



The **COST** *of* **EXCESS**

Why Colleges and Universities Must
Control Runaway Spending



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American Council of Trustees and Alumni
Institute for Effective Governance®

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Acknowledgments

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For over a decade, ACTA has led calls for transparency and accountability in college spending and has provided university boards with guidance to address rising costs. ACTA's one-of-a-kind higher education financial analysis tool, **HowCollegesSpendMoney.com**, makes it possible for board members to evaluate their institutions' spending patterns and benchmark them against their peers. ACTA's trustee guide ***How Much Is Too Much? Controlling Administrative Costs through Effective Oversight*** takes a deeper look at the challenges trustees face in balancing the cost of administration with their core mission—teaching and learning.

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Preface

We can put a face on higher education spending. The face that has traditionally brought pride to America is that of the successful graduate, ready for a meaningful career and engaged, informed citizenship. But there is also another face, a grim one, of young people and mid-career adults with an onerous debt burden, which has now reached an average of \$39,351 for the 65% of students who borrow money to fund their college educations. That face changes from grim to tragic for the 6% whose burden is greater than \$100,000. The rationalizations for this economic catastrophe ring hollow: College debt does not comport with the dismissive description, “good debt,” once so popular among higher education administrators. High levels of student loan debt have been shown to postpone major life events dramatically, with borrowers reporting delays in saving for retirement (62%), buying a home (55%), marriage (21%), and starting a family (28%).¹

The solution cannot be debt forgiveness, which is merely a way of shifting the burden to the American taxpayer. More importantly, debt cancellation is but a temporary solution that treats the symptom and not the disease. How, exactly, did the cost to attend college in the United States rise so high? Even the most optimistic would be hard-pressed to argue that colleges today are providing nearly three times the educational value that they did 30 years ago—which would otherwise justify the 178% increase in sticker price at four-year public institutions since 1990. This argument crumbles in the face of studies that show that one-third of students leave college without any growth in critical thinking or analytical reasoning skills and that only 49% of employers think recent graduates are proficient in oral and written communication.²

College and university governing boards, which hold the legal authority to set institutional budgets, are a critical line of defense for students, families, and taxpayers who are concerned about higher education’s spiraling costs. Trustees have acted courageously at schools such as Purdue University, which in the 2022–23 academic year will go into its 10th straight year of a tuition freeze; Troy University, whose board in 2020 voted to freeze tuition for a second straight year; and the University of Illinois, which froze tuition for incoming students during the 2021–22 academic year. But in an increasingly tight financial environment, such action is not easy and is not the norm.³

While many college presidents may be sanguine about their long-term fiscal situation (a 2021 survey found that nearly eight out of 10 presidents felt confident that their institution would be financially stable over the next 10 years), board members are less so. Before the COVID-19 pandemic, a 2020 survey of America’s college trustees found that their top concern about the future of higher education institutions was financial sustainability.⁴

To address these concerns, the American Council of Trustees and Alumni (ACTA) conducted a comprehensive analysis of data from over 1,500 American colleges and universities as part of its Project on Administrative Costs. The results demonstrate at the national level how colleges' rampant spending can drive up tuition while having little impact on graduation rates. A proper understanding of an institution's spending habits can provide valuable insights for governing boards seeking to allocate scarce resources efficiently toward what most benefits students. The evidence is anecdotal, but it is perhaps significant that MacMurray College in Jacksonville, Illinois—which closed in 2020 after 174 years—spent \$0.76 on administration for every dollar spent on instruction in 2018, well above the average of its self-selected peers at \$0.56. Less than a mile away, Illinois College, whose finances remain stable, spent \$0.37 on administration per dollar spent on instruction that same year. Contrast the difference between two private liberal arts colleges in Massachusetts: Becker College closed in 2021 after years of spending **over \$1** on administration for every dollar spent on instruction, while Endicott College spent \$0.34 on administration per dollar spent on instruction in 2018 and managed, as of April 2021, to increase its endowment to \$119 million while avoiding any layoffs or furloughs.⁵

This report illustrates the implications for students—both financially and academically—of the steady growth in spending since the Great Recession. It is our hope that public awareness of this trend's impact on student finances and student outcomes will encourage more prudent choices.

When trustees of Indiana's public universities gathered in 2011, then-governor Mitch Daniels was blunt in his admonition to higher education governing boards: "You are not there to be a mindless cheerleader. Administrative costs are rising rapidly, and that is a lopsided way to deliver resources." If that was not sufficiently clear, he added, "I don't want to see you at the Statehouse asking for more money." Upon assuming the presidency of Purdue University in 2013, he proceeded to cut administrative spending—keeping it below the level of Purdue's peer institutions—and freeze tuition. The findings of this paper should make clear why strong medicine of this sort is urgently important for the future of American higher education.

Michael B. Poliakoff, Ph.D.
President, American Council of Trustees and Alumni

Executive Summary

Research points to numerous factors correlated with increases in tuition and graduation rates, including selectivity, urbanicity, and other institutional and student body characteristics, as well as the level of state and federal funding for public schools. This study seeks to account for these variances and isolate the effect of spending to answer the following question: **What impact does an institution's spending habits have on tuition, and to what extent does this spending actually benefit students?**⁶

Toward this end, we examined the nine years of publicly available data collected by the U.S. Department of Education's National Center for Education Statistics (NCES) since the Great Recession (2010–2018). Institutions that receive federal funds (including those that accept federally backed student loans) are

The aggregate data reveal a clear pattern: Institutional spending continues to rise while contributing little to graduation rates.

required to report institutional data annually to NCES which then makes this data accessible through the Integrated Postsecondary Education Data System (IPEDS). For the purposes of this study, we limited our analysis to Title IV-participating, four-year public and

private, nonprofit doctoral, master's, and bachelor's degree-granting institutions in the U.S., for a total of 1,529 schools.⁷

The aggregate data reveal a clear pattern: Institutional spending continues to rise while contributing little to graduation rates. Moreover, investment in instructional staff—particularly tenured or tenure-track professors—has been overshadowed by increases in administrative staff, namely well-paid, professional employees.

Growth in college spending has consequences, first and foremost by raising costs for students. We found that increases in spending are associated with rising tuition, even after controlling for external factors such as level of state appropriations. At the same time, we found that increased spending on instruction, administration, and (at private institutions) student services was only marginally associated with increases in four-year graduation rates. At public institutions, spending on student services showed no statistically significant correlation with graduation rates, after controlling for more consequential factors such as selectivity and student demographics. These findings serve as a stark warning of the repercussions of wasteful spending. In the wake of the COVID-19 pandemic, institutions must prioritize spending in service of their educational mission.

Key Findings

Based on an analysis of federal data between 2010 and 2018 from 1,529 four-year public and private, nonprofit institutions:

■ Spending at institutions of higher education continued to climb both during and after the Great Recession.

- Non-instructional spending—including student services (29%) and administration (19%)—grew faster than instructional spending (17%).
- From 2012 (the earliest year for which comparable staffing data are available) to 2018, colleges and universities prioritized hiring less expensive and often less-credentialed instructional staff and more expensive administrative staff.

■ Spending drove up the price of tuition, which was also correlated with increases in net cost for students.

- Increases in per-student spending on instruction, administration, and student services were each correlated with an increase in tuition for the next academic year, even after controlling for levels of appropriations and institutional characteristics.
- An increase in reported tuition and mandatory fees (commonly known as the “sticker price”) was correlated with an increase in average net price, suggesting that tuition discounting has not kept pace with the growth of tuition.

■ Spending had a minimal impact on graduation rates.

- At public institutions, spending on instruction and administration had statistically significant, but inconsequential correlations with graduation rates. Spending on student services had no correlation with graduation rates at public institutions.
- At private institutions, spending on instruction, administration, and student services had statistically significant, but inconsequential correlations with graduation rates.
- On a strictly percentage basis, an increase in instructional spending at public institutions was twice as effective as an increase in administrative spending at improving graduation rates. Student services spending showed no correlation with graduation rates.
- On a strictly percentage basis, an increase in instructional spending at private institutions was over five times as effective as an increase in administrative spending and nearly three times as effective as an increase in student services spending at improving graduation rates.

1.

How Did We Get Here?

The years before the Great Recession marked a period of rapid expansion for America's colleges and universities. As enrollment steadily rose, institutions prioritized spending on part-time instructional staff, non-instructional student services personnel, and professional business and administrative positions instead of traditional, full-time, tenured or tenure-track professors. One analysis found that from 1993 to the beginning of the Recession in 2007, the number of full-time administrators per 100 students at America's leading universities increased by 39%, while the number of employees engaged in teaching, research, or public service increased by only 18%.⁸

A Great Recession Spending Spree

Several studies have shown that higher education is somewhat insulated from the market forces that are disruptive to the economy as a whole during periods of instability. For example, a 2013 analysis of six recessions between 1970 and 2009 found that economic downturns “had very little restraining power” on college enrollment. Even so, when the global economy began to contract during the Great Recession, institutions did face stark fiscal challenges. In 2009, charitable giving to colleges and universities fell by nearly 12%, endowment returns decreased by 23%, and state spending on public institutions shrank by 25% on a per-student basis. However, during economic crises, many seek to improve their resume and develop new skills by furthering their education. Between 2007 and 2010, the number of undergraduates in the U.S. increased by almost 16%, with close to 2.5 million more people attending a two- or four-year postsecondary institution. The federal government encouraged this trend by raising the borrowing limit for undergraduates in 2007 and again in 2008 for the first time since 1995 and—as of the time of this report—these rates have remained fixed at their 2009 limits. To increase college accessibility for lower-income students, the maximum amount of Pell Grants that could be awarded was also increased in 2009. As a result, demand skyrocketed. From 2007–08 to 2010–11, Pell Grant expenditures rose from nearly \$16 billion to \$37 billion, and student loans grew from almost \$75 billion to \$110 billion.⁹

