

The other looming educational debt crisis: institutional debt

Part 1: How large is the institutional burden today and how is it distributed across institutions?



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In 2018, US higher education institutions held almost \$300 billion in long-term debt, representing about \$40,000 in debt per student at private institutions and nearly \$15,000 per student at public institutions.³





Introduction

In today's complex higher education environment, few topics have garnered more attention than student debt, with many industry participants describing it as an imminent crisis. Indeed, it is hard to ignore the extent to which the cost burden of postsecondary education has risen for students and their families. While gross tuition in real dollars has grown at 3% each year over the last two decades,¹ the real US median income has remained largely flat, resulting in a significantly higher price tag for students, increased reliance on student loans for families and a strained federal student loan system that has ballooned to \$1.6 trillion in outstanding student loan balances in 2019.²

Yet, just as millions of American students have increased their debt load, so too have colleges and universities turned to long-term debt to fund growth and supplement their operations.

While the impact of student debt has been investigated and discussed at length in the media and by policymakers alike, the ramifications of long-term institutional debt have been left largely unexplored.

American colleges and universities are entering an increasingly challenging and hyper-competitive era. As boards of trustees and administrations lead their

institutions into this new era, they will be forced to grapple with new strategic questions brought on by the pressure of increased long-term debt: is this growing debt a problem? How do institutions know when they have incurred too much debt? What types of institutions may be more at risk due to their institutional borrowing? Our three-part series aims to tackle these questions and more by examining the industry dynamics surrounding debt over the last 10 years, assessing relative debt burdens at the institutional level and evaluating the potential impact of continued long-term debt growth.

The rise of institutional debt

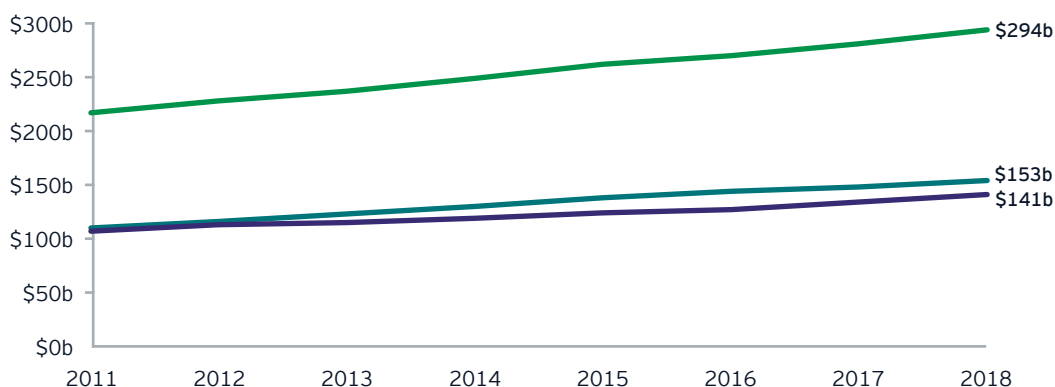
Just how large of a debt load are colleges and universities carrying? As of 2018, 74% of public and private four-year and two-year institutions hold some form of interest-bearing debt, which amounts to nearly \$294 billion. This represents a 36% increase in total institutional debt since 2011. However, these aggregate numbers do little to answer basic questions about the implications of this recent explosion of long-term debt. By analyzing the debt burden at the sector, segment and individual institution levels, we can begin to understand the impact of rising debt balances. In fact, sector segmentation reveals stark differences in debt concentration between public and private institutions as well as wide variations in debt load per student across different types of institutions.

Public and private segmentation

As with many financial and operational metrics in higher education, long-term debt must be evaluated differently based on the funding model of the institution. For example, private colleges and universities manage their debt by tapping into endowments and expendable net assets, while public institutions rely on some amount of state funding to subsidize ongoing operations. Public institutions will also issue debt at the system level and then distribute funding across the member institutions. Public and private institutions appear to have similar levels of long-term debt in aggregate, as shown in Figure 1 below, and private and public debt levels have increased at similar rates per year since 2011 (4% and 5%, respectively).⁴

Figure 1: Relative growth of total long-term debt, by sector (2011-18)

