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Determinants of Presidential Pay at National Liberal Arts Institutions

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The presidents of institutions of higher education have not been immune to the controversies surrounding skyrocketing salaries that have plagued private corporations in the United States (Basinger, 2002, 2003a, 2003b; Bok, 2002; Nicklin, 2001). Basinger's (2002) article on "The Growing \$500,000 Club: 27 Private College Presidents Earned More than Half a Million in Compensation in 2000–2001" finds that presidential salary increases at the top research institutions outpaced those of their top faculty and outstripped those at masters' degree and baccalaureate institutions. While most presidents of the \$500,000 club are at large research institutions, a few members of the club can be found at baccalaureate institutions. For example, Robert H. Edwards, president of Bowdoin College, received \$591,006 in 2001, \$217,250 of it severance pay received after the end of the academic year. While it was the severance pay that put Edwards over the half-million dollar mark, his base compensation is still substantial.

This paper examines the structure and determinants of presidential pay at nationally ranked baccalaureate institutions. This study departs from previous presidential pay studies in two ways. First, it includes significantly

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more, and varied, nationally ranked liberal arts institutions. Second, it incorporates additional determinants of presidential pay from the executive compensation literature: differential motivations and risk.

THE RANGE OF LIBERAL ARTS PRESIDENTIAL PAY

Ehrenberg, Cheslock, and Epifantseva (2001) examined the pay-performance link for presidents of more than 400 private universities and colleges across the Carnegie classifications for five academic years: 1992–1993 to 1996–1997. While their results provided only weak support for the hypothesis that a president's pay is based upon performance, they did find that pay was sensitive to fund-raising success. In addition, Ehrenberg et al. (2001) and later Monks and McGoldrick (2002) concluded that presidents of national liberal arts colleges respond to trustee incentives in the same way as presidents at large research institutions. Both studies put all national liberal arts colleges, without regard to their ranking or tier, into the same category. Such lumping together suggests that all upper-tier institutions, and thus their presidents, have the same motivations and goals backed by similar incentives as do the trustees and their associated presidents in lower-tier institutions. Since an institution's ranking is important (Monks & Ehrenberg, 1999) to its recruitment efforts, fund-raising and long-run viability, motivational differences between upper- and lower-tier institutions must exist. The success of for-profit educational enterprises, on-line degrees and doctoral/research institutions developing their own liberal arts colleges has increased the pressure on rankings.

Along with differentiation by tier, institutions operate in dissimilar financial environments, characterized by both short- and long-run financial volatility. Presidents in "higher-ranked" institutions face different kinds of financial risks than presidents at lower-ranked institutions. As a result, presidents operating in distinct financial risk environments may not receive the same rewards on their human capital and performance variables.

Higher-Risk Presidential Factors

The literature on for-profit and not-for-profit executive compensation has dealt with both of these issues (Aggarwal & Samwick, 1999; Alexander & Zhou, 1995; Gray & Cannella, 1997; Hall & Lieberman, 1998; Hallock, 2002; Murphy, 1999; Murphy & Oyer, 2002; Preston, 1989; Schaefer, 1998). Executives are differentially motivated. Some want to keep their market share and others want to increase it (Bartlett, Grant, & Miller, 1990); in other words, some executives try to maximize their company's sales and others try to maximize their company's profits. In addition to these two variables, executives are paid a compensating differential for working in riskier financial or market environments (Aggarwal & Samwick, 1999; Bartlett, Grant,

& Miller, 1992; Barragato, 2002; Gray & Cannella, 1997; Pfeiffer and Ross, 1990). Executives in stabler industries receive little risk compensation while those in riskier ones receive more.