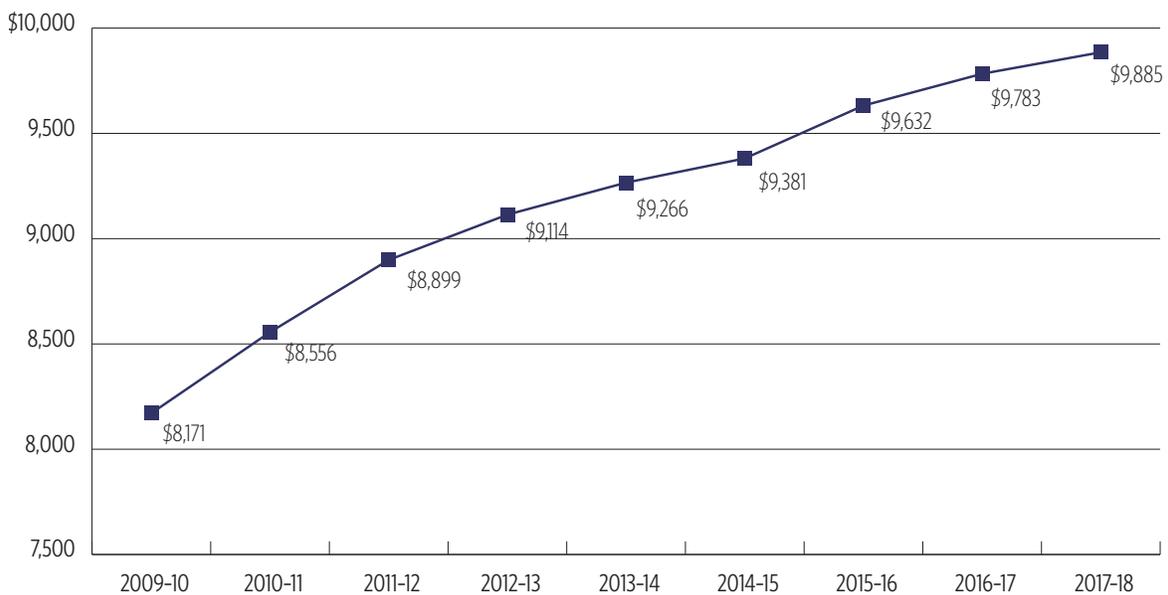
In most industries, if one source of revenue declines during an economic downturn, businesses need to reduce (or find new ways to finance) their expenses. **Despite the dramatic decrease in certain sources of revenue in the years immediately following the Recession, our analysis of colleges and universities showed no comparable decrease in spending.** Rather than cutting costs, many institutions relied more heavily on tuition revenue to finance additional spending. Sticker price grew precipitously during the Recession. From 2007 to 2012, states that were hit hardest (as measured by unemployment rates) saw

tuition and fees at four-year public institutions rise by an average of \$2,800, while states least affected still experienced a \$1,200 average increase. More broadly, when adjusted for inflation, tuition at four-year public institutions rose 19% during the Recession. Despite increased access to federal aid, the growth in sticker price outpaced both aid and discounting, forcing families to pay more to send their children to college and increasing the amount of student loan debt held by the average borrower.¹⁰

Public colleges and universities were particularly affected by this shift. Net tuition revenue—the total amount of tuition and fees collected after accounting for “state and institutional financial aid, tuition waivers or discounts, and medical student tuition and fees”—increased by 39% per full-time equivalent (FTE) student between 2008 and 2019, even after adjusting for inflation. In more than half of the states, tuition revenue now accounts for over 50% of public institutions’ revenue. Our own analysis of four-year institutions found that in 2018, public schools received an additional \$1,977 per FTE student in tuition revenue compared to 2010, while private schools received an additional \$957.¹¹

FIGURE 1
CHANGE IN TUITION AND REQUIRED FEES
AT FOUR-YEAR INSTITUTIONS, 2010–2018

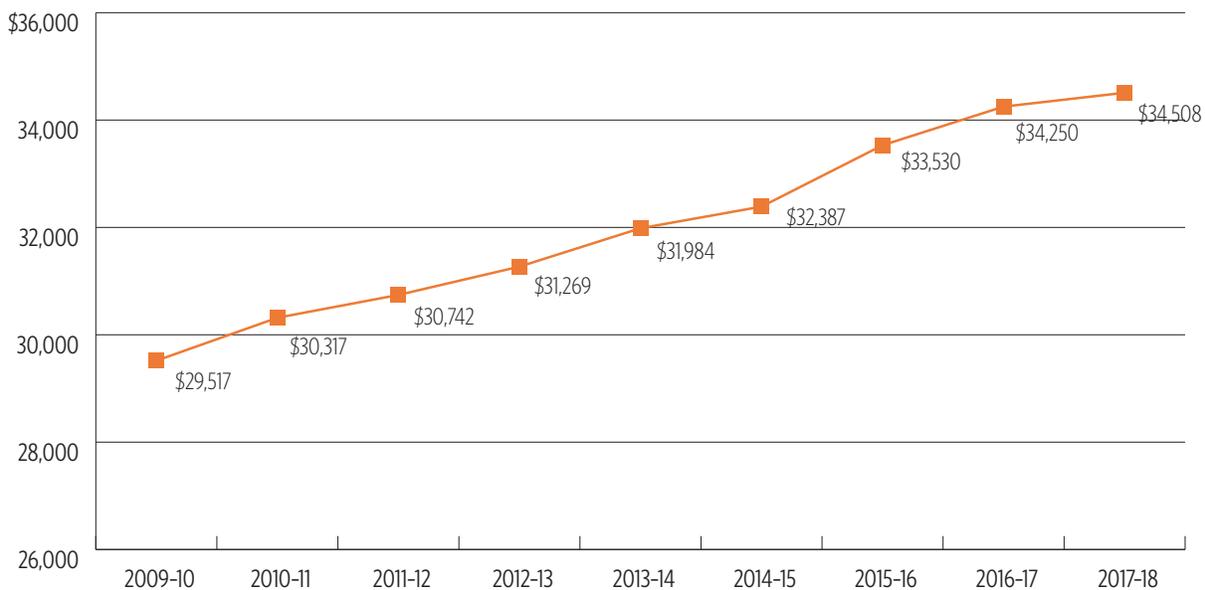
FIGURE 1A: Average Tuition and Required Fees at Four-Year Public Institutions



Source: IPEDS

Note: Dollar figures are expressed in 2020 inflation-adjusted figures. Data reflect institutions with Carnegie Classifications that fall within the range of “Baccalaureate Colleges: Diverse Fields” and “Doctoral Universities: Very High Research Activity.” Public school tuition is in-state tuition only.

FIGURE 1B: Average Tuition and Required Fees at Four-Year Private, Nonprofit Institutions



Source: IPEDS

Note: Dollar figures are expressed in 2020 inflation-adjusted figures. Data reflect institutions with Carnegie Classifications that fall within the range of “Baccalaureate Colleges: Diverse Fields” and “Doctoral Universities: Very High Research Activity.”

We are already seeing similar trends in response to the economic downturn caused by the COVID-19 pandemic. A recent survey found that 65% of schools experienced a decline in philanthropy in 2020, and one-quarter reported that gift revenue in the second half of the year was down by more than 30% compared to 2019. In addition, many states have laid out double-digit cuts to higher education spending, with Colorado going so far as to cut support by \$493 million, or 58% of total funding. **The seeds of our current student loan crisis were sown during the last recession due to collegiate overspending and dysfunctional spending priorities. America’s students and taxpayers simply cannot afford for colleges and universities to continue to prioritize extracting funds from students over controlling their runaway expenses.**¹²

Where the Money is Going

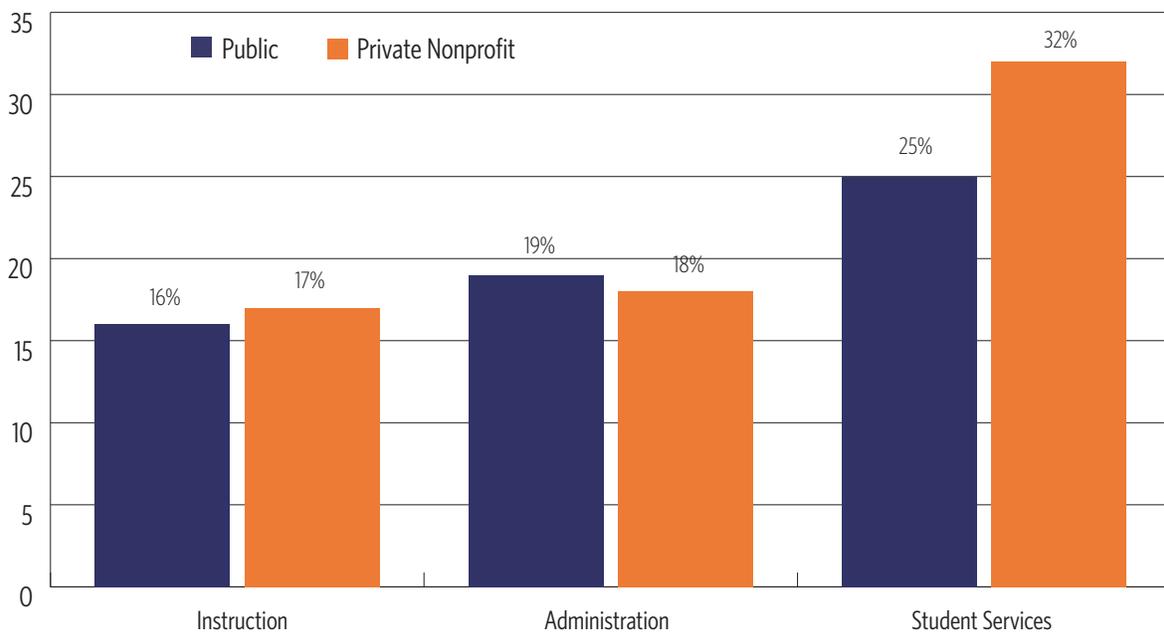
Colleges that receive federal funding are required to categorize and report various types of expenditures, grouping them together into a series of what NCEC calls “functional classifications” which are generally consistent year-to-year and apply to institutions uniformly. For the purpose of this study, we combine the NCEC categories of instruction (which includes general academic instruction) and academic support (which covers expenses that support an institution’s primary mission, such as libraries and museums) into a single category that we call **instructional spending**. This definition recognizes that certain functions at a college or university may be considered administrative in nature but still have direct bearing on the institution’s academic enterprise.¹³

Next, **administrative spending** refers to what institutions report as institutional support, defined by NCES as “the day-to-day operational support of the institution. [This] includes expenses for general administrative services, central executive-level activities concerned with management and long-range planning, legal and fiscal operations . . . and public relations and development.”¹⁴

Finally, we examine the effects of **student services spending**, defined by NCES as expenses for “activities whose primary purpose is to contribute to students['] emotional and physical well-being and to their intellectual, cultural, and social development outside the context of the formal instructional program.” This includes student activities, career services, and financial aid staff, but often also includes diversity and inclusion initiatives and athletics.¹⁵

With these definitions in mind, where does the money go? In recent years, an increasing share has been going to costs not directly related to student education. For example, in 2018, four-year public and private, nonprofit institutions spent over \$73 billion on student services and administration alone. Since 2010, spending on student services has grown 29%, and spending on administration has grown 19%, both outstripping growth in spending on instruction (17%). Figure 2 shows these trends disaggregated by sector.¹⁶

FIGURE 2
GROWTH IN TOTAL SPENDING AT FOUR-YEAR
PUBLIC AND PRIVATE, NONPROFIT INSTITUTIONS, 2010–2018



Source: IPEDS

Note: Percent changes are adjusted for inflation. Data reflect institutions with Carnegie Classifications that fall within the range of “Baccalaureate Colleges: Diverse Fields” and “Doctoral Universities: Very High Research Activity.” For the purpose of this report, spending on “Instruction” is expressed as the sum of what NCES refers to as the functional categories of instruction and academic support, and spending on “Administration” refers to what NCES defines as institutional support expenses.



