

Boston University School of Law

Scholarly Commons at Boston University School of Law

Faculty Scholarship

12-2013

Sunshine, Stakeholders, and Executive Pay: A Regression-Discontinuity Approach

Brian D. Galle

Georgetown University Law Center

David I. Walker

Boston University School of Law

Follow this and additional works at: https://scholarship.law.bu.edu/faculty_scholarship



Part of the [Nonprofit Organizations Law Commons](#), and the [Other Law Commons](#)

Recommended Citation

Brian D. Galle & David I. Walker, *Sunshine, Stakeholders, and Executive Pay: A Regression-Discontinuity Approach* (2013).

Available at: https://scholarship.law.bu.edu/faculty_scholarship/3152

This Working Paper is brought to you for free and open access by Scholarly Commons at Boston University School of Law. It has been accepted for inclusion in Faculty Scholarship by an authorized administrator of Scholarly Commons at Boston University School of Law. For more information, please contact lawlessa@bu.edu.



SUNSHINE, STAKEHOLDERS, AND EXECUTIVE PAY: A REGRESSION-DISCONTINUITY APPROACH

Boston College Law School Legal Studies Research Paper No. 316
(December 17, 2014)
Boston University School of Law Working Paper No. 14-09
(January 27, 2014)

Brian D. Galle
Boston College Law School

David I. Walker
Boston University School of Law

This paper can be downloaded without charge at:

<http://www.bu.edu/law/faculty/scholarship/workingpapers/2014.html>

**Sunshine, Stakeholders, and Executive Pay:
A Regression-Discontinuity Approach**

Dec. 17, 2013

**Brian Galle
Boston College Law School
brian.galle@bc.edu**

**David I. Walker
Boston University Law School
diwalker@bu.edu**

Abstract

We evaluate the effect of highly salient disclosure of private college and university president compensation on subsequent donations. Using a differences-in-discontinuities approach to compare institutions that are highlighted in the Chronicle of Higher Education's annual "top 10" list of most highly-compensated presidents against similar others, we find that appearing on a top 10 list is associated with reduced average donations of 4.5 million dollars in the first full fiscal year following disclosure, despite greater fundraising by "top 10" schools. We also find some evidence that top 10 appearances slow the growth of compensation, while increasing enrollment, in subsequent years. We interpret these results as consistent with the hypothesis that donors care about compensation but are typically inattentive to pay levels. We discuss the implications of these findings for the regulation of nonprofits and for our broader understanding of the pay-setting process at for-profit as well as nonprofit organizations.

1. Introduction

Nonprofit organizations are characterized by a separation of ownership from control that leads to predictable agency problems. (Glaeser 2003, Steinberg 1990). As in the for-profit sector (Bebchuck, Fried, and Walker 2002), those agency problems could result in excessive executive pay. To be sure, there is a line of argument in the nonprofit literature that “the people attracted to managerial positions in the non-profit sector are those who care relatively little about financial gain,” and hence need little oversight. (Rose-Ackerman 1987; for similar sentiments, see Jobome 2006, Ballou & Weisbrod 2003, Roomkin & Weisbrod 1999, Rose-Ackerman 1996, and Fama & Jensen 1983). As a consequence, some have argued that “boards should not necessarily invest in ... mechanisms ... to curb ... CEO pay excesses.” (Jegers 2008).

Whether and to what extent agency problems affect executive pay in the nonprofit sector is an open question. While scholars have closely studied the consequences of similar agency problems in the context of managerial pay among for-profit firms (see Walker 2012 for a recent overview), this has not been the case for nonprofit organizations. Prior work has explored different views of the objective functions of nonprofit firms. (See Horwitz & Nichols 2009 for a review.) But there has been little examination of the impact executive pay structures may have on the objective functions of nonprofit *managers*.

Moreover, even if it is the case that nonprofit managers are less motivated by cash than others, they may still be interested enough to make investments in monitoring worthwhile. Galle & Walker (2013), drawing on theories of managerial power in the for-

profit sector, sketch a framework in which nonprofit managers with even modest interest in monetary rewards can extract rents from their firms relatively easily.

Galle & Walker (2013) also argue that donors represent a potential source of monitoring and executive pay discipline in the nonprofit sector. But in order to serve this monitoring/disciplining role, it must be the case that 1) donors are aware (at some level) of nonprofit executive compensation, 2) care about these pay levels, and 3) respond, in aggregate, negatively to higher executive pay levels by withholding or reducing donations. Analyzing the compensation of the presidents of three hundred and forty colleges and universities between 1999 and 2007, and controlling for a variety of institutional and individual variables, Galle & Walker (2013) find that an additional dollar of compensation in years $Y - 1$ or $Y - 2$ is associated with \$30 less in donations in year Y . They also report that increasing dependence on donations tends to reduce reported total compensation.

A difficulty with these earlier findings is the possibility of omitted variable bias. Unobservable presidential ability, institutional culture, and similar factors may simultaneously affect both donations and compensation.

Accordingly, in this paper we revisit the role of donors in a setting that we argue is less susceptible to these econometric issues. We observe the effect on donations of appearing in the Chronicle of Higher Education's annual "top ten" lists of the highest-compensated college and university presidents. Using a differences-in-discontinuities design to compare presidents appearing on a "top ten" list in each of three ranking categories with others, we find that appearing on a top ten list is associated with reduced average donations of between 2.8 and 4.5 million dollars, depending on the specification.

This reduction, moreover, occurs despite increased fundraising effort and increased enrollment at universities that appear on a top ten list. And we find some evidence that top-ten appearances slow the growth of compensation in later years. We suggest that these findings provide evidence that the added salience of appearing on the top ten list increases the effectiveness of stakeholder monitoring, although we cannot rule out the possibility that donors react disproportionately to top ten compensation.

While some econometric questions remain, we argue that this method represents an advance over earlier work in that it more closely resembles random assignment to treatment and control. In a group of over 100 rivals, whether a given president happens to be the 9th or 11th-most highly paid in a particular year is essentially random. Thus there should be little correlation between the “treatment,” top ten appearance, and any omitted variables.

Our findings are potentially relevant to the operation and regulation of nonprofit organizations. Evidence that donors react negatively to higher executive pay means that donors are a potential source of monitoring and pay discipline, but the differential impact of appearing on the CHE’s top ten list suggests that substantial agency costs remain in this setting. It appears that donors are somewhat aware of but not fully attentive to the pay-setting process, and their negative reaction to high pay when it is made salient implies that process does not fully reflect their preferences.

Rent extraction affects firms not only by diminishing their resources but also by changing managerial incentives. Again, we find some evidence that affected presidents increase enrollment, which we suggest may be motivated by knowledge that larger

colleges tend to pay more. Nor is there any reason to suspect that agency costs differ in other forms of large, complex nonprofits. Our data therefore speak to the possibility of added disclosure or other forms of regulatory oversight of nonprofit pay-setting.

Finally, our results also have implications for those interested in public company executive pay or in the general institutional design of disclosure regimes. We find major differences in the impact of information when it is packaged in a way that is readily accessible and digestible by its consumers. While the nonprofit setting differs in important ways from other institutions, our results in this respect are consistent with suggestive earlier results in the public company context.

2. Theory and Prior Literature

2.1 Managerial Agency Costs at For-Profit and Nonprofit Organizations

Is executive compensation a reflection of agency costs, or is it instead a tool for constraining them? While any sophisticated answer probably begins at “some of both,” commentators vary in their view of the relative importance of the two possibilities. For example, Bebchuk, Fried & Walker (2002) (“BFW”) suggest that “managerial power” and agency slack play an outsized role both in the amount and form of executive compensation, particularly at publicly-traded firms. Many others, however, hold that the high cost of compensation at most public firms is typically an efficient response to the separation of ownership from control. (E.g., Edmans & Gabaix 2009, Core et al. 2003, Murphy 2002).

Whatever the answer in the public company context, conventional wisdom suggests that ideological alignment with donors serves to constrain rent-seeking by managers at nonprofit firms (e.g., Caers et al. 2006, Jobome 2006, Roomkin & Weisbrod 1999, Rose-

Ackerman 1996, Fama & Jensen 1983). The basic argument of this “stewardship theory,” (Sedatole et al. 2013) is that managers self-select into employment at non-profits, where they know that compensation will be lower. (Caers et al. 2006). Managers are therefore motivated primarily by ideological or other mission-related goals. (Rose-Ackerman 1996). Commentators suggest that this combination implies that investments in reducing agency costs in the executive pay-setting context are not worthwhile, since any principal-agent slack would be minimal. (Jegers 2008, Jobome 2006).

Galle & Walker (2013) suggest several reasons to be skeptical of the pay-setting process at nonprofit institutions. Compensation may not be the foremost concern for these managers, but it is surely an input in their utility function. Studies find some evidence of pay for performance among non-profits, implying that managers indeed are motivated by financial rewards. (Sedatole et al. 2013; see Galle & Walker 2013 for a review of the evidence among private colleges and universities). Even if managers fully internalize the benefit of the output of their firms, the marginal utility of a dollar for a firm of any significant size is typically far lower than for the manager, leaving her with incentives to shift funds to her own use.

Non-profit managers who perceive some value in additional compensation have ample opportunities to extract it. As in the case of public companies, boards of directors are charged with negotiating nonprofit executive pay. These boards are likely to be relatively weak and the executives relatively strong with respect to the pay setting process, and other matters, for the same reasons that public company boards are weak and executives strong. First, nonprofit outside directors are part-timers who typically

spend a small fraction of their time exercising oversight over the organization, while the full time executives set the agenda and control the flow of information to the outside directors. (Fishman 1987; *cf.* BFW 2002 describing the impact at public companies.) Second, while public company directors are increasingly compensated with equity, most nonprofit outside directors have little or no economic interest in their organizations. (Hansmann 1980.) Third, as in the case of public companies, nonprofit outside directors are likely to be bound to the senior executives through various formal and informal ties that encourage a culture of deference to the executives.¹ (Main, O'Reilly & Wade 1995 (for-profits); Ben-Ner & Hoomissen 1994 (nonprofits)).

Moreover, external market forces are even less likely to provide effective discipline over the executive pay-setting process in the nonprofit than the for-profit sector. There is no organizational control market in the nonprofit sector, and, given the nature of the sector, markets for capital and products are likely to be much less efficient than in the for-profit sector.

These disabilities have been recognized and the law does provide some responses. State attorneys general have responsibility for nonprofit oversight, including oversight of nonprofit executive pay. But state AGs are subject to their own agency problems and resource constraints and it seems unreasonable to expect state AGs to provide discipline over any but the most egregious cases of excessive nonprofit executive pay. Federal law in theory also prohibits the distribution of profits to managers in the form of “excess”

¹ U.S. tax law discourages conflicts of interest for pay-setting board members, but those rules provide for only a very modest degree of independence. See Galle & Walker (2013) for additional discussion.

compensation. In practice, however, federal rules are extraordinarily deferential to board decisions.

2.2 Donor Monitoring of Nonprofit Executive Pay

Of course, nonprofit organizations have other stakeholders that could provide effective monitoring of executive pay practices. Actual or potential outrage on the part of one or more of these constituencies could influence even a weak board and strong executive to restrain compensation. (BFW 2002). Generally speaking, these constituencies include employees and donors, and in some cases, customers and grant-making organizations.

This paper analyses the relationship between executive pay and donations at private colleges and universities. Each of the aforementioned constituencies is present and could potentially play a disciplining role with respect to compensation in this setting, but we posit that contributors are most likely to play that role. The customers (students and parents) of higher education are typically not repeat players and tend to focus excessively on US News rankings. To our knowledge, government grant-making agencies have shown no interest in university executive pay. University employees might play a disciplining role but have limited leverage. Potential donors, however, may have significant leverage as well as strong ideas about appropriate pay levels.

Although potential donors seem promising as a source of monitoring and pressure on university boards and executives, it is not a given that they will exercise this role. There are two primary obstacles.

First, it is not obvious that donors care about pay levels or that they respond negatively to high pay levels. There are a range of possible responses. Some donors may be indifferent. Other donors may view high executive pay levels as a signal of quality that justifies their support. Still others may view high compensation levels as waste, a signal of poor governance, or an indication that the institution is already flush with funds.² Only in these latter cases would we expect a negative association between pay and donation levels and the existence of such an association would depend on the latter effect outweighing any positive association between pay levels and donations.

Second, potential donors must be aware of executive pay levels. A lack of awareness may arise from rational apathy, particularly in the case of modest contributions from alumni; but poor awareness may be augmented by purposeful obfuscation by nonprofit management. (Galle & Walker 2013.)