Similarly, some college presidents try to maintain their college's reputation and others try to improve it. The motivation for improving reputation is to attract better students and better faculty and to ensure long-term viability. Some trustees offer their top institutional leaders performance bonuses for reaching or doing better than expected on specific goals, like fund-raising or organizational objectives (Michael, Schartz, & Balraj, 2001; Tang, Tang, & Tang, 2000). Derek Bok (2002), however, believes that it is impossible to link the progress of an institution to one person and even more impossible to link the contribution of its president to an institution's successes. He cites as evidence two of the basic measures used by *U.S. News & World Report* in calculating its rankings of institutions: students' SAT scores and the faculty's reputation.¹ According to Bok, college presidents cannot control either; yet others believe that presidents may be able to affect students' SATs with scholarships and influence faculty reputation through appropriate development opportunities and funding (Ehrenberg, 2002). If the board of trustees overemphasizes any particular objective, presidents may be tempted to manipulate performance measures. Ronald G. Ehrenberg (2002) demonstrates several ways to manipulate the components of these rankings. One would be to increase the acceptance yield and decrease the acceptance rate of applicants by early acceptance programs. Thus, the connection between performance and presidential pay is tenuous.

In an effort to improve their position, presidents at the bottom of the college rankings may be willing to embark upon new and riskier fund-raising or academic strategies to attract better faculty and students. In this case, college presidents are more likely to be entrepreneurs than managers and

¹*U.S. News & World Report* annually surveys most of the country's colleges and universities, calculates the ranking of each, and publishes it in the fall issue along with an explanation of its methodology. It evaluates colleges on seven broad categories of academic excellence and financial performance that are weighted to produce an overall score. For 1998–2001, the years of this study, the categories and associated weights were: academic reputation (25%), retention rate (20%), faculty resources (20%), student selectivity (15%), financial resources (10%), alumni giving (5%), and graduation rate (5%). Each category is composed of individual measures for a total of 16 different variables.

The 16 variables are: six-year graduation rate, freshman retention rate, proportion of classes with fewer than 20 students, proportion with 50 or more students, faculty salary, proportion of professors with the highest degree in their fields, student-faculty ratio, proportion of the faculty who are full time, test scores of enrollees on the SAT or ACT tests, proportion of enrolled freshmen who graduated in the top 10% of their high school classes, acceptance rate, yield, average spending per student on instruction, research, student services, and related educational expenditures, graduation rate performance, alumni giving rate, and peer assessment.

figureheads. These presidents may be hired as “change agents” or “hired guns.” Change agents must endure the additional intellectual and emotional toll of setting the institution off in a new direction academically and/or financially. Hired guns do the tough work of cleaning house and/or putting things back in order. As a result, trustees have to pay these presidents a compensating differential for working in a more challenging situation.

Differential Financial Environments

College presidents with comparable human capital characteristics may work in institutions with very different long-run financial stability environments. For example, the financial situation of an institution rated Aaa by Moody's is very different than that of an institution rated Baa3. Lending money to the former would be considered a good financial investment while the latter would be speculative. These rankings affect the interest rates colleges face when they borrow.² Institutions that are more dependent on tuition to fund the general operating budget are at a greater financial risk than well-endowed institutions, which may choose to run current account deficits as a way of financing short-run projects. However, the risks associated with these short-run deficits are less crucial than the long-run financial health indicated by Moody's ratings and predicated on the institution's reputation, quality of management, and alumni support (Bartlett, Grant, & Miller, 1990; Pfeffer & Ross 1990).

A MODEL OF PRESIDENTIAL PAY

An earnings model for the pay of presidents at liberal arts institutions developed from this literature takes the following functional form:

$$Y = \beta_0 + \beta_1 D + \beta_2 H + \beta_3 I + \epsilon,$$

Where: Y = Ln (presidential pay in dollars); D is a vector of variables reflecting demographic characteristics of the presidents; H is a vector of variables reflecting human capital characteristics of the presidents; and I is a vector of variables reflecting institutional characteristics.

Demographic Characteristics

Based on previous research findings, we would expect gender to be an important determinant of presidential pay. Being a female usually has a negative effect on earnings in academic administration (Birnbaum & Umbach, 2001; Monks & McGoldrick, 2001; Pfeffer & Ross, 1990). In the case of college presidents, alumni status might also be another important demographic factor. Our expectations regarding the effect of alumni status

²Moody's rates institutions Aaa, Aa1, Aa2, Aa3, Baa1, Baa2, Baa3, and so on. An institution's long-run financial risk and cost of borrowing money increase with the alphabet and numbering. (Moody's, n.d.).

on executive compensation, however, are ambiguous. Alumni presidents could either accept lower pay because they feel an obligation to their *alma mater* or they may want to be paid more to shift careers and help out their home institutions. No doubt, alums would look more kindly at another alum's request for funds.