Long-term institutional debt growth



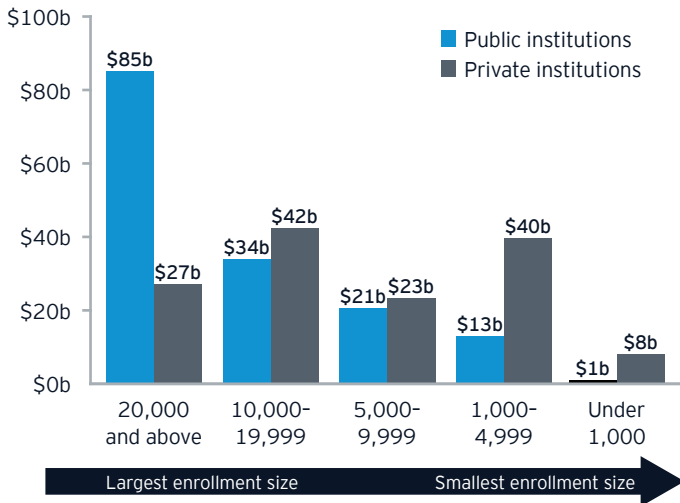
Annual change	2011-18
Aggregate debt	4.5%
Public institution debt	4.9%
Private institution debt	4.0%

Source: IPEDS; IRS.



Figure 2: Total long-term debt among public and private institutions in 2018, by size

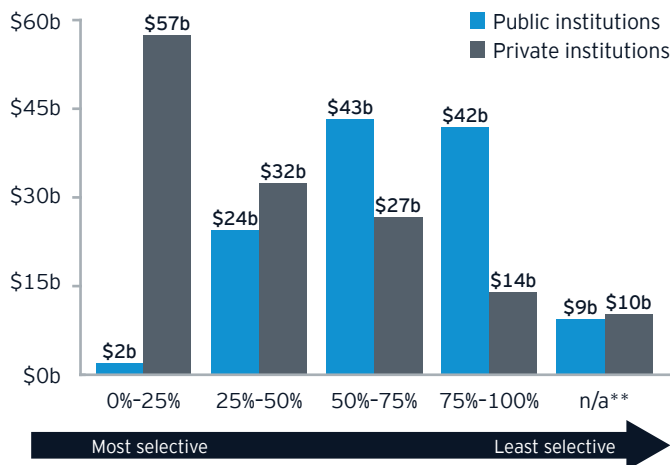
2018 long-term debt by institutional size (public vs. private segment)



Source: IPEDS; IRS.

Figure 3: Total long-term debt among public and private institutions in 2018, by selectivity*

2018 long-term debt by institutional selectivity (public vs. private four-year institutions)



Source: IPEDS; IRS.

* Public and private two-year institutions are excluded due to unavailability of selectivity data; such institutions account for ~\$32b and ~\$1b in long-term debt respectively.

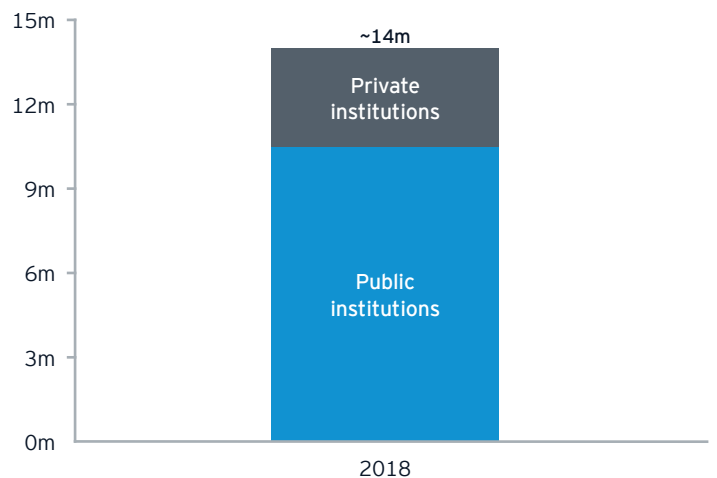
** Some public and private four-year institutions do not report selectivity data in IPEDS, and are thus noted as "n/a."

However, there are substantial differences in the concentration of debt by type of institution within the public and private segments. Among public institutions, institutions with enrollments larger than 20,000 students, as well as institutions that are less selective (as measured by acceptance rates reported in IPEDS), tend to carry a larger portion of the public segment's overall debt burden (as shown in Figure 2 and Figure 3). This is in direct juxtaposition to private institutions, where the debt burden seems to be concentrated among more selective and smaller-sized institutions.