While spending on instruction has grown in recent years, its nature has changed, with less emphasis placed on full-time instructional staff. From 2012 (the earliest year for which complete staffing data are available) to 2018, the number of full-time instructional staff rose by 8%, and their salary outlays increased by 12% after adjusting for inflation. Breaking this down on a per-position basis, the number of professors (which includes all full-time professors, regardless of rank or tenure status) increased by 5%, while their salary outlays rose by 10%. Meanwhile, the number of other full-time instructional staff (which includes instructors, lecturers, and staff with no academic rank) increased by 20%, while their salary outlays rose by 27%.¹⁷

This pattern is consistent with the oft-cited phenomenon of the “adjunctification” of higher education, where part-time, often less-credentialed (and often less-experienced) contingent positions replace full-time tenured or tenure-track instructors. This is not a new trend. The American Association of University Professors (AAUP) issued in 1980 its first official policy statement related to the issue of contingent staff. In 2017, the AAUP noted that between 1975 and 2015, the percentage of full-time tenured and tenure-track positions declined from 45% to 30% of the overall academic labor force. During the same period, the percentage of contingent staffers rose from 55% to 70%. We found that this trend has continued unabated, with the percentage of full-time instructional staff who are tenured or tenure-track at four-year public and private, nonprofit institutions falling 4% just from 2012 to 2018. The decline was so acute at private institutions that not only did the percentage of tenured or tenure-track faculty fall, the total *number* of these positions actually decreased as well.¹⁸

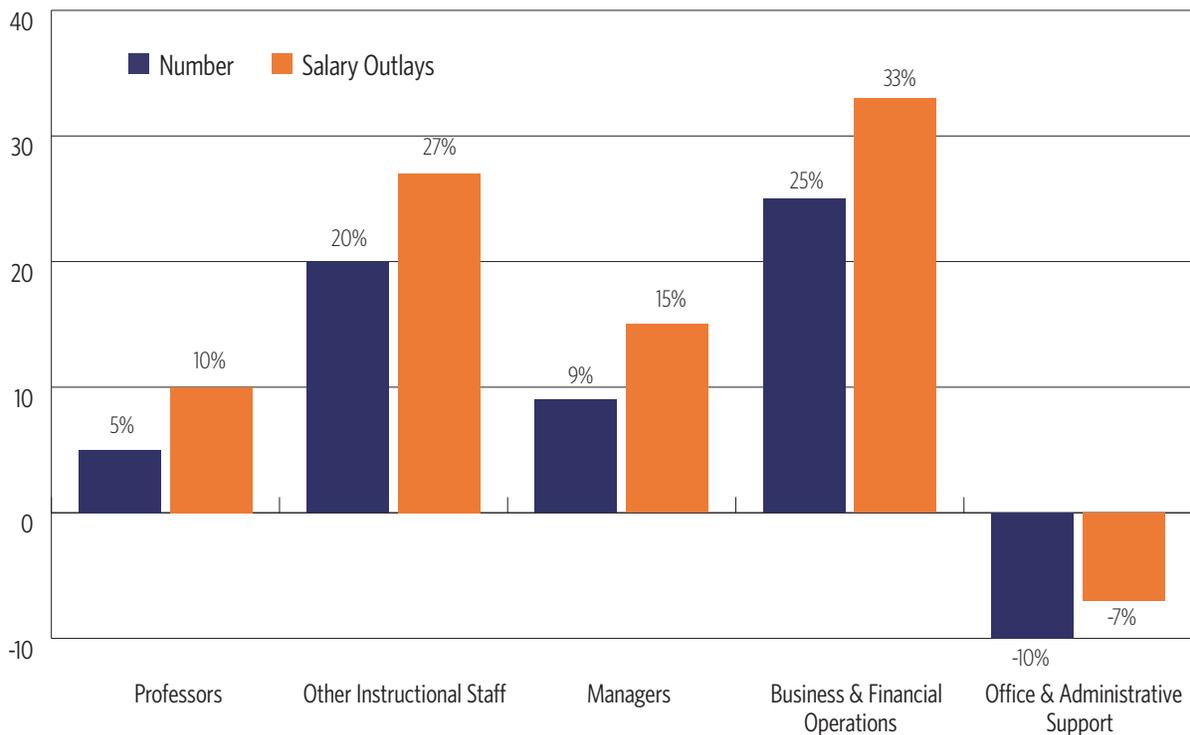
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The growth trend of non-instructional staff is quite different. The New England Center for Investigative Reporting found that from 1987 to 2012, 517,636 administrators and professional employees were hired at colleges and universities across the country—an average of 87 hires for every working day. Other studies have shown that the increase in non-academic employees at colleges and universities has greatly outpaced the growth of both students and faculty. There is little evidence that the Great Recession served to curtail this course, as the total number of employees at public colleges and universities actually *grew* during the worst of it. Our own analysis showed that from 2012 to 2018, the number of full-time, non-instructional staff increased by 9%, and their salary outlays rose by 15%.¹⁹

The IPEDS Human Resources Survey allows us to break down this category further on a position-by-position basis. From 2012 to 2018, we found that the number of managers increased by 9%, and business and financial operations staff increased by 25%, while salary outlays rose by 15% and 33% respectively. In contrast to those administrative professionals, the number of office and administrative support staff fell 10% by 2018. The COVID-19 pandemic may exacerbate this decrease in lower level employees, as early estimates suggest that colleges have lost 12% of their workers since the start of the pandemic, with the

majority of these cuts felt by hourly staff members in areas like food services and maintenance. **Here we see a complete reversal of the instructional staff trends. Instead of prioritizing less expensive general support staff, who are often the student-facing members of the administrative team, institutions are radically cutting the number of lower-level staffers in favor of hiring more expensive and specialized administrators.**²⁰

FIGURE 3
INSTRUCTIONAL VERSUS NON-INSTRUCTIONAL STAFF GROWTH
AT FOUR-YEAR PUBLIC AND PRIVATE, NONPROFIT INSTITUTIONS, 2012–2018



Source: IPEDS

Note: Four-year public and private, nonprofit schools only. Percent changes for salary outlays are adjusted for inflation. Staff figures exclude medical staff. "Professors" includes all full-time professors, regardless of rank or tenure status. "Other Instructional Staff" includes all full-time instructional employees that NCES categorizes as instructors, lecturers, or staff with no academic rank. "Managers," "Business & Financial Operations," and "Office & Administrative Support" all refer to their respective categories in the IPEDS Human Resources Survey. Data reflect institutions with Carnegie Classifications that fall within the range of "Baccalaureate Colleges: Diverse Fields" and "Doctoral Universities: Very High Research Activity."

The impulse to hire lower-earning instructional staff in order to keep up with rising enrollment and falling revenue streams (such as during the Great Recession and subsequent recovery) could be partially attributed to fiscal expediency, but the data suggest that thrift alone is not what is driving these hiring patterns. As the AAUP pointed out, higher education's preference for untenured and less-credentialed instructors has persisted even during periods of prosperity. If fiscal austerity was the primary driver of this inclination, we would have seen fewer highly paid administrative professionals and more student-facing, lower-level staff.



Moreover, the most disturbing long-term trend in higher education—the steadily rising price of attendance—also transcends market cycles. The average package of in-state tuition and fees at a four-year public college or university in the U.S. has nearly tripled over the past 30 years—*continuing during times when state appropriations hit record highs*. Student loan debt has become the largest source of consumer debt in the country, rising to over \$1.7 trillion as of 2021, yet the price of a college degree has not declined. And at the same time, spending has continued to increase unabated, with the latest figures from the Digest of Education Statistics showing that total expenditures by four-year public and private, nonprofit institutions were over \$572 billion in 2018–19. Given that institutions have agency, and that these patterns are not solely driven by external pressures, we have a duty to examine the impact of these choices.²¹

2.

What Do College Spending Trends Mean for Student and Family Finances?

What impact do schools' spending habits have on tuition, and which spending categories have the strongest effect on price? To answer these questions, we applied regression models to nine years of data from 2010 to 2018 for 573 public institutions and 956 private, nonprofit institutions with Carnegie Classifications that fall between "Baccalaureate Colleges: Diverse Fields" and "Doctoral Universities: Very High Research Activity." While sticker price is an imperfect measure of college affordability because of the practice of tuition discounting (in which institutions offer some students need- and merit-based grant aid to offset the price of attendance), we found that a \$1 increase in in-state public school tuition was associated with an \$0.84 increase in net price, while a \$1 increase in private school tuition was associated with a \$0.42 increase in net price. **In other words, increases in sticker price still represent real dollars out of the pockets of students and families.**²²

After controlling for federal and state appropriations per student, urbanicity (city, suburb, or town/rural), Carnegie Classification, average SAT score of admitted students, undergraduate enrollment, and the full-time student-per-faculty ratio, we found that in the aggregate, instructional, administrative, and student services spending all had a positive and statistically significant correlation with the following year's tuition. At public institutions, a 1% increase in student services spending was associated with a 0.1% increase in tuition for the next year, while a 1% increase in administrative spending was associated with a 0.13% increase in tuition for the next year. We also found that a 1% increase in instructional spending was associated with a 0.32% increase in tuition. For private institutions, a 1% increase in student services spending was associated with a 0.19% increase in the following year's tuition. A 1% increase in administrative spending was associated with a 0.04% increase in the following year's tuition, and a 1% increase in instructional spending was associated with a 0.31% increase in the following year's tuition.

FIGURE 4
PERCENTAGE INCREASE IN TUITION RATE
ASSOCIATED WITH A 1% CHANGE IN SPENDING (BY TYPE)

Institution Type	Spending Categories		
	Instruction	Administration	Student Services
Public Institutions	0.32%	0.13%	0.10%
Private Institutions	0.31%	0.04%	0.19%

Source: IPEDS

Note: Figures are based on an OLS regression using data from 2010 to 2018 for institutions with Carnegie Classifications that fall within the range of "Baccalaureate Colleges: Diverse Fields" and "Doctoral Universities: Very High Research Activity." Tuition includes tuition and required fees. All spending is in 2020 dollars, and models include institution-specific controls. See Appendices A and B for additional information on methodology and all controls.

The biggest takeaway of this analysis is that increases in spending on instruction, administration, and student services were statistically correlated with a rise in the following year's tuition, even after controlling for state and federal appropriations, whose decline in recent years has often been cited as a primary driver of the rising price of tuition. As such, spending decisions have real consequences for taxpayers and students, who are the primary recipients of the bill. While it is true that the average student is likely to benefit from some degree of tuition discounting, recall that net price and tuition are directly correlated, and thus these charges will be passed on to students in some way.

To illustrate the consequences for students, the graphic below uses spending data from 2018 to model the average four-year institution for both the public and private, nonprofit sectors and then uses the average growth in per-student spending from 2010 to 2018 to examine the expected changes for the next school year.

FIGURE 5
BREAKDOWN OF AVERAGE SPENDING INCREASES
AND THEIR IMPACT ON TUITION

Institution Type	Spending Categories	Average Spent Per Student in 2018	Average Annual Growth 2010-18	Expected Per-Student Increase in Spending in Next School Year	Expected Percentage Increase in Next Year's Tuition	Expected Dollar Increase in Next Year's Tuition	Portion of Each Additional Dollar Spent Passed on to Tuition
Public Institutions							
	Instruction	\$13,781	0.90%	\$124	0.29%	\$28	\$0.23
	Administration	\$3,350	1.45%	\$49	0.19%	\$19	\$0.38
	Student Services	\$2,450	2.32%	\$57	0.23%	\$23	\$0.40
Private Institutions							
	Instruction	\$17,020	0.58%	\$99	0.18%	\$62	\$0.63
	Administration	\$6,992	0.72%	\$50	0.03%	\$10	\$0.20
	Student Services	\$5,786	2.58%	\$149	0.49%	\$167	\$1.12

Note: Figures are based on an OLS regression using data from 2010 to 2018 for institutions with Carnegie Classifications that fall within the range of "Baccalaureate Colleges: Diverse Fields" and "Doctoral Universities: Very High Research Activity." Tuition includes tuition and required fees. Dollar amounts are expressed in 2020 inflation-adjusted numbers. For the 2018 school year, the average public institution charged \$9,885 in tuition, while the average private institution charged \$34,508. The expected increase in next year's tuition is based on the models found in Appendix B.

