

SHEF Technical Paper A

The Higher Education Cost Adjustment: A Proposed Tool for Assessing Inflation in Higher Education Costs

Prices charged to students, the total cost of higher education, and the effect of inflation are all important issues for the public, state and federal governments, and colleges and universities. This brief technical paper discusses two relevant dimensions of inflation in higher education—the consumer and the provider perspectives—and describes a tool to benchmark the inflation experienced by providers, colleges, and universities.

The Consumer Perspective

The student, parent, or student-aid provider most often views higher education prices compared to how much consumers pay for other goods and services. The Consumer Price Index for Urban Consumers (CPI-U) is most often used for such comparisons.

The CPI-U "market basket" consists of: housing (42 percent of the index), transportation (19 percent), food and beverage (18 percent), apparel and upkeep (7 percent), medical care (5 percent), entertainment (4 percent), and other goods and services (5 percent). To calculate the CPI-U, the Bureau of Labor Statistics measures average changes in the prices paid for these goods and services in 27 local areas.

Prices for different goods and services generally change faster or slower than the average rate of increase in the CPI-U. Incomes also grow or decline at different rates. Consumers notice when prices increase and they become concerned when prices for important goods and services grow faster than their incomes. Prices for higher education and health care, for example, have grown faster than overall consumer prices. While consumer prices, as measured by CPI-U, grew by 75 percent between 1992 and 2017, the cost of medical care grew by 150 percent,¹ and enrollment-weighted tuition and fees for 4-year public universities grew by 273 percent.² U.S. income per capita grew by 85 percent³ during the same period—more than prices in general, but less than the health care and college tuition price increases.

In view of these facts, it is not surprising that college prices are attracting national attention. Colleges and universities are certainly aware of the issues and of the increase in their prices. At the same time, however, they face growth in the prices that they pay.

The Provider Perspective

The CPI-U is based on goods and services purchased by the typical urban consumer. Colleges and universities spend their funds on different things, mostly (about 75 percent) on salaries and benefits for faculty and staff; and lesser amounts on utilities, supplies, books and library materials, and computing. Trends in the costs of these items don't necessarily run parallel to the average price increases of the goods and services tracked by the CPI-U.

Kent Halstead developed the Higher Education Price Index (HEPI) to track changes in the prices paid by colleges and universities. This index, which tracks price changes since 1961, is based on a 1972 market basket of expenditures for colleges and universities. To estimate price changes for components in this market basket, Halstead used trends in

¹ "Economic Report of the