Debt per student FTE: measuring long-term debt growth relative to enrollment changes

One way to control for obvious differences in size and scale is to consider long-term debt held by an institution relative to the number of students enrolled at that institution. As Figure 4 indicates, at 10.5 million, full-time equivalent (FTE) student enrollment in public institutions is nearly three times that of private institutions (3.5 million). This proportion has largely remained steady over the last several years as overall enrollment has stagnated.

Figure 4: Sector share of enrollment in 2018



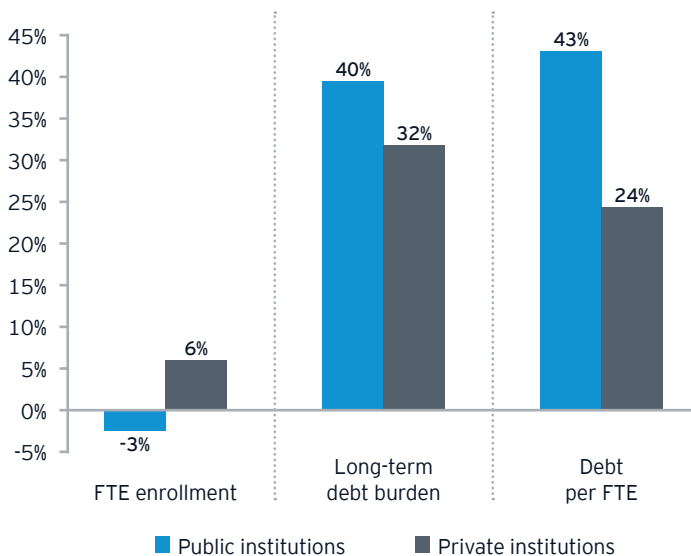
Source: IPEDS; IRS.

Figure 5 shows the result of comparing institutional debt burden against institutional enrollment over time. The industry average debt per student FTE was **\$21,000**, up from **\$15,000** in 2011. This aggregate number masks larger differences between public and private institutions. The debt per student FTE was **\$15,000** in 2018 for public institutions (compared to **\$40,000** for private institutions). Since such metrics also offer a lens into the evolving relationship between debt and institutional scale, they act as an ideal means through which to begin to contextualize the growth of long-term debt over time.

As demonstrated in Figure 6, measuring institutional debt on a per-student-FTE basis reveals the extent to which debt has grown far faster than enrollment. From 2011 to 2018, cumulative changes in FTE enrollment were much lower than cumulative changes in long-term debt. As a result, levels of debt per student FTE grew 24% overall in public institutions and 43% in private institutions in just seven years.

Figure 6: Cumulative change in enrollment, debt and debt per student FTE over time (2011-18)

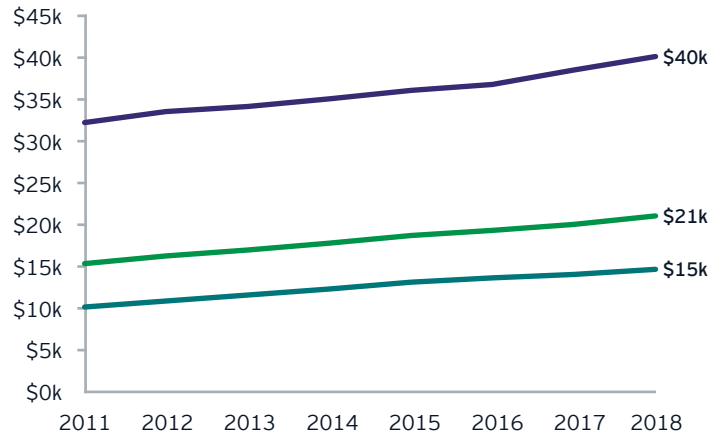
Cumulative changes in key statistics over time



Source: IPEDS; IRS.

Figure 5: Debt per student FTE over time (2011-18)

Debt per student FTE by sector



Source: IPEDS; IRS.

How might we gauge whether an institution could be putting its financial health and future in jeopardy because of the amount of debt it has taken on? Revenue-per-student metrics offer an apt counterpoint to debt, as they indicate the amount of revenue institutions are able to attain from each student in order to cover expenses and grow assets. Of all revenue streams, tuition and fees revenue is on average the greatest contributor to core revenues and is most readily tied to student enrollment, unlike private gifts, investment returns or state funding. Thus, net revenue per student FTE (after institutional financial aid that is awarded to students) acts as a serviceable barometer for gauging the implications of taking on a certain debt burden.

