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Executive Compensation for Top-Ranked Private Universities in the United States: A Study of a 2-Decade Change

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Abstract

The increasing cost of attending higher education institutions in the United States of America warrants investigations into potential causal factors. As one major recurring expenditure is employee compensation, the purpose of this study was to determine if total executive compensation as a percentage of total institutional expenses has changed over the 2-decade period of 2001 to 2021 with a specific focus on the top 20 private universities in the United States that are not part of the Ivy League. Due to their excellence, these 20 institutions hold national and international attention and serve as influential models to other higher education institutions thus making them important for analysis. For these institutions, the findings suggest that total executive compensation represented an increasing percentage of total institutional expenses over this 2-decade period; however, chief executive officer base compensation represented a decreasing percentage of total executive compensation over this same period.

Keywords: private U.S. universities, executive compensation, chief executive officer compensation

1. Introduction

The cost of attending higher education institutions in the United States of America continues to rise. Over the past two decades, tuition and fees for undergraduate education has increased by 78% for public institutions and 41% for private institutions (see Table 1); for graduate (i.e., postbaccalaureate) education, the increase has been 102% for public institutions and 32% for private institutions (see Table 2). These costs do not include costs for lodging, food, and other items each with their own inflationary increases. Overall, such tuition and fee increases have been attributed to the cost of increased student services (e.g., counseling, nonfaculty academic support), reduced governmental support (particularly affecting public institutions), and the increased cost of producing an education (McGurran, 2023).

Table 1. Two-Decade Change in Annual Average Undergraduate Tuition and Fees at 4-Year Institutions in the United States

	Average Tuition and Fees[1] at Public 4-Year Institutions	Average Tuition and Fees[1] at Private (Nonprofit) 4-Year Institutions
Year: 2000–2001	5,261	23,251
Year: 2020–2021	9,375	32,825
Two-Decade Change	+78%	+41%

Note. [1]Constant 2020–21 United States dollars. Source: National Center for Education Statistics (2022).

Table 2. Two-Decade Change in Annual Average Graduate Tuition and Fees at Institutions in the United States

	Average Tuition and Fees[1] at Public Institutions	Average Tuition and Fees[1] at Private (Nonprofit) Institutions
Year: 1999–2000	6,142	21,460
Year: 2019–2020	12,410	28,430
Two-Decade Change	+102%	+32%

Note. [1]Constant 2019–20 United States dollars. Source: National Center for Education Statistics (2021).

Producing an education requires an infrastructure of faculty, staff, and facilities led by executives at the institutional level. Such executives represent many of an institution's highest paid administrators due to their extensive experience and high-impact responsibilities. Because of the high salaries that executives receive in relation to other employees, they are a relevant group to consider in furthering an understanding of causal factors for increased attendance cost. Hence, the purpose of this study was to determine if total executive

compensation as a percentage of total institutional expenses has changed over the 2-decade period of 2001 to 2021 with a specific focus on the top 20 private universities in the United States that are not part of the Ivy League. Due to their excellence, these 20 institutions hold national and international attention and serve as influential models to other higher education institutions.

Changes in total executive compensation can be related to two factors: changes in the number of executives and changes in the compensation per executive. The data available for this study were unable to parse these two factors; however, data were available for the chief executive officer (CEO) and, thus, were analyzed. Related to these two factors, potential problems of administrative bloat (i.e., excessive number of administrators) as well as excessive compensation (i.e., excessive compensation per executive) are discussed in the extant literature.

According to Johnson (2020), "administrative bloat … occurs when more managers and associated staff than needed populate a university" and its negative consequences are "escalating costs, power shifts, and corruption" (pp. 1–2). Johnson discussed the pursuit of prestige as a cause for modeled bloating when less prestigious institutions adopt practices of more prestigious institutions; hence, the influence of the 20 top-ranked institutions for the present study on other institutions may be in ways that are both positive and negative with respect to effectiveness and efficiency. However, as these top-ranked institutions maintain large financial endowments, they are better positioned to financially offset less efficient practices than many other institutions.

Friedman et al. (2022) classified "excessive executive compensation" as a form of "wasteful spending" (p. 7). They argued that such compensation "has exacerbated the problem of income inequality in the United States" while "wages and salaries for employees in the middle and bottom remain stagnant" (p. 16). They further asserted, "adding insult to injury, CEOs' exorbitant salaries are not correlated with performance; instead, they are related to the strength of the relationship CEOs have with the board members who determine compensation" (p. 16). In fact, Friedman et al. cited a corporate case in which executives were paid a multimillion dollar bonus when the company was "on the brink of bankruptcy" (p. 16). Friedman et al. addressed this wasteful practice to various settings that include higher education.

