Can Anything Be Done About Rising College Costs?

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Tuition and Fee Trends
Average Published Tuition and Fees in 2021 Dollars by Sector, 1991-92 to 2021-22

College Board, Trends in College Pricing and Student Aid 2021, Figure CP-2.

College Board, Trends in College Pricing and Student Aid 2021, Figure CP-3.
Net Tuition Revenues, Subsidies, and Education and Related Expenditures per Full-Time Equivalent (FTE) Student in 2018 Dollars, 2008-09, 2013-14, and 2018-19

College Board, Trends in College Pricing and Student Aid 2021, Figure CP-14.
Public FTE Enrollment, Education Appropriations Per FTE, and Net Tuition Revenue Per FTE, U.S., FY 1980-2020 (Constant Dollars)

Source: SHEEO SHEF Report, 2021
Public FTE Enrollment, Education Appropriations Per FTE, and Net Tuition Revenue Per FTE, New Hampshire, FY 1980-2020 (Constant Dollars)

Notes:
1. Education appropriations are a measure of state and local support available for public higher education operating expenses and student financial aid, excluding appropriations for research, hospitals, and medical education. Education appropriations include federal stimulus funding.
2. Net tuition revenue is calculated by taking the gross amount of tuition and fees, less state and institutional financial aid, tuition waivers or discounts, and medical student tuition and fees.
3. Full-time equivalent enrollment converts student credit hours to full-time, academic year students, but excludes medical students.
4. Constant dollars adjusted by the Consumer Price Index (CPI).

Source(s): State Higher Education Executive Officers Association
Public FTE Enrollment, Education Appropriations Per FTE, and Net Tuition Revenue Per FTE, New Mexico, FY 1980-2020 (Constant Dollars)

- Education Appropriations Per FTE
- Net Tuition Revenue Per FTE

Data values for the years 1980 to 2020 are shown, with education appropriations and net tuition revenue plotted against years on the x-axis and in millions of dollars on the y-axis.

- Education Appropriations Per FTE range from $0.04 million in 1980 to $0.18 million in 2020.
- Net Tuition Revenue Per FTE range from $0.01 million in 1980 to $0.15 million in 2020.
Five Possible Explanations

1. Baumol’ Disease
2. Bowen’s Revenue Theory of Costs
3. Arms Race
4. The Lattice and the Ratchet
5. (Bennett Hypothesis) – lacking evidence
Baumol’s Disease
Baumol’s Disease

- There are productive and non-productive sectors of the economy.
- Workers require living wages in both sectors.
- In the non-productive sector, where productivity is stable, there are no productivity improvements in output per hour worked so increases in wages become increases in labor costs.
- A famous example is of a string quintet where it took five players to play a Mozart concerto the year it was released (say the string quintet No. 2 in C minor from 1787). Today to perform that same concerto, five musicians are still required and it will take the same length of time to perform, yet the wages for professional musicians have risen in the last 235 years.
  - These increases in wages are reflected in increases in ticket prices.
- Higher education shares many similarities with a non-productive sector and is a very people-heavy sector.
  - The increases in wages is reflected in increases in tuition prices.
Bowen’s Revenue Theory of Costs

- Universities raise all the money they can and spend all the money they raise.
Bowen’s Five Rules

1. "The dominant goals of institutions are educational excellence, prestige, and influence."

2. "There is virtually no limit to the amount of money an institution could spend for seemingly fruitful educational ends."

3. "Each institution raises all the money it can."

4. "Each institution spends all it raises."

5. "The cumulative effect of the preceding four laws is toward ever increasing expenditure."
Arms Race
Arms Race Characteristics

“The characteristics of an arms race appear to be these:
● Each competitor has incentives to behave in ways that, collectively, may damage them all.
● Nothing internal to the arms race tends to bring it to an end except, perhaps, the exhaustion of the competitors' resources.
● The race itself has no finish line that indicates success. It's a continuing process that can only be ended by ending the process.
● The end of an arms race can come through an agreement to stop the competition, an agreement reached for the common good or imposed externally,
● But any agreement to stop the process is inherently fragile as long as individual advantage accrues to its violation.
Arms Race

Climbing Wall, Colorado State University, Fort Collins
Arms Race

The University of Colorado in Boulder
Arms Race

Colorado State University in Fort Collins
Arms Race in Knowledge Production Too

- Universities produce new knowledge
  - Pressure to hire faculty in emerging areas, increased technology needs in new fields, new courses, new disciplines and departments are developed.
- “Old” knowledge and disciplines still matter and need to be maintained.
- The layers of new knowledge on top of old knowledge results in pressure to add courses, faculty, technology, buildings to keep up with the expanding knowledge.
Lattice and Ratchet
The Lattice and the Ratchet

The Lattice:
● Work that faculty used to do goes to administrators, who naturally seek to expand the scope of their operations.

The Ratchet:
● Faculty drift away from institutional goals like teaching and toward disciplinary goals like research.
The Administrative Lattice

- “The pervasiveness of an administrative entrepreneurism has also increased institutional costs. As administrative staffs have increased in size, they have tended to become more professional. One consequence of employing more highly trained individuals has been better management. Institutions have become more technologically sophisticated and better able to serve their clientele. An unintended consequence has been that academic and administrative support staffs have come to "own" their jobs in much the same way that faculty do. They have created their own set of goals and priorities for the institution. Inevitably, one of their goals is to expand their own area (Pew Higher Education Research Program, 1990, p. 3).”
The Lattice

- Shifting what was once faculty work to administrators
The Ratchet “Output Creep”

- Faculty time shifting from teaching to research, publication, and professional service.
- Most pronounced at elite research institutions.
- Faculty time use is typically self-selected. Building reputations outside of their home institution increases a faculty member’s market power.