Strikingly, overall net revenue per student FTE currently sits at \$11,000 across the higher education industry, or just half of the average debt burden of \$21,000 per student FTE. Debt per student FTE among private institutions is roughly double the average net revenue per student FTE (\$40,000 vs. \$22,000), and a similar pattern can be observed among public institutions (\$15,000 vs. \$7,000).



On average, institutions across sectors are borrowing \$2 for every dollar they receive in net revenue.

It is important to note that colleges and universities are not servicing debt directly from tuition revenues. Institutions most often rely on unrestricted assets, endowments or state funding to act as collateral for institutional borrowing and cover the annual costs of debt service. For context, industry-wide endowment assets per student FTE in 2018 were over \$42,000, double the current debt per FTE. Endowment assets also have been growing at a faster rate than debt during the 2011-18 period, at 6% per year vs. 5%. Although these historic comparisons are encouraging, analysis at the sector and segment level offers additional insights on key metrics in relation to debt.

Figure 7 displays the extent to which these subsector differences manifest at the per-FTE level among private institutions. Pictured are the median per-FTE metrics for private institutions by reported acceptance rate.

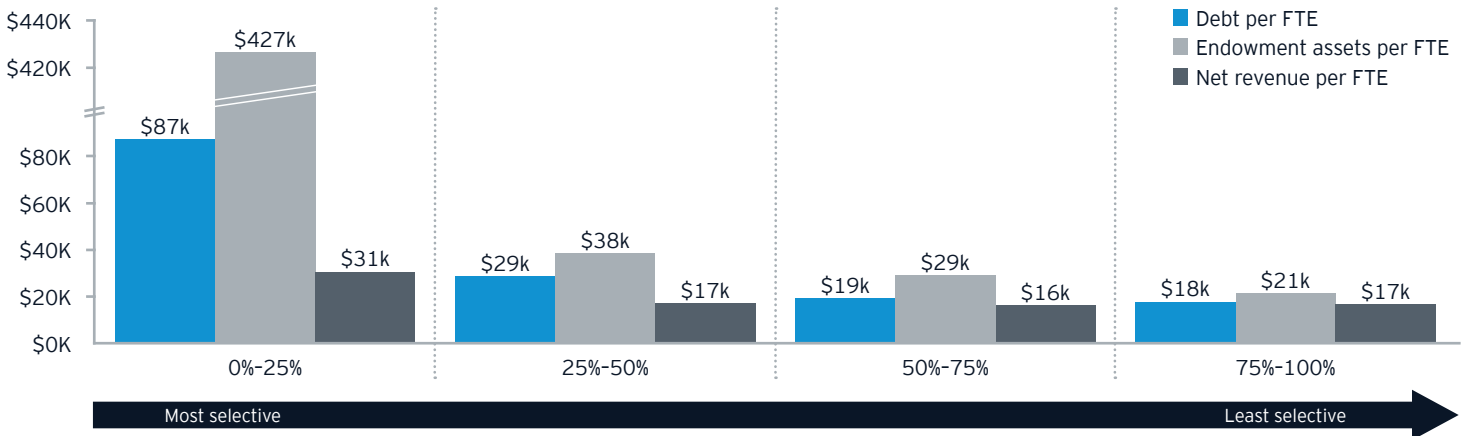
More selective institutions (0%-25% acceptance rate) have a median endowment per FTE over four times that of their debt per student, while the least selective institutions (75%-100%

acceptance rate) tend to have endowment assets per FTE that hover near their levels of debt burden per student. Net revenue per student at selective institutions is also nearly twice that of institutions that are not selective. Evidently, the conversation regarding private institutional debt changes significantly once elite institutions are removed from the picture.

These comparisons should help ground discussions that evaluate whether the current levels of long-term debt pose a true risk to higher education institutions. Debt is a foundational element of our financial structure. Governments, companies, homeowners and consumers all finance their spending with debt in varying degrees. That long-term debt is easily serviced and paid off by growth – GDP growth, profit growth, home value growth and income growth. However, without growth, long-term debt can become an unwelcome anchor. This is especially true for those whose circumstances involve debt burdens and growth outlooks that are more challenging. Any homeowner with an outstanding mortgage that is higher than the value of their home could explain the impacts of this anchor in detail.