To reiterate, the purpose of this study was to determine if total executive compensation as a percentage of total institutional expenses has changed over the 2-decade period of 2001 to 2021 with a specific focus on the top 20 private universities in the United States that are not part of the Ivy League. Findings and conclusions will be related solely to the data analyzed and will not extend to conclusions of administrative bloat or excessive compensation that cannot be inferred from data; that is, the data analyzed cannot discern what was excessive with respect to either staffing numbers or compensation. Hence, these problematic concerns were only introduced as related considerations for further study.

2. Method

The focus of this study was on the top 20 private universities in the United States that are not

part of the Ivy League (Boyington & Moody, 2021). As the Ivy League represents a particular group of eight historical institutions within the United States (cf. "Ivy League Schools," 2022), they were excluded from this study due to their special characteristics and status; however, many of the universities analyzed are quite comparable in terms of selectivity, endowment, and international prestige.

In the United States, nonprofit organizations such as the universities analyzed for this study are required to annually submit an Internal Revenue Service Form 990 to report revenues and expenditures for the fiscal tax year. These submissions are available in the public domain at ProPublica (2023) and, thus, provided the following financial data analyzed for this study: total expenses, total executive compensation, and CEO compensation. Using the current version of the Form 990, ProPublica categorizes "compensation of current officers, directors, trustees, and key employees" as "executive compensation"; thus, the present analysis will similarly classify this compensation as total executive compensation. (Note that an analogous category in the earlier version of Form 990 was also used in this manner.)

3. Findings

3.1 Institutional Analysis

Table 3 presents the total expenses, executive compensation, and percent of executive compensation to total expenses for all 20 institutions analyzed for the 2001 and 2021 fiscal years ending on June 30. Note that because the percentage will be analyzed, constant dollars are unnecessary; thus, the dollars are as per the respective fiscal year.

For the 2-decade period, descriptive highlights from Table 3 are as follows:

- 18 out of 20 institutions experienced a percent increase over the period;
- University of Chicago experienced a percent reduction whereas Emory University was unchanged over the period;
- Rice University is the single institution with a percent exceeding 1.00 for both fiscal years; and
- Wake Forest University had a percent exceeding 1.00 only for the 2021 fiscal year.

Table 3. Total Executive Compensation for the Top 20 Private Universities (Non-Ivy League; Boyington & Moody, 2021) in the United States

	July 1, 2000–June 30, 2001			July 1, 2020–June 30, 2021		
Institution	Total Expenses (USD[1])	Executive Compensation[2] (USD[1])	Percent[3]	Total Expenses (USD[1])	Total Executive Compensation[2] (USD[1])	Percent[3]
Massachusetts Institute of Technology	1,514,912,000	2,361,000	0.16	4,281,626,000	9,852,000	0.23
Stanford University	2,047,969,537	2,163,235	0.11	6,677,255,686	10,056,959	0.15

University of Chicago	1,073,642,235	4,531,796	0.42	3,761,982,970	14,830,893	0.39
California Institute of Technology	1,882,285,000	3,270,000	0.17	3,276,012,000	12,091,000	0.37
Duke University (NC)	1,080,444,553	3,819,982	0.35	3,270,558,153	20,464,488	0.63
Johns Hopkins University (MD)	1,964,832,000	5,571,000	0.28	6,686,829,000	25,966,000	0.39
Northwestern University (IL)	984,319,961	3,568,381	0.36	3,030,857,470	24,832,681	0.82
Vanderbilt University (TN)	1,456,398,079	4,677,123	0.32	1,922,598,487	14,513,676	0.75
Washington University in St. Louis	1,212,006,000	3,339,069	0.28	4,080,045,645	15,680,502	0.38
Rice University (TX)	259,756,171	3,431,283	1.32	1,001,174,859	16,055,005	1.60
University of Notre Dame (IN)	542,200,115	2,871,479	0.53	1,705,430,078	9,403,822	0.55
Emory University (GA)	1,393,110,978	7,263,111	0.52	4,984,531,745	26,086,941	0.52
Georgetown University (DC)	600,895,801	1,912,878	0.32	1,512,702,096	5,832,638	0.39
Carnegie Mellon University (PA)	505,096,839	1,422,879	0.28	1,383,731,619	10,352,564	0.75
University of Southern California	1,416,884,000	2,631,000	0.19	5,421,388,375	18,578,900	0.34
New York University	1,749,803,000	1,990,000	0.11	8,413,939,502	11,380,187	0.14
Tufts University (MA)	428,686,372	2,304,835	0.54	1,138,493,828	9,502,314	0.83
Wake Forest University (NC)	616,356,179	2,424,680	0.39	585,188,441	9,624,586	1.64

