varepsilon \tag{3}$$

Since measuring performance in the nonprofit sector is tricky in itself, I use many proxies to measure performance in this study commonly used in the nonprofit literature (Callen et al., 2003; Tinkelman and Mankaney, 2007; Balsam and Harris, 2018). Specifically, I test for PROG_RATIO$_{t+2}$, TOT_REV$_{t+2}$, DONATIONS$_{t+2}$, GOV_GRANTS$_{t+2}$, and ROA$_{t+2}$. In each of these regressions, the dependent variable is measured in year $t+2$ while the control variables include the dependent variable in year t. Including the lagged dependent variable is expected to control for time-invariant organization-specific unobservables. The rest of the control variables follow previous literature on the determinants of nonprofit performance. Given the extensive extant work on these nonprofit performance measures, I do not go into detail here. The variables included in model 3 can

be found in Table 5 and their descriptions in Appendix A. In this analysis, the number of observations is reduced since the analysis needs two years of forward data. Propensity scores from the full sample are reused but matching is redone within the smaller sample.

[insert Table 5 about here]

The results in Table 5 provide no evidence of compensation consultants improving organizational performance. In fact, total donations, government grants, and return on assets decrease for organizations that use consultants. This challenges the assumption that compensation consultants universally enhance organizational outcomes. The lack of improvement in program ratio and total revenues suggests that I find no evidence that compensation consultants contribute to the enhancement of core nonprofit activities or revenue growth. Alternatively, compensation consultants may inspire the boards and executives to look beyond such measures of performance and help organizations that way. Given the lack of better uniform measures for mission success, that is not testable in this study.

4.5.3 Robustness to entropy balancing

The PSM technique to match observations with similar probability of receiving the treatment given covariates has the downside that it may result in loss of data if exact matches are not found. It also only balances covariates indirectly, through the propensity score. Hence, in untabulated analyses, I employ entropy balancing as a robustness check. Entropy balancing is a method to provide weights to observations to achieve an exact balance on covariates within the weighted sample.

Using this alternative methodology, compensation consultants are still found to significantly positively impact compensation and all parts of compensation. Coefficient sizes are similar to the PSM model in Table 4.

Of the significant coefficients of COMP_CONS in Table 5 only the coefficient in column (9) is robust to using entropy balancing. This indicates that the only performance measure we can reliably say something about is return on assets.

4.6 Additional Analysis

4.6.1 Do good committees hire consultants?

To learn more about the interplay between compensation committees and compensation consultants, I employ one more test. Table 6, further investigates why the analysis in Table 3 finds mixed results on whether good governance is positively or negatively related to consultant use. I interact both proxies for governance with COMMITTEE, the dummy variable for whether the organization has a compensation committee. To do so, I transform the PERC_BOARD_INDEP variable to an indicator variable that is one if 100% of the board consists of independent board members. This is more than half of the sample. This avoids issues with the skewed distribution of the variable and eases interpretation.

In this specification, in the full sample of organizations (Table 6, columns (1) and (2), both governance proxies are positively related to consultant use. Also, I find robust evidence that 'good' compensation committees are less likely to use compensation consultants. Both GOV_INDEX17×COMMITTEE and FULL_BOARD_NDEP×COMMITTEE have significantly negative coefficients. This implies that good governance organizations that have a compensation committee are less likely to use consultants compared to good

governance organizations that do not have a compensation committee. I infer that high-quality committees may not need the help of compensation consultants.

Table 6, columns (3) and (5), looking at the subsamples without consultant in $t-1$ and without consultant in $t-3$, $t-2$, and $t-1$, show another interesting insight. In organizations with a compensation committee, hiring a consultant for the first time after one (or three) years is significantly less likely for organizations with an independent board. This means that it is significantly more likely when the board is not fully independent in organizations with a committee. While I do not have data on whether the members that sit on the committee are independent, this result does align with weak committees deciding to hire a consultant.

4.7 Discussion

As corporate governance in nonprofits is on average weaker than in the for-profit sector (Newton, 2015), this research paper empirically examines whether the determinants and consequences of the decision to hire compensation consultants show signs of compensation consultants being used to extract rents by powerful CEOs. The results show that smaller boards, less independent boards, insider CEOs, and longer-tenured CEOs make boards more likely to hire compensation consultants. Another powerful predictor of consultant use is the difference in the CEO pay of CEOs at peer organizations. Whether this reflects powerful CEOs pushing for the use of compensation consultants or boards struggling to monitor or retain the CEO under these conditions is unclear. However, in further analysis, I do find that high-quality compensation committees are less likely to seek the help of compensation consultants.

The results further suggest that compensation consultants are more likely to be used to set pay for new outsider CEOs, which does not align with the 'rent extraction' explanation.

The consequences of the use of compensation consultants are larger pay packages with all components of pay positively affected. Consultant use is also related to more complex pay packages. However, I find no indication that hiring a compensation consultant for the first time increases compensation complexity. Possibly, consultants do not layer new pay components in the first year. Instead, components of pay that were already there increase in value.

Further analysis provides no evidence of compensation consultants improving organizational performance. In fact, in the two years that follow, total donations, government grants, and return on assets decrease when compensation consultants are employed. Overall, this study provides a nuanced view of the role of compensation consultants in the nonprofit sector.

One limitation of this study is its reliance on Census statistical areas to identify peer CEOs. These areas encompass only the most densely populated regions of the US, resulting in biased sampling towards nonprofits operating in urban environments. Consequently, the findings may not generalize to organizations based in rural or less populated areas. Another limitation of this study is that it relies heavily on Form 990 data. While Form 990 data enables large sample empirical research, the form is unaudited, and reporting quality is not a given (Gordon et al., 2007). To further uncover the role of compensation consultants, future research may want to complement the current study with insights from qualitative or consultant-level data.