Presidents who are in their last year of employment, like corporate executives, may receive additional compensation for outstanding performance. Or they may receive higher compensation during their last year as severance pay, which would indicate unsatisfactory performance. Since in both cases we can expect the so-called "golden parachutes" to inflate the compensation figures of presidents in their final years, we made no inferences about presidential performance on these grounds and used a dummy variable to capture this occurrence.

Human Capital

More experienced presidents who have developed more general skills would be expected to earn more. Similarly, presidents who have spent more time in their current position would have developed more specific skills and would earn more. Certainly, we could expect that presidents who had previously served as a college president would earn more pay. Robert Birnbaum and Paul Umbach (2001) found that presidents at the top institutions tend to have Ph.D.'s in traditional liberal arts fields. However, several presidents in our sample have degrees in economics, business, and law. We would expect them to be paid more, since their foregone earnings are generally higher. Given the homogeneity of the backgrounds of college presidents in our dataset, we used job tenure, previous presidency, and type of highest degree earned as proxies for human capital investments and expected them to have a direct effect on presidential pay.

Institutional Characteristics

We captured the influence of institutional size and quality on presidential pay with standard full-time enrollment figures, endowment dollars per student, average SAT scores, and freshmen retention rates. Higher endowment figures and enrollment numbers would have a positive influence on pay since they signify larger and more complex institutions with more resources to be managed. Average SAT scores and freshmen retention rate are proxies for an institution's educational excellence. Presidents of higher quality institutions would be expected to earn more, everything else being equal.

To proxy possible adjustment for the cost of living in different parts of the country, we used mean housing values obtained from the U.S. Bureau of the Census. We calculated short-term financial risk by taking the difference between an institution's annual revenues and expenditures divided by its total endowment. As a result of defining financial risk in this manner, if

expenditures exceeded revenues, the risk measure has a negative sign. The lower the measure, the greater the institution's amount of short-term financial risk. Long-term financial stability is proxied by the Moody's bond ratings. We assign a value of 1 to the highest-ranked bonds and 15 to the lowest in our dataset.

We hypothesize that college presidents who find themselves leading a college in a short-term risky financial situation may require a premium for the complexity of their task. Thus, the absolute value of the short-term financial risk factor will be positively correlated with presidential pay. On the other hand, we would expect presidents leading colleges with lower bond ratings to be paid less since these colleges have more long-term constraints on their financial resources.

The Impact of Academic Ranking

Presidents who are not in the top tier of national private liberal arts colleges are likely to receive direction from the trustees to find ways to improve their academic ranking. Moreover, we cannot assume that presidents of institutions in different tiers are rewarded in the same way for similar demographic characteristics, human capital investments, and institutional factors.

Each determinant of presidential pay may receive a differential reward depending on the tier within which the institution is located. For example, presidents in first-tier colleges may receive a greater reward for each year on the job than presidents of third- or fourth-tier schools. To control for such differences and to insure homoskedasticity, we tested our model using the data for each tier separately. We could have put a variable for tier into the model to be estimated; however, it is strongly correlated with other institutional factors.

THE DATA

Our dataset includes 159 top liberal arts colleges ranked by the *U.S. News & World Report* (1999, 2000, 2001) as "America's Best Colleges." According to the 2000–2001 rankings, 51 colleges comprise the first tier, 29 colleges comprise the second tier, 40 colleges comprise the third tier, and 39 institutions comprise the fourth tier. We did not include presidents of public colleges in our sample, to keep it parallel with earlier studies.

We drew data on annual pay and benefits from the *Chronicle of Higher Education's* survey of college presidents' pay and benefits, conducted annually from 1993 to 2001 (2001, 2002, 2003). Pay was defined as all salaries, fees, bonuses, and severance payments that each person received. Benefits vary by institution and may include housing, cars, and health insurance. This survey also provides data on revenues and expenditures. Endowment information came from the Integrated Postsecondary Education Data Sys-

tem (IPEDS, 1999, 2000, 2001); Chronicle: *506 College and University Endowments*). Enrollments came from *America's 311 Best Colleges* (Custard et al., 1998, 1999; Frarek, Meltzer, & Owens, 2000). We obtained information on human capital investments and personal characteristics from the biographical entries in *Who's Who in America* (1999, 2000, 2001), *Who's Who in American Education 1996–1997* (1999), *Who's Who in American Education 1997–1998* (2000) and official college websites.