Percent of Tenure Track Faculty Time at Research Institutions

- Research: 40%
- Teaching: 40%
- Service: 20%
Faculty "Output Creep" and Increased Costs

FIGURE 1. Effect of Faculty, Faculty Lines, and Curriculum Structure on the Departmental Activity Mix
Bennett Hypothesis
The Bennett Hypothesis

- “If anything, increases in financial aid in recent years have enabled colleges and universities blithely to raise their tuitions, confident that Federal loan subsidies would help cushion the increase.”

- Bill Bennett was the US Secretary of Education 1985-1988 under President Reagan.

What Can Be Done?

It depends which theory is likely to be true . . .

**Cost Disease:** Seek out as much administrative and back office efficiency as possible, but understand that core faculty will just get more expensive over time.

**Revenue Theory of Costs:** set limits on tuition and appropriations increase; make increases in both steady, dependable and *limited*

**Arms Race:** Use policy to ensure that institutions are directing entrepreneurial activity toward societal goals

**These are not mutually exclusive!**
Questions?
Additional Rationales for Price Increases

- **Salary increases**
  - Not true across fields
  - Not true for adjunct and contingent workforce

- **Increased government regulation and reporting burdens**
  - While there are burdens and they have increased over time with accountability movements, this work is typically a small share of institutional resources.

- **Waste and abuse “organizational slack”**
Other concerns

- Access-Quality-Efficiency zero sum game (Johnstone).
- Reduced subsidy values even with increased prices.
another where productivity is stable. As an illustration, let us suppose that where technological improvements are possible they lead to an increase in output per man-hour of 4 percent per annum, but that output per man-hour remains absolutely constant in the stable productivity sector. If these sectors are assigned equal weights in the construction of an economy-wide productivity index, the aggregate rate of increase in output per man-hour will be 2 percent per annum. For the moment let us assume that there is only one grade of labor, that labor is free to move back and forth between sectors, and that the real wage rate rises pari passu with the aggregate rate of change of productivity, at 2 percent per annum. Finally, let us suppose that the money supply and the level of aggregate demand are controlled in such a way that the price level is kept stable. Assuming that there are no changes in the shares of capital and labor, this means that money wages will also increase at the rate of 2 percent a year.
per unit must therefore decline. However, in the sector where productivity is stable, there is no offsetting improvement in output per man-hour, and so every increase in money wages is translated automatically into an equivalent increase in unit labor costs—2 percent per annum in our example. It should be noted that the extent of the increase in costs
It is apparent that the live performing arts belong to the stable productivity sector of our economy. The legitimate theater, the symphony orchestra, the chamber group, the opera, the dance—all can serve as textbook illustrations of activities offering little opportunity for major technological change. The output per man-hour of the violinist playing a Schubert quartet in a standard concert hall is relatively fixed, and it is fairly difficult to reduce the number of actors necessary for a performance of *Henry IV, Part II*. 
Grand Statements

TUESDAY 1/24/23 • 7:30 PM

SCHUBERT  Quartettsatz in C minor for Strings, D. 703 (1820)

SCHUBERT  Sonata in B-flat major for Piano, D. 960 (1828)

SCHUBERT  Quartet in G major for Strings, D. 887, Op. 161 (1826)

Gilbert Kalish, PIANO • Escher String Quartet
(Adam Barnett-Hart, Brendan Speltz, VIOLIN
Pierre Lapointe, VIOLA • Brook Speltz, CELLO)
An Evening with Escher

Sunday, April 3, 2022, 5:00 PM at Alice Tully Hall

Tickets start at $34.00
Productivity in Postsecondary Education: A New Approach

William F. Massy
Andrea K. Wilger
Stanford University

Educational Evaluation and Policy Analysis

The pervasiveness of an administrative entrepreneurship has also increased institutional costs. As administrative staffs have increased in size, they have tended to become more professional. One consequence of employing more highly trained individuals has been better management. Institutions have become more technologically sophisticated and better able to serve their clientele. An unintended consequence has been that academic and administrative support staffs have come to "own" their jobs in much the same way that faculty do. They have created their own set of goals and priorities for the institution. Inevitably, one of their goals is to expand their own area (Pew Higher Education Research Program, 1990, p. 3).
The Lattice

As Nashville reopens, Vanderbilt’s Office of Active Citizenship and Service is coordinating with local organizations to evaluate potential service opportunities for the coming semester.
Gordon Winston – Why College is Not Like a Firm

- Non-distribution constraint
- Asymmetric information
- Idealistic goals
- Prestige maximization
- Donative nonprofits
- Commercial nonprofits
- Donative-commercial nonprofits
- Customer-input technology
- Peer effects
- Trust market
- Cross-subsidization
The Arms Race

The characteristics of an arms race appear to be these:

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The Arms Race

- A school’s position is important in determining the quality of its students, which is important, in turn, in determining the quality of the education it offers.
- Position depends on the size of a school’s student subsidies and they have to be supported by non-tuition revenues or wealth.
- If other schools raise their prices, a school can raise its own with positional impunity, but
- If schools down the line increase their spending – especially in ways that are obvious to students – a school risks having its own position, hence its access to student quality, changed through inaction.
- Pressure from a school below, through increased spending or reduced price, is more effective in inducing an arms race response than is a growing gap with a school above: a school can choose not to follow subsidy increases of the ones above but it ignores those overtaking its subsidy from below at considerable peril.
- Strategies that hope to reposition through more spending or lower price can be supported by increased non-tuition revenues, by reducing saving, or by drawing down net wealth (borrowing or reducing assets). If these are strategies that can’t be sustained, their long-run success depends on a subsequent improvement of fortunes to ‘repay’ a temporary reduction in wealth. Many such strategies are predicated on the hope for a feedback of student quality