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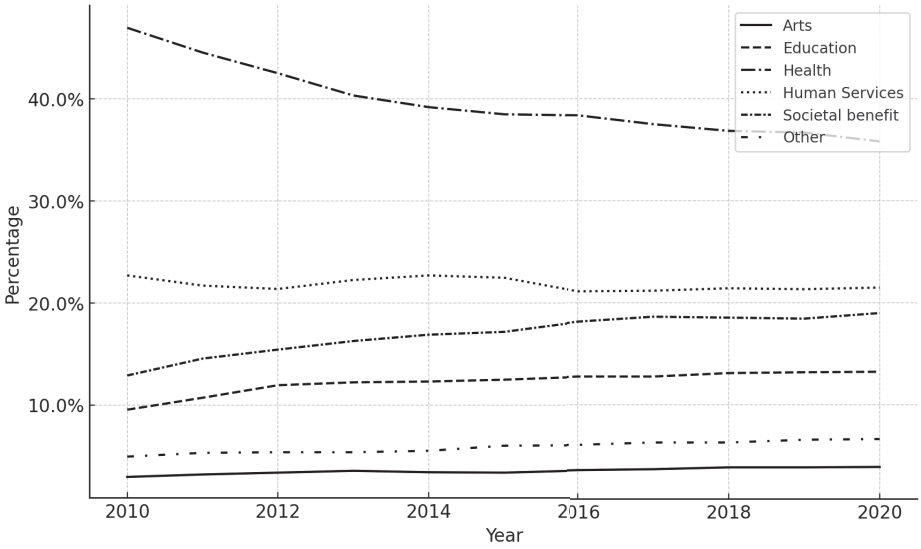
Appendix A: Variable Definitions

Variable Name	Description
COMP_CONS	Compensation consultant used by org (indicator)(SchJ)
COMP_CONS_NEW	Compensation consultant used by org in year *t* but not in year *t-3* to *t-1*. (indicator)(SchJ)
COMPLEX_SIZE	Natural log of total assets at the end of the year. (F990)
COMPLEX_OPER	The log of (employees + volunteers) scaled by the log of total expenses. (F990)
COMPLEX_STAKEH	An index between 0-5 increasing with one for every revenue source of contributions, government grants, and program service revenues exceeding 10% of total revenues and increasing with one if the organization has more than 20 volunteers and if the organization has more than 20 employees. (computed)
COMPLEX_REPORT	The natural logarithm of the number of boxes (0-55) ticked on Part IV. (computed)
NR_PEERS	The natural log of the number of active nonprofit CEOs identified in the same year and with the same NTEE-CC industry, CBSA geographical area, and SIZE quartile. (computed)
PEER_DIFF	The difference between the CEO compensation of organization *i* and the average CEO compensation at peer organizations in the same year, NTEE-CC, CBSA, and size quartile. (computed)
GOV_INDEX5	Government index score on 5 indicators. (Boland et al., 2020)(F990)
GOV_INDEX17	Government index score on 17 indicators. (Boland et al., 2020)(F990)
GOV_PERC_INDEP_BOARD	The percentage of independent voting members on the board. (F990)
FULL_BOARD_INDEP	All voting members of the board are independent. (F990)
BOARD_SIZE	Natural log of the number of voting members on the board. (F990)
ROA	Return on assets computed as net income divided by average total assets. (F990)
COMPETITION	The number of schedule J filing nonprofit organizations in the same year, NTEE-CC industry, and CBSA. (computed)
APPROVAL	The methods to establish CEO compensation include approval by the board or compensation committee. (SchJ)
COMMITTEE	The methods to establish CEO compensation include a compensation committee. (SchJ)
CONTRACT	The methods to establish CEO compensation include a written employment contract. (SchJ)
BENCHMARK	The methods to establish CEO compensation include benchmarking against Form 990 filings of other organizations. (SchJ)
SURVEY	The methods to establish CEO compensation include a compensation survey or study. (SchJ)
DONATIONS	Natural log of total contributions received. (F990)
PROG_SERV_REV	Natural log of total program service revenues. (F990)
GOV_GRANTS	Natural log of total government grants received. (F990)
CEO_NEW	The CEO in year *t* differs from the CEO in year *t-1* (indicator)(Sch J).
CEO_INSIDER	The CEO previously appeared on Sch J before becoming CEO (SchJ)
CEO_GENDER	Assumed gender based on the CEO's first name using the genderize.io API where 1 = female and 0 = male. (computed)
CEO_TENURE	Observed CEO tenure since 2010. (F990)
TOT_COMP	Natural log of total CEO compensation. (SchJ)
TOT_SALARY	Natural log of base compensation. (SchJ)
TOT_BONUS	Natural log of bonus and incentive compensation. (SchJ)
TOT_OTHER	Natural log of other reportable compensation, deferred compensation, and nontaxable benefits. (SchJ)
COMP_COMPLEX	Compensation contract complexity measured as the number of components to the compensation package (0-6). (SchJ)
PROG_RATIO	Ratio of program expenses to total expenses. (F990)
FUNDR_EXP	Natural log of total fundraising expenses. (F990)
NET_INCOME	Total revenues minus total expenses. (F990)

Figure 1

Prevalence of Compensation Consultant Use



Percentage of organizations hiring compensation consultants per nonprofit industry within the entire sample of eFilers (not the final sample of this study).