Therefore one of our central hypotheses is that changes in the salience of firm governance information will affect stakeholder behavior. Given the natural inclination to free ride on the data collection and analysis of others, news reports or other highly salient disclosures could have an important impact on donations. Our theory derives from BFW (2002), who assert that complicated and relatively opaque pay structures, such as large pensions whose value is disclosed indirectly and in footnotes of public filings, are evidence of managerial rent-seeking, with managers using complexity as a screen to conceal total compensation.

² Although the view is not unanimous, there is evidence in the public company realm that shareholders take a dim view of high executive pay. Kimbro & Xu (2013) find that negative “say on pay” votes are associated with high levels of executive pay. Cai & Walkling (2011) find that the unexpectedly overwhelming House passage of mandatory “say on pay” shareholder voting in 2007 resulted in a positive market reaction at firms with high abnormal CEO pay levels, suggesting that the discipline created by say on pay was welcome.

Although retail shareholders and other casual observers of the firm are usually rationally ignorant of firm governance, for BFW (2002) they are potentially important as a source of outrage. Disclosure may subject managers to shame or other social discomfort. Shareholders who feel strong emotional or ideological responses to high compensation may come to treat firm activism as a private good, and therefore represent a source of latent opposition to managerial plans.

Prior studies of pay disclosure have shed some light on this question but generally have not been able to disentangle market reactions to the *form* of executive compensation from reactions to its value. For example, Wei & Yermack (2011) find an abnormal negative return among firms forced by a 2006 SEC regulation to disclose more clearly the value of executive pensions. But, since managers promised pensions are effectively creditors of the firm, this reaction may have represented concerns about managers' risk preferences more than responses to managerial rents.

Aside from Galle & Walker (2013), no previous study has examined the effect of executive compensation on charitable contributions. Several earlier papers, however, consider whether donors care about administrative costs, of which executive compensation may be a component. Results are generally sensitive to specification, but the consensus seems to be that administrative costs do matter at least at firms that are most dependent on donations. (Kitching et al. 2012, Frumkin & Keating 2010, Jacobs & Marudas 2009, Tinkelman & Mankaney 2007). Donors' emotional connection to the institution is also known to be an important aspect of giving. (E.g., Wright & Bocarnea 2007).

The threat of donor responses frames a set of strategic choices for management. Assuming that firm resources are an input into managers' utility, negative shocks to firm wealth should motivate greater fundraising through an income effect. (Andreoni & Payne 2011). However, if the shock is accompanied by reduced returns to fundraising, as well, the net effect of the shock is ambiguous. (Galle & Nichols unpublished). Alternatively, managers can curtail the sources of donor outrage, such as by reducing pay or making it more opaque to donors. Galle & Walker (2013) summarize the prior literature on the determinants of nonprofit pay, and report new findings that increasing dependence on donations appears to reduce reported compensation.

However, endogeneity issues linger over most of these prior findings. In complex institutions such as universities or public firms, causality questions and omitted variables are inevitable. For example, unobservable aspects of a president's skills and relationship with stakeholders can affect both her pay and donations, leading to biased estimates of the statistical relation between the two. Prior work, to the extent it has engaged with this problem, has relied on instrumental variables and presidential fixed effects (Galle & Walker 2013; Sedatole et al. 2013 similarly use system-GMM instrumental variables methods to address endogeneity issues in the measurement of pay for performance), but it remains unclear whether these techniques can fully control for potential biases.

3. Data and Methodology

In order to better deal with the possible endogeneity concerns mentioned above, we employ here a regression-discontinuity design. The Chronicle of Higher Education reports annually on the ten highest-paid college and university presidents in each of four

categories: private baccalaureate colleges, private masters-granting institutions, private research universities, and public universities.³ We examine the effects of appearing on one of the private-college or university lists.⁴ Since a ranking of, say, nine rather than twelve in any given year is essentially random, we in effect have random assignment to treatment and control groups.

Universities and presidents can influence their likelihood of appearing in the Top 10, but cannot control it precisely. Executive compensation is generally disclosed by all universities at roughly the same time, when their annual tax return is filed and made available for public inspection. Each university can observe compensation disclosed in the previous year, but average nominal compensation rises by roughly 9% annually in our sample. Thus, while schools can greatly reduce their odds of avoiding the list by paying an amount below what the 10th-ranked president earned for the prior year, any amount greater than that may or may not land on the list, depending on how other universities behave.⁵

As Lee & Lemieux (2010) explain, even this small amount of uncertainty is generally sufficient to make the regression-discontinuity design essentially equivalent to random assignment. Nonetheless, we test the random-assignment assumption in several different ways, as reported in more detail below.

³ CHE has varied its approach a bit over time. Before 1999, CHE ranked only the top five most highly compensated presidents for each category. In 1999 CHE used five categories, splitting universities into research and non-research. And for unclear reasons CHE did not produce top 10 lists for private colleges and universities in 2005.

⁴ We omit public universities because of data limitations and because their stakeholders, budget, and management structure can differ considerably from those at public institutions.

⁵ Even paying below what would have been 10th for the prior year runs some risk of hitting the list, since some presidents' pay may include one-time bonuses, rival presidents may retire, and rival boards may change the way that they report non-cash compensation.

Following the standard regression-discontinuity literature (Lee & Lemieux 2010, Angrist & Pischke 2009), we estimate equations of the form:

$$Y_{it} = \alpha + \beta_1 X_{it} + \beta_2 X_{it-1} + \rho D_{it-2} + \beta_3 (z - c)^n + \beta_4 (z - c)^n D_{it-2} + \varepsilon_{it}$$

where ρ represents the coefficient on the discontinuity, top-ten appearance, two periods before donations or other outcome variables of interest are observed. We allow for the possibility of different functional forms on either side of the discontinuity with the normalization, $z - c$, which measures the distance in the assignment variable (here log of the president's total compensation) from the cutoff point. The cutoff point is determined by the compensation of the lowest-ranked president appearing in the relevant list, and so varies by year and category of institution. Following Trochim (2006), we initially include higher polynomial terms of the normalization function, and then drop them where insignificant.

We use a two-year lag of the discontinuity variable because CHE issues its report in the November following each fiscal year, and any resulting donor or firm responses will appear in the tax return for the fiscal year following that. For example, the November 2006 issue of CHE reports on FY 2005 compensation, and any resulting drop in donations would occur primarily during the 2007 fiscal year.⁶ We examine outcomes for the years 1998 through 2010, reflecting CHE top ten lists published from 1997 through 2009 (except 2005, when CHE published no private-university lists).

⁶ Most universities begin their fiscal year in the middle of the calendar year, which potentially allows for some drop in donations in the same calendar year as the CHE report. When we include lags of only one year in our regression (e.g., donations in FY2006 for presidents whose 2005 compensation appeared in the Nov. 2006 top ten list), they have identical signs to those reported below but are not generally statistically significant.

In addition to its ranking of the top ten in each category, CHE also reports---in smaller, densely printed type---salaries and benefits for approximately 300 other private colleges and universities each year, listed in alphabetical order.⁷ CHE draws its information from Form 990 federal tax returns filed annually by each institution. We use the detailed listings to compile our own ranking of presidential pay in each of the four categories for each year. Unsurprisingly, since our rankings are also computed from the CHE data, our top 10's match exactly the CHE rankings.

We draw additional data from the National Center on Charitable Statistics' database of Form 990 tax returns and from the National Center on Education Statistics.⁸ A cautionary note on the compensation and fundraising data is that both sets of numbers are self-reported and rarely subject to close government scrutiny. Since donors react negatively to large fundraising expenditures (Okten & Weisbrod 2000), we expect that any measured increases in reported fundraising are biased downwards. Further, we interpret any compensation findings as the effects on *reported* compensation; we discuss whether this distinction is important in section 4 below.

Our controls are mostly those now standard in the university literature, such as assets, revenues, net tuition, student:faculty ratio, and return on investment. (See Galle & Walker 2013 for more extensive discussion). Since donors may respond to school conditions only with some delay, we run alternative regressions with lagged and same-year controls, and report the lagged-control specifications because they are more precisely

⁷ A sample "top ten" page and detailed listing page are each reproduced in the Appendix.

⁸ We are grateful to the program on Tax Policy and Philanthropy at the Urban Institute for providing us with access to their NCCS data.

identified.⁹ Because we find some evidence that fundraising and enrollment are themselves outcomes variables, we do not control for them in the reported regressions. (See Angrist & Pischke 2009:64-68 for discussion.) Our results are robust to including controls for one or both of these variables.

As shown in the summary statistics in Table 1, below, institutions whose president appears in the top 10 for any given year are fairly similar, if slightly larger on average, than those whose president would rank in the next 10. In an average year, there are about 62 baccalaureate colleges in our sample, along with 128 masters-granting institutions and 113 research universities.¹⁰ Therefore the top 20 are a relatively elite group of presidents in each category, though certainly less so among liberal-arts colleges.