Figure 7: Key median per-FTE financial metrics of private institutions, by selectivity (2018)

Key median per-student-FTE by selectivity (private institutions only)*



Source: IPEDS; IRS.

*Private institutions without available acceptance rate, debt burden or endowment data are excluded. Note that 910 out of 1,254 debt-bearing private institutions are included in the above analysis.



Market context: is there room to grow?

The recent growth of long-term debt raises the question of whether colleges and universities can continue to grow revenues under current market conditions. While a limited number of institutions have massive endowments or easier access to state coffers, many institutions rely heavily on tuition receipts (driven by enrollment growth and pricing) to increase assets each year and cover costs such as interest expenses and principal payments on debt. And the headwinds against enrollment growth are strong.

High school graduation rates are forecasted to be flat for the next five years. Furthermore, a birth-rate dip due to the Great Recession is projected to cause these numbers to decline significantly beginning in the 2025-26 school year, particularly in the Midwest, mid-Atlantic and New England regions. In addition, total international enrollments, once a source of growth to augment domestic enrollment declines, were down 3% cumulatively from 2015-16 to 2018-19. New international student enrollments have fallen a net 10% from their peak of ~301,000 students over the same period. These enrollment changes are particularly important when viewed within universities' financial and operational context. For instance, among private nonprofit institutions in 2018, over 68% of institutions relied on tuition and fees revenue to account for 50% or more of core revenues. Any threat to tuition revenue growth is a serious consideration for an institution's ability to pay back its debt.

Over the past several years, enrollment stagnation has led to increased revenue and operational pressures on universities. In an effort to stabilize enrollment, colleges and universities are offering larger and larger tuition discounts. Over the last decade, the average discount rate for first-time, full-time freshmen rose from 40% in 2009–10, to 52% in 2019–20. External and governmental funding for education of low-income students also has become less impactful over time as the percentage of average costs (tuition and fees plus room and board) covered by maximum Pell grants has fallen from 30% in 2009–10, to 25% in 2017–18. In addition, total state appropriations to public institutions grew at half the rate of public debt from 2011 to 2018 (2.4% compared to 4.9%).

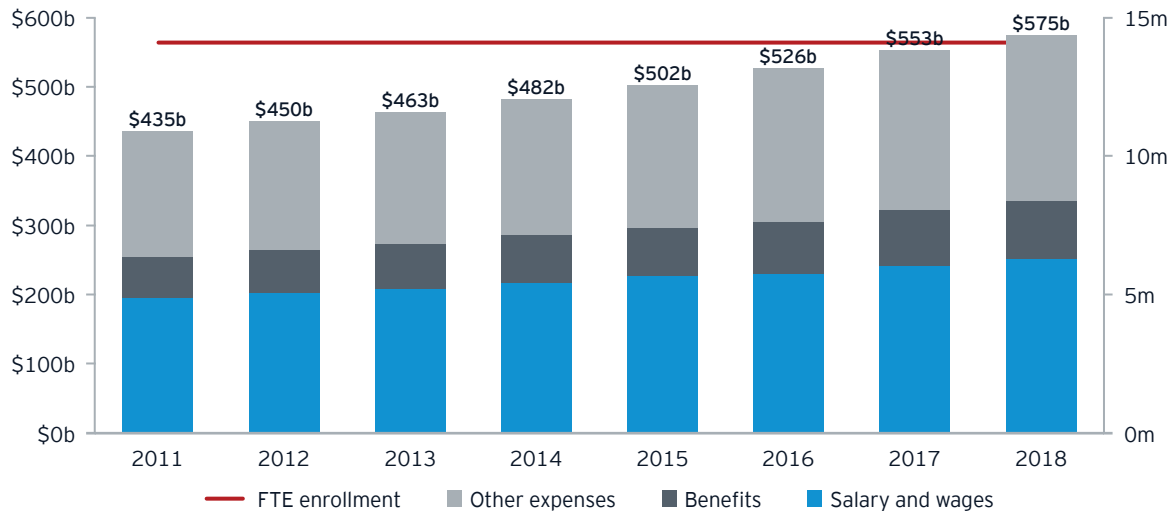
At the same time, spend on staff has continued to rise despite enrollment declines and revenue pressures. Figure 8 (on the next page) demonstrates the stark contrast of these trends.

These overall revenue and cost trends put tremendous pressure on institutional financial health. Institutions unable to win over students in the demanding and competitive marketplace will be forced to explore alternative revenue strategies simply to keep up with their peers and effectively manage debt costs.