Table 1 presents the descriptive statistics of the sample for 2000–2001. The mean age of college presidents in the dataset is about 56 years, with a standard deviation of 5.45 years. Eleven percent of the presidents hold a degree in business, economics, or law. Twenty-four percent are female. The average length of time on the job at their current institution is six years, 13% of the presidents had had earlier experience as presidents at other higher educational institutions, and 15% are alumni of their institutions. Table 2 presents institutional descriptive statistics.

The average pay of the presidents in academic year 2000–2001 as presented in Table 3 is \$190,504 (1999 dollars). Average pay varies greatly by tier, from \$147,553 for presidents of Tier 4 colleges to \$229,080 for presidents of Tier 1 colleges. Presidents of the Tier 1 colleges receive on average 55% more than their counterparts in Tier 4. We performed a t-test for difference in means and found that the difference in mean pay between first- and lower-tier colleges is statistically significant at the 99% percent level. Salary plus benefits also exhibits the same pattern of progressive increases from Tier 4 to Tier 1. These observations support our hypothesis that differential pay structures exist among liberal arts colleges and, in particular, among the four tiers.

RESULTS

Table 4 presents random effects estimates of the natural logarithm of pay and total compensation (pay plus benefits) of the presidents. We pooled data for three academic years across institutions and college presidents.³ The estimated coefficients imply that human capital and demographic characteristics are statistically significant determinants of presidential pay. College presidents receive about 1% higher pay for each year of tenure in their current position, which supports the human capital theory of compensation. Presidents who are alumni at their institutions receive on average a

³Table 4 presents the results of fitting a fixed effect regression model, assuming that the disturbance term is first-order autoregressive. We employed a GLS estimator using the methods derived by Baltagi and Wu (1999). We performed estimates only for the institutions for which all the data were available. An attempt to reestimate the model for the total population with missing data imputed using mean substitution substantially reduced the fit of the model.

TABLE 1
CHARACTERISTICS OF LIBERAL ARTS COLLEGE PRESIDENTS IN
2000–2001

| <i>Variables</i> | <i>Mean</i> | <i>Standard Deviation</i> | <i>Minimum</i> | <i>Maximum</i> |
|------------------------------------|-------------|-------------------------------|----------------|----------------|
| Age | 56 | 5.45 | 40 | 77 |
| Law, business, economics degree | 0.11 | 0.32 | 0 | 1 |
| Female | 0.24 | 0.43 | 0 | 1 |
| Alumni | 0.15 | 0.36 | 0 | 1 |
| Job tenure | 6.00 | 5.31 | 0 | 25 |
| Previous presidency | 0.14 | 0.34 | 0 | 1 |
| Last year | 0.05 | 0.22 | 0 | 1 |

TABLE 2
CHARACTERISTICS OF LIBERAL ARTS COLLEGES IN 2000–2001

| <i>Variables</i> | <i>Mean</i> | <i>Standard Deviation</i> | <i>Minimum</i> | <i>Maximum</i> |
|---|-------------|-------------------------------|----------------|----------------|
| Endowment per student \$ | 158,503 | 145,548 | 4,860 | 716,210 |
| Enrollment | 1,639 | 716.48 | 290 | 3,803 |
| Mean SAT score | 1,195 | 94.01 | 950 | 1,425 |
| Freshmen retention rate (%) | 84 | 7.20 | 61 | 98 |
| Freshmen in the top of the class (%) | 41 | 16.42 | 11 | 88 |
| Acceptance rate (%) | 69 | 18.47 | 19 | 98 |
| Alumni giving rate (%) | 36 | 11.02 | 8 | 68 |
| Tier | 2.42 | 1.18 | 1 | 4 |
| Risk | 0.0090 | 0.0226 | -0.0437 | 0.1498 |
| Bond ratings | 4.5 | 2.66 | 1 | 15 |

5.4% premium compared to their non-alumni counterparts. Female presidents are paid 4.4% more than male presidents, although this difference is not statistically significant. Finally, the presidents in their last year of presidency are paid 8.0% more, *ceteris paribus*.