Table 1: Summary Statistics: 1997 to 2010

~~~~~

| <u>Variable</u>     | <u>Obs</u> | <u>Sample Mean</u> | <u>Std. Dev.</u> | <u>Rank 11 - 20 Mean</u> | <u>Top 10 Mean</u> |
|---------------------|------------|--------------------|------------------|--------------------------|--------------------|
| CEO in Last Year?   | 5405       | .0323774           | .1770167         |                          |                    |
| Donations           | 6157       | 3.08e+07           | 8.04e+07         | 8.09e+07                 | 9.08e+07           |
| Donations / student | 6137       | 6709.577           | 9364.835         | 11725.77                 | 11355.79           |
| Execs / 100 FTE     | 5945       | 2.674444           | 2.20487          | 3.138919                 | 3.432617           |
| Faculty             | 5945       | 610.7583           | 1050.6           | 1166.255                 | 1531.606           |
| FTE enrollment      | 6178       | 4235.813           | 4264.762         | 6532.188                 | 7783.933           |
| Fundraising exp.    | 3799       | 2.73e+07           | 1.86e+08         | 6.96e+07                 | 8.11e+07           |
| Government grants   | 5967       | 3.27e+07           | 1.12e+08         | 1.00e+08                 | 1.08e+08           |
| Liabilities         | 5389       | 2.56e+08           | 1.22e+09         | 4.36e+08                 | 6.31e+08           |

<sup>9</sup> Including lags does not meaningfully change the sign or magnitude of any coefficient of interest.

<sup>10</sup> Because of missing data for some schools for some years, the exact number in each category varies each year.

|                    |      |          |          |          |          |
|--------------------|------|----------|----------|----------|----------|
| Log Assets         | 5389 | 19.57549 | 1.232864 | 20.43433 | 20.67045 |
| Net Tuition        | 6165 | 7.39e+07 | 9.97e+07 | 1.27e+08 | 1.65e+08 |
| Ret. on Investment | 5381 | 4.38e+07 | 3.68e+08 | 1.27e+08 | 1.48e+08 |
| Religious Affil.?  | 6388 | .5312107 | .4990598 | .2372372 | .1515152 |
| Share undergrad.   | 3910 | .8453141 | .1661738 | .8028724 | .7948965 |
| Total expenditures | 5387 | 2.21e+08 | 5.15e+08 | 4.53e+08 | 6.51e+08 |
| Total CEO comp     | 6183 | 233917.4 | 279042.5 | 552769.4 | 870259.8 |

Notes: Data cover the period 1997 to 2010. All dollar figures in 2009 dollars.

We omit from our regressions (but not the summary table above) presidents in the last year of their term in office. In many cases, last-year presidents receive a large one-time payout. These payouts are sometimes characterized as cashing out of deferred awards, but a better description in many cases would be a golden parachute, buyout, or separation agreement. That is, the president encounters difficulty and is paid to leave. Since donations might also be expected to fall in the wake of a controversy large enough to force out the chief executive, including these observations might produce a spurious negative correlation between pay and donations. In addition, in the case of a president who exits between receiving her pay and its disclosure, it is less likely that donors would “punish” the president by cutting back on donations.

We also omit presidents reporting zero compensation. In our sample these are universally members of religious orders who take vows of poverty. While in practice the president’s religious order may be reimbursed for her services, the exact value of that reimbursement cannot usually be discerned from available sources.

## 4. Results and Discussion

### 4.1. Testing the Continuity Assumption

A fundamental assumption of the regression-discontinuity design is that the underlying assignment variable is continuous across the discontinuity. (Lee & Lemieux 2010, McCrary 2008.) In our context, we are assuming that the distribution of compensation does not jump or drop at rank 10. For instance, if universities were aware of the adverse affects of rankings, and could control their ranking precisely, we might expect pay to bunch at just below the cutoff point, which would throw our results into question.

A simple visual inspection reveals no discernible bunching or other discontinuity. For example, figure one below graphs the distribution of log total compensation by distance from the relevant “top ten” or “top five” cutoff point for each academic year/university category grouping.

<Fig. 1: Figures follow references section in this version>

### **Figure One: Distribution of President Pay Relative to Lowest CHE-Reported Pay, 1997-2009**

More formal testing, as in McCrary (2008), also shows no evidence that the assignment or control variables are discontinuous at the cutoff point (or elsewhere).

#### **4.2 Main Results**

Turning to the regression analysis, we examine three different dependent variables. Our first set of regressions, reported in Table 2 below, considers the effect of top-ten inclusion on donations. As suggested in Lee & Lemieux (2010), we estimate results using pooled OLS, as well as panel regressions. Columns one and two reports the impact on

donations per full-time equivalent enrollee, while columns three and four report first differences of donations per FTE. Columns one and three are random-effects panel regressions, while columns two and four are pooled OLS.<sup>11</sup> All results are reported as log-log, except for indicator variables, which are of course reported level-log.

---

<sup>11</sup> We also obtain similar results, but less precisely estimated, using fixed-effects panel regressions.

**Table 2: Effect of “Top Ten” Appearance on Gross Donations Per Student**

| VARIABLES            | (1)<br>OLS RE                    | (2)<br>OLS Pooled                | (3)<br>1st Diff RE          | (4)<br>1st Diff Pooled      |
|----------------------|----------------------------------|----------------------------------|-----------------------------|-----------------------------|
| CHE Top List?        | <b>-0.128**</b><br>(0.0600)      | <b>-0.159**</b><br>(0.0730)      | <b>-0.107**</b><br>(0.0501) | <b>-0.107**</b><br>(0.0543) |
| dis_to_cutoff        | -0.0237<br>(0.0217)              | 0.0222<br>(0.0354)               | -0.0525<br>(0.0749)         | -0.0525<br>(0.0724)         |
| D x dis_to_cut       | 0.0250<br>(0.290)                | -0.155<br>(0.374)                | <b>0.590**</b><br>(0.278)   | <b>0.590**</b><br>(0.289)   |
| dis_to_cut_2         | <b>0.00648*</b><br>(0.00358)     | -0.00578<br>(0.00659)            | 0.0138<br>(0.0165)          | 0.0138<br>(0.0160)          |
| D x dis_to_cut_2     | -0.107<br>(0.183)                | -0.0207<br>(0.252)               | <b>-0.441**</b><br>(0.189)  | <b>-0.441**</b><br>(0.189)  |
| lagged total comp    | 0.0714<br>(0.0447)               | -0.0371<br>(0.0521)              | 0.0284<br>(0.0763)          | 0.0284<br>(0.0760)          |
| assets               | <b>0.553***</b><br>(0.0644)      | <b>0.599***</b><br>(0.0328)      | -0.0156<br>(0.0158)         | -0.0156<br>(0.0342)         |
| expends              | <b>0.599***</b><br>(0.110)       | <b>0.499***</b><br>(0.0512)      | <b>0.0463*</b><br>(0.0251)  | 0.0463<br>(0.0432)          |
| return on investment | <b>-0.00383***</b><br>(0.000391) | <b>-0.00267***</b><br>(0.000655) | -0.000316<br>(0.000562)     | -0.000316<br>(0.000646)     |
| net tuition          | 0.0798<br>(0.0541)               | <b>0.0905**</b><br>(0.0417)      | 0.0110<br>(0.0217)          | 0.0110<br>(0.0375)          |
| R-squared            | .736                             | 0.741                            | .032                        | 0.032                       |

Notes: All columns include state, year, and Carnegie group 2000 effects, as well as liabilities, share of undergraduates enrolled, executives per enrollment, and total faculty (insignificant controls). All variables reported in logs. Columns (1) & (3): random effects regressions. Columns (2) & (4): pooled OLS regressions. Robust standard errors, clustered by university, in parentheses. N=3,400. Number of clusters: 376. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

We find that appearing on a top-ten list on average reduces subsequent donations by between 10 and 16 percent in the short term.<sup>12</sup> Since the mean gifts/student in our sample is \$6710, that corresponds to an average drop of between \$670 and \$1070 per

<sup>12</sup> The smaller coefficient for the first-difference regressions may reflect the possibility that some donor reactions occur in the same fiscal year as the release of the CHE results.

student, or from \$2.8 million to \$4.5 million in total.<sup>13</sup> Results for changes in total donations, without scaling for enrollment, are similar. Figure Two summarizes our results graphically, employing a polynomial-fit graph.

<Fig. 2>

### **Figure Two: Plot of Gifts Per Student Against Distance to Cutoff**

These estimates may somewhat understate donors' reactions. If university administrators are aware that potential donors are displeased by pay disclosures, they may respond by increasing fundraising effort. We find evidence across a variety of specifications that appearing on a CHE top ten or top five list increases fundraising and fundraising per student, but the 95% confidence intervals are quite wide, with estimates ranging from slight decreases to more than 150 percent increases. Similarly, we find that the average effects of top ten appearances on donations net of fundraising are an order of magnitude larger than the effects reported in Table 2, but those results were not statistically significant at the 5% level. Figure three depicts net donations on either side of the top ten (or top five) cutoff.

<Fig. 3>

### **Figure Three: Plot of Net Gifts Per Student Against Distance to Cutoff**

Next, given our hypothesis, derived from BFW (2002), that it is fear of these kinds of latent responses to disclosure that typically constrain executive pay, we expect that the upward shock to outrage that the top ten list produces should also curtail future pay

---

<sup>13</sup> We additionally run each regression for each of the three CHE categories separately, to allow coefficients to vary across groups. We find the largest effects among colleges, while effects at research universities are still negative but not significant in some specifications. This pattern is consistent with a story in which donor reactions depend on the extent to which the CHE news is a genuine surprise: Since research universities receive much more attention, and their presidents are more prone to appear on the list year after year, the top ten announcement is less likely to change donors' prior beliefs about those schools.

increases. Accordingly, we report in Table 3 the effects of top ten or top five appearances on subsequent rates of compensation growth. Column one reports a random-effects panel regression, while column two reports pooled OLS. We also obtain essentially identical results using a fixed-effects panel.

**Table 3: Effects of Top Ten Appearance on Logged Subsequent Pay**

| VARIABLES         | (1)<br>OLS RE                 | (2)<br>OLS Pooled            |
|-------------------|-------------------------------|------------------------------|
| CHE Top List?     | <b>-0.0987***</b><br>(0.0326) | <b>-0.0987**</b><br>(0.0406) |
| dis_to_cutoff     | -0.0106<br>(0.0118)           | -0.0106<br>(0.0147)          |
| D x dis_to_cut    | 0.182<br>(0.200)              | 0.182<br>(0.210)             |
| dis_to_cut_2      | 0.00314<br>(0.00220)          | 0.00314<br>(0.00264)         |
| D x dis_to_cut_2  | <b>-0.251*</b><br>(0.138)     | -0.251<br>(0.154)            |
| lagged total comp | 6.91e-08<br>(7.15e-08)        | 6.91e-08<br>(9.18e-08)       |
| R-squared         | .019                          | 0.019                        |

Notes: All columns include state, year, and Carnegie group 2000 effects, as well as religious affiliation, liabilities, assets, revenues, expenditures, return on investment, net tuition, share undergraduate enrollment, executives per 100 FTE employees, and total faculty (insignificant controls). All variables reported in logs. N: 2,798. First-difference regressions. Column (1): random effects regression. Column (2): pooled OLS. Robust standard errors clustered by university in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Here we find some evidence consistent with our theory that positive shocks to outrage diminish future pay. In particular, we find that the rate of pay growth declines a fair bit, by about 10% of total compensation, relative to the rate of growth of other presidents' pay. Real mean pay increases over the same two-year period are about 14% in our sample, implying that top ten presidents' pay grew at only about 4% over the same time frame. This drop could simply represent mean reversion. However, in placebo tests

we observe no significant drop for presidents ranking eleven through twenty, which tends to support our donor-pressure theory. Figure four represents the compensation results graphically.

<Fig. 4>

#### **Figure Four: Plot of Change in Log Compensation Against Distance to Cutoff**

### **4.3 Robustness Analysis**

As a robustness check, we re-estimate each of the regressions using kernel regressions for each side of the discontinuity. We optimize kernel bandwidth using the calculations from Fuji, Imbens, and Kalyanaraman (2009), as implemented in Stata by Nichols (2011). In the gifts per student regressions, at the predicted optimal bandwidths, we estimate a coefficient for *rho* of about -.37, statistically significant at the .01% level. Although Nichols (2011) counsels against including covariates, we find that result is robust to including our controls.

Notably, this effect is two to three times larger than the effect we measure with OLS, implying that the cost of a top ten appearance may be as high as \$ 9 million on average. However, our results are sensitive to choice of bandwidth; at bandwidths of half optimal and below, the effect is somewhat smaller and no longer statistically significant.

We similarly find larger and more precise results for the effect of top ten or top five appearance on donations net of fundraising. In the OLS regressions, we found a large and negative, but imprecisely measured, average effect. Kernel regressions suggest a net impact of about -.41, again statistically significant at the .01% level at optimal or larger bandwidths. Results with smaller bandwidths again are not significant and somewhat



smaller in magnitude. Results for fundraising alone are similar in magnitude and significance to our OLS results.

Finally, our kernel regressions somewhat confirm our findings for the impact of top ten appearances on later compensation growth. While the magnitude of the effect is similar, about  $-.14$ , it is just short of significant at the 10% level at optimum bandwidth (though significant at the 5% level at larger bandwidths).

In addition, to test the robustness of our results to using some cutoff point other than the one reported in CHE, we ranked each president by university category and academic year, and created a placebo dummy variable for presidents who ranked twentieth or higher. We then repeated our analysis using the placebo dummy. Under either OLS or kernel regression analysis for the placebo dummy, we found either no statistically significant effects, or effects that were significant but of opposite sign from our principal analysis (and relatively small in magnitude). As Table One demonstrates, top twenty universities are fairly similar to the top ten. The absence of any evidence that ranking in the top twenty negatively affects donations or subsequent compensation growth therefore strongly supports our hypothesis that it is CHE's reporting, and not some other shared feature of top ten membership, that is driving our results.

We also conduct a set of robustness checks employing variations on our OLS analysis. We repeat the random effects regressions using population-average or "general estimating equation" regressions, which do not require any assumptions about the correlation of the unit-level effects and the other regressors. Results are robust to either specification. We further obtain essentially identical results when omitting controls for

lagged executive compensation, and when using same-year controls rather than lags for other variables.