University of Rochester (NY)	1,184,960,000	2,542,000	0.21	4,295,127,288	12,271,338	0.29
Boston College	463,556,635	1,541,891	0.33	1,148,979,197	6,812,128	0.59

Notes. [1]United States dollars. [2]For officers, directors, key employees, etc. [3]The percentage that total executive compensation represents of total expenses.

Table 4 presents the 2-decade change ratio for the percentage that total executive compensation represents of total expenses for the 20 institutions. The 2-decade change ratios of note are the University of Chicago (7% reduction in executive compensation percentage), Emory University (no change in executive compensation percentage), and Wake Forest University (321% increase in executive compensation percentage) that had the largest percent change of the 18 institutions with an increased percent change. Using data for all 20 institutions, the results of a paired *t* test suggest that the mean percent of total executive compensation to total expenses for the reporting year 2020–2021 (M = 0.59, SD = 0.41) was significantly greater than the mean percent of total executive compensation to total expenses for the reporting year 2000–2001 (M = 0.36, SD = 0.26), $t(19) = 3.57$, $p = .001$, $d = .29$; effect size was small. The 95% confidence interval for the difference in means ranged from 0.09 to 0.36.

Table 4. Percentage of Total Executive Compensation to Total Expenses and the 2-Decade Change Ratio (2001–2021)

Institution	Percent[1] July 1, 2000–June 30, 2001	Percent[1] July 1, 2020–June 30, 2021	Percent 2020–2021/Percent 2000–2001
Massachusetts Institute of Technology	0.16	0.23	1.44
Stanford University	0.11	0.15	1.36
University of Chicago	0.42	0.39	0.93
California Institute of Technology	0.17	0.37	2.18
Duke University (NC)	0.35	0.63	1.80
Johns Hopkins University (MD)	0.28	0.39	1.39
Northwestern University (IL)	0.36	0.82	2.28
Vanderbilt University (TN)	0.32	0.75	2.34
Washington University in St. Louis	0.28	0.38	1.36
Rice University (TX)	1.32	1.60	1.21
University of Notre Dame (IN)	0.53	0.55	1.04
Emory University (GA)	0.52	0.52	1.00
Georgetown University (DC)	0.32	0.39	1.22
Carnegie Mellon University (PA)	0.28	0.75	2.68
University of Southern California	0.19	0.34	1.79
New York University	0.11	0.14	1.27
Tufts University (MA)	0.54	0.83	1.54

Wake Forest University (NC)	0.39	1.64	4.21
University of Rochester (NY)	0.21	0.29	1.38
Boston College	0.33	0.59	1.79

Notes. [1]The percentage that total executive compensation represents of total expenses.

Descriptive statistics for the 2-decade change ratio are provided in Table 5. On average, the percent of total executive compensation to total expenses increased by 71% (M = 1.71 for 2-decade change ratio; see Table 5). Using data for all 20 institutions, the results of a one sample t test suggest that the 95% confidence interval for the ratio of the mean percent of total executive compensation to total expenses for the reporting year 2020–2021 divided by the percent for 2000–2001 (M = 1.71, SD = 0.76) ranged from 1.35 to 2.06.

Table 5. Descriptive Statistics for Total Executive Compensation to Total Expenses Percentages and the 2-Decade Change Ratio

Statistic	Percent[1] July 1, 2000–June 30, 2001	Percent[1] July 1, 2020–June 30, 2021	Percent (2020–2021)/ Percent (2000–2001)
Mean	0.36	0.59	1.71
Median	0.32	0.46	1.42
Standard Deviation	0.26	0.41	0.76
Minimum	0.11	0.14	0.93
Maximum	1.32	1.64	4.21

Notes. [1]The percentage that total executive compensation represents of total expenses.

3.2 CEO Analysis

Table 6 provides the base compensation for each institution's CEO as well as the percent of this base compensation to total executive compensation for the 2001 fiscal year; Table 7 provides these same statistics for the 2021 fiscal year. Note that the CEO for Boston College does not accept a salary; thus, this institution will not be included in the 2-decade change analysis.