Table 1 Sample Composition

NTEE broad category	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Total
Arts, Cult., & Hum.	777	983	1,118	1,216	1,283	1,415	1,512	1,579	1,686	1,796	13,365
% COMP_CONS	20.3	17.4	15.0	14.7	13.6	13.8	12.1	12.9	12.0	11.8	13.8
Education	3,004	3,614	3,949	4,102	4,272	4,807	5,079	5,162	5,610	6,076	45,675
% COMP_CONS	18.8	17.2	16.5	14.9	14.1	13.4	12.8	12.9	12.3	11.6	14.0
Env. and Animals	315	399	418	494	564	648	699	730	827	919	6,013
% COMP_CONS	22.2	20.8	20.3	18.2	18.3	16.5	16.9	13.4	13.1	12.8	16.3
Health	6,529	7,018	7,293	7,249	7,255	7,769	7,954	7,923	8,459	9,120	76,569
% COMP_CONS	34.5	29.6	26.7	25.3	24.5	23.7	23.1	22.3	21.6	21.1	24.9
Human Services	6,158	7,417	8,298	8,991	9,624	10,503	11,179	11,735	12,618	13,744	100,267
% COMP_CONS	17.3	14.7	13.5	12.7	11.9	10.0	9.4	9.2	8.9	8.5	11.0
Intern., For. Aff.	230	292	315	355	395	432	461	491	558	637	4,166
% COMP_CONS	26.5	20.9	20.6	17.8	20.5	18.1	16.5	17.9	14.5	15.1	18.0
Public, Soc. Ben.	3,339	4,162	4,581	5,072	5,496	6,055	6,426	6,712	7,336	8,059	57,238
% COMP_CONS	21.4	18.8	17.8	16.9	15.9	15.6	15.1	14.2	14.0	13.2	15.7
Religion Related	298	349	432	467	550	597	594	599	646	700	5,232
% COMP_CONS	11.7	8.6	6.7	6.0	6.6	7.4	7.1	8.5	8.1	8.0	7.7
Mutual/Memb. Ben.	498	643	723	807	867	934	880	897	964	1,002	8,215
% COMP_CONS	12.7	9.6	8.7	8.9	7.7	7.1	7.4	7.5	7.3	7.6	8.2
Unknown	17	32	16	20	19	21	23	32	33	37	250
% COMP_CONS	17.7	25.0	25.0	15.0	5.3	4.8	4.4	6.3	3.0	8.1	10.8
Total	21,168	24,910	27,144	28,773	30,325	33,182	34,807	35,860	38,737	42,090	316,996
% COMP_CONS	23.6	20.0	18.2	17.0	16.0	15.0	14.3	13.9	13.4	12.9	15.8

This table reports on the composition of the full sample over 10 NTEE industries and 10 consecutive years. In each respective cell, the percentage of organizations hiring compensation consultants is printed below the number of organizations.

Table 2 Descriptive statistics

	No consultant (n=266,803)			Consultant (n=50,193)			
	mean	median	std.dev.	mean	median	std.dev.	p-value of mean diff.
COMP_CONS	0	0.00	0.00	1	1	0.00	-
COMP_CONS_NEW	0	0.00	0.00	.042	0	.20	0.000***
Organizational characteristics							
COMPLEX_SIZE	15.65	17.38	2.12	17.36	15.63	1.94	0.000***
COMPLEX_OPER	0.24	0.26	0.14	0.34	0.32	0.12	0.000***
COMPLEX_STAKEH	2.27	3	1.03	2.69	2	1.19	0.000***
COMPLEX_REPORT	2.3	2.56	0.34	2.55	2.3	0.32	0.000***
NR_PEERS	0.97	0.69	1.13	0.99	0.69	1.15	0.000***
PEER_DIFF	-0.04	0	0.53	0.05	0	0.45	0.000***
DONATIONS	9.48	13.77	6.57	10.97	12.56	6.57	0.000***
PROG_SERV_REV	11.95	16.3	5.49	14.68	14.1	6	0.000***
GOV_GRANTS	4.38	0	7.06	5.69	0	6.46	0.000***
INV_REV	8.79	9.83	4.59	11.26	12.44	4.62	0.000***
TOT_REV	15.11	15.25	1.98	16.87	16.96	2.06	0.000***
FUNDR_EXP	4.01	0	6.49	5.28	0	5.75	0.000***
PROG_RATIO	0.67	0.82	0.35	0.71	0.83	0.32	0.000***
ROA	0.02	0.02	0.23	0.01	0.02	0.25	0.000***
COMPETITION	17.39	3	33.64	13.94	3	40.37	0.000***
Board characteristics							
GOV_INDEX5	3.32	4	0.65	3.9	4	0.99	0.000***
GOV_INDEX17	13.43	15	1.37	15.14	14	2.7	0.000***
GOV_PERC_INDEP_BOARD	83.94	96.67	22.55	86.92	100	29.14	0.000***
BOARD_SIZE	2.51	2.71	0.62	2.72	2.48	0.65	0.000***
COMMITTEE	0.23	1	0.42	0.77	0	0.42	0.000***
CEO characteristics							
CEO_NEW	0.15	0	0.36	0.16	0	0.35	0.000***
CEO_INSIDER	0.16	0	0.44	0.25	0	0.37	0.000***
CEO_TENURE	3.68	3	2.49	3.88	3	2.35	0.000***
CEO_GENDER	0.29	0	0.44	0.25	0	0.45	0.000***
Compensation characteristics							
TOT_COMP	12.55	13.01	0.75	13.13	12.42	0.64	0.000***
TOT_SALARY	12.26	12.72	0.7	12.75	12.24	0.8	0.000***
TOT_BONUS	3.46	9.68	5.69	6.36	0	4.98	0.000***
TOT_OTHER	9.37	10.9	2.15	10.83	10.31	3.4	0.000***
COMP_COMPLEX	2	4	2	3.35	2	1.79	0.000***