#### 4.4 Implications for Nonprofit Organizations

Overall, our results are consistent with the theory that agency costs in the nonprofit executive pay-setting process are considerable. The compensation data reported by CHE were publicly available prior to publication, and during the later periods of our sample could be found for free on at least two major on-line aggregators of nonprofit tax returns. Data on schools outside the top ten are printed in the same issue as the top ten list, albeit in a format that makes cross-firm comparisons cumbersome. (We reproduce a sample image of both listings in the Appendix). The fact that donors respond so strongly when comparative compensation information is provided to them very readily, but have little response to pay disclosures otherwise, thus implies that donors exert very little effort in gathering pay information.

Our finding also suggest that managers take advantage of this slack to set pay levels above donors' preferences.<sup>14</sup> Presidents in the "top twenty" paying masters-granting

---

<sup>14</sup> While high agency costs do not necessarily imply lower social welfare in this context, we think in many cases they do. By definition, charitable organizations in the U.S. provide positive externalities to firm outsiders. It may be that higher pay levels would permit the firm to produce benefits of higher quality or at lower total cost, once the effects of quality leadership are taken into account. "Impurely altruistic" donors---those who give for reasons other than the welfare of beneficiaries (see Andreoni 1989 for more discussion) -- may have ideological or emotionally-driven preferences for lower pay levels, which could result in social under-production of the charitable good.

But the nonprofit entrepreneur's willingness to accept sub-market returns is a key costly signal of her commitment not to seek rents. (Hansmann 1981). Donors who punish highly-paid managers may also be helping to discipline the manager's other, even less observable behaviors, helping to ensure that managers do not misappropriate charitable resources for personal ends.

Even if donors would set pay at inefficiently low levels, we doubt that making pay more opaque is the best regulatory solution. Though there might be benefits at some firms, others would experience greater managerial waste. Heightened transparency, combined with higher social subsidies for firms where greater CEO pay would add social value, would in our view better solve any potential problem along the lines we've described.

institutions are typically in about the 94th percentile of pay for their university category. While in theory it may be that donors are content with the pay level of the 11th-ranked president, even while others are discontent with the pay of the 9th-ranked president, the more plausible explanation is that donors to schools ranked eleven through twenty are simply inattentive to the president's compensation.

It might be argued that the agency costs we document are modest, since excess pay is small relative to the overall budgets of universities. The true significance of agency costs, however, is not in pay alone, but in other managerial decisions that might be motivated by it. For example, presidents may manage their schools in ways that reduce dependence on donors or strengthen their arguments for exceptionally high pay. It is well known that pay levels tend to rise for schools of greater wealth and size. (See Galle & Walker 2013 for a review.)

Accordingly, we also tested for whether top ten appearances are correlated with changes in tuition or enrollment. We find mixed but suggestive evidence that presidents appearing on top lists subsequently increase enrollment. Depending on specification, our OLS estimates yield 95% confidence intervals as low as between 0 to 3% enrollment increase, and as high as .2 to 11.6%. Kernel regressions again suggest a rather larger effect, up as much as 20%, and are significant at the 1% level. We find no comparable effects in placebo tests; that is, "Top 20" presidents do not increase enrollment. Figure six illustrates the enrollment results graphically.

<Fig. 6>

**Figure Six: Plot of Enrollment Against Distance to Cutoff**

Our results can thus be read as support for more carefully considering the legal regime for monitoring nonprofit managers. Galle & Walker (2013) argue that existing nonprofit regulatory and governance structures are premised on “ideological alignment” or “stewardship” theories -- that is, these regimes assume that managers can generally be trusted not to extract rents in the form of excess compensation. Our work here suggests that the current regime is not particularly effective at cabining opportunities for rents. Our results are, however, consistent with prior theory (e.g., in Paredes 2005) that simple, comparative information provided in a relatively salient way by a credible intermediary can be more effective.<sup>15</sup> But of course it might be difficult to extend a “top ten” model to a larger group of firms. Therefore other governance options, such as more demanding regulatory processes, lower judicial deference to the board’s decisions, or private alternatives such as paid third-party monitoring likely deserve closer consideration. (See Galle & Walker 2013 for more discussion of these possibilities).

#### **4.5 Implications for For-Profit Firms**

Our results may also shed some light on the behavior of managers and shareholders in publicly-traded firms. Many commentators are skeptical that government regulation of the manner in which executive pay is disclosed is necessary or effective. Assuming that information is available in some format, skeptics suggest, rational investors for whom those data are important should be able to acquire it and trade appropriately. Our findings here, to the contrary, suggest that the salience of information---the ease of

---

<sup>15</sup> We caution that, since our data are self-reported by universities, we cannot cleanly separate genuine reductions in pay from changes in reporting methodology. Thus, it is not entirely clear that disclosure is effective at reducing pay levels. What is clear, at least, is that increased salience of pay reporting changes managerial behavior, either in the setting of pay or in the reporting of it.

acquiring it and understanding it in context---can affect stakeholder behavior, which in turn may influence managerial behavior.

To be sure, public firms offer greater opportunities for arbitrage by better-informed traders, such that rent-extracting pay may not be as easy to hide. But together with our findings, results such as Wei & Yermack (2011), in which markets react to data that could have been computed, albeit with some effort, before the change in disclosure, imply that opacity may well play a role in public firms.

Moreover, evidence that top 10 appearances are associated with moderation in subsequent presidential pay lends some support to the broader managerial power theory of the pay-setting process, which is significant for students of public company executive pay. That theory predicts that university boards and presidents would respond to the outrage associated with highly salient top 10 disclosure by moderating pay. Of course, the relationships between stakeholders and the boards and executives of public companies and private universities are somewhat different, but, as discussed above, the agency problems in the two settings are sufficiently similar that evidence of managerial power in the nonprofit sector should bolster the case for the theory more generally.

## **5. Conclusion**

We have examined the effects of more-salient disclosures of executive compensation on donor and firm behavior. Overall, we find that appearing in a Chronicle of Higher Education “Top Ten” list for most-highly compensated college and university presidents depresses donations by an average of about \$2.8 to \$4.5 million in the fiscal year following disclosure. We also find evidence that disclosures slow the growth of executive pay, which

we argue is a product of increased scrutiny by stakeholders. We suggest these results imply significant principal-agent slack in the setting of non-profit pay. We further find some evidence that top-ten managers increase fundraising expenditures and enrollment, implying that agency slack affects outcomes other than compensation alone.

Finally, we also add some detail to the existing scholarly picture of the relationship between nonprofit managers and their stakeholders. We are the first to examine donor responses to executive pay, as well as the first to document that firms may increase fundraising effort in response to adverse disclosures.

## REFERENCES

Andreoni, James. 1990. "Impure Altruism and Donation to Public Goods: A Theory of Warm-Glow Giving." *The Economic Journal*, Vol. 100, pp. 464-477.

Andreoni, James and Abigail A. Payne. 2011. "Is Crowding Out Due Entirely to Fundraising? Evidence from a Panel of Charities." *Journal of Public Economics*, Vol. 95, pp. 334-343.

Angrist, Joshua D. and J. Pischke. 2009. "Mostly Harmless Econometrics." Princeton, N. J.: Princeton University Press.

Atwell, Robert and Jane V. Wellman. 2000. "Presidential Compensation in Higher Education: Policies and Best Practices." AGB.

Baker, George P. and Brian J. Hall. 2004. "CEO Incentives and Firm Size." *Journal of Labor Economics*, Vol. 22, pp. 767-798.

Ballou, Jeffrey P. and Burton Weisbrod. 2003. "Managerial rewards and the behavior of for-profit, governmental, and nonprofit organizations: evidence from the hospital industry." *Journal of Public Economics*, Vol. 87, pp. 1895-1920.

Banker, Rajiv D., Jose M. Plehn-Dujowich and Chunwei Xian. 2009. "The Compensation of University Presidents: A Principal-Agent Theory and Empirical Evidence." Unpublished.

Baum, Christopher F. 2006. "An Introduction to Modern Econometrics Using Stata." Stata Press.

Bebchuk, Lucian A., Jesse Fried, and David Walker. 2002. "Managerial Power and Rent Extraction in the Design of Executive Compensation." *University of Chicago Law Review*, Vol. 69, pp. 751-846.

Bebchuk, Lucian A. and Robert J. Jackson, Jr. 2005. "Executive Pensions." *Journal of Corporation Law*, Vol. 30, pp. 823-855.

Ben-Ner, Avner. 1986. "Nonprofit organizations: Why do they exist in market economies?" In S. Rose-Ackerman (ed.), *The Economics of Nonprofit Institutions: Studies in Structure and Policy*, Oxford University Press.

Ben-Ner, Avner & T. Van Hoomissen. 1994. "The Governance of Nonprofit Organizations: Law and Public Policy," *Nonprofit Management & Leadership*, Vol. 4, p. 393.

Bernheim, Douglas B. and Antonio Rangel. 2008. "Beyond Revealed Preference: Choice Theoretic Foundations for Behavioral Welfare Economics." NBER Working Papers 13737, National Bureau of Economic Research, Inc.

Bond, Stephen R. 2002. "Dynamic panel data models: a guide to micro data methods and practice." *Portuguese Economic Journal*, Vol.1, pp. 141-162.

Boulanger, Kim and Jeffrey Pliskin. 1999. "Determinants of Compensation of College Presidents." *Hamilton College mimeo*.

Caers, Ralf et al. 2006. "Principal-Agent Relationships on the Stewardship-Agency Axis," *Nonprofit Management & Leadership*, Vol. 17, p. 25.

Campbell, John L. 2007. "Why Would Corporations Behave in Socially Responsible Ways? An Institutional Theory of Corporate Responsibility." *Academy of Management Review*, Vol. 36, pp. 947-967.

Core, John E., Wayne R. Guay, and David F. Larcker. 2003. "Executive Equity Compensation and Incentives: A Survey." *FRBNY Economic Policy Review*, Vol. 9, No. 1, pp. 27-50.

Dukeminier, Jesse, Robert Sitkoff, and James Lindgren. 2010. "Wills, Trusts, and Estates." Eighth Edition. Aspen Publishers.

Edmans, Alex and Xavier Gabaix. 2009. "Is CEO Pay Really Inefficient? A Survey of New Optimal Contracting Theories," *European Finance and Management*, Vol. 15, p. 486.

Ehrenberg, R. G. and M. J. Rizzo. 2004. "Resident and Non-Resident Tuition and Enrollment at State Flagship Universities. In Hoxby, C. M., (ed), *College Choices: The*



*Economics of Where to Go, When to Go, and How to Pay For It*, Chicago: University of Chicago Press, pp. 303-354.

Ehrenberg, Ronald G., John J. Cheslock, and Julia Epifantseva. 2001. "Paying Our Presidents. What Do Trustees Value?" *Review of Higher Education*, Vol. 25, No. 1, pp. 15-37.

Fama, Eugene F. and Michael C. Jensen. 1983. "Separation of Ownership and Control," *Journal of Law & Economics*, Vol. 26, p. 301.

Fishman, James J. 1987. "Standards of Conduct for Directors of Nonprofit Corporations," *Pace Law Review*, Vol. 7, p. 389.

Frydman, Carola and Dirk Jenter. 2010. "CEO Compensation." Rock Center for Corporate Governance at Stanford University, Working Paper No. 77, available at <http://ssrn.com/abstract=1582232>.

Frumkin, Peter and Elizabeth K. Keating. 2010. "The Price of Doing Good: Executive Compensation in Nonprofit Organizations." *Policy and Society*, Vol. 29, pp. 269-82.

Galle, Brian. 2010. "Keep Charity Charitable." *Texas Law Review*, Vol. 88, pp. 1213.

Galle, Brian and David I. Walker. 2013. "Nonprofit Executive Pay as an Agency Problem: Evidence from U.S. Colleges and Universities." Unpublished. Available at [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2187979](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2187979).

Galle, Brian and Austin Nichols. 2013. "How Do Nonprofit Firms Respond to Tax Policy?" Unpublished working paper.

Gardiner, Joseph C., Zhehui Luo and Lee Anne Roman. 2009. "Fixed effects, random effects, and GEE: What are the differences?" *Statistics in Medicine*, Vol. 28, pp. 221-239.

Glaeser, Edward L. 2003. "Introduction." In Edward L. Glaeser (ed), *The Governance of Not-for-Profit Organizations* pp.1 - 36.

Hall, Brian J. and Jeffrey B. Liebman. 1998. "Are CEOs Really Paid Like Bureaucrats?" *Quarterly Journal of Economics*, Vol. 113, pp. 653-691.

Hall, Brian J. and Jeffrey B. Liebman. 2000. "The Taxation of Executive Compensation." In James M. Poterba (ed), *Tax Policy and the Economy*, National Bureau of Economic Research, Vol. 14, pp. 1-44.

Hansmann, Henry B. 1980. "The Role of Nonprofit Enterprise." *Yale Law Journal*, Vol. 89, No. 5, pp. 835-901.

Hardin, Russell. 1982. "Collective Action." Johns Hopkins University.

Holmström, Bengt R. 1982. "Moral Hazard in Teams." *The Bell Journal of Economics*, Vol. 13, pp. 324-340.

Horwitz, Jill and Austin Nichols. 2009. "Hospital ownership and medical services: market mix, spillover effects, and nonprofit objectives." *Journal of Health Economics*, Vol. 28, pp. 924-37.

Jackson, Robert J. Jr. 2009. "Private Equity and Executive Compensation." (unpublished manuscript) (on file with author).

Jacobs, Fred A. and Nicholas P. Marudas, "The Combined Effect of Donation Price and Administrative Inefficiency on Donations to US Nonprofit Organizations." *Financial Accountability & Management*, Vol. 25, pp. 33-53.

Jegers, Marc. 2008. *Managerial Economics of Non-Profit Organizations*. New York, NY: Routledge Press.

Jensen, Michael C. and William H. Meckling. 1976. "Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure." *Journal of Financial Economics*, Vol. 3, pp. 305-360.

Jensen, Michael C. and Kevin J. Murphy. 1990b. "Performance Pay and Top-Management Incentives." *Journal of Political Economy*, Vol. 98, pp. 225-264.

Jobome, Gregory O. 2006. "Management Pay, Governance, and Performance: The Case of Large U.K. Nonprofits," *Financial Accountability & Management*, Vol. 22 p. 331

Kitching, Karen A. et al. 2012. "Nonprofit Resource Allocation Decisions: A Study of Average versus Marginal Spending," *Journal of Government & Non-Profit Accounting*, Vol. 1, pp. A1-A19.

Knoke, David. 1998. "The Organizational State: Origins and Prospects." *Research in Political Sociology*, Vol. 8, pp. 147-163.

Langbert, Mitchell and Marc Fox. 2011. "The Compensation and Benefits of Private University and College Presidents." Available at SSRN: <http://ssrn.com/abstract=2089641>.

Lee, D. and T. Lemieux. 2010. "Regression Discontinuity Design in Econometrics." *Journal of Economic Literature*." Vol. 48, pp. 281-355.

Leete, Laura. 2006. "Work in the Nonprofit Sector." In Richard Steinberg and Walter Powell (eds), *The Nonprofit Sector Research Handbook*, Second edition, pp. 159-179, Yale University Press.