Table 6. Reportable Base Compensation for CEOs From the Organization: July 1, 2000–June 30, 2001

Institution	Total Executive Compensation[2] (USD[1])	CEO's Base Compensation (USD[1])	Percent[3]
Massachusetts Institute of Technology	2,361,000	507,376	21.5
Stanford University	2,163,235	495,000	22.9

University of Chicago	4,531,796	454,988	10.0
California Institute of Technology	3,270,000	440,000	13.5
Duke University (NC)	3,819,982	410,800	10.8
Johns Hopkins University (MD)	5,571,000	510,231	9.2
Northwestern University (IL)	3,568,381	441,467	12.4
Vanderbilt University (TN)	4,677,123	487,275	10.4
Washington University in St. Louis	3,339,069	537,950	16.1
Rice University (TX)	3,431,283	499,771	14.6
University of Notre Dame (IN)	2,871,479	315,000	11.0
Emory University (GA)	7,263,111	405,000	5.6
Georgetown University (DC)	1,912,878	468,000	24.5
Carnegie Mellon University (PA)	1,422,879	364,397	25.6
University of Southern California	2,631,000	545,000	20.7
New York University	1,990,000	625,000	31.4
Tufts University (MA)	2,304,835	328,169	14.2
Wake Forest University (NC)	2,424,680	221,000	9.1
University of Rochester (NY)	2,542,000	388,453	15.3
Boston College	1,541,891	0[4]	0.0[4]

Notes. Base compensation excludes benefits or estimates of other compensation. [1]United States dollars. [2]For officers, directors, etc. [3]The percentage that CEO base compensation represents of total executive compensation. [4]CEO declined salary, which is typically due to a religious poverty vow.

Table 7. Reportable Base Compensation for CEOs From the Organization: July 1, 2020–June 30, 2021

Institution	Total Executive Compensation[2] (USD[1])	CEO's Base Compensation (USD[1])	Percent[3]
Massachusetts Institute of Technology	9,852,000	1,102,428	11.2
Stanford University	10,056,959	1,117,378	11.1
University of Chicago	14,830,893	1,831,643	12.4
California Institute of Technology	12,091,000	1,394,670	11.5
Duke University (NC)	20,464,488	1,476,476	7.2
Johns Hopkins University (MD)	25,966,000	1,646,872	6.3
Northwestern University (IL)	24,832,681	1,647,490	6.6
Vanderbilt University (TN)	14,513,676	924,409	6.4
Washington University in St. Louis	15,680,502	1,164,999	7.4
Rice University (TX)	16,055,005	1,528,621	9.5
University of Notre Dame (IN)	9,403,822	1,164,429	12.4
Emory University (GA)	26,086,941	671,443	2.6
Georgetown University (DC)	5,832,638	919,044	15.8

Carnegie Mellon University (PA)	10,352,564	1,260,567	12.2
University of Southern California	18,578,900	2,330,738	12.5
New York University	11,380,187	1,517,998	13.3
Tufts University (MA)	9,502,314	1,004,586	10.6
Wake Forest University (NC)	9,624,586	1,524,226	15.8
University of Rochester (NY)	12,271,338	791,699	6.5
Boston College	6,812,128	0[4]	0.0[4]

Notes. Base compensation excludes benefits or estimates of other compensation. [1]United States dollars. [2]For officers, directors, etc. [3]The percentage that CEO base compensation represents of total executive compensation. [4]CEO declined salary, which is typically due to a religious poverty vow.

Table 8 presents the 2-decade change ratio for the percentage that CEO base compensation represents of total executive compensation for 19 institutions. Three of the 19 institutions had a 2-decade change ratio greater than 1.00: University of Chicago (24% increase in CEO base compensation percentage), University of Notre Dame (13% increase in CEO base compensation percentage), and Wake Forest University (74% increase in CEO base compensation percentage). Using data for 19 institutions, the results of the paired *t* test suggest that the mean percent of CEO base compensation to total executive compensation for the reporting year 2020–2021 (M = 10.07, SD = 3.54) was significantly lower than the mean percent of CEO base compensation to total executive compensation for the reporting year 2000–2001 (M = 15.73, SD = 6.86), $t(18) = 4.22$, $p < .001$, $d = 5.85$; effect size was large. The 95% confidence interval for the difference in means ranged from 2.84 to 8.48.