This table presents the descriptive statistics and univariate analyses of all variables used in the later multivariate regressions. The means of organization-years with compensation consultants are compared with the means of organization-years without compensation consultants. All continuous variables are winsorized at the 1st and 99th percentiles. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 3 Determinants analysis (logistic panel regression)

	(Full Sample)		(Subsample without consultant in t-1)		(Subsample without consultant in t-3 to t-1)	
	COMP_CONS (1)	COMP_CONS (2)	COMP_CONS (3)	COMP_CONS (4)	COMP_CONS (5)	COMP_CONS (6)
COMPLEX_SIZE	1.025***	0.266***	0.231***	0.336***	0.259***	0.263
	(0.062)	(0.055)	(0.025)	(0.122)	(0.038)	(0.285)
COMPLEX_OPER	-0.085	-0.221	-0.670*	-1.303	0.870	4.477**
	(0.581)	(0.517)	(0.407)	(1.010)	(0.593)	(1.980)
COMPLEX_STAKEH	-0.256***	0.015	-0.080**	0.139*	-0.178***	0.146
	(0.046)	(0.041)	(0.038)	(0.080)	(0.055)	(0.149)
COMPLEX_REPORT	2.107***	0.483***	0.789***	1.072***	0.695***	1.733***
	(0.221)	(0.179)	(0.148)	(0.348)	(0.213)	(0.668)
NR_PEERS	0.216***	-0.013	0.224***	-0.004	0.109*	-0.354*
	(0.058)	(0.058)	(0.045)	(0.110)	(0.065)	(0.212)
PEER_DIFF	0.796***	0.357***	0.567***	0.215*	0.676***	0.502**
	(0.061)	(0.057)	(0.068)	(0.113)	(0.100)	(0.233)
GOV_INDEX17	0.372***	0.149***	0.087***	0.137***	0.101***	0.088
	(0.046)	(0.024)	(0.021)	(0.045)	(0.031)	(0.096)
GOV_PERC_INDEP_BOARD	-0.018***	-0.005**	-0.005***	-0.013***	-0.011***	-0.017**
	(0.002)	(0.002)	(0.002)	(0.004)	(0.002)	(0.007)
BOARD_SIZE	-0.677***	-0.164	-0.646***	-0.089	-0.490***	-0.123
	(0.118)	(0.115)	(0.072)	(0.229)	(0.102)	(0.397)
ROA	-0.106	0.090	-0.057	0.202	-0.111	0.597
	(0.115)	(0.111)	(0.136)	(0.207)	(0.218)	(0.398)
COMPETITION	-0.003	-0.004*	-0.003**	-0.002	-0.002	-0.005
	(0.002)	(0.002)	(0.001)	(0.004)	(0.002)	(0.013)
APPROVAL	5.386***	2.314***	2.214***	2.451***	2.216***	2.283***
	(0.782)	(0.099)	(0.172)	(0.195)	(0.258)	(0.380)
COMMITTEE	3.695***	1.390***	1.564***	1.477***	1.720***	1.555***
	(0.213)	(0.070)	(0.097)	(0.130)	(0.167)	(0.229)
CONTRACT	1.038***	0.512***	0.454***	0.285**	0.403***	0.241
	(0.099)	(0.062)	(0.076)	(0.114)	(0.110)	(0.186)
BENCHMARK	1.418***	0.818***	0.905***	1.217***	0.930***	0.745***
	(0.123)	(0.070)	(0.088)	(0.135)	(0.126)	(0.211)
SURVEY	4.841***	2.174***	1.944***	1.696***	1.854***	1.668***
	(0.369)	(0.073)	(0.129)	(0.130)	(0.202)	(0.231)
CEO_NEW	0.175***	0.050	0.440***	0.241*	0.502***	0.379*
	(0.066)	(0.069)	(0.088)	(0.125)	(0.135)	(0.210)
CEO_INSIDER	0.578***	0.187**	0.365***	0.303*	0.408***	0.120
	(0.089)	(0.082)	(0.094)	(0.167)	(0.129)	(0.329)
CEO_NEW×CEO_INSIDER	-0.235**	-0.100	-0.366***	-0.146	-0.405*	-0.289
	(0.093)	(0.106)	(0.140)	(0.194)	(0.209)	(0.345)
CEO_TENURE	0.038***	0.021*	-0.009	0.047**	-0.015	0.052
	(0.014)	(0.011)	(0.015)	(0.023)	(0.021)	(0.038)
CEO_GENDER	-0.169*	0.005	-0.069	0.257*	0.091	0.560*
	(0.087)	(0.070)	(0.070)	(0.142)	(0.099)	(0.288)
Constant	-44.293***		-16.270***		-17.967***	
	(2.457)		(0.673)		(1.168)	
Fixed Effects	Year&Ind	Year&Org	Year&Ind	Year&Org	Year&Ind	Year&Org
N	319,097	33,948	265,701	10,331	164,743	4,028
Pseudo R-squared	0.319	0.467	0.198	0.401	0.189	0.520

This table presents the results of logistic regression analyses of the determinants of the use of compensation consultants. The outcome variable COMP_CONS is an indicator variable that is one if the organization employed consultants in year t. *The outcome variable COMP_CONS_NEW is an indicator variable that is one if the organization employed consultants in year* t*, but not in year* t-1. *Organization-clustered robust standard errors are in parentheses.* * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 4 Consequence analysis: Effect on CEO compensation. Propensity-score matched samples.