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While enrollment declined by ~1% cumulatively from 2011 to 2018, spend on staff salaries and benefits has climbed 32%.¹⁶

Figure 8: Total higher education expenses and enrollment over time (2011-18)



Source: IPEDS; IRS.

The current higher education landscape is defined by an intense competition for revenue. Long-term debt has historically offered institutions the ability to fund ambitious academic and campus projects, as well as cover ongoing university expenses. Debt growth has steadily continued, reaching \$294 billion in 2018, and measuring \$21,000 in debt per student. But questions remain as to whether long-term debt is a problem at all. Industry-wide metrics such as net tuition revenue per student and endowment per student offer some insight into the broad financial and operational context of the industry, indicating that average debt per student now doubles average net tuition and fees per student, while endowment assets appear to dwarf them both.

The trends noted above suggest that challenges to higher education institutions are set to intensify over the next several years, affecting an institution's ability to grow assets year over year and cover debt service costs in the future. Given the sector and segment differences noted earlier in our paper, not all institutions are starting from the same place, nor will they be affected by these changes equally. So, is institutional debt a problem? Our next installment in the series will examine institutions' debt burdens relative to their ability to shoulder these loads, with an emphasis on how this is distributed across key institutional characteristics, including size, selectivity, geography, and financial and operational metrics.





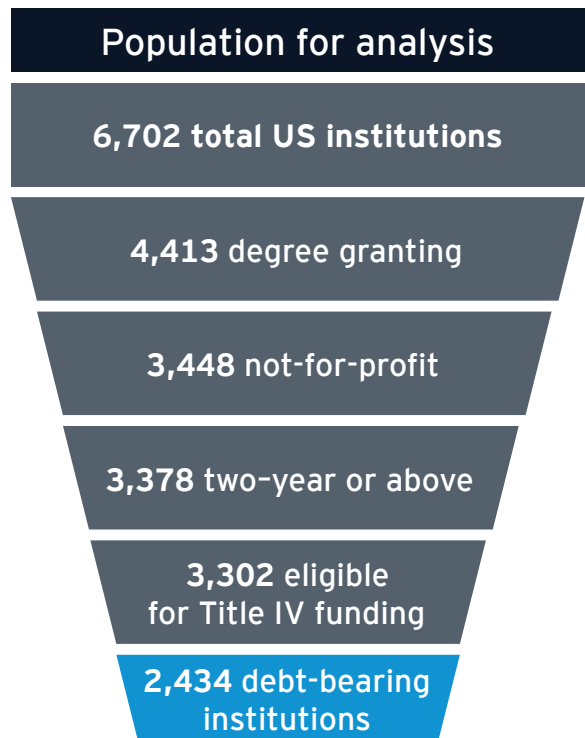
Appendix: Methodology

Institutions included in the analysis

Our data set consists entirely of publicly available information, most of which is submitted by institutions to the National Center for Education Statistics and hosted in the Integrated Postsecondary Education Data System (IPEDS). The IPEDS database includes ~6,702 total higher education institutions. Of this broad population, our analysis focuses on degree-granting institutions only and excludes for-profit institutions and universities (nearly ~1,000 institutions) as well as any institutions not eligible for Title IV funding. Removing less-than-two-year institutions results in a sample composed of ~3,378 public four-year or above; public two-year; private, not-for-profit four-year or above; and private, not-for-profit two-year institutions. Approximately 2,434 of these institutions carry interest-bearing debt and are included in our analysis of total long-term debt burden. The graphic below outlines the breakdown of the population in this sample.

Definitions and sources of financial data

Debt burden for public institutions is defined as total interest-bearing debt, which includes the long-term debt and current portion variables for public institutions using Governmental Accounting Standards Board (GASB) accounting standards. These variables are self-reported by institutions and encompass bonds and notes payable, long-term debt obligations and capital lease obligations recorded in institutional financial statements. IPEDS financial data does not include the data of component units (affiliated foundations or organizations) for public institutions for all years.