While, on a percentage basis, an increase in instructional spending has a higher correlation with tuition growth than increases in administrative or student services spending (see Figure 4), this is due in part to the fact that institutions typically spend more on instruction than any other type of expenditure (except in rare cases such as the now-defunct Becker College). For a real-world example, consider the University of Minnesota–Twin Cities, which in 2018 spent \$28,902 per student on instruction versus \$10,702 per student on administration and student services combined. A 1% increase in the former (an additional \$289) would naturally have a greater effect on the university’s budget than a 1% increase in the latter (an additional \$107). But as Figure 5 illustrates, as a practical matter, institutions do not increase spending uniformly across all categories in 1% intervals. This tells a different story as to how the various spending types affect tuition.

In 2018, the average four-year public and private institutions in our study both reported significantly higher per-student spending on instruction than on administration or student services, with the average public institution spending more than double on instruction than what it spent on administration and student services combined. However, because non-instructional expenses grew faster than spending on instruction on a percentage basis, the expected per-year dollar increases were not quite as disparate: an additional \$106 on administration and student services combined, versus \$124 more on instruction. More importantly, we found that on a per-dollar basis, spending on instruction is less associated with a growth in the cost of tuition than spending on administration or student services at the average public institution in our study.

A particularly curious finding is that at the average private institution, an additional \$1 spent on student services correlates with an increase of \$1.12 in tuition. This appears to suggest that private schools may pass the cost of this spending on to next year’s tuition with an additional markup, whereas instructional spending and administrative spending are not fully passed on. There are multiple factors that could contribute to this. For example, while student services spending is often directly funded through mandatory student fees—which in this paper are grouped with the price of tuition—it is far more common for private colleges to find additional revenue streams (such as grants or restricted philanthropic gifts) to supplement instructional spending. Alternatively, this could be an example of the tendency among some colleges to spend a great deal on attractive recreational facilities while raising tuition to demonstrate their quality to prospective students. While outside the scope of this paper, the finding warrants further study.²³

Why Cutting Costs Alone Does Not Lead to Lower Tuition

If, in the aggregate, spending increases are associated with higher tuition the following year, one might expect that cutting costs is the path to lowering tuition. And despite the national trend of growing expenditures across the higher education sector, it is not at all uncommon for an institution occasionally to reduce spending—or increase it below the rate of inflation—in a single cost category for a given year. For



example, almost every college and university in this study (1,507 out of 1,529) had at least one year when it spent less per student (after adjusting for inflation) on instruction, administration, or student services than it did the previous year. If that is the case, why have total higher education spending and the price of tuition risen so much over this period?

The answer is simple: A reduction in spending in a single cost category does not necessarily equate to a reduction in overall spending, as it is all too common for an institution simply to reallocate finances to other expenses. Higher education leaders must combat this tendency by instituting revenue controls—such as freezing tuition and required student fees—alongside any reduction in spending. This is particularly important during periods of market instability or when state funding is reduced.

As early as 1980, economist Howard Bowen recognized that colleges and universities are incentivized to spend as much money as is available in order to strengthen the public perception of their resources and therefore, of their quality. *Perception* is the key word here. Colleges have long known that students and parents tend to view price as a signal of quality. In the words of David L. Warren, current president of the National Association of Independent Colleges and Universities, “schools wanted a high tuition on the assumption that families would say that if they’re charging that high tuition, they must be right up there with the Ivies.” This public perception led institutions to employ a so-called “Chivas Regal” strategy by inflating the sticker price and further discounting tuition, creating a sort of “status aspirational” pricing. Unsurprisingly, schools most likely to engage in such behavior are those that experience a sharp decline in national rankings. Thus, tuition is often used as a tool to respond to and alter public perception without actually addressing academic quality.²⁴

Dr. Bowen examined this perceived interplay between price and quality in his 1981 *Costs of Higher Education*, which now reads like an invitation to a Dance of Death:

At any given time, the unit cost of education is determined by the amount of revenues currently available for education relative to enrollment. The statement is more than a tautology, as it expresses the fundamental fact that unit cost [i.e., the cost of education] is determined by hard dollars of revenue and only indirectly and distantly by considerations of need, technology, efficiency, and market wages and prices.

Separating colleges’ price setting mechanism from material concerns has a secondary effect: It creates an information asymmetry between institutions and applicants. Even with online tools, tuition discounting limits the ability of prospective students and parents to determine the net cost of college. This forces students to spend time negotiating with a school’s administrators to determine the aid package they will receive and often extracts a monetary cost in the form of application fees, with the average cost of a college application being \$44.²⁵

Failure to control for these effects has a measurable, detrimental impact on students. Financial pressures are one of the most common reasons for a student to drop out of college, and even a relatively small increase in cost can lead to dramatic changes in a school's retention rate. Increases in tuition have even been linked to a decrease in student diversity in future years on public campuses, with a \$1,000 increase in tuition and fees causing the racial and ethnic diversity of first-time, full-time freshmen to decline by 4.5%. For institutions pledging millions to offices of diversity, equity, and inclusion, this statistic demands attention. While there is little evidence that employing executive-level diversity officers will grow diversity on campus, passing the cost of these hires on to students is overtly harmful.²⁶

Despite these negative consequences, the grim reality is that collegiate overspending and dysfunctional spending priorities are widespread. College administrators are able to justify the need for larger and larger budgets when they imply possession of the moral high ground, asserting that without the addition of this unit or that office on campus, students will be worse off—albeit under an inherently subjective standard. But to what extent do students actually benefit from different types of spending?²⁷

3.

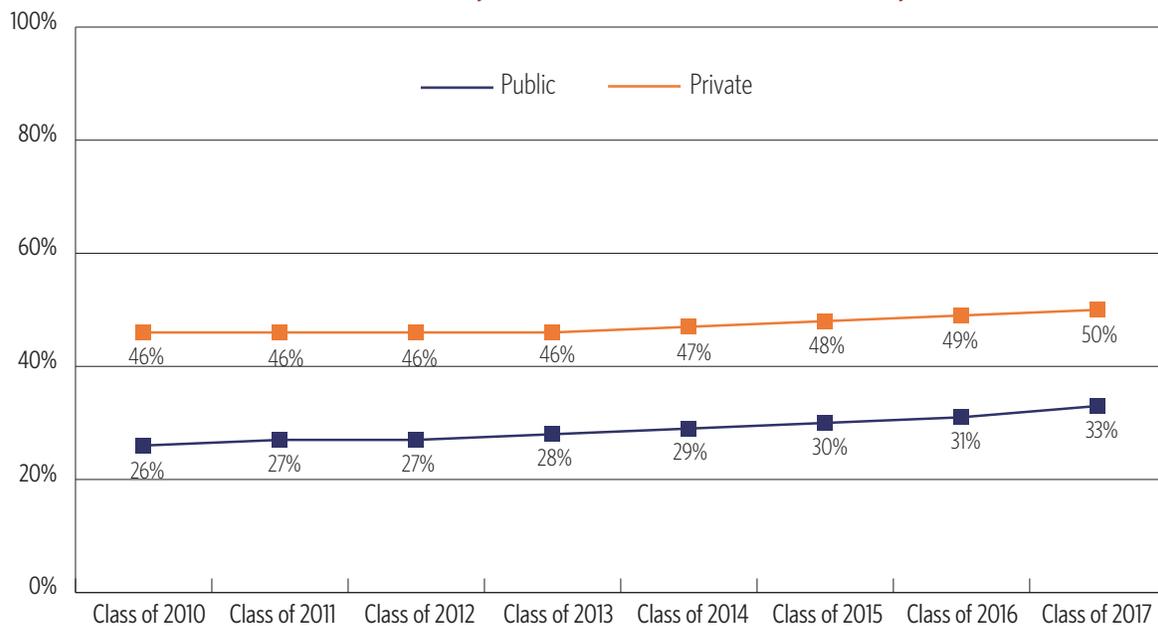
Does College Spending Benefit Students?

In an environment of scarce economic resources like the present, a vital question for governing boards and policymakers is whether colleges and universities are allocating budgets efficiently toward achieving their educational mission. Furthermore, students, taxpayers, and the general public need to know if the higher education spending they finance provides an adequate return on investment. Graduation rates serve as a key indicator of the ability of an institution to provide the academic support that students need, as well as of the financial health of graduates, given that the length of time spent at college strongly correlates with higher levels of student debt. The relationship between spending and other student outcome measures, such as the results of nationally-normed, value-added assessments of student learning gains (e.g., the Collegiate Learning Assessment), merits future study.²⁸

Instructional Spending Growth Is More Effective at Raising Graduation Rates

As we have already established, the past decade has seen steady growth in all categories of educational spending. Were this the most efficient and effective use of funds, we would expect to see similar growth in graduation rates. Sadly, this has not been the case.

FIGURE 6
AVERAGE BACCALAUREATE FOUR-YEAR GRADUATION RATE
AT PUBLIC AND PRIVATE, NONPROFIT INSTITUTIONS, 2010–2017



Source: IPEDS

Note: Class years reflect the cohorts of first-time, full-time freshmen who entered four years prior to that year. Data reflect institutions with Carnegie Classifications that fall within the range of “Baccalaureate Colleges: Diverse Fields” and “Doctoral Universities: Very High Research Activity.”

While both public and private schools have seen modest gains in graduation rates, an increase of four percentage points for private institutions and seven percentage points for public institutions pales in comparison to the growth in expenses.

Spending appears to be only weakly correlated with outcomes. After controlling for factors commonly linked to high graduation rates outside of spending and using a similar regression model as the one described in Section 2, we found that in the aggregate for public institutions, a 1% increase in instructional spending was associated with a 0.10 percentage point increase in graduation rates, while a 1% increase in administrative spending was associated with a 0.05 percentage point increase in graduation rates. For private institutions, a 1% increase in instructional spending was associated with a 0.11 percentage point increase in graduation rates, a 1% increase in administrative spending was associated with a 0.02 percentage point increase in graduation rates, and a 1% increase in student services spending was associated with a 0.04 percentage point increase in graduation rates. In other words, on a percentage basis, an increase in instructional spending at public institutions is twice as effective as an increase in administrative spending at boosting graduation rates, while an increase in instructional spending at private institutions is over five times as effective as an increase in administrative spending and nearly three times as effective as an increase in student services spending. A full description of our methodology can be found in Appendix C.²⁹

FIGURE 7
PERCENTAGE POINT CHANGE IN GRADUATION RATE
ASSOCIATED WITH A 1% CHANGE IN SPENDING (BY TYPE)

Institution Type	Spending Categories		
	Instruction	Administration	Student Services
Public Institutions	0.10%	0.05%	See * below.
Private Institutions	0.11%	0.02%	0.04%

Source: IPEDS

Note: Figures are based on an OLS regression using data from 2010 to 2018 for institutions with Carnegie Classifications that fall within the range of “Baccalaureate Colleges: Diverse Fields” and “Doctoral Universities: Very High Research Activity.” Graduation rates are four-year graduation rates for all first-time, full-time freshmen who entered four years prior to that year. All spending is in 2020 dollars, and models include both demographic and institution-specific controls. See Appendices A and C for additional information on methodology and all controls.