Leslie, Phillip and Paul Oyer. 2009. "Managerial Incentives and Value Creation: Evidence from Private Equity." Rock Center for Corporate Governance at Stanford University, Working Paper No. 21.

Lowry, R. C. 2001a. "The Effects of State Political Interests and Campus Output on University Revenues." *Economics of Education Review*, Vol. 20, No. 2, pp. 105-119.

Main, Brian G. M. et al. 1995. "The CEO, the Board of Directors, and Executive Compensation: Economic and Psychological Perspectives," *Industrial & Corporate Change* Vol. 11, p. 293.

Marwell, Gerald and Pamela Oliver. 1993. "The Critical Mass in Collective Action: A Micro-social Theory." Cambridge, U. K.: Cambridge University Press.

McCrary, Justin. 2008. "Manipulation of the Running Variable in the Regression Discontinuity Design: A Density Test." *Journal of Econometrics*, Vol. 142.

Monks, James. 2007. "Public versus Private University Presidents Pay Levels and Structure." *Economics of Education Review*, Vol. 26, No. 3, pp. 338-348.

Murphy, Kevin J. 1999. "Executive Compensation." In Orley Ashenfelter (ed), *Handbook of Labor Economics*, Elsevier, pp. 2485-2563.

Nichols, Austin. 2011. "rd 2.0: Revised Stata Module for Regression Discontinuity Estimation." *Available at:* <http://ideas.repec.org/c/boc/bocode/s456888.html>

Nicklin, J. 2000. "Presidential Salaries." *The Chronicle of Higher Education*, Vol. 47, No. 13, pp. A26-A28.

Okten, C. and B. A. Weisbrod. 2000. "Determinants of Donations in Private Nonprofit Markets." *Journal of Public Economics*, Vol. 75, pp. 255-272.

Oster, Sharon M. 1998. "Executive Compensation in the Nonprofit Sector." *Nonprofit Management and Leadership*, Vol. 8, No. 3, pp. 207-221.

Ostrom, Elinor. 1990. "Governing the Commons: The Evolution of Institutions for Collective Action." Cambridge, UK: Cambridge University Press.

Rappaport, Alfred. 1999. "New Thinking on How to Link Executive Pay with Performance." *Harvard Business Review*, Vol. 77, No. 2, pp. 91-101.

Roomkin, Myron J. and Burton A. Weisbrod. 1999. "Managerial Compensation and Incentives in For-Profit and Nonprofit Hospitals: Is There a Difference?," *Journal of Law, Economics & Organizations*, Vol. 15, p. 750.

Rose-Ackerman, Susan. 1996. "Altruism, Nonprofits, and Economic Theory," *Journal of Economic Literature*, Vol. 34, p. 701.

Rose-Ackerman, Susan. 1987. "Ideals Versus Dollars: Donors, Charity Managers and Government Grants," *Journal of Political Economy*, Vol. 95, p. 810.

Saez, Emmanuel, J. Slemrod, and S. Giertz. 2012. "The Elasticity of Taxable Income with Respect to Marginal Tax Rates: A Critical Review." *Journal of Economic Literature*, Vol. 50, No. 1, pp. 3-50.

Saunders, Kent T. 2007. "Salary Study of College Presidents and Faculty: Are Salaries for Institutions in the Council of Christian Colleges and Universities Different From Other Private Institutions?" *Christian Business Academy Review*, Spring 2007, pp. 83-91.

Sorokina, Olga V. 2003. "Executive Compensation: The Case of Liberal Arts College Presidents." *Issues in Political Economy*, Vol. 12, pp. 1-16.

Steinberg, Richard. 1990. "Profits and Incentive Compensation in Nonprofit Firms." *Nonprofit Management and Leadership*, Vol. 1, pp. 137-51.

Tang, T. L., et al. 1996. "The Pay-Performance Linkage Revisited: Is University Presidents' Pay Related to Reputation Rating." *ERIC*, pp. 1-28.

Tinkelman, Daniel and Kamini Mankaney. 2007. "When is Administrative Efficiency Associated with Charitable Donations?" *Nonprofit and Voluntary Sector Quarterly*, Vol. 36, pp. 41--61.

Vesterlund, Lise. 2006. "Why do people give?" In W.Powell and R.S.Steinberg, (eds.), *The Nonprofit Sector: A Research Handbook*, Second Edition, pp. 568–587.

Walker, David I. 2007. "Unpacking Backdating: Economic Analysis and Observations on the Stock Option Scandal." *Boston University Law Review*, Vol. 87, pp. 561-623.

Walker, David I. 2012. "The Law and Economics of Executive Compensation: Theory and Evidence." In Claire A. Hill & Brett H. McDonnell, (eds.), *Research Handbook on the Economics of Corporate Law*, p. 232.

Wei, Chenyang and David Yermack. 2011. *Investor Reactions to CEO's Inside Debt Incentives*, *Review of Financial Studies*, Vol. 24, pp. 3813-3840.

Wright, Marshall H. and Mihai C. Bocarnea. 2007. "Contributions of unrestricted funds: The donor organization-public relationship and alumni attitudes and behaviors." *Nonprofit Leadership and Management*, Vol. 18, pp. 215-235.

## Figures

Figure One

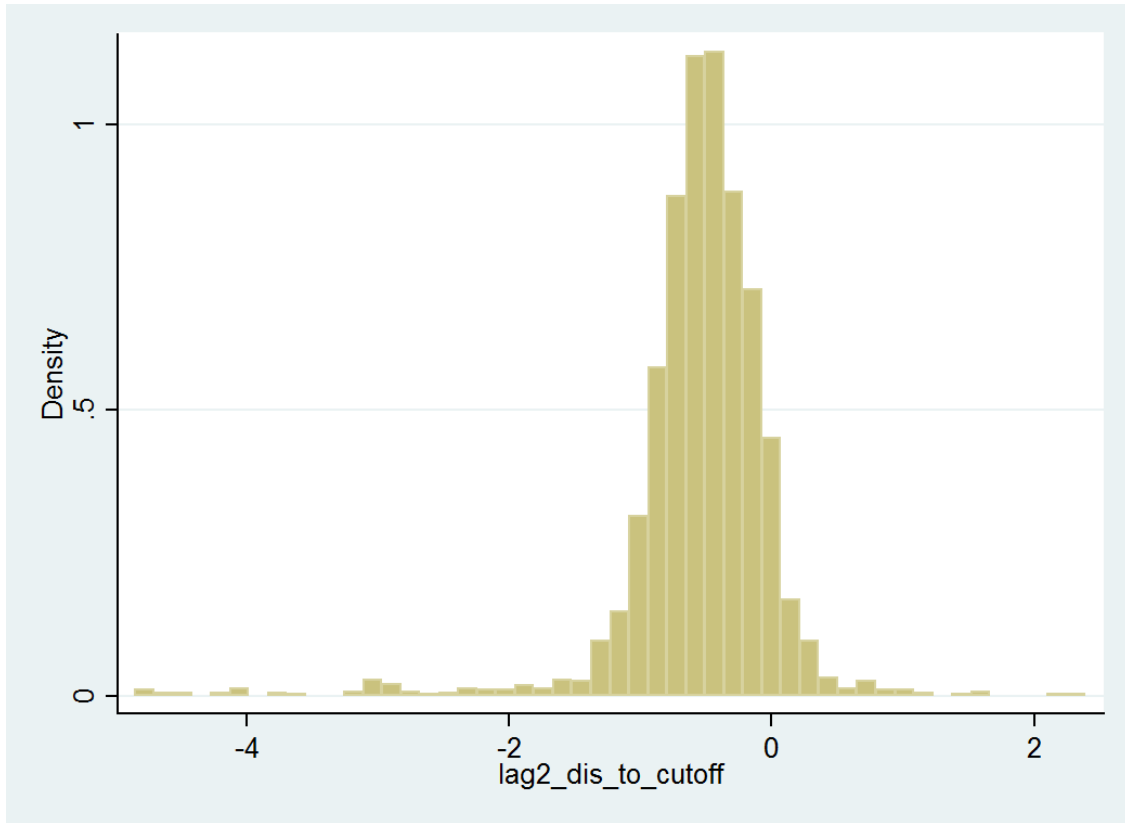


Figure Two

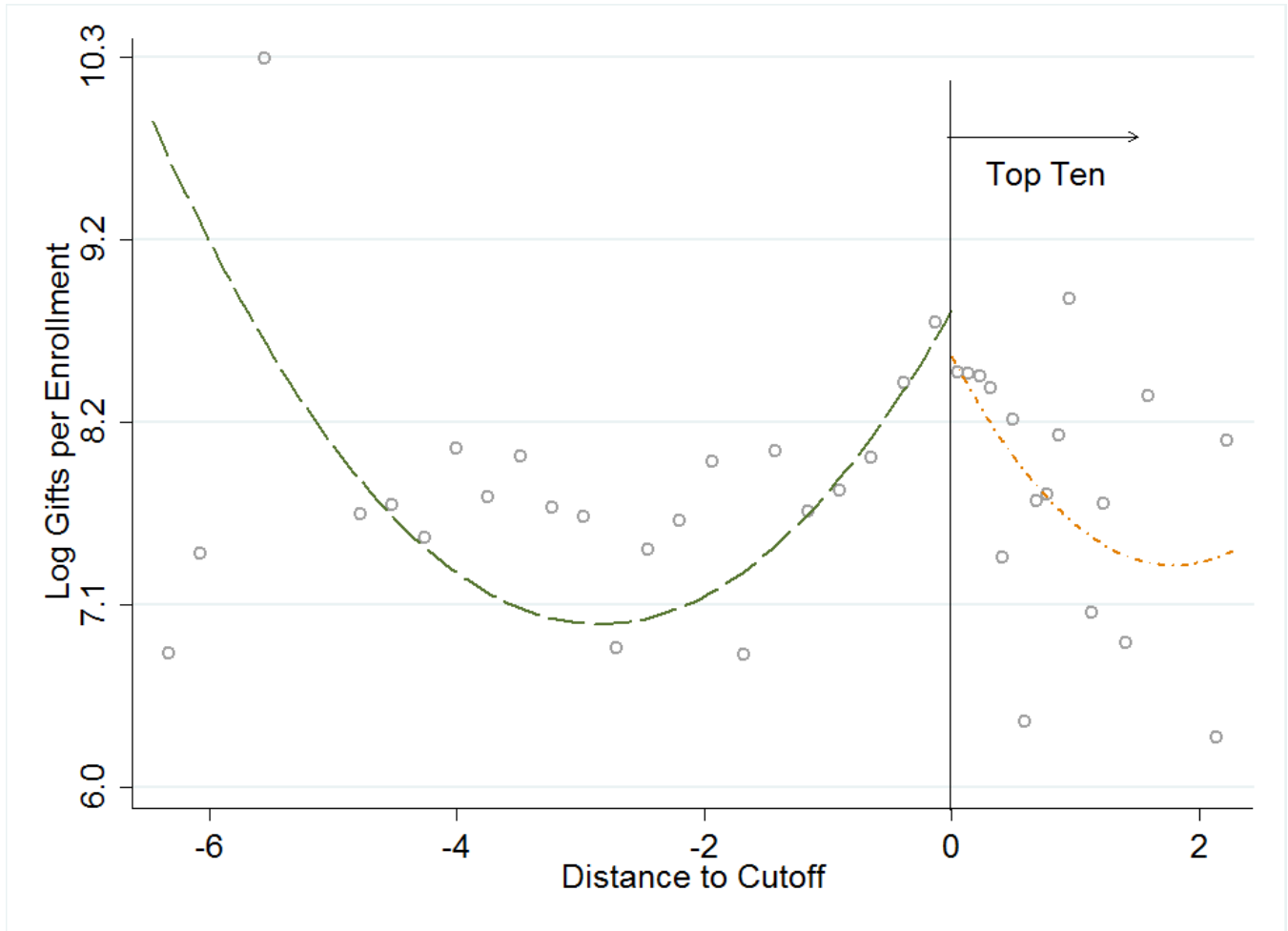


Figure Three

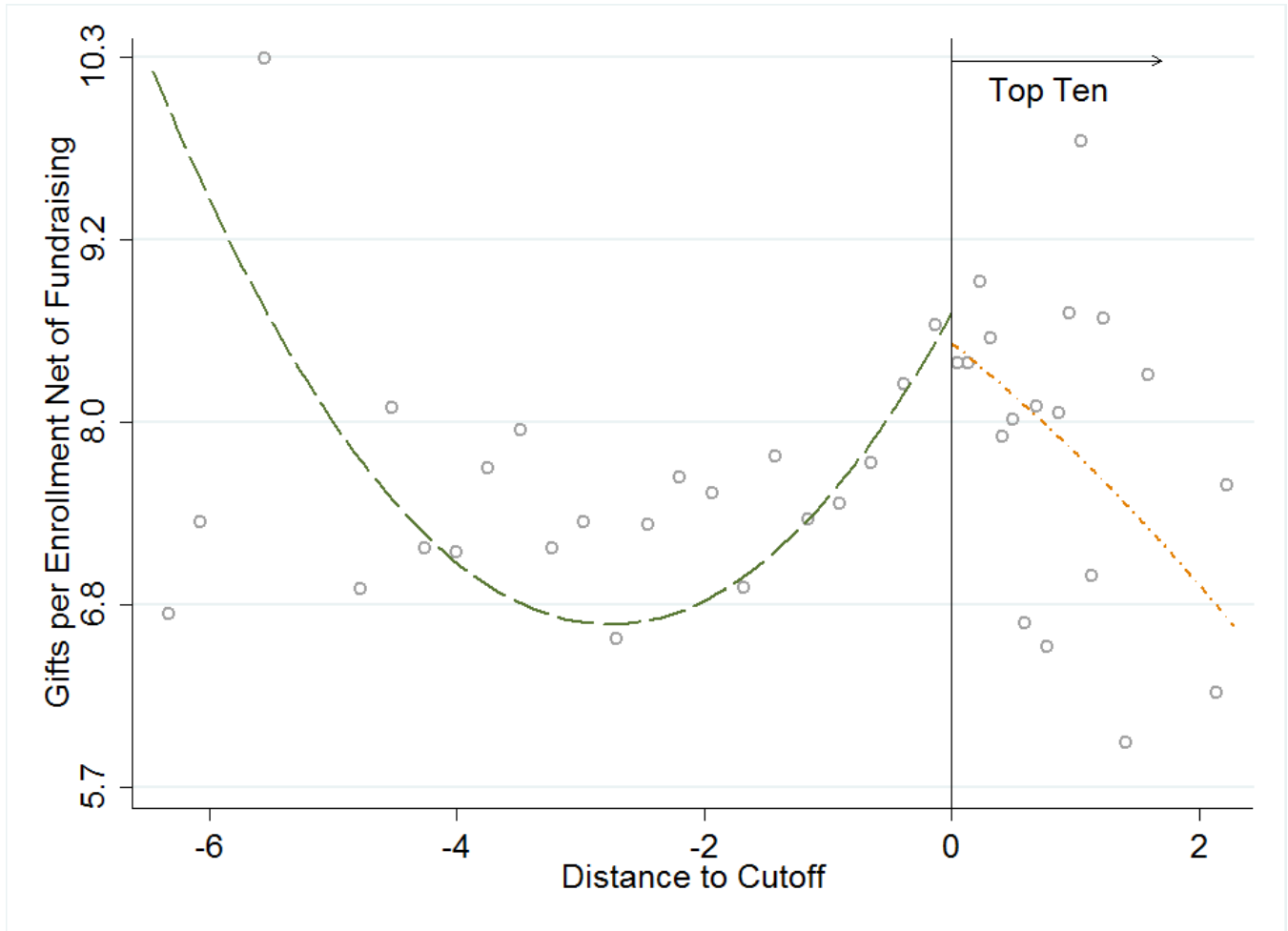




Figure Four

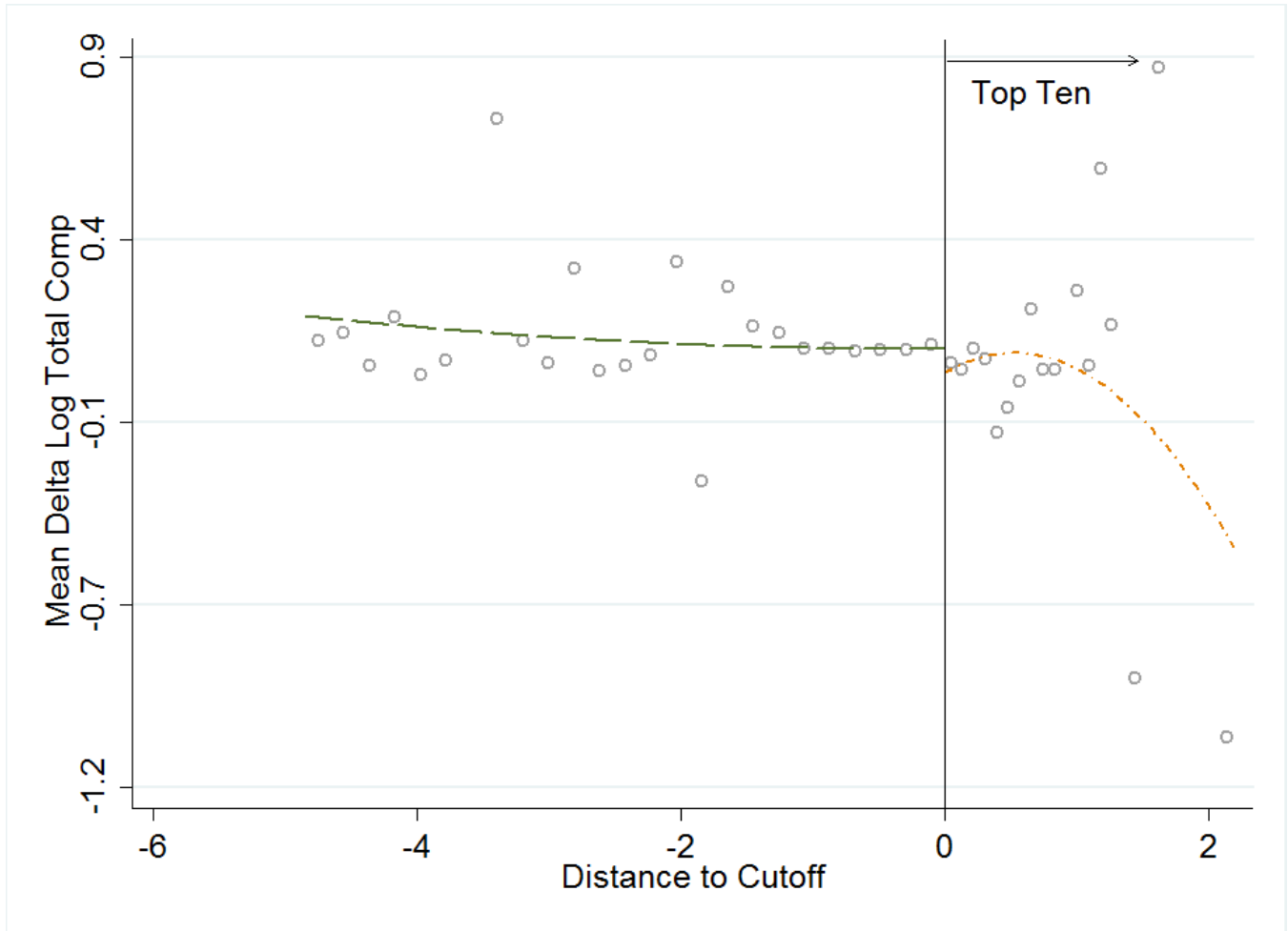
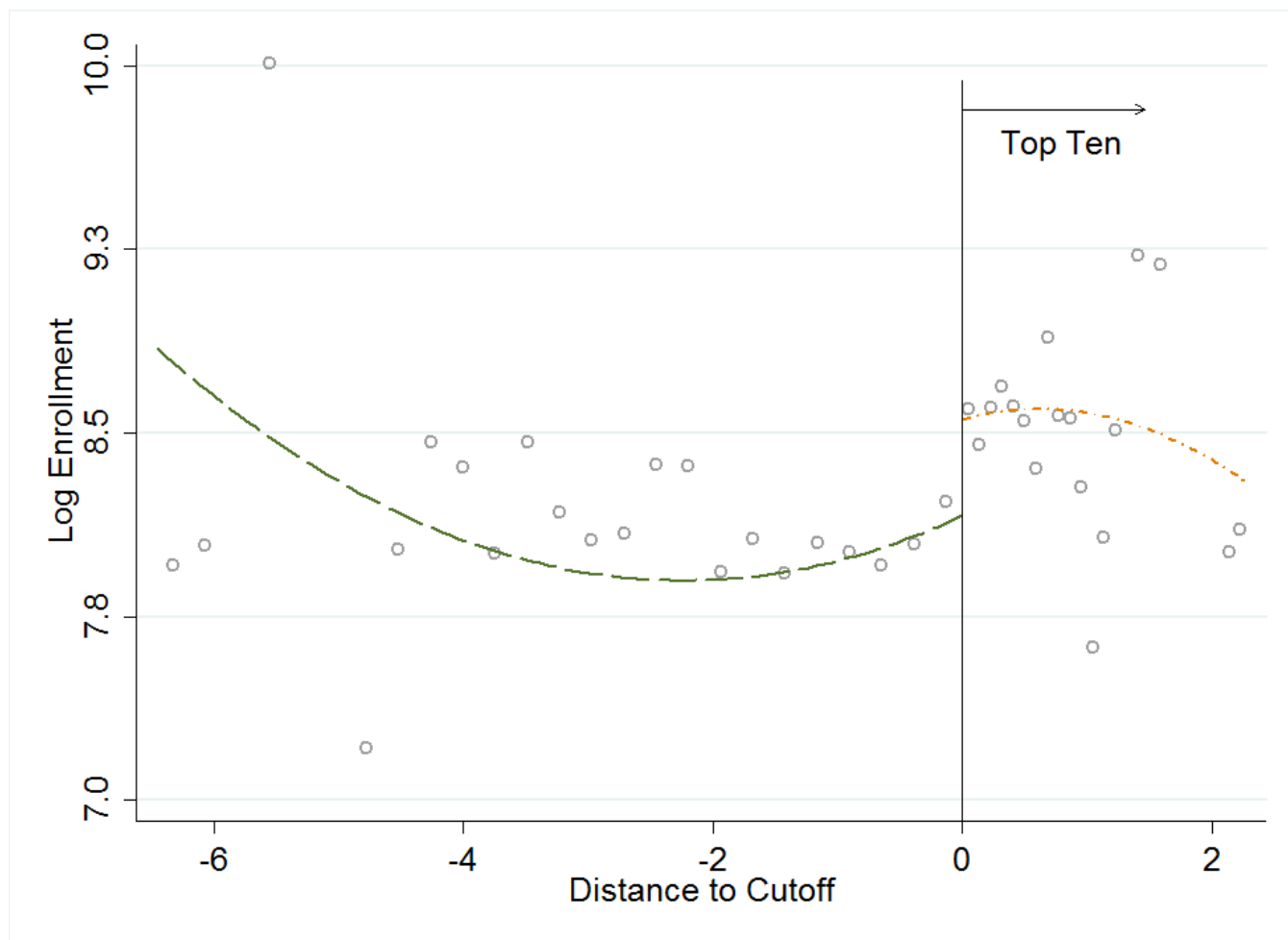


Figure Five



## **Appendix**

Chronicle of Higher Education, November 21, 2008

# Leaders in Total Compensation at Private Colleges, 2006-7

Total compensation listed covers pay and benefits during the 2007 fiscal year, the most recent for which IRS tax filings containing those data are available.

## RESEARCH UNIVERSITIES

|                                                                            |             |
|----------------------------------------------------------------------------|-------------|
| <b>E. Gordon Gee</b> , Vanderbilt U. <sup>1</sup>                          | \$2,065,143 |
| <b>Henry S. Bienen</b> , Northwestern U. <sup>2</sup>                      | \$1,742,560 |
| <b>Lee C. Bollinger</b> , Columbia U. <sup>3</sup>                         | \$1,411,894 |
| <b>Shirley Ann Jackson</b> , Rensselaer Polytechnic Institute <sup>4</sup> | \$1,326,774 |
| <b>John E. Sexton</b> , New York U. <sup>5</sup>                           | \$1,324,874 |
| <b>Amy Gutmann</b> , U. of Pennsylvania <sup>6</sup>                       | \$1,088,786 |
| <b>William R. Brody</b> , Johns Hopkins U. <sup>7</sup>                    | \$1,060,772 |
| <b>James W. Wagner</b> , Emory U. <sup>8</sup>                             | \$1,040,420 |
| <b>Constantine N. Papadakis</b> , Drexel U. <sup>9</sup>                   | \$1,021,537 |
| <b>Jack P. Varsalona</b> , Wilmington U. <sup>10</sup>                     | \$973,760   |

<sup>1</sup> Mr. Gee resigned as of August 2007. Pay is \$969,817. Benefits include \$1,066,759 in contributions to deferred compensation. Mr. Gee forfeited this amount and his entire deferred compensation plan balance, when he resigned. Mr. Gee also appears as the highest paid president of a public research institution (Ohio State University) in this survey, but the two rankings cover different years.

<sup>2</sup> Pay is \$1,342,595 and includes deferred compensation of \$590,929. Benefits include \$375,000 in deferred compensation that is subject to forfeiture if Mr. Bienen is not employed by the university as of August 31, 2009, the scheduled date of his retirement.

<sup>3</sup> Pay is \$911,284. Benefits include credits for supplemental retirement income that are based on performance and subject to vesting.

<sup>4</sup> Pay is \$909,735. Benefits include deferred compensation contributions of \$367,389.

<sup>5</sup> Pay is \$1,291,525. Mr. Sexton may receive additional retirement benefits that are subject to risk of forfeiture. They include annual payments of about \$800,000 and the use of a university owned apartment.

<sup>6</sup> Pay is \$750,000. Benefits include \$170,000 in deferred compensation and \$139,000 for additional retirement and disability related expenses.

<sup>7</sup> Pay consists of \$614,805 from Johns Hopkins and \$300,000 from the Johns Hopkins Health System, a separate, nonprofit organization affiliated with the university's School of Medicine. Benefits include \$50,700 in deferred compensation that is subject to forfeiture.

<sup>8</sup> Pay consists of base salary of \$700,000, \$125,000 in deferred compensation as an incentive for retention, and \$43,000 as a retirement plan distribution. Benefits include \$140,000 in deferred compensation as an incentive for retention. The deferred compensation is subject to forfeiture if Mr. Wagner leaves his job before a defined date, which is not specified.

<sup>9</sup> Pay is \$862,500 and includes a performance-based bonus of \$300,000.

<sup>10</sup> Pay is \$624,500 and includes a bonus. Benefits include \$326,333 for supplemental retirement pay.

## MASTER'S INSTITUTIONS

|                                                          |             |
|----------------------------------------------------------|-------------|
| <b>David J. Sargent</b> , Suffolk U. <sup>1</sup>        | \$2,800,461 |
| <b>Susan C. Scrimshaw</b> , Simmons College <sup>2</sup> | \$1,159,269 |
| <b>Charles H. Polk</b> , Mountain State U. <sup>3</sup>  | \$760,140   |
| <b>Ronald J. Volpe</b> , Hood College <sup>4</sup>       | \$735,071   |
| <b>Esther L. Barazzone</b> , Chatham U. <sup>5</sup>     | \$734,576   |
| <b>John R. Brazil</b> , Trinity U. (Tex.) <sup>6</sup>   | \$726,708   |
| <b>John B. Muller</b> , Bellevue U. <sup>7</sup>         | \$672,022   |
| <b>Guy F. Riekeman</b> , Life U. <sup>8</sup>            | \$663,590   |
| <b>Richard S. Moyers</b> , Webster U. <sup>9</sup>       | \$594,730   |
| <b>Ronald L. Vaughn</b> , U. of Tampa <sup>10</sup>      | \$586,891   |

<sup>1</sup> The president's salary includes \$436,000 in base pay and a \$436,000 longevity bonus. Benefits include a \$1,190,000 deferred substantial bonus, \$555,667 in deferred compensation, a capped performance bonus of \$87,200, and \$56,262 in health, dental, and other retirement benefits. The president also receives a housing allowance or the use of a university owned house.

<sup>2</sup> Ms. Scrimshaw resigned effective June 2008. Pay is \$326,905, which includes a relocation allowance of \$25,000. Benefits include

# Compensation of Presidents of Private Institutions

**T**HIS TABLE SHOWS the compensation received by the chief executives at each of 599 private colleges.

The figures, unless otherwise noted, are for 2006-7, the most recent fiscal year available. *The Chronicle* compiled the information from the Form 990 that each institution filed with the Internal Revenue Service. According to IRS regulations, tax-exempt entities must release a copy of the form to those who request it. Nonprofit organizations, including colleges, are required to list, among other financial data, the pay and benefits of their officers, directors, trustees, and key employees.

*The Chronicle's* survey includes only those private institutions classified in 2005 by the Carnegie Foundation for the Advancement of Teaching as Research Universities (very high research activity), Research Universities (high research activity), Doctoral/Research Universities, Master's Colleges and Universities (large, medium, and small), and Baccalaureate Colleges-Arts & Sciences.

The survey included colleges that reported at least \$20-million in expenditures.

The tables omit colleges that claim religious exemptions from filing Form 990: Baptist Bible College and Graduate School, Brigham Young University, Concordia College at Moorhead, Harding University, Houghton College, Indiana Wesleyan University, Saint John's University (Minn.), Southern Wesleyan University, and Wisconsin Lutheran College.

*The Chronicle* was not able to include Liberty University and Tougaloo College because they provided incomplete information or failed to provide their IRS Form 990, a public docu-

ment, after repeated requests.

A key to the listings:

- Expenditures: Taken from Line 17 of Form 990, it shows the college's total expenses in the 2007 fiscal year.
- Revenue: Taken from Line 12 of Form 990, it shows total revenue in that fiscal year.
- Pay: Defined as all salaries, fees, bonuses, severance payments, and deferred compensation that each person received. (The Form 990 calls this overall category "compensation.") Colleges are required to have included in prior years' filings, in a separate column about benefits, the amounts for deferred compensation allocated to be paid in later years. Deferred compensation is often accrued over many years and then is often paid as a lump sum in one year.
- Benefits: Includes health and pension plans. Colleges also are required to include deferred compensation that was allocated in that year.
- Expense compensation: For college presidents, this includes fringe benefits that the IRS requires those leaders to count as income, including the fair-market value of cars and houses supplied by the college for personal use; club memberships; flights on college-owned aircraft; supplemental life insurance; and perquisites for children and spouses, like payments for tuition or travel. If an institution reported that its leader had received no expense compensation, that category has been omitted from the institution's entry.

■ Total compensation: The sum of pay and benefits. Expense pay is not included, because of inconsistencies in how individual institutions account for it. For instance, some institutions include the fair-market value of what it would cost to rent the house that the president lives in. But many colleges and universities have interpreted the IRS guidelines to mean that they do not have to report the rental value if they state on the federal tax form that the president is required to live in the house as a condition of his or her employment.

■ Asterisk: Indicates that the person is no longer the president of the institution.

■ Two or more presidents listed: Each served part of the year.

In general, the information appears here as it was reported on Form 990. *The Chronicle* notes exceptional circumstances, like a partial-year payment or a severance package. The titles of some people, such as that of interim president, may have changed since the forms were filed.

A searchable database with information from surveys from this year and previous years can be found on *The Chronicle's* Web site (<http://chronicle.com/stats/990>).

— Jeffrey Brumard, with additional reporting by Paul Fain, Marisa López-Rivera, Eugene McCormack, Caitlin Moran, Kate Moser, and Joan Waynick.

## RESEARCH UNIVERSITIES (VERY HIGH RESEARCH ACTIVITY)

|                                                                                                                                                                                                                                                                                                                                  | 2006-7 pay | 2006-7 benefits | Total compensation |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|-----------------|--------------------|
| <b>BOSTON U. (MASS.)</b>                                                                                                                                                                                                                                                                                                         |            |                 |                    |
| Expenditures: \$1.9 billion; revenue: \$1.7 billion                                                                                                                                                                                                                                                                              |            |                 |                    |
| Robert A. Brown, president†                                                                                                                                                                                                                                                                                                      | \$639,420  | \$62,272        | \$901,692          |
| † Mr. Brown has a deferred compensation agreement that gives him an annual credit of 20 percent of base pay for the preceding year, per year, subject to vesting.                                                                                                                                                                |            |                 |                    |
| <b>BRANDEIS U. (MASS.)</b>                                                                                                                                                                                                                                                                                                       |            |                 |                    |