Debt burden for private institutions also comprises the same interest-bearing items of bonds and notes payable and long-term debt/capital lease obligations noted in institutional financial statements and reported to IPEDS and the IRS. However, reported IPEDS debt data for private colleges and universities is limited to the variables reported via Financial Accounting Standards Board (FASB) accounting standards, or *debt related to property, plant and equipment*. This variable includes only interest-bearing debt issued on account of property, plant, or equipment projects and leases (\$122 million in 2018; 71% of institutions reporting debt). In order to achieve a more holistic view of total private debt, data from IRS Form 990s was analyzed for each institution. Interest-bearing debt variables included on the primary Form 990 statement include tax-exempt bond liabilities, secured mortgages and notes payable, and unsecured notes and loans payable. Interest-bearing debt reported via Form 990s represented nearly \$130 million and was reported by 72% of institutions. Our final institutional data set combines the two data sets to record debt not captured by either database individually, resulting in \$141 million in private sector debt (80% of private institutions reporting debt). Note that when debt is cited for private institutions, private two-year institution debt totals (~\$750 million across institutions) are included.

Additional financial data, including tuition and fees, endowment assets and expenses, is available via IPEDS. Relevant financial metrics can be found under GASB guidelines for public institutions and FASB standards for private institutions. Recorded financial metrics are comparable across both methodologies and are treated as such in this report. The table on the right highlights the variables included in portions of the analysis.

	Additional IPEDS financial variables	
	GASB (public)	FASB (private)
Endowment assets	Value of endowment assets at the end of the fiscal year	Value of endowment assets at the end of the fiscal year
Tuition and fees	Tuition and fees, after deducting discounts and allowances	Tuition and fees
State appropriations	State appropriations	State appropriations
Total expenses	Total expenses deductions – current year total	Total expenses – total amount
Salaries and wages	Total expenses deductions – salaries and wages	Total expenses – salaries and wages
Benefits	Total expenses deductions – employee fringe benefits	Total expenses – benefits

Note: Historical IPEDS data includes data only for current institutions, not for institutions that may have closed prior to 2018.

Sources of enrollment and demographic data

Enrollment and size data was pulled from IPEDS and reflects the *full-time equivalent enrollment* variable, which is derived from total full-time and part-time student enrollment. Institution size buckets were determined using reported FTE enrollment in fall 2018. Cited enrollment data represents the entire universe of ~3,300 public and private four-year and two-year institutions.

Selectivity data reflects recorded acceptance rate in IPEDS, or *percent admitted - total*. This also can be derived by dividing the variable admissions total by the applicants total. Note: Although available for most four-year institutions, selectivity information is not available for the majority of two-year institutions. Institutions without selectivity data account for \$9 billion and \$10 billion for public and private four-year institutions (respectively), as well as nearly \$32 billion for public two-year institutions.

Note: Historical IPEDS data includes data only for current institutions, not for institutions that may have closed prior to 2018.

Calculation definitions

Calculations **per FTE student** represent the weighted average of the relevant segment. For example, debt per student FTE of private institutions is equal to the total debt burden among private institutions divided by FTE enrollment of those private institutions, while endowment assets per FTE of public institutions are equal to total endowments among public institutions divided by FTE enrollment of those public institutions.

Net revenue per student FTE is calculated as tuition and fees revenue (net of financial aid) divided by FTE enrollment. Calculations by segment are performed similarly to the above per-FTE calculations, involving only tuition and fees revenue and FTE enrollment relevant to the specific segments.

Endnotes

- ¹ EY-Parthenon, "Federal student loan system: an uncertain future," Feb. 2020; Integrated Postsecondary Education Data System (IPEDS); U.S. Census Bureau.
- ² IPEDS; U.S. Census Bureau; Federal Reserve Bank of St. Louis; College Board.
- ³ IPEDS; please see the Appendix for a detailed methodology description.
- ⁴ IPEDS; Internal Revenue Service (IRS)
- ⁵ See Appendix for methodology.
- ⁶ IPEDS.
- ⁷ IPEDS; IRS data.
- ⁸ "Knocking at the College Door," Western Interstate Commission for Higher Education website, knocking.wiche.edu/, accessed January 20, 2020.
- ⁹ Nathan D. Grawe, *Demographics and the Demand for Higher Education* (Johns Hopkins University Press, 2018).
- ¹⁰ "Open Doors 2019," Institute of International Education website, www.iie.org/en/Research-and-Insights/Open-Doors/Open-Doors-2019-MediaInformation, accessed January 20, 2020.
- ¹¹ Id.
- ¹² IPEDS
- ¹³ National Association of College and University Business Officers data; U.S. Census Bureau data; College Board.
- ¹⁴ U.S. Department of Education.
- ¹⁵ IPEDS.
- ¹⁶ IPEDS.



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