Table 8. Percentage of CEO Compensation to Total Executive Compensation and the 2-Decade Change Ratio (2001–2021)

Institution	Percent[1] July 1, 2000–June 30, 2001	Percent[1] July 1, 2020–June 30, 2021	Percent 2020–2021/Percent 2000–2001
Massachusetts Institute of Technology	21.5	11.2	0.52
Stanford University	22.9	11.1	0.48
University of Chicago	10.0	12.4	1.24
California Institute of Technology	13.5	11.5	0.85
Duke University (NC)	10.8	7.2	0.67
Johns Hopkins University (MD)	9.2	6.3	0.68
Northwestern University (IL)	12.4	6.6	0.53
Vanderbilt University (TN)	10.4	6.4	0.62
Washington University in St. Louis	16.1	7.4	0.46
Rice University (TX)	14.6	9.5	0.65
University of Notre Dame (IN)	11.0	12.4	1.13
Emory University (GA)	5.6	2.6	0.46

Georgetown University (DC)	24.5	15.8	0.64
Carnegie Mellon University (PA)	25.6	12.2	0.48
University of Southern California	20.7	12.5	0.60
New York University	31.4	13.3	0.42
Tufts University (MA)	14.2	10.6	0.75
Wake Forest University (NC)	9.1	15.8	1.74
University of Rochester (NY)	15.3	6.5	0.42

Notes. Boston College excluded due to CEO declined salary. [1]The percentage that total executive compensation represents of total expenses.

Descriptive statistics for the 2-decade change ratio are provided in Table 9. On average, the percent of CEO base compensation to total executive compensation decreased by 30% (M = 0.70 for 2-decade change ratio; see Table 9). Using data for 19 institutions, the results of a one sample t test suggest that the 95% confidence interval for the ratio of the mean percent of CEO base compensation to total executive compensation for the reporting year 2020–2021 divided by the percent for 2000–2001 (M = 0.70, SD = 0.33) ranged from 0.54 to 0.86.

Table 9. Descriptive Statistics for CEO Base Compensation to Total Executive Compensation Percentages and the 2-Decade Change Ratio

Statistic	Percent[1] July 1, 2000–June 30, 2001	Percent[1] July 1, 2020–June 30, 2021	Percent (2020–2021)/ Percent (2000–2001)
Mean	15.73	10.07	0.70
Median	14.20	11.10	0.62
Standard Deviation	6.86	3.54	0.33
Minimum	5.60	2.60	0.42
Maximum	31.40	15.8	1.74

Notes. Boston College excluded due to CEO declined salary. [1]The percentage that CEO base compensation represents of total executive compensation.

4. Discussion

For the institutions analyzed, total executive compensation represented an increasing percentage of total expenses over the 2-decade period from fiscal years ending in 2001 to 2021 (p = .001; d = .29, small effect size); however, CEO base compensation represented a decreasing percentage of total executive compensation (p < .001; d = 5.85, large effect size). Because percentages were analyzed, this suggests there have been increases in executive staffing or non-CEO executive compensation out of proportion with other expense changes. Whether or not this lack of proportionality was excessive either in staffing (i.e., administrative bloat; cf. Johnson, 2020) or compensation (i.e., excessive executive

compensation; cf. Friedman et al., 2022) could not be determined from the data; thus, further investigation is suggested.

5. Limitations

This study was delimited to the top 20 private, non-Ivy League universities in the United States as per Boyington and Moody (2021); thus, the findings are limited in generalizability to these institutions.

6. Conclusion

The ability for students and their families to pay for higher education in the United States is increasing in difficulty due to rising costs. In order to pay increasing costs, student loan debt per borrower is increasing, and "the total average [student loan debt] balance (including private loan debt) may be as high as $40,505" (Hanson, 2023, para. 1). Bahadir and Gicheva (2022) stated "outstanding student debt [in the United States] reached $1.5 trillion in 2019, representing the second largest type of household credit after mortgage debt" (p. 2273); Mir and Toor (2023) recently updated this total student debt to $1.7 trillion.

In order to reduce continued debt increases due to higher education thus ameliorating its harmful effects on life after graduation, higher education institutions must identify the causes of increasing costs and determine cost-containment strategies. Based on the findings of the present study, one area requiring further scrutiny is total executive compensation that has increased out of proportion with other expense changes. The focus for this recommended research should be on the size and compensation of executive staff in proportion to nonexecutive staff.

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