* Student services spending at public institutions did not have a statistically significant correlation with first-year graduation rates under this model.

Even more telling is the fact that student services spending at public institutions was not correlated with graduation rates. Recall that student services is among higher education’s fastest-growing expense categories: From 2010 to 2018, student services spending at four-year public institutions went up by 25%. During this period, public institutions spent \$112 billion (after adjusting for inflation) on expenses that do not show any significant correlation with moving students toward graduation.³⁰

Even Spending on Instruction Has Its Limits

Although instructional spending has a statistically significant correlation with graduation rates at both public and private institutions, the strength of that relationship is still very small, with thousands of dollars correlating with only fractions of a percentage point in graduation rates. Expressed another way, based on the average amount of per-student spending in 2018, an additional \$1,000 per student in instructional spending was associated with a 0.7 percentage point increase in four-year graduation rates at the average public institution and a 0.6 percentage point increase at the average private institution. The average four-year public university charged \$9,885 in tuition and had an undergraduate enrollment of 10,201. In this hypothetical situation, to graduate an additional 72 students, it would need to spend an additional \$10.2 million and charge students an additional \$224 in tuition. The average four-year private institution (with an enrollment of 2,619 and tuition of \$34,508) would need to raise its sticker price by \$616 for 17 additional graduates.

FIGURE 8
IMPACT OF INSTRUCTIONAL SPENDING INCREASES
ON NUMBER OF GRADUATES

Institution Type	Additional Spending Per Student	Number of New Graduates	Projected Increase in Tuition
Public Institutions	0.5%	5	\$ 16
	1.0	10	31
	1.5	15	47
	2.0	20	63
Private Institutions	0.5%	1	\$ 53
	1.0	3	106
	1.5	4	159
	2.0	6	213

Source: IPEDS

Note: Dollar figures are expressed in 2020 inflation-adjusted, per-student numbers. Figures are based on an average undergraduate 2017-18 FTE enrollment of 10,201 at public institutions and 2,619 at private institutions, and average 2017-18 tuition and required fees of \$9,885 at public institutions and \$34,508 at private institutions. Regression is based on data from 2010 to 2018. Public institutions have increased annual per-student instructional spending by an average of 0.9% and private, nonprofit institutions by an average of 0.58% between 2010 and 2018. In some years, public institutions increased institutional spending by as much as 4% on average and private, nonprofit institutions by as much as 2% on average. See Appendices B and C for additional information on methodology.

One can see the sobering cost-benefit conundrum most clearly when put in terms of actual student numbers. At the average public institution in this study—with undergraduate FTE enrollment of 10,201 and in-state tuition and required fees of \$9,885—increasing instructional spending per student by 0.5% would

raise four-year graduation rates by the equivalent of five students, accompanied by a \$16 tuition increase. Increasing per-student spending by 2% would net the equivalent of 20 new graduates, accompanied by a \$63 tuition increase. The average public institution in this study raised instructional spending per student by 0.9% per year.

At private institutions, whose average undergraduate enrollment was 2,619 and average tuition and required fees were \$34,508, a 0.5% spending increase per student is associated with the equivalent of *one additional graduate* at the cost of \$53 in tuition. Meanwhile, a 2% spending increase would net only six more students, associated with a \$213 tuition hike. The average private institution in this study raised instructional spending per student by 0.58% per year.

Figure 8 illustrates the difference in how much, in the aggregate, spending increases influence tuition levels versus how much they contribute to higher graduation rates. The implication is that the amount of money that institutions would need to spend—and thereby extract from students and taxpayers—to increase graduation rates meaningfully is very high. But even more striking is what is *not* reflected in Figure 8, namely, the array of variables used as controls in our model that show a stronger correlation with graduation rates than spending. For instance, at public institutions, student demographics have more influence on graduation rates than increased instructional spending. This suggests an achievement gap issue, which calls out for a better remedy than the steady upward march of tuition costs.

Smart Spending Is Possible

This is not to say that spending does not provide any benefits to students. For example, a competent office of institutional research (which would likely fall under administrative spending) can help boards set data-driven, strategic priorities. Such was the case at Arizona State University, whose innovative and multidisciplinary approach to restructuring its academic departments has earned it the top spot on the *U.S. News & World Report's* list of “Most Innovative Schools” for the past six years. Similarly, spending on substance abuse programs (which often fall under student services spending) can be lifesaving. Augsburg University’s StepUP initiative has grown to become one of the largest residential collegiate recovery programs in the country, with participating students averaging a 3.2 GPA while receiving the support they need to overcome their addictions. Additionally, it should not be surprising that hiring more and better-qualified teachers or improving educational resources such as libraries and computer labs (which can be classified as instructional expenses) can lead to real cognitive gains among graduates.³¹

These are clear examples of areas where spending can have a strong impact on student outcomes and, indeed, the overall quality of the education provided by an institution. Expenditures need not even be explicitly instructional in nature to provide educational benefits, and graduation rates alone are far from a



dispositive proxy for academic quality. But the public is right to question whether additional expenses—or even maintaining current levels of expenditure—would be prudent given the \$572 billion spent by all four-year public and private, nonprofit institutions in 2019 and the marginal benefits that additional spending may have on graduation rates. Of the institutions we surveyed, the average four-year graduation rate for traditional students was 29% for public schools and 47% for private schools. Moreover, recent growth trends show that in the aggregate, spending on student services as well as on administration continues to outpace spending on instruction. As such, governing boards should monitor increases in all categories to ensure that resources are allocated efficiently, and policymakers must question what—if any—additional spending is reasonable to drive graduation rates up without condemning more students to a future of crippling debt.³²

Conclusion

The student debt crisis is fundamentally a spending crisis. While commentators often suggest that the “system” or “model” of higher education is producing bad outcomes due to external pressures (particularly a reduction in state funding), these abstractions serve only to muddy the waters. The reality is that many of the trends identified by this report are decades old. In times of plenty, institutions poured billions of dollars into spending in an amenities and student services arms race, resulting in a seemingly never-ending stream of projects on campus that projected a veneer of quality to prospective applicants. Even spending on instruction played into this, as schools “modernized” classrooms by replacing blackboards with smartboards and introduced an ever-expanding roster of programs and majors. This process has been overseen by an expanded administrative bureaucracy dominated by well-paid, specialized professionals.

The Great Recession dramatically reduced several sources of revenue, but it also presented institutions with the largest undergraduate classes in history. Schools were given a choice: radically cut spending to make up for the loss of funds or increase revenue by charging students more. The majority chose the

Institutions need to prioritize **access** instead of **excess** by scrutinizing nonessential spending and performing long-overdue cuts with an eye on lowering the overall cost of a college education.

latter. And make no mistake, **this was a choice.** Schools could have moved to offset the loss of funds by drawing down the number of nonessential staff, tapping into endowments, cutting pay for employees making more than \$100,000, suspending construction and renovation projects, and reducing funding for non-self-supporting campus expenses like athletic facilities. Instead,

the decision to continue spending at similar levels clearly contributed to the rising cost of higher education and has proven to be a wholly inefficient way to ensure that students graduate in a timely manner. At a point when a historically large body of Americans needed the skills afforded by a high-quality education to cushion the blow of the worst economic downturn in generations, the completion rates (i.e., receiving a degree or a certificate) of college students declined while their debt soared. Higher education now finds itself in a similar position to 2010, except without the benefit of a large influx of new students. Undergraduate enrollment peaked in 2010 and has been on a steady decline since. With rising costs, shifting demographics, and falling consumer confidence in higher education, we are unlikely to see a reversal of this trend any time soon. Given just how economically disastrous higher education’s response to the Recession was, America’s students and parents simply cannot afford for colleges and universities to double down on attempts to spend their way out of the COVID-19 pandemic. Institutions need to prioritize access instead of excess by scrutinizing nonessential spending and performing long-overdue cuts with an eye on efficiency and lowering the overall cost of a college education.³³

Recommendations

■ Colleges and universities need to make controlling costs a top priority.

- The steadily rising pricing model of higher education in the United States is simply not sustainable. College leaders should be circumspect about any decision to increase spending, as those costs will almost certainly be passed on to students, families, and taxpayers and will not necessarily lead to better outcomes for students. Other stakeholders in the higher education ecosystem, including the philanthropic community and even investors in bonds issued by universities, should insist that cost containment and reduction be an integral part of any college or university's long-term financial strategy, along with rigorous metrics that track the success or failure of academic and student services programs.
- Institutions must be willing to consider innovative ways to mitigate costs. Administrative spending per student at the University of Maryland–College Park has remained roughly flat since the University System of Maryland implemented an effort known as the Effectiveness and Efficiency 2.0 Initiative in 2015. Through methodically merging departments into larger interdisciplinary schools, Arizona State University saved \$13 million recurring by eliminating administrative redundancy, without cutting any faculty positions.³⁴

■ Policymakers and the public must insist that institutions hold the line on tuition.

- Institutions that cut costs should do so in tandem with tuition cuts or freezes. Cost savings will not necessarily be passed on to students, as other institutional constituencies will eventually find a way to spend the “windfall” created by cuts made to one area of the institution. Governing boards must exercise the fiscal discipline to ensure that the pecuniary benefits of savings make their way to students and not to administrative offices. State legislatures may wish to consider models adopted in Florida and Michigan, which place statutory limits on the amount that public institutions may increase tuition in a given year.³⁵
- Legislatures should not assume that reductions in appropriations alone will induce institutions to allocate resources efficiently. Recent history shows that colleges and universities will first seek alternative revenue sources (in the form of increased tuition) to finance spending increases.

■ Stakeholders should use available data to make smart spending decisions that benefit students.

- Governing boards should take special care to scrutinize the rate at which non-instructional expenditures (such as administration and student services) grow when compared to spending on instruction.

Trustees and regents can use ACTA's **HowCollegesSpendMoney.com** website to examine trends at their institution and its peers. If an institution's administrative-to-instructional cost ratio is increasing over time, further investigation into the nature and purpose of these new expenses may be warranted. Institutions including Northern Illinois University and the Nevada System of Higher Education have used ACTA's administrative-to-instructional cost ratio as part of their formal performance evaluation systems.³⁶

- Colleges and universities must be intentional about their choice of institutional peers. The missions of institutions of higher education are diverse enough that aspiration should not be confused with actuality. In other words, not every university can—or should—be Harvard. Each year, NCES offers colleges and universities the opportunity to choose the peer institutions against which they are compared in the annual *IPEDS Data Feedback Report*. Boards of trustees should be aware of how peers are selected, as those peer institution choices drive benchmarking decisions and ultimately should influence institutional strategy.