	(1) TOT_COMP	(2) TOT_COMP	(3) TOT_SALARY	(4) TOT_SALARY	(5) TOT_BONUS	(6) TOT_BONUS	(7) TOT_OTHER	(8) TOT_OTHER	(9) COMP_COMPLEX	(10) COMP_COMPLEX
COMP_CONS	0.276***		0.206***		1.500***		0.452***		0.102***	
	(0.007)		(0.007)		(0.067)		(0.026)		(0.020)	
COMP_CONS_NEW		0.184***		0.142***		1.216***		0.196***		-0.060
		(0.018)		(0.018)		(0.196)		(0.076)		(0.058)
SIZE	0.111***	0.113***	0.084***	0.094***	0.457***	0.327***	0.215***	0.175***	0.324***	0.260***
	(0.003)	(0.007)	(0.002)	(0.007)	(0.022)	(0.066)	(0.009)	(0.025)	(0.007)	(0.020)
DONATIONS	-0.007***	-0.008***	-0.005***	-0.003	-0.030***	-0.058**	-0.021***	-0.027***	-0.002	-0.006
	(0.001)	(0.003)	(0.001)	(0.002)	(0.008)	(0.025)	(0.003)	(0.010)	(0.003)	(0.008)
GOV_GRANTS	-0.002***	-0.004**	-0.001	-0.003**	-0.053***	-0.053***	0.002	-0.007	0.005***	0.011**
	(0.001)	(0.002)	(0.001)	(0.001)	(0.006)	(0.017)	(0.002)	(0.006)	(0.002)	(0.005)
FUNDR_EXP	-0.009***	-0.006***	-0.007***	-0.007***	-0.071***	-0.050**	-0.014***	0.001	0.010***	0.014**
	(0.001)	(0.002)	(0.001)	(0.002)	(0.007)	(0.021)	(0.003)	(0.009)	(0.002)	(0.007)
GOV_INDEX17	-0.000	-0.004	0.003	-0.000	0.112***	0.060	0.075***	0.040	0.045***	0.040*
	(0.003)	(0.007)	(0.003)	(0.008)	(0.023)	(0.074)	(0.011)	(0.034)	(0.007)	(0.021)
GOV_PERC_INDEP_BOARD	-0.005***	-0.006***	-0.004***	-0.004***	-0.018***	-0.014***	-0.007***	-0.008***	0.006***	0.008***
	(0.000)	(0.001)	(0.000)	(0.001)	(0.002)	(0.005)	(0.001)	(0.003)	(0.001)	(0.002)
BOARD_SIZE	0.116***	0.106***	0.097***	0.073***	0.457***	0.416**	0.324***	0.217**	0.459***	0.412***
	(0.008)	(0.021)	(0.007)	(0.019)	(0.070)	(0.210)	(0.028)	(0.096)	(0.022)	(0.063)
APPROVAL	-0.138***	-0.219***	-0.079***	-0.170***	-0.531***	-0.896	0.035	0.093	0.675***	0.706***
	(0.021)	(0.058)	(0.020)	(0.062)	(0.170)	(0.554)	(0.096)	(0.306)	(0.055)	(0.186)
COMMITTEE	0.137***	0.133***	0.101***	0.100***	0.918***	1.168***	0.274***	0.329***	0.022	0.017
	(0.008)	(0.020)	(0.008)	(0.021)	(0.074)	(0.217)	(0.030)	(0.092)	(0.022)	(0.061)
CONTRACT	0.053***	0.021	0.045***	0.006	0.291***	0.562***	-0.026	-0.092	0.113***	0.127**
	(0.007)	(0.019)	(0.007)	(0.019)	(0.068)	(0.204)	(0.027)	(0.079)	(0.021)	(0.059)
BENCHMARK	0.019***	0.027	0.019***	0.020	0.051	-0.183	0.056**	0.073	0.064***	0.036
	(0.007)	(0.019)	(0.007)	(0.020)	(0.072)	(0.208)	(0.027)	(0.075)	(0.022)	(0.061)
SURVEY	0.077***	0.076***	0.073***	0.069***	0.616***	0.564**	0.340***	0.332***	0.174***	0.194**
	(0.010)	(0.024)	(0.010)	(0.025)	(0.093)	(0.273)	(0.042)	(0.121)	(0.029)	(0.077)
COMPETITION	0.002***	0.002***	0.002***	0.002***	0.002**	0.006**	0.003***	0.000	0.002***	0.001
	(0.000)	(0.000)	(0.000)	(0.000)	(0.001)	(0.003)	(0.000)	(0.001)	(0.000)	(0.001)
CEO_NEW	-0.067***	-0.014	-0.093***	-0.020	-0.643***	-0.517*	-0.287***	-0.211	-0.204***	-0.352***
	(0.006)	(0.032)	(0.008)	(0.030)	(0.060)	(0.304)	(0.030)	(0.142)	(0.018)	(0.093)
CEO_INSIDER	0.078***	0.069***	0.060***	0.090***	0.304***	-0.165	0.335***	0.083	0.020	0.007
	(0.009)	(0.023)	(0.009)	(0.021)	(0.084)	(0.244)	(0.031)	(0.095)	(0.026)	(0.073)
CEO_TENURE	0.034***	0.030***	0.028***	0.030***	0.061***	-0.008	0.086***	0.066***	0.026***	0.004
	(0.001)	(0.005)	(0.001)	(0.004)	(0.013)	(0.048)	(0.005)	(0.017)	(0.004)	(0.014)
CEO_GENDER	-0.159***	-0.137***	-0.129***	-0.105***	-0.267***	-0.029	-0.269***	-0.261***	-0.002	-0.004
	(0.007)	(0.020)	(0.008)	(0.019)	(0.071)	(0.217)	(0.027)	(0.086)	(0.022)	(0.063)
Constant	10.988***	11.043***	10.995***	10.918***	-5.059***	-2.181	4.800***	6.199***	-5.996***	-4.677***
	(0.052)	(0.161)	(0.053)	(0.217)	(0.454)	(1.496)	(0.226)	(0.643)	(0.143)	(0.447)
Fixed Effects	Year&Ind	Year&Ind	Year&Ind	Year&Ind	Year&Ind	Year&Ind	Year&Ind	Year&Ind	Year&Ind	Year&Ind
N	77,006	2,924	77,006	2,924	77,006	2,924	77,006	2,924	77,006	2,924
Adj R-squared	0.344	0.329	0.210	0.248	0.127	0.108	0.107	0.071	0.330	0.263
F-value	357.770	41.660	258.128	32.267	93.846	8.845	112.382	8.022	271.568	24.015