While college characteristics that reflect the size of institutions and level of their financial resources also have a statistically significant impact on pay, the economic significance of these parameters is minimal. An increase in full-time enrollment by 100 students is associated with a 0.9% increase

TABLE 3
MEAN SALARIES AND BENEFITS OF LIBERAL ARTS COLLEGE PRESIDENTS
BY COLLEGE TIER: 1998-1999 TO 2000-2001
(Standardized in 1999 Dollars)

| <i>College Tier</i> | <i>Salaries</i> | | | <i>Salary plus Benefits</i> | | |
|---------------------|-----------------|---------------------|------------|-----------------------------|---------------------|---------------------|
| | N | Mean (Std. Div.) | Difference | N | Mean (Std. Div.) | Difference |
| 1998-1999 | | | | | | |
| Tier 1 | 40 | 226,878 (35,180) | | 40 | | 261,289 (40,715) |
| Tier 2 | 46 | 179,578 (46,402) | 47,300*** | 45 | 208,674 (58,102) | 52,615*** |
| Tier 3 | 32 | 153,751 (47,125) | 25,827** | 32 | 175,790 (56,863) | 32,884*** |
| Tier 4 | 32 | 141,963 (31,468) | 11,788 | 32 | 160,315 (34,879) | 15,475 |
| 1999-2000 | | | | | | |
| Tier 1 | 42 | 234,480 (37,383) | | 42 | 272,590 (46,654) | |
| Tier 2 | 37 | 180,899 (40,801) | 53,581*** | 37 | 210,348 (54,263) | 62,242*** |
| Tier 3 | 39 | 167,498 (48,519) | 13,401 | 39 | 191,382 (57,245) | 18,966 |
| Tier 4 | 26 | 146,754 (31,551) | 20,744* | 26 | 166,657 (39,129) | 24,725* |
| 2000-2001 | | | | | | |
| Tier 1 | 50 | 229,080 (53,470) | | 50 | 271,577 (72,022) | |
| Tier 2 | 28 | 193,637 (34,088) | 35,443*** | 28 | 223,126 (46,943) | 48,451*** |
| Tier 3 | 38 | 170,216 (50,882) | 23,421** | 38 | 193,477 (57,119) | 29,649** |
| Tier 4 | 29 | 147,553 (38,346) | 22,663** | 29 | 165,614 (45,949) | 27,863** |
| All Colleges | | | | | | |
| 1998-1999 | 150 | 178,245 (51,932) | | 149 | 204,779 (62,228) | |
| 1999-2000 | 144 | 186,184 (51,843) | | 144 | 215,476 (63,721) | |
| 2000-2001 | 145 | 190,504 (56,041) | | 145 | 220,561 (71,649) | |

*p < 0.10

**p < 0.5

***p < 0.01

TABLE 4
RANDOM EFFECTS ESTIMATES OF PRESIDENT'S PAY AND
BENEFITS EQUATIONS, 1998-1999 TO 2000-2001
(Standard Errors)

| Variables ^a | Pay | <i>Pay + Benefits</i> |
|-------------------------------|------------|-----------------------|
| Female | 0.0441 | (0.0314) |
| Business or law degree | 0.0576* | (0.0346) |
| Alumni status | 0.0438 | (0.0377) |
| Job tenure | 0.0243 | (0.0403) |
| Last year | 0.0547* | (0.0352) |
| Previous presidency | 0.0472 | (0.0376) |
| SAT (*100) | 0.0104*** | (0.0024) |
| Freshman retention rate | 0.0123*** | (0.0025) |
| Enrollment (*100) | 0.0837*** | (0.0228) |
| Endowment per student (*1000) | 0.0799*** | (0.0233) |
| House value (*1000) | 0.0490 | (0.0339) |
| Bond rating | 0.0426 | (0.0363) |
| Risk | 0.0426** | (0.0199) |
| Intercept | 0.0429** | (0.0403) |
| R-squared | 0.0045* | (0.0026) |
| Wald chi2 (11) | 0.0054** | (0.0027) |
| N | 0.0078*** | (0.0024) |
| | 0.0094*** | (0.0029) |
| | 0.0019*** | (0.0012) |
| | 0.0025** | (0.0012) |
| | 0.0045 | (0.0046) |
| | 0.0024 | (0.0039) |
| | -0.0134 | (0.0092) |
| | -0.0140 | (0.0098) |
| | -0.1193 | (0.2768) |
| | 0.1500 | (0.2834) |
| | 11.0231*** | (0.2449) |
| | 11.0529*** | (0.2587) |
| | 0.5178 | 0.5217 |
| | 200.22*** | 208.55*** |
| | 328 | 326 |