APPENDIX A

The Data Set

To define the universe of institutions in our analysis, we used the Carnegie Classification to determine if a school is a “doctoral,” “master’s,” or “bachelor’s” school. A “doctoral” school includes “Doctoral Universities: Very High Research Activity,” “Doctoral University: High Research Activity,” and “Doctoral/Professional Universities.” “Master’s” schools include “Master’s Colleges & Universities: Larger Programs,” “Master’s Colleges and Universities: Medium Programs,” and “Master’s Colleges and Universities: Small Programs.” “Bachelor’s” schools include “Baccalaureate Colleges: Arts & Sciences Focus,” “Baccalaureate Colleges: Diverse Fields,” and “Baccalaureate/Associate’s Colleges: Mixed Baccalaureate/Associate’s.” While most schools had the same Carnegie Classification during the nine years we examined, some schools changed classifications to outside of our scope (i.e., from bachelor’s to associate’s). In these cases, our correlative models did not include the school during the year its classification was not a doctoral, master’s, or bachelor’s school. Additionally, we only included degree-granting institutions, institutions that participate in Title IV funding (federal financial aid programs), and four-year public and private, nonprofit institutions in the U.S.

When analyzing sector-wide growth in spending, revenue, and staffing data (such as those found in Figures 2 and 3), we first included all data from all institutions within these parameters, just as we did for our correlative analyses. However, we found that because more institutions existed in 2018 compared to 2010, this methodology artificially inflated our findings. To maintain a consistent data set when examining growth rates, we excluded from those analyses any school whose institutional characteristics fell outside of our scope or that had incomplete data at any time between 2010 and 2018.

Some schools outside of these aforementioned specifications were included due to parent/child reporting status. Parent/child institutions are those that report to IPEDS their expenditures or revenues as a “family,” typically a main campus and branch campuses. When a school reports data as a “child,” it combines its expense data with a “parent” campus. If an institution within the universe reported expenditures or revenues as a family, we included all members of the family, regardless of their Carnegie or sector status (four-year public or private, nonprofit). In total, 46 schools were added to the universe that were outside of the Carnegie Classification, sector, degree-granting status, or Title IV boundaries. In cases where institutions reported expenses with a parent/child relationship, we used the undergraduate enrollment figures to create a weighted system average for nearly all variables used in the models.³⁷

The three expenditure variables we used were instructional spending (which we defined as all spending on instruction plus all academic support spending), student services spending, and administrative spending

(defined as institutional support spending). Each of these functional classifications is further broken down into various subcategories, several of which were affected by a revision to the IPEDS Finance Survey in 2016. However, the overarching variable titled “current year total” remained consistent across the two revisions to the survey for all expenditures. All three of these variables include all spending for all students, both graduate and undergraduate.

All expenditure variables were divided by the reported FTE fall enrollment variable, which includes both graduate and undergraduate students. We opted not to add a control for the population of graduate students after using an interaction term between spending and the percentage that graduate students represent of all FTE students, and finding that the interaction was either insignificant or had an insubstantial effect on all models. The FTE variable multiplies the part-time enrollment by factors that depend on the sector of the institution and the level of the student to determine the FTE fall enrollment.



APPENDIX B

Correlation Between College Spending and Tuition

Previous Research

To understand the correlation between college spending and the following year's tuition, we created a model to see what types of spending—instructional, administrative, or student services—influence the following year's tuition most strongly. In addition to these three types of spending, we included other controls based on previously published research, as described below.

Public Funding and State Policies

Research has found that tuition price (often referred to as “sticker price,” which is not necessarily the amount students pay, due to tuition discounting) depends on variations in the level of state funding as well as other policies. One analysis found that cuts in state funding are associated with increases in tuition at public schools more so than similar cuts in federal funding. Another paper, which looked at 10 years' worth of data on four-year public schools, found that state policies such as incentives to limit tuition increases and linking tuition to financial aid were associated with controlling tuition. Similarly, other research has found that cuts in state funding are tied both to increases in tuition at public four-year schools and a simultaneous decrease in the assets that tend to contribute most strongly to educational quality, such as the elimination of faculty positions, courses, or even campuses. Other research has found that the increase in tuition that students pay when state funds decrease has been increasing over time. Research also shows that when private colleges receive more state or federal aid, they are more likely to spend more on educational inputs or take on more low-income students than to decrease tuition.³⁸

Perceived Quality of the School

Research has found that when it comes to private colleges and universities, students are willing to pay more for what they perceive to be higher quality, defining perceived quality as “reputation ranking” and median SAT scores. There has been even some evidence of “status aspirational” pricing, or setting tuition higher after falling within college rankings.³⁹

Expenditures

Unsurprisingly, previous spending influences how colleges set the next year's tuition. One study examining how private colleges set tuition found that schools with larger surpluses raised tuition by lower levels than those with smaller surpluses, and schools with larger deficits raised tuition by higher levels than those with lower deficits.⁴⁰

Urbanicity

Where a college is located can also influence how tuition is set. Colleges in more densely populated areas face more competition than colleges in more isolated areas, where students have few other options.⁴¹

Other Variables

One paper examining the perceived quality of a private school and its relation to tuition found that president pay and benefits, Carnegie Classification, region, and number of faculty influence how tuition is set.⁴²

Data

This model uses the three categories of expenses previously described as its independent variables, and it uses the following year's tuition and required fees as its dependent variable. In order to account for external factors, we included several controls, such as federal and state appropriations. Federal appropriations are funds received through acts of a federal legislative body (not including grants and contracts) and are used for current operating expenses. An example of this is federal land-grant appropriations. Similarly, state appropriations are funds received through acts of a state legislative body that also do not include grants and contracts and are used for current operating expenses.

We used the IPEDS urbanicity variable to determine if a school is located in an urban, suburban, or rural area based on the U.S. Census Bureau's Population Division. A school is located in a city if the address of the school is inside an urbanized area and inside a principal city. A school is located in a suburb if the address of the school is inside an urbanized area and outside a principal city. A school is located in a town if it is inside an urban cluster. A school is considered rural if it is located in a census-defined rural territory. Because there were so few schools located in rural areas (less than 7% of the data set), we combined "rural" and "town" into a single category.

We also used the SAT critical reading and math scores of all applicants to create a combined SAT variable. We used the average of the 25th and 75th percentile scores of all applicants for both reading and math and added the two scores for the SAT variable. Students can typically report either SAT or ACT scores, and both have been found to be correlated with graduation rates. We used SAT scores over ACT scores in our models to avoid multicollinearity because we found that these two variables highly correlated with each other within our data set and because previous literature has focused on SAT scores.

Lastly, we created a full-time student-per-faculty ratio using what NCES calls "full-time equivalent enrollment (fall enrollment derivation)" divided by the number of full-time instructional staff with faculty status. While most full-time instructional staff have faculty status, this is not always the case. We only considered those with faculty status to avoid counting teaching assistants or similar non-faculty instructors.

Methods

Public and private institutions have significantly different revenue and expenditure structures, and as such, we analyzed them separately. To understand better what types of spending are most associated with the following year's tuition, we created an Ordinary Least Squares (OLS) model using next year's tuition—adjusted for inflation using the Consumer Price Index for Urban Consumers (CPI-U)—as the dependent variable. The current year of data for variables used in the three models found in Figures B-1 and B-2 (on pages 31 and 32, respectively) served as independent variables. All values of 0 for any logged variables were dropped, as were outliers (defined as any variable either below the first quartile minus 1.5 multiplied by the interquartile range, or above the third quartile plus 1.5 multiplied by the interquartile range) for all variables.

We adjusted all expenditures for inflation and divided expenditures by the number of full-time equivalent students, both undergraduate and graduate, using a log-log model for spending and tuition. We only used schools with no missing variables for spending types.

We ran three models each for public and for private institutions, with additional control variables, in order best to isolate the correlation between spending and tuition. The first model used no controls besides expenditures (instruction, administration, and student services), the second model controlled for expenditures and state and federal appropriations, and the final model controlled for all other variables, including Carnegie Classification, urbanicity, perceived quality (using SAT scores), the full-time student-per-faculty ratio, and federal and state funding.

Main Findings

Public Institutions

In the final model (see Figure B-1, Model 3), we found that a 1% increase in instructional spending is associated with a 0.32% increase in next year's tuition, a 1% increase in administrative spending is associated with a 0.13% increase in next year's tuition, and a 1% increase in student services spending is associated with a 0.10% increase in next year's tuition. We also found in the final model a positive and significant relationship between next year's tuition and federal appropriations, colleges in suburban areas (compared to those in cities), doctoral institutions, and the average SAT score. We found a negative relationship between next year's tuition and state appropriations, undergraduate enrollment, and the full-time student-per-faculty ratio. We did not find a significant relationship between master's institutions and next year's tuition, or colleges in towns/rural areas (when compared to colleges in cities) and next year's tuition.

Private Institutions

In the final model (see Figure B-2, Model 3), we found that a 1% increase in instructional spending is associated with a 0.31% increase in next year's tuition, a 1% increase in administrative spending is associated

with a 0.04% increase in next year's tuition and a 1% increase in student services spending is associated with a 0.19% increase in next year's tuition. We also found a positive and significant relationship between colleges in suburban areas (compared to those in cities), colleges that offer doctoral and master's degrees (when compared to schools only offering bachelor's), as well as SAT scores, undergraduate enrollment, and the full-time student-per-faculty ratio. We found a negative and significant relationship between next year's tuition and colleges in towns/rural areas (when compared to colleges in cities). We did not find a significant relationship between tuition and federal appropriations or state appropriations.

Other Findings

Public Institutions

In the first model (see Figure B-1, Model 1), where we examined spending by public schools and its association with the next year's tuition (i.e., no controls), we found that a 1% increase in instructional spending is associated with a 0.43% increase in next year's tuition, a 1% increase in administrative spending is associated with a 0.07% decrease in next year's tuition, and a 1% increase in student services spending is associated with a 0.10% increase in next year's tuition.

In the second model (see Figure B-1, Model 2), where we controlled for both federal and state appropriations per student, we found that a 1% increase in instructional spending is associated with a 0.62% increase in next year's tuition, a 1% increase in administrative spending is associated with a 0.05% increase in next year's tuition, and a 1% increase in student services spending is associated with a 0.10% increase in next year's tuition. We also found in the second model a negative and significant correlation between state appropriations and the following year's tuition. We did not find a significant relationship between federal appropriations and tuition.

Private Institutions

In the first model with no controls (see Figure B-2, Model 1), we found that a 1% increase in instructional spending is associated with a 0.49% increase in next year's tuition. We also found that a 1% increase in administrative spending is associated with a 0.04% decrease in next year's tuition, and a 1% increase in student services spending is associated with a 0.24% increase in next year's tuition.

In the second model (see Figure B-2, Model 2), after controlling for federal and state appropriations per student, we found that a 1% increase in instructional spending is associated with a 0.49% increase in next year's tuition, a 1% increase in administrative spending is associated with a 0.04% decrease in next year's tuition, and a 1% increase in student services spending is associated with a 0.24% increase in next year's tuition. We also found in the second model a negative and significant correlation between state appropriations and next year's tuition and a positive correlation between federal appropriations and next year's tuition.