This table presents the results of ordinary least squares regression analyses of the consequences of the use of compensation consultants. The samples are propensity score matched along the parameters identified in the text. The reduced sample in the even columns includes only organizations that had not used a consultant in the three years prior to year t. *The outcome variable* COMP_CONS *is an indicator variable that is one if the organization employed compensation consultants in year* t *and* COMP_CONS_NEW *is an indicator variable that is one if the organization employed compensation consultants in year* t *but not in* t-3 *to* t-1. *Organization-clustered robust standard errors are in parentheses.* * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 5 Consequence analysis: Effect on future performance. Propensity-score matched samples.

	(1) PROG_RATIO$_{t+2}$	(2) PROG_RATIO$_{t+2}$	(3) TOT_REV$_{t+2}$	(4) TOT_REV$_{t+2}$	(5) DONATIONS$_{t+2}$	(6) DONATIONS$_{t+2}$	(7) GOV_GRANTS	(8) GOV_GRANTS$_{t+2}$	(9) ROA$_{t+2}$	(10) ROA$_{t+2}$
COMP_CONS	0.002		-0.008		-0.050**		-0.069*		-0.008***	
	(0.001)		(0.005)		(0.024)		(0.037)		(0.002)	
COMP_CONS_NEW		-0.004		-0.012		-0.006		-0.014		-0.005
		(0.005)		(0.036)		(0.118)		(0.172)		(0.008)
PROG_RATIO	0.887***	0.870***	-0.010	-0.143*	0.732***	0.782**	0.655***	1.152***	-0.019***	-0.025
	(0.005)	(0.023)	(0.012)	(0.086)	(0.067)	(0.316)	(0.062)	(0.319)	(0.004)	(0.018)
TOT_REV	0.001	0.003	0.951***	1.047***	0.088***	0.200**	0.143***	0.295***	-0.002	0.004
	(0.001)	(0.004)	(0.005)	(0.043)	(0.016)	(0.097)	(0.017)	(0.086)	(0.001)	(0.006)
DONATIONS	0.001***	0.003***	-0.000	0.001	0.812***	0.784***	0.039***	0.072***	0.001***	0.002
	(0.000)	(0.001)	(0.001)	(0.006)	(0.005)	(0.025)	(0.004)	(0.022)	(0.000)	(0.001)
GOV_GRANTS	0.000***	-0.000	0.003***	-0.002	0.025***	0.023**	0.837***	0.771***	0.000***	0.001
	(0.000)	(0.000)	(0.000)	(0.003)	(0.002)	(0.010)	(0.004)	(0.017)	(0.000)	(0.001)
ROA	0.010***	0.010	-0.249***	-0.194**	-0.467***	0.069	-0.153*	0.642	0.402***	0.529***
	(0.004)	(0.011)	(0.028)	(0.079)	(0.097)	(0.539)	(0.086)	(0.465)	(0.020)	(0.064)
SIZE	-0.001**	-0.004	0.049***	-0.017	0.003	-0.115	-0.041***	-0.081	0.007***	0.002
	(0.001)	(0.002)	(0.004)	(0.028)	(0.014)	(0.074)	(0.015)	(0.079)	(0.001)	(0.007)
FUNDR_EXP	0.001***	0.000	0.002***	0.002	0.057***	0.072***	0.008*	-0.030	0.000*	-0.001*
	(0.000)	(0.001)	(0.001)	(0.003)	(0.003)	(0.014)	(0.004)	(0.020)	(0.000)	(0.001)
NET_INCOME	0.000	0.000	-0.000***	0.000	-0.000***	-0.000	-0.000*	-0.000	-0.000***	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
GOV_INDEX17	0.001**	-0.000	0.009***	0.028	0.054***	-0.008	0.040***	0.080	0.001*	-0.001
	(0.001)	(0.002)	(0.002)	(0.018)	(0.011)	(0.053)	(0.012)	(0.057)	(0.001)	(0.003)
GOV_PERC_INDEP_BOARD	-0.000***	-0.000***	0.000*	0.002	0.003***	0.005	0.002**	0.007	0.000***	0.000
	(0.000)	(0.000)	(0.000)	(0.002)	(0.001)	(0.005)	(0.001)	(0.005)	(0.000)	(0.000)
BOARD_SIZE	-0.006***	-0.001	0.018***	0.017	0.135***	0.247	0.030	0.292	0.001	0.008
	(0.001)	(0.006)	(0.006)	(0.033)	(0.030)	(0.154)	(0.035)	(0.182)	(0.002)	(0.010)
COMPETITION	-0.000***	-0.000**	0.000	-0.001	-0.002***	0.001	0.000	-0.001	-0.000**	0.000
	(0.000)	(0.000)	(0.000)	(0.001)	(0.001)	(0.002)	(0.000)	(0.002)	(0.000)	(0.000)
APPROVAL	-0.008*	0.014	-0.012	-0.022	0.003	-0.444	0.082	-0.006	-0.012**	-0.056*
	(0.004)	(0.023)	(0.020)	(0.153)	(0.085)	(0.409)	(0.091)	(0.361)	(0.006)	(0.034)
COMMITTEE	0.002*	-0.001	-0.016***	-0.047	-0.106***	-0.072	-0.083**	-0.110	-0.007***	0.002
	(0.001)	(0.005)	(0.006)	(0.030)	(0.028)	(0.144)	(0.038)	(0.188)	(0.002)	(0.009)
CONTRACT	-0.002*	-0.010*	0.008	0.033	-0.028	-0.118	0.012	-0.119	0.000	-0.005
	(0.001)	(0.005)	(0.005)	(0.029)	(0.025)	(0.124)	(0.037)	(0.176)	(0.002)	(0.009)
BENCHMARK	0.001	0.005	0.005	0.010	-0.030	0.132	-0.086**	-0.154	0.002	-0.017*
	(0.001)	(0.005)	(0.005)	(0.034)	(0.026)	(0.133)	(0.039)	(0.177)	(0.002)	(0.009)
SURVEY	-0.000	-0.001	0.003	-0.022	0.017	0.270	0.070	0.135	-0.006**	-0.010
	(0.002)	(0.008)	(0.008)	(0.036)	(0.039)	(0.172)	(0.048)	(0.230)	(0.003)	(0.012)
Constant	0.097***	0.101*	-0.155***	-1.114*	-1.763***	-0.799	-2.580***	-6.199***	-0.130***	-0.040
	(0.012)	(0.053)	(0.053)	(0.571)	(0.224)	(1.111)	(0.257)	(1.158)	(0.019)	(0.089)
Fixed Effects	Year&Ind	Year&Ind	Year&Ind	Year&Ind	Year&Ind	Year&Ind	Year&Ind	Year&Ind	Year&Ind	Year&Ind
N	54,062	1,992	54,020	1,989	54,061	1,992	40,662	1,992	54,045	1,992
Adj R-squared	0.888	0.879	0.922	0.850	0.841	0.827	0.778	0.740	0.186	0.285
F-value	2973.8	362	9957.8	396.6	3763.5	185.4	4664.7	364.0	41.9	6.8