| Expenditures: \$304 million; revenue: \$363 million                                                                                                                                                                                                                                                                              |            |                 |                    |
| Jehuda Reinharz, president†                                                                                                                                                                                                                                                                                                      | \$387,744  | \$225,055       | \$592,799          |
| † Benefits include supplemental retirement pay averaging \$123,000 a year that is subject to forfeiture if certain conditions are not met.                                                                                                                                                                                       |            |                 |                    |
| <b>BROWN U. (R.I.)</b>                                                                                                                                                                                                                                                                                                           |            |                 |                    |
| Expenditures: \$677 million; revenue: \$888 million                                                                                                                                                                                                                                                                              |            |                 |                    |
| Ruth J. Simmons, president†                                                                                                                                                                                                                                                                                                      | \$745,481  | \$30,237        | \$775,718          |
| † Compensation includes deferred compensation that has vested.                                                                                                                                                                                                                                                                   |            |                 |                    |
| <b>CALIFORNIA INSTITUTE OF TECHNOLOGY (CALIF.)</b>                                                                                                                                                                                                                                                                               |            |                 |                    |
| Expenditures: \$2.3 billion; revenue: \$2.4 billion                                                                                                                                                                                                                                                                              |            |                 |                    |
| Jean-Lou A. Chameau, president†                                                                                                                                                                                                                                                                                                  | \$600,000  | \$32,949        | \$632,949          |
| † Mr. Chameau became president in September 2006. The institute set aside \$125,000 as deferred compensation, subject to vesting, to compensate Mr. Chameau for retirement benefits from his former employer if at the time of his move to Caltech. Mr. Chameau is scheduled to be fully vested in this amount in December 2008. |            |                 |                    |
| <b>CARNEGIE MELLON U. (PA.)</b>                                                                                                                                                                                                                                                                                                  |            |                 |                    |
| Expenditures: \$836 million; revenue: \$979 million                                                                                                                                                                                                                                                                              |            |                 |                    |
| Jared L. Cohen, president                                                                                                                                                                                                                                                                                                        | \$486,779  | \$105,097       | \$591,876          |
| Expense compensation: \$32,003                                                                                                                                                                                                                                                                                                   |            |                 |                    |
| <b>CASE WESTERN RESERVE U. (OHIO)</b>                                                                                                                                                                                                                                                                                            |            |                 |                    |
| Expenditures: \$902 million; revenue: \$955 million                                                                                                                                                                                                                                                                              |            |                 |                    |
| Gregory L. Eastwood, interim president*                                                                                                                                                                                                                                                                                          | \$500,000  | \$32,491        | \$532,491          |
| <b>COLUMBIA U. (N.Y.)</b>                                                                                                                                                                                                                                                                                                        |            |                 |                    |
| Expenditures: \$2.0 billion; revenue: \$3.0 billion                                                                                                                                                                                                                                                                              |            |                 |                    |
| Lee C. Bollinger, president†                                                                                                                                                                                                                                                                                                     | \$911,284  | \$500,610       | \$1,411,894        |
| † Benefits include credits for supplemental retirement income that are based on performance and subject to vesting.                                                                                                                                                                                                              |            |                 |                    |
| <b>CORNELL U. (N.Y.)</b>                                                                                                                                                                                                                                                                                                         |            |                 |                    |
| Expenditures: \$2.0 billion; revenue: \$3.0 billion                                                                                                                                                                                                                                                                              |            |                 |                    |
| David J. Skorton, president                                                                                                                                                                                                                                                                                                      | \$518,223  | \$214,381       | \$732,604          |
| Expense compensation: \$25,000                                                                                                                                                                                                                                                                                                   |            |                 |                    |
| <b>DARTMOUTH COLLEGE (N.H.)</b>                                                                                                                                                                                                                                                                                                  |            |                 |                    |
| Expenditures: \$766 million; revenue: \$1.0 billion                                                                                                                                                                                                                                                                              |            |                 |                    |
| James E. Wright, president                                                                                                                                                                                                                                                                                                       | \$470,000  | \$99,761        | \$569,761          |
| <b>DUKE U. (N.C.)</b>                                                                                                                                                                                                                                                                                                            |            |                 |                    |
| Expenditures: \$1.9 billion; revenue: \$2.4 billion†                                                                                                                                                                                                                                                                             |            |                 |                    |
| Richard H. Brodhead, president                                                                                                                                                                                                                                                                                                   | \$628,108  | \$35,398        | \$663,506          |
| Expense compensation: \$3,955                                                                                                                                                                                                                                                                                                    |            |                 |                    |
| <b>EMORY U. (GA.)</b>                                                                                                                                                                                                                                                                                                            |            |                 |                    |
| Expenditures: \$2.2 billion; revenue: \$2.7 billion                                                                                                                                                                                                                                                                              |            |                 |                    |
| James W. Wagner, president†                                                                                                                                                                                                                                                                                                      | \$868,200  | \$172,220       | \$1,040,420        |
| Expense compensation: \$55,312                                                                                                                                                                                                                                                                                                   |            |                 |                    |

\* Pay includes base salary of \$700,000, \$125,000 in deferred compensation, as an incentive for retention, and \$431,000 as a retirement plan distribution. Benefits include \$140,000 in deferred compensation as an incentive for retention. The deferred compensation is subject to forfeiture if Mr. Wagner leaves his job prior to a defined date, which was not specified.

|                                                                                                                                                                                                                                                                                                                                       | 2006-7 pay  | 2006-7 benefits | Total compensation |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|-----------------|--------------------|
| <b>GEORGETOWN U. (D.C.)</b>                                                                                                                                                                                                                                                                                                           |             |                 |                    |
| Expenditures: \$928 million; revenue: \$1.0 billion                                                                                                                                                                                                                                                                                   |             |                 |                    |
| John J. DeGioia, president                                                                                                                                                                                                                                                                                                            | \$558,340   | \$33,277        | \$591,617          |
| <b>JOHNS HOPKINS U. (MD.)</b>                                                                                                                                                                                                                                                                                                         |             |                 |                    |
| Expenditures: \$3.3 billion; revenue: \$3.5 billion                                                                                                                                                                                                                                                                                   |             |                 |                    |