FIGURE B-1: Outputs for OLS Regression Models
Impact on Percent Change in Next Year's Tuition at Public Institutions

Variables	Model 1: Expenditures Only	Model 2: Expenditures and Funding	Model 3: All Controls
	Coefficient (P value)	Coefficient (P value)	Coefficient (P value)
Instruction Spending (logged)	0.43*** (<0.00)	0.62*** (<0.00)	0.32*** (<0.00)
Administration Spending (logged)	-0.07*** (<0.00)	0.05*** (<0.00)	0.13*** (<0.00)
Student Services Spending (logged)	0.10*** (<0.00)	0.10*** (<0.00)	0.10*** (<0.00)
State Appropriations (in thousands of dollars)		-0.04*** (<0.00)	-0.04*** (<0.00)
Federal Appropriations (in thousands of dollars)		0.03 (0.15)	0.11** (0.02)
Suburb			0.15*** (<0.00)
Town/Rural			0.01 (0.31)
Carnegie Classification (Master's)			0.01 (0.70)
Carnegie Classification (Doctoral)			0.08*** (<0.00)
SAT Score (in hundreds of points)			0.05*** (<0.00)
Undergraduate Full-Time Enrollment (in thousands)			-0.01*** (<0.00)
Full-time Student-Per-Faculty Ratio			-0.01*** (<0.00)
Intercept	4.82 (<0.00)	2.46 (<0.00)	4.19 (<0.00)
R Squared	0.23	0.42	0.51
Observations	3,863	3,861	1,409

*** Denotes statistical significance at the 1% level; ** at the 5% level; and * at the 10% level.

FIGURE B-2: Outputs for OLS Regression Models
Impact on Percent Change in Next Year's Tuition at Private Institutions

Variables	Model 1: Expenditures Only	Model 2: Expenditures and Funding	Model 3: All Controls
	Coefficient (P value)	Coefficient (P value)	Coefficient (P value)
Instruction Spending (logged)	0.49*** (<0.00)	0.49*** (<0.00)	0.31*** (<0.00)
Administration Spending (logged)	-0.04*** (<0.00)	-0.04*** (<0.00)	0.04*** (<0.00)
Student Services Spending (logged)	0.24*** (<0.00)	0.24*** (<0.00)	0.19*** (<0.00)
State Appropriations (in thousands of dollars)		-0.03* (0.05)	0.00 (0.80)
Federal Appropriations (in thousands of dollars)		0.04** (0.01)	0.00 (0.94)
Suburb			0.03*** (<0.00)
Town/Rural			-0.05*** (<0.00)
Carnegie Classification (Master's)			0.05*** (<0.00)
Carnegie Classification (Doctoral)			0.05*** (<0.00)
SAT Score (in hundreds of points)			0.06*** (<0.00)
Undergraduate Full-Time Enrollment (in thousands)			0.01*** (<0.00)
Full-time Student-Per-Faculty Ratio			0.01*** (<0.00)
Intercept	4.00 (<0.00)	3.99 (<0.00)	4.72 (<0.00)
R Squared	0.44	0.45	0.51
Observations	5,987	5,985	2,699

*** Denotes statistical significance at the 1% level; ** at the 5% level; and * at the 10% level.

APPENDIX C

Correlation Between College Spending and Graduation Rates

Previous Research

To understand better how the same types of spending drive four-year graduation rates at public and private colleges, we examined factors that are commonly linked to high graduation rates and spending to create a model using both spending and other variables as controls.

Student Characteristics

Research has found that high school GPA and GPA in the first year of college are tied to the likelihood of graduating on time. One study examining public and private four-year college students and two-year college students found that those with a college GPA of 3.0 were more likely to graduate than those with a weaker GPA. Similarly, a study examining a public flagship school found that students in underrepresented groups with a low first-year GPA were less likely to graduate in six years than their peers. One paper that looked at four-year colleges and universities from multiple data sets found that SAT scores were positively correlated with graduation rates.⁴³

Unsurprisingly, finances play a role in determining both if and when a student graduates. One paper found that students who experience stress about their finances take longer to graduate than those who do not. The same authors found that students who live or work on campus are more likely to graduate. Research has found that there is a negative correlation between receiving Pell Grants and graduation rates at four-year broad-access institutions (schools that accept at least 80% of applicants).⁴⁴

Recent research has also found that a student's race and ethnicity are associated with higher or lower graduation rates. Hispanic students, on average, have lower graduation rates than their peers, possibly due to the likelihood that many Hispanic students tend to “undermatch” when choosing colleges.⁴⁵

Overall, research has found that women have higher graduation rates than men. Within sexes there are likely also interaction effects, as recent research has found that black women graduate at lower rates than white women. These demographic achievement gaps and how spending patterns affect them are urgent research questions to explore in the future.⁴⁶

School Characteristics

In addition to student-specific characteristics, institution-specific characteristics can play a role in graduation rates. On average, public schools have lower graduation rates than private schools, but other research

has found that this is due to the characteristics of the students and that public universities may be doing “more with less.”⁴⁷

Additionally, the type of public or private college—such as bachelor’s, master’s, or doctoral—has been found to have an impact on graduation rates. One paper found that attending a liberal arts college was most highly correlated with graduating, followed by doctoral universities and master’s universities.⁴⁸

There is also evidence that spending on faculty is associated with higher graduation rates, whether through a higher percentage of full-time faculty or faculty salaries. Among students attending Christian colleges, one study showed that instructional spending per student was associated with an increase in six-year graduation rates.⁴⁹

Data

For our model’s dependent variable, we used four-year graduation rates for the class that began four years previously. This variable is a derived variable created by dividing the total number of first-time, full-time students who completed all requirements for a bachelor’s degree by the total number of first-time, full-time students who began completing their bachelor’s degree four years earlier. IPEDS removes students who did not graduate but have an “allowable exclusion,” including transferring, deployment, or death.

We used the percent accepted rate to create a selectivity variable. Because both SAT score and a college’s selectivity influence graduation rates, we created the selectivity variable by dividing the number of first-time students offered an official chance to enroll, including early action and early decision, by the total number of first-time applicants. We also included the combined SAT variable used in the tuition model. While IPEDS does not offer either high school or first-year GPA as a variable, SAT score has been found to be correlated with college GPAs.⁵⁰

We also included a number of demographic variables, including the percentage of undergraduates awarded Pell Grant aid, the percentage of undergraduates who are women, the percentage of undergraduates who are black, the percentage of undergraduates who are Hispanic, and the percentage of undergraduates who are neither white, black, nor Hispanic. We created these variables using the 12-month enrollment figures—which include an unduplicated headcount over the year—and divided the number of students in a particular demographic by the total number of undergraduates in the 12-month enrollment cohort.

Methods

Similar to our tuition and spending models, we broke all of the graduation models into private and public schools and used a linear-log approach, taking the log of all three spending variables. All spending was



adjusted for inflation using the CPI-U, and only schools with complete and comparable data for all types of spending were included. All values of 0 for any logged variables were dropped, as were outliers for all variables.

We created three models: The first included all three types of expenditures (instructional, administrative, and student services) and focused on student-specific controls, including the average combined math and reading SAT score of applicants, percentage of students admitted, percentage of undergraduate students who are black, percentage of undergraduate students who are women, percentage of undergraduate students who are Hispanic, percentage of undergraduate students who are neither white, black, nor Hispanic, and percentage of students who are awarded Pell Grants. The second model included all three expenditures and focused on school-specific controls, including Carnegie Classification and full-time student-per-faculty ratio. The third and final model included all expenditures and controls used in the previous models. All models can be found in Figure C-1 and Figure C-2 (on pages 38 and 39, respectively).

Main Findings

Public Institutions

When we combined both the student-specific and institution-specific models using all controls in the final model (see Figure C-1, Model 3), we found that a 1% increase in instructional spending is associated with a 0.10 percentage point increase in graduation rates, and a 1% increase in administrative spending is associated with a 0.05 percentage point increase in graduation rates. We found no significant relationship between student services spending and four-year graduation rates when all controls were included.

We also found positive and significant relationships between graduation rates and the following variables: SAT scores, the percentage of women, and the full-time student-per-faculty ratio. We found a negative and significant relationship between graduation rates and schools that offer doctoral degrees relative to those that offer only bachelor's, the percentage of students accepted, the percentage of students awarded a Pell Grant, the percentage of students who are black, and the percentage of students who are neither white, black, nor Hispanic. We did not find any significant relationships between schools that offer master's degrees and graduation rates or the percentage of students who are Hispanic and graduation rates.

Private Institutions

In the final model (see Figure C-2, Model 3), while controlling for all student- and institution-specific variables, a 1% increase in instructional spending is associated with a 0.11 percentage point increase in graduation rates; a 1% increase in administrative spending is associated with a 0.02 percentage point increase in graduation rates; and a 1% increase in student services is associated with a 0.04 percentage point increase in graduation rates.

We also found a positive and significant relationship between SAT scores, the percentage of students admitted, and the percentage of students who are women. We found a negative and significant relationship between doctoral programs when compared to bachelor's programs, the percentage of students awarded a Pell Grant, the percentage of students who are black, the percentage of students who are Hispanic, and the percentage of students who are neither white, black, nor Hispanic. We did not find a significant relationship between master's programs and graduation rates or the full-time student-per-faculty ratio and graduation rates.

Other Findings

Public Institutions

In the first model (see Figure C-1, Model 1), which controls for only student-specific variables, we found that a 1% increase in instructional spending is associated with a 0.08 percentage point increase in graduation rates, a 1% increase in administrative spending is associated with a 0.05 percentage point increase in graduation rates, and a 1% increase in student services spending is associated with a 0.01 percentage point increase in graduation rates. Additionally, we found that SAT scores and the percentage of students who are women are positively correlated with graduation rates at a significant level, while the percentage of students accepted, the percentage of students awarded Pell Grants, the percentage of students who are black, and the percentage of students who are neither white, black, nor Hispanic are negatively correlated at a significant level. We did not find a significant correlation between the percentage of students who are Hispanic and graduation rates.

In our second model (see Figure C-1, Model 2), which controls for only institution-specific variables such as the type of school and the full-time student-per-faculty ratio, we found that a 1% increase in instructional spending is associated with a 0.28 percentage point increase in graduation rates, while a 1% increase in administrative spending is associated with a 0.03 percentage point decrease in graduation rates. There is no significant relationship between student services spending and graduation rates in this model.

We also found that there is a positive correlation between four-year graduation rates and both master's universities and doctoral universities compared to colleges that only award bachelor's degrees. We found no significant relationship between the full-time student-per-faculty ratio and graduation rates.

Private Institutions

We found that when controlling for student-specific variables (see Figure C-2, Model 1), a 1% increase in instructional spending per student is associated with a 0.08 percentage point increase in graduation rates, a 1% increase in administrative spending per student is associated with a 0.02 percent increase in graduation rates, and a 1% increase in student services spending per student is associated with a 0.05 percentage



point increase in graduation rates. Additionally, SAT scores, the percentage of students accepted, and the percentage of students who are women are positively correlated with graduation rates at a significant level, while the percentage of students who are awarded Pell Grants, the percentage of students who are Hispanic, the percentage of students who are black, and the percentage of students who are neither white, black, nor Hispanic are negatively correlated with graduation rates.