This table presents the results of ordinary least squares regression analyses of the consequences of the use of compensation consultants. The sample is propensity score matched along the parameters identified in the text. The reduced sample in the even columns includes only organizations that had not used a consultant in the three years prior to year t. The outcome variable COMP_CONS *is an indicator variable that is one if the organization employed compensation consultants in year* t *and* COMP_CONS_NEW *is an indicator variable that is one if the organization employed compensation consultants in year* t *but not in* t-3 *to* t-1. *Organization-clustered robust standard errors are in parentheses.* * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 6 Good Committees and Consultants

	(Full Sample)		(Subsample without consultant in t-1)		(Subsample without consultant in t-3 to t-1)	
	COMP_CONS (1)	COMP_CONS (2)	COMP_CONS (3)	COMP_CONS (4)	COMP_CONS (5)	COMP_CONS (6)
COMMITTEE	9.589***	3.757***	2.756***	4.602***	2.866***	2.079
	(1.144)	(0.574)	(0.571)	(1.047)	(0.832)	(1.923)
GOV_INDEX17	0.496***	0.207***	0.106***	0.204***	0.110***	0.066
	(0.061)	(0.030)	(0.027)	(0.053)	(0.042)	(0.114)
GOV_INDEX17×COMMITTEE	-0.319***	-0.138***	-0.050	-0.201***	-0.053	-0.021
	(0.072)	(0.038)	(0.038)	(0.069)	(0.055)	(0.129)
FULL_BOARD_INDEP	0.347**	0.189*	0.137	-0.236	-0.059	-0.118
	(0.145)	(0.102)	(0.111)	(0.199)	(0.158)	(0.368)
FULL_BOARD_INDEP×COMMITTEE	-1.834***	-0.501***	-0.777***	-0.184	-0.657***	-0.337
	(0.198)	(0.113)	(0.139)	(0.215)	(0.194)	(0.374)
CONTROLS	YES	YES	YES	YES	YES	YES
FIXED EFFECTS	Year&Ind	Year&Org	Year&Ind	Year&Org	Year&Ind	Year&Org
N	316,990	33,948	265,701	10,331	163,681	4,028
Pseudo R-squared	0.321	0.468	0.200	0.401	0.188	0.519

This table presents the results of additional logistic regression analyses of the determinants of the use of compensation consultants. The outcome variable COMP_CONS *is an indicator variable that is one if the organization employed compensation consultants in year* t*. Organization-clustered robust standard errors are in parentheses.* * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Summary

This dissertation in the realm of nonprofit governance and nonprofit accounting spotlights the intricate balance between rewarding talent and adhering to organizational missions and values. Through three chapters of comprehensive empirical analyses, it dissects potential determinants and consequences of governance choices in the third sector and variations therein across diverse nonprofit categories.

The first chapter examines a specific non-financial consequence of excessive CEO compensation that receives media attention. While emphasizing the dissemination role of news media, the findings indicate that CEO compensation mentioned in the media is negatively related to the number of volunteers at nonprofit organizations. The implications of this study highlight the drawbacks of excessive compensation for organizations that rely on public support in the form of volunteerism. The study also underlines the importance of media attention to nonprofit governance.