| William R. Brody, president†                                                                                                                                                                                                                                                                                                          | \$914,805   | \$145,967       | \$1,060,772        |
| Expense compensation: \$92,608                                                                                                                                                                                                                                                                                                        |             |                 |                    |
| † Dr. Brody received \$614,805 in pay from the Johns Hopkins University and \$300,000 from the Johns Hopkins Health System, a separate, nonprofit organization affiliated with the university's School of Medicine. The university gave him \$145,967 in benefits, of which \$50,700 was deferred compensation subject to forfeiture. |             |                 |                    |
| <b>MASSACHUSETTS INSTITUTE OF TECHNOLOGY (MASS.)</b>                                                                                                                                                                                                                                                                                  |             |                 |                    |
| Expenditures: \$2.4 billion; revenue: \$3.5 billion                                                                                                                                                                                                                                                                                   |             |                 |                    |
| Susan Hockfield, president†                                                                                                                                                                                                                                                                                                           | \$635,294   | \$173,404       | \$808,698          |
| † Benefits include \$100,000 in deferred compensation.                                                                                                                                                                                                                                                                                |             |                 |                    |
| <b>NEW YORK U. (N.Y.)</b>                                                                                                                                                                                                                                                                                                             |             |                 |                    |
| Expenditures: \$2.7 billion; revenue: \$2.9 billion                                                                                                                                                                                                                                                                                   |             |                 |                    |
| John E. Sexton, president†                                                                                                                                                                                                                                                                                                            | \$1,291,525 | \$33,349        | \$1,324,874        |
| Expense compensation: \$100,330                                                                                                                                                                                                                                                                                                       |             |                 |                    |
| † Mr. Sexton may receive additional retirement benefits that are subject to risk of forfeiture. They include annual payments of about \$800,000 and the use of a university-owned apartment.                                                                                                                                          |             |                 |                    |
| <b>NORTHWESTERN U. (ILL.) †</b>                                                                                                                                                                                                                                                                                                       |             |                 |                    |
| Expenditures: \$1.5 billion; revenue: \$2.3 billion                                                                                                                                                                                                                                                                                   |             |                 |                    |
| Henry S. Bliven, president†                                                                                                                                                                                                                                                                                                           | \$1,342,595 | \$399,965       | \$1,742,560        |
| † Compensation figures are for the 2006 calendar year.                                                                                                                                                                                                                                                                                |             |                 |                    |
| † Pay includes deferred compensation of \$590,329. Benefits include \$375,000 in deferred compensation that is subject to forfeiture if Mr. Bliven is not employed by the university as of August 31, 2009, the scheduled date of his retirement.                                                                                     |             |                 |                    |
| <b>PRINCETON U. (N.J.)</b>                                                                                                                                                                                                                                                                                                            |             |                 |                    |
| Expenditures: \$1.2 billion; revenue: \$2.8 billion                                                                                                                                                                                                                                                                                   |             |                 |                    |
| Shirley M. Tilghman, president                                                                                                                                                                                                                                                                                                        | \$697,000   | \$45,444        | \$742,444          |
| Expense compensation: \$84,239                                                                                                                                                                                                                                                                                                        |             |                 |                    |
| <b>RENSSELAER POLYTECHNIC INSTITUTE (N.Y.)</b>                                                                                                                                                                                                                                                                                        |             |                 |                    |
| Expenditures: \$424 million; revenue: \$438 million                                                                                                                                                                                                                                                                                   |             |                 |                    |
| Shirley Ann Jackson, president†                                                                                                                                                                                                                                                                                                       | \$909,735   | \$417,039       | \$1,326,774        |
| † Benefits include deferred compensation contributions of \$367,389.                                                                                                                                                                                                                                                                  |             |                 |                    |
| <b>RICE U. (TEX.)</b>                                                                                                                                                                                                                                                                                                                 |             |                 |                    |
| Expenditures: \$396 million; revenue: \$704 million                                                                                                                                                                                                                                                                                   |             |                 |                    |
| Dayid W. Leebron, president                                                                                                                                                                                                                                                                                                           | \$719,588   | \$147,876       | \$867,464          |
| <b>STANFORD U. (CALIF.)</b>                                                                                                                                                                                                                                                                                                           |             |                 |                    |
| Expenditures: \$3.1 billion; revenue: \$5.4 billion                                                                                                                                                                                                                                                                                   |             |                 |                    |
| John L. Hennessy, president††                                                                                                                                                                                                                                                                                                         | \$667,440   | \$34,061        | \$701,501          |
| † Mr. Hennessy also earned supplemental retirement pay that is subject to forfeiture. The university did not specify the amount.                                                                                                                                                                                                      |             |                 |                    |
| <b>TUFTS U. (MASS.)</b>                                                                                                                                                                                                                                                                                                               |             |                 |                    |
| Expenditures: \$642 million; revenue: \$799 million                                                                                                                                                                                                                                                                                   |             |                 |                    |
| Lawrence S. Bacow, president                                                                                                                                                                                                                                                                                                          | \$520,420   | \$52,151        | \$572,571          |
| <b>TULANE U. (LA.)</b>                                                                                                                                                                                                                                                                                                                |             |                 |                    |
| Expenditures: \$659 million; revenue: \$856 million                                                                                                                                                                                                                                                                                   |             |                 |                    |
| Scott S. Cowen, president                                                                                                                                                                                                                                                                                                             | \$665,000   | \$27,000        | \$692,000          |
| Expense compensation: \$5,000                                                                                                                                                                                                                                                                                                         |             |                 |                    |

|                                                                                                                                                                                                                                                                                                                                      | 2006-7 pay | 2006-7 benefits | Total compensation |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|-----------------|--------------------|
| <b>U. OF CHICAGO (ILL.)</b>                                                                                                                                                                                                                                                                                                          |            |                 |                    |
| Expenditures: \$1.8 billion; revenue: \$2.2 billion                                                                                                                                                                                                                                                                                  |            |                 |                    |
| Robert J. Zimmer, president                                                                                                                                                                                                                                                                                                          | \$501,767  | \$440,896       | \$942,663          |