^a Dummy variables for missing observations added
* p < 0.10; ** p < 0.5; *** p < 0.01

in the president's pay. The effect of per-student endowment is even smaller. A 100 point increase in SAT scores is associated with a 4.3% increase in pay, *ceteris paribus*, which coincides with a 10 percentage-point increase in freshmen retention rate.

Although these findings support our hypothesis that size, financial resources, and quality characteristics of colleges matter, changes in these characteristics must be drastic to significantly influence presidential pay. Human capital characteristics and the last year of service indicator are more important determinants.

As mentioned earlier, there are reasons that suggest differential compensation structure for colleges in different tiers. In Table 5 we report coefficients for the original model estimated for three tiers.⁴ As expected, gender and job tenure variables are statistically significant only for presidents at higher ranked colleges. Female presidents at Tier 1 colleges receive a 9.2% premium, while presidents at Tier 1 and Tier 2 colleges receive 0.7% and 1.1% higher salaries respectively for every year served in current position. On the other hand, size of the institution was an important salary determinant only for presidents in Tier 2 and below.

A major difference between the tiers can be found in how boards of trustees compensate presidents for working in an environment characterized by short-term financial risk. The short-term financial risk variable is statistically significant for all the presidents in the population. For the presidents in Tier 1, however, the coefficient is positive: higher financial risk will induce lower pay, *ceteris paribus*. For presidents in Tiers 2–4, the coefficient has a negative sign, while the absolute value of the coefficient is almost two times larger for the colleges in Tiers 3–4. Since college presidents working in lower-tier colleges do not benefit from the prestige of their position as much as the presidents of higher-tier colleges, they may require higher pay for working in a high financial risk environment. Moody's bond rating coefficient appears with a negative sign in all three equations and was statistically significant only for the Tier 2 colleges. This finding indicates that presidents are paid less if they are working in an environment characterized by long-term financial risk and high costs of borrowing.

Another difference between the tiers is the "golden parachute" factor. Interestingly, presidents at Tier 2 institutions do not receive a significant last-year premium, even though Tier 1 presidents receive a salary increase of 9.8% and Tiers 3–4 presidents receive a salary increase of 23.1% during their last year of service. Further research may explore where former col-

⁴We performed an F-test to determine whether the result would differ if we introduce a separate intercept for each tier. The intercept terms were jointly significant at the 5% level. We chose to introduce one intercept term for Tiers 3 and 4 and to combine the data for these two tiers to correct for missing observations.

TABLE 5
RANDOM EFFECT REGRESSION OF LN (PAY) BY TIER:
1998-1999 TO 2000-2001
(Standard Errors)

| <i>Variable:</i> | <i>Tier 1</i> | <i>Tier 2</i> | <i>Tier 3-4</i> |
|-------------------------------|------------------------|------------------------|------------------------|
| Female | 0.0916** (0.0439) | 0.0579 (0.0685) | -0.0404 (0.0522) |
| Business or law degree | 0.0621 (0.0444) | 0.0229 (0.0657) | 0.0390 (0.0747) |
| Alumni status | 0.0587 (0.0438) | -0.0263 (0.0589) | 0.0062 (0.0675) |
| Job tenure | 0.0070** (0.0034) | 0.0105*** (0.0036) | 0.0066 (0.0047) |
| Previous presidency | 0.0074 (0.0468) | 0.1065* (0.0595) | 0.0177 (0.0610) |
| Last year | 0.0984*** (0.0323) | 0.0052 (0.0390) | 0.2309*** (0.0707) |
| Enrollment* (100) | 0.0045 (0.0033) | 0.0066* (0.0041) | 0.0110** (0.0052) |
| Endowment per student* (1000) | 0.0006 (0.0015) | 0.0014 (0.0024) | 0.0110 (0.0072) |
| SAT* (100) | 0.0622* (0.0356) | 0.0467 (0.0420) | 0.0136 (0.0355) |
| Freshman retention rate | 0.0002 (0.0062) | 0.0000 (0.0052) | 0.0052 (0.0041) |
| House value* (1000) | 0.0010 (0.0049) | 0.0008 (0.0070) | 0.0163** (0.0072) |
| Bond value | -0.0089 (0.0158) | -0.0354** (0.0165) | -0.0079 (0.0144) |
| Risk | 0.5583** (0.2813) | -2.2126*** (1.0121) | -4.1314*** (1.3948) |
| Intercept | 11.3309*** (0.5548) | 11.5950*** (0.6345) | 11.0365*** (0.5271) |
| R-squared | 0.2929 | 0.4946 | 0.3387 |
| Wald chi2 (11) | 50.54*** | 62.69*** | 60.97*** |
| N | 124 | 102 | 102 |