In the second chapter, a critical investigation into whether nonprofits employ creative compensation methods as a means to sidestep tax obligations reveals nuanced strategies that answer the research question of whether nonprofit organizations avoid taxes. It highlights possible unintended consequences of taxing executive compensation and adds to our understanding of how tax policy can prove harmful in a setting where transparency and accountability are of utmost importance. Perks, loans, and delegation of management can serve as tax-avoiding alternatives to compensation which help boards balance the need to retain executive talent with the efficient use of resources.

Third, the dissertation delves into the dynamics surrounding the engagement of compensation consultants by nonprofits. By examining the determinants leading to their employment—including organizational governance factors—as well as the resultant shifts in compensation structures and performance, the study sheds light on broader implications for nonprofit performance. The study finds that good governance is not a deciding factor in the hiring of compensation consultants. Also, the hiring of compensation consultants is not found to improve some common measures of nonprofit organizational performance.

Collectively, these chapters contribute to a deeper understanding of the challenges confronting nonprofits in the realm of executive compensation. In a sector where optimal pay can be viewed as excessive by important public stakeholders, getting it right is both important and difficult. The challenges in determining extrinsic rewards emphasize the benefits of having intrinsically motivated staff in nonprofit organizations.

Samenvatting

Deze dissertatie op het gebied van non-profit governance en non-profit accounting belicht het delicate evenwicht tussen het belonen van talent en het naleven van de missie en waarden van de organisatie. Door middel van drie hoofdstukken met uitgebreide empirische analyses onderzoekt het de mogelijke determinanten en gevolgen van governancekeuzes in de derde sector en de variaties hierin binnen diverse categorieën non-profitorganisaties.

Het eerste hoofdstuk onderzoekt een specifieke niet-financiële consequentie van excessieve beloning van CEO's in de media. Terwijl het de verspreidende rol van nieuwsmedia benadrukt, wijzen de bevindingen erop dat de beloning van CEO's die in de media wordt genoemd negatief gerelateerd is aan het aantal vrijwilligers bij non-profitorganisaties. De implicaties van deze studie tonen de nadelen van buitensporige beloningen voor organisaties die afhankelijk zijn van publieke steun in de vorm van vrijwilligerswerk. Daarnaast benadrukt de studie het belang van media-aandacht voor non-profit governance.

In het tweede hoofdstuk wordt kritisch onderzocht of non-profits creatieve beloningsmethoden gebruiken om belastingverplichtingen te omzeilen. Het onthult subtiele strategieën en beantwoordt de onderzoeksvraag of non-profitorganisaties belastingen ontwijken. Het belicht mogelijke onbedoelde gevolgen van het belasten van topsalarissen en draagt bij aan ons begrip van hoe belastingbeleid schadelijk kan zijn in een omgeving waar transparantie en verantwoording van het grootste belang zijn. Extraatjes, leningen en delegatie van management kunnen dienen als belastingontwijkende alternatieven voor beloningen, waarmee besturen een balans kunnen vinden tussen het behouden van talentvol leiderschap en het

efficiënt gebruik van middelen.

Ten derde verdiept de dissertatie zich in de dynamiek rond het inschakelen van beloningsadviseurs door non-profits. Door de determinanten die leiden tot hun inzet—waaronder organisatorische governancefactoren—en de resulterende veranderingen in beloningsstructuren en prestaties te onderzoeken, werpt de studie licht op bredere implicaties voor de prestaties van non-profits. De studie toont aan dat goed bestuur geen doorslaggevende factor is bij het inhuren van beloningsadviseurs. Daarnaast blijkt dat het inschakelen van beloningsadviseurs geen verbetering oplevert op enkele gangbare maatstaven voor de prestaties van non-profitorganisaties.

Gezamenlijk dragen deze hoofdstukken bij aan een dieper begrip van de uitdagingen waarmee non-profits te maken hebben op het gebied van executive beloningen. In een sector waar optimale beloning door belangrijke publieke belanghebbenden als excessief kan worden gezien, is het vinden van de juiste balans zowel belangrijk als moeilijk. De uitdagingen bij het vaststellen van extrinsieke beloningen onderstrepen de voordelen van intrinsiek gemotiveerd personeel in non-profitorganisaties.

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This dissertation investigates the nuanced challenges of executive compensation and governance in the nonprofit sector. It contains three distinct empirical studies, each addressing pivotal questions in this field.

The first study examines whether excessive executive compensation is related to volunteer labor contributions in nonprofit organizations, highlighting the role of public perception and media coverage. The second study explores how nonprofit organizations navigate taxation challenges when executive pay policies are scrutinized by regulations such as Section 4960. Finally, the third study analyzes the influence of compensation consultants on executive pay-setting processes and organizational outcomes, offering insights into their role in achieving governance objectives.

Together, these studies contribute to the understanding of how nonprofit organizations balance fair compensation, public trust, and operational needs while striving to fulfill their social missions. This work provides valuable implications for academics, practitioners, and policymakers seeking to optimize nonprofit governance and accountability.

Wilhelmus Geertrudis Maria Maas (Heerlen, The Netherlands, 1993) graduated cum laude from Tilburg University with a BSc in Business Economics in 2014, followed by three Master's degrees: an MSc in Accounting (2015), an MSc in Academic Teacher in Management and Organization (cum laude, 2016), and an MSc in Academic Teacher in Economics (2016). After gaining professional experience in education, he began research master's courses in 2018 and officially enrolled in Tilburg University's Professional PhD Program in 2019, combining his teaching responsibilities with research. His doctoral work, supervised by Prof. Dr. Stephan Hollander, Prof. Dr. Anja de Waegenaere, and Prof. Dr. Christoph Sextroh, included a research visit to the University of Melbourne in 2019. In 2024, he decided to continue his role at Tilburg University as an educator in undergraduate programs and assume a role in teacher education at the Tilburg Center of the Learning Sciences.

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