| Expense compensation: \$38,030                                                                                                                                                                                                                                                                                                       |            |                 |                    |
| <b>U. OF MIAMI (FLA.)</b>                                                                                                                                                                                                                                                                                                            |            |                 |                    |
| Expenditures: \$1.7 billion; revenue: \$1.8 billion                                                                                                                                                                                                                                                                                  |            |                 |                    |
| Donna E. Shalala, president                                                                                                                                                                                                                                                                                                          | \$875,637  | \$66,856        | \$942,493          |
| <b>U. OF NOTRE DAME (IND.)</b>                                                                                                                                                                                                                                                                                                       |            |                 |                    |
| Expenditures: \$618 million; revenue: \$1.5 billion                                                                                                                                                                                                                                                                                  |            |                 |                    |
| Rev. John I. Jenkins, president†                                                                                                                                                                                                                                                                                                     | \$432,000  | \$48,389        | \$480,389          |
| Expense compensation: \$170,006                                                                                                                                                                                                                                                                                                      |            |                 |                    |
| † Compensation is paid to the president's religious order. Expenses include \$157,300 as a tuition benefit that is offered to members of the president's religious order.                                                                                                                                                            |            |                 |                    |
| <b>U. OF PENNSYLVANIA (PA.)</b>                                                                                                                                                                                                                                                                                                      |            |                 |                    |
| Expenditures: \$3.4 billion; revenue: \$4.8 billion                                                                                                                                                                                                                                                                                  |            |                 |                    |
| Amy Gutmann, president†                                                                                                                                                                                                                                                                                                              | \$750,000  | \$338,786       | \$1,088,786        |
| Expense compensation: \$66,848                                                                                                                                                                                                                                                                                                       |            |                 |                    |
| † Benefits include \$170,000 in deferred compensation and \$139,000 for additional retirement and disability-related expenses.                                                                                                                                                                                                       |            |                 |                    |
| <b>U. OF ROCHESTER (N.Y.)</b>                                                                                                                                                                                                                                                                                                        |            |                 |                    |
| Expenditures: \$2.0 billion; revenue: \$2.1 billion                                                                                                                                                                                                                                                                                  |            |                 |                    |
| Joel Seltman, president                                                                                                                                                                                                                                                                                                              | \$596,296  | \$21,152        | \$617,448          |
| Expense compensation: \$23,571                                                                                                                                                                                                                                                                                                       |            |                 |                    |
| <b>U. OF SOUTHERN CALIFORNIA (CALIF.)</b>                                                                                                                                                                                                                                                                                            |            |                 |                    |
| Expenditures: \$2.1 billion; revenue: \$2.7 billion                                                                                                                                                                                                                                                                                  |            |                 |                    |
| Steven B. Sample, president†                                                                                                                                                                                                                                                                                                         | \$810,839  | \$96,139        | \$906,978          |
| Expense compensation: \$71,801                                                                                                                                                                                                                                                                                                       |            |                 |                    |
| † Pay includes \$69,875 in deferred compensation.                                                                                                                                                                                                                                                                                    |            |                 |                    |
| <b>VANDERBILT U. (TENN.)</b>                                                                                                                                                                                                                                                                                                         |            |                 |                    |
| Expenditures: \$2.8 billion; revenue: \$3.0 billion                                                                                                                                                                                                                                                                                  |            |                 |                    |
| E. Gordon Gee, chancellor††                                                                                                                                                                                                                                                                                                          | \$968,814  | \$1,096,329     | \$2,065,143        |
| Expense compensation: \$79,729                                                                                                                                                                                                                                                                                                       |            |                 |                    |
| † Benefits include \$1,066,759 in contributions to deferred compensation. Mr. Gee forfeited this amount, and the entire deferred-compensation plan balance, when he resigned as of August 2007.                                                                                                                                      |            |                 |                    |
| <b>WASHINGTON U. IN ST. LOUIS (MO.) †</b>                                                                                                                                                                                                                                                                                            |            |                 |                    |
| Expenditures: \$1.8 billion; revenue: \$2.2 billion                                                                                                                                                                                                                                                                                  |            |                 |                    |
| Mark S. Wrighton, chancellor                                                                                                                                                                                                                                                                                                         | \$510,250  | \$227,992       | \$738,242          |
| Expense compensation: \$53,886                                                                                                                                                                                                                                                                                                       |            |                 |                    |
| † Compensation figures are for the 2006 calendar year.                                                                                                                                                                                                                                                                               |            |                 |                    |
| <b>YALE U. (CONN.) †</b>                                                                                                                                                                                                                                                                                                             |            |                 |                    |
| Expenditures: \$2.2 billion; revenue: \$4.1 billion                                                                                                                                                                                                                                                                                  |            |                 |                    |
| Richard C. Levin, president†                                                                                                                                                                                                                                                                                                         | \$782,500  | \$172,907       | \$955,407          |
| Expense compensation: \$17,870                                                                                                                                                                                                                                                                                                       |            |                 |                    |
| † Compensation figures are for the 2006 calendar year.                                                                                                                                                                                                                                                                               |            |                 |                    |
| † The university has agreed to supplement Mr. Levin's retirement income with 75 percent of his base salary for 20 years, with the payments decreased by other retirement benefits provided by Yale. This pay is subject to conditions and vesting. Mr. Levin's expenses include a scholarship grant available to eligible employees. |            |                 |                    |
| <b>YESHIVA U. (N.Y.)</b>                                                                                                                                                                                                                                                                                                             |            |                 |                    |
| Expenditures: \$598 million; revenue: \$749 million                                                                                                                                                                                                                                                                                  |            |                 |                    |
| Richard M. Joel, president                                                                                                                                                                                                                                                                                                           | \$676,004  | \$22,491        | \$698,495          |
| Expense compensation: \$84,989                                                                                                                                                                                                                                                                                                       |            |                 |                    |