In the institution-specific model (see Figure C-2, Model 2), we found that a 1% increase in instructional spending is associated with a 0.27 percentage point increase in graduation rates, a 1% increase in administrative spending is associated with a 0.03 percentage point decrease in graduation rates, and a 1% increase in student services spending is associated with a 0.09 percentage point increase in graduation rates. In the same model, we found that master's and doctoral schools and the full-time student-per-faculty ratio are not significantly related to graduation rates.

**FIGURE C-1: Outputs for OLS Regression Models
Impact on Four-Year Graduation Rates at Public Institutions**

Variables	Model 1: Student Controls	Model 2: School Controls	Model 3: All Controls
	Coefficient (P value)	Coefficient (P value)	Coefficient (P value)
Instruction Spending (logged)	0.08*** (<0.00)	0.28*** (<0.00)	0.10*** (<0.00)
Administration Spending (logged)	0.05*** (<0.00)	-0.03*** (<0.00)	0.05*** (<0.00)
Student Services Spending (logged)	0.01* (0.09)	0.01 (0.93)	-0.01 (0.39)
Carnegie Classification (Master's)		0.02** (0.03)	0.01 (0.70)
Carnegie Classification (Doctoral)		0.04*** (<0.00)	-0.03** (0.02)
SAT Score (in hundreds of points)	0.05*** (<0.00)		0.05*** (<0.00)
Percent of Students Admitted	-0.16*** (<0.00)		-0.16*** (<0.00)
Percent Pell Grant Students	-0.50*** (<0.00)		-0.54*** (<0.00)
Percent Women	0.35*** (<0.00)		0.36*** (<0.00)
Percent Hispanic	-0.01 (0.85)		-0.05 (0.51)
Percent Black	-0.20*** (<0.00)		-0.16*** (<0.00)
Percent neither White, Black, nor Hispanic	-0.46*** (<0.00)		-0.31** (0.03)
Full-time Student-Per-Faculty Ratio		-0.01 (0.49)	0.02* (0.07)
Intercept	-1.29 (<0.00)	-2.09 (<0.00)	-1.43 (<0.00)
R Squared	0.62	0.28	0.61
Observations	2,020	2,308	1,238

*** Denotes statistical significance at the 1% level; ** at the 5% level; and * at the 10% level.

**FIGURE C-2: Outputs for OLS Regression Models
Impact on Four-Year Graduation Rates at Private Schools**

Variables	Model 1: Student Controls	Model 2: School Controls	Model 3: All Controls
	Coefficient (P value)	Coefficient (P value)	Coefficient (P value)
Instruction Spending (logged)	0.08*** (<0.00)	0.27*** (<0.00)	0.11*** (<0.00)
Administration Spending (logged)	0.02*** (<0.00)	-0.03*** (<0.00)	0.02*** (<0.00)
Student Services Spending (logged)	0.05*** (<0.00)	0.09*** (<0.00)	0.04*** (<0.00)
Carnegie Classification (Master's)		0.01 (0.27)	0.01 (0.94)
Carnegie Classification (Doctoral)		-0.01 (0.28)	-0.04** (<0.00)
SAT Score (in hundreds of points)	0.05*** (<0.00)		0.05*** (<0.00)
Percent of Students Admitted	0.03** (0.02)		0.03* (0.05)
Percent Pell Grant Students	-0.38*** (<0.00)		-0.39*** (<0.00)
Percent Women	0.15*** (<0.00)		0.17*** (<0.00)
Percent Hispanic	-0.13 (<0.00)		-0.10* (0.07)
Percent Black	-0.35*** (<0.00)		-0.32*** (<0.00)
Percent neither White, Black, nor Hispanic	-0.36*** (<0.00)		-0.38*** (<0.00)
Full-time Student-Per-Faculty Ratio		-0.01 (0.70)	0.01 (0.45)
Intercept	-1.30 (<0.00)	-2.60 (<0.00)	-1.48 (<0.00)
R Squared	0.61	0.39	0.59
Observations	3,518	3,493	2,062

*** Denotes statistical significance at the 1% level; ** at the 5% level; and * at the 10% level.

End Notes

1. First Republic Bank, “U.S. Student Loan Debt Statistics,” March 25, 2021, <https://www.firstrepublic.com/personal-line-of-credit/student-loan-debt-averages-2021>; Adam Looney, David Wessel, and Kadija Yilla, “Who owes all that student debt? And who’d benefit if it were forgiven?,” The Brookings Institution, January 28, 2020, <https://www.brookings.edu/policy2020/votervital/who-owes-all-that-student-debt-and-whod-benefit-if-it-were-forgiven>; and American Student Assistance, *Life Delayed: The Impact of Student Debt on the Daily Lives of Young Americans* (Boston: American Student Assistance, 2015), https://www.canisius.edu/sites/default/files/*/life_delayed_12-2015_1.pdf.
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5. Note on “self-selected peers”: Colleges provide a list of comparison colleges when reporting data to the Integrated Postsecondary Education Data System (IPEDS). If a college does not provide a list of peers, IPEDS selects its own list based on criteria such as enrollment, tuition, and graduation rates. Colleges can also compare their spending levels to their peers on HowCollegesSpendMoney.com. David Jesse, “1 rural town, 2 small colleges and the thin line between death and survival,” *Detroit Free Press*, February 12, 2021, <https://www.freep.com/in-depth/news/education/2021/02/12/illinois-college-macmurray-college-liberal-arts/6122046002/>; Laura Krantz, “After years of struggle at Becker College, the pandemic was one hurdle too many,” *The Boston Globe*, April 5, 2021, <https://www.bostonglobe.com/2021/04/05/metro/after-years-struggle-becker-college-pandemic-was-one-hurdle-too-many/>; and Emma Whitford, “A Pandemic Financial Success Story?,” *Inside Higher Ed*, April 6, 2021, <https://www.insidehighered.com/news/2021/04/06/how-private-college-fortified-finances-amid-pandemic>. Administrative and instructional spending data are drawn from HowCollegesSpendMoney.com, using the “Find a College” search tool. American Council of Trustees and Alumni (ACTA), “How Colleges Spend Money,” Find a College, Administrative/Instructional Cost Ratio, <https://www.howcollegesspendmoney.com/>.

6. See Appendices B and C for discussions of existing literature on factors correlated with tuition and graduation rates. Going forward, “tuition” includes both tuition and required fees, defined by NCES as “the amount of money charged to students for instructional services. Tuition may be charged per term, per course, or per credit. Required fees are those fixed sums charged to students for items not covered by tuition and required of such a large proportion of all students that the student who does not pay the charge is an exception.” IPEDS, Compare Institutions, Select Variables, <https://nces.ed.gov/ipeds/datacenter/SelectVariables.aspx?stepId=2>.
7. A complete description of our methodology can be found in Appendix A.
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13. The National Center for Education Statistics' (NCES) definition of instruction includes “expenses of the colleges, schools, departments, and other instructional divisions of the institution” as well as “expenses for departmental research and public service that are not separately budgeted.” NCES classifies as academic support “expenses of activities and services that support the institution’s primary missions of instruction, research, and public service” and includes expenses for “museums, libraries, galleries, audio/visual services, ancillary support, academic administration, personnel development, and course and curriculum development.” U.S. Department of Education, NCES, IPEDS, “2020–21 Data Collection System: View Glossary,” <https://surveys.nces.ed.gov/ipeds/public/glossary>.
14. Institutional support does not include items such as parking facilities, housing, or food services (reported as auxiliary enterprises). Expenses for operating a hospital are reported as a separate category and are not included in the institutional support category, with a few exceptions. IPEDS, “2020–21 Data Collection System: View Glossary.”
15. Examples of student services expenses provided by NCES include “career guidance, counseling, and financial aid administration” as well as “cultural events, student newspapers, intramural athletics, student organizations, supplemental instruction outside the normal administration, and student records.” Athletics and student health services may be included. IPEDS, “2020–21 Data Collection System: View Glossary.”
16. See Appendix A for a more detailed description of our methodology and data set.
17. For the purpose of this report, “Professors” is defined as a combination of what institutions report to IPEDS as professors, assistant professors, and associate professors. “Other full-time instructional staff” is defined as a combination of what institutions report to IPEDS under the categories of instructors, lecturers, and staff with no academic rank. IPEDS, “2020-21 Data Collection System: View Glossary.”
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20. For the purpose of this analysis, these positions were drawn directly from the IPEDS Human Resources Survey. Management is defined as staff who “plan, direct, or coordinate policies, programs, and may include some supervision of other workers.” This includes managers in advertising, marketing, promotions, PR, and sales, top executives, and others with supervisory authority such as academic deans or department chairs, provided that their primary responsibilities are administrative in nature.

Business and Financial Operations are the non-managerial staff in departments whose primary activities are related to the financial health of the institution. Some examples are appraisers, compliance officers, human resources workers, project management specialists, management analysts, event planners, fundraisers, work-related training and development specialists, marketing specialists, accountants, auditors, budget and credit analysts, tax examiners, and revenue agents.

Office and administrative support staff are those whose primary activities are concerned with the day-to-day functions of the institution. This includes financial, information, and records clerks, assistants, receptionists, secretaries, data entry workers, and their direct supervisors. More information, including full definitions, can be found on pages one, three, and four in the Human Resources Survey glossary at <https://surveys.nces.ed.gov/ipeds/public/glossary>.

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21. Melanie Hanson, “Total Student Loan Debt,” EducationData.org, February 9, 2021, <https://educationdata.org/total-student-loan-debt>; Expense data are from NCES, “Table 334.10. Total expenditures of public degree-granting postsecondary institutions, by purpose and level of institution: 2009-10 through 2018-19,” Digest of Education Statistics, February 2020, https://nces.ed.gov/programs/digest/d20/tables/dt20_334.10.asp; and NCES, “Table 334.30. Total expenditures of private nonprofit degree-granting postsecondary institutions, by purpose and level of institution: Selected years, 1999-2000 through 2018-19,” Digest of Education Statistics, February 2021, https://nces.ed.gov/programs/digest/d20/tables/dt20_334.30.asp. Dollar amounts are expressed in 2020 inflation adjusted dollars using the Consumer Price Index for All Urban Consumers (CPI-U).
22. Antioch University-System Administration and Ottawa University-Surprise were considered private institutions for the sake of this analysis, as both combined their financial information with private institutions. See Appendix A for more information.

Net price here refers to what IPEDS classifies as “Average net price-students awarded grant or scholarship aid,” defined as “Average net price for full-time, first-time degree/certificate-seeking undergraduates paying the in-state or in-district tuition rate who were awarded grant or scholarship aid from federal, state or local governments, or the institution.” Figures are based on a linear-linear OLS regression model.

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“The cost of higher education has been rising at an unsustainable rate for more than two decades. These exorbitant costs often prevent students, once they graduate, from being able to climb out of debt. Most troubling is the fact that these rising and unnecessary costs are increasingly associated with administrative bloat, rather than investing in the classroom and curriculum. Student debt is higher than mortgage debt or credit card debt and the causes of this need to be immediately remedied. With our nation facing over \$28 trillion dollars of debt, this preventable crisis should not be adding to the other problems crippling our future. ACTA’s reporting and fact-finding have been critical in Congressional attempts to rein in spending and keep dollars invested where they truly matter—students and the classroom.”

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