* p < 0.10; ** p < 0.5; *** p < 0.01

lege presidents go after their term is over to find an explanation for this phenomenon.

The mean house value variable is statistically significant only in the Tiers 3-4 equation. An increase in house value of \$10,000 is associated with an increase in pay of 1.6%, holding other factors constant.

All of these differences in the statistical and economic significance of the coefficients suggest structural differences in the compensation of the presidents in different tiers. Institutional prestige encompasses the implicit premium for the presidents at higher-ranked colleges. Since the presidents at lower-tier colleges do not benefit from the prestige of their institutions, they receive premiums for higher financial risk and the higher cost of living. On the other hand, gender and human capital accumulation play the leading role in determining compensation for the presidents of Tier 1 colleges. This finding supports our hypothesis that presidents in more prestigious institutions are expected to maintain the status quo and are rewarded more for their human capital and demographic characteristics than for their performance or the environment within which they work.

Based on the R-squared coefficient, we can conclude that our model is best at predicting the pay of the presidents at the lower-tier colleges. These are the colleges omitted from the previous studies, although they provide the most insight into the structure of executive compensation.

CONCLUSION

Examining the population of presidents from elite and not so elite private liberal arts colleges has provided a simplified structure within which to study the determinants of executive compensation. There are very few layers of management between the presidents and the faculty and staff of these institutions as compared to those at the major research institutions. Liberal arts colleges have much in common: they have the same educational goals, similar size, and structures. However, the circumstances they operate under vary considerably, which can be captured by the tier and financial risk factors. Lower-tier schools, for example, have to follow more aggressive strategies to move up in the rankings; thus, different aspects of presidents' actions are more important in determining pay. In this paper, we correct for the sample bias in previous studies created by focusing only on top-tier institutions.

Our findings support the idea that a college's tier matters. For the presidents in the higher tiers, compensation depends more on human capital and personal characteristics. In comparison, we find that presidents in Tiers 3–4 are rewarded generously for incurring short-term financial risk, while presidents in the upper tier are expected to function within the limits of operating budget and are financially punished for running at a deficit in their current account. Long-term risk and the high cost of borrowing as measured by Moody's bond rating is negatively correlated with presidential compensation across all institutions in all tiers. The explanation is intuitive: financially stable institutions with lower costs of borrowing can afford to pay their presidents more.

Our results also suggest that the pay-performance link is weak. While it may seem that presidents in the lower tiers should be compensated more for having a more challenging job, they seem to receive non-monetary rewards. During their service they acquire specific skills and national recognition and may reap larger rewards when, through their success, they become members of a smaller pool of qualified presidential candidates for top-tier positions. Presidents of the top-tier institutions benefit from the prestige of their schools, which is also a part of their "fringe benefits." Tracking the presidents after the end of their term may shed some light on this side of presidential pay.

It would also be interesting to see if college and university presidents at institutions in the other four Carnegie classifications have different salary structures, based upon their rankings. It seems that presidents at the top-ranked schools in the Carnegie research classification may have very different goals than presidents of colleges and universities ranked in the third or fourth tiers of that classification. A closer examination of these institutions may help identify the more subtle determinants of executive compensation among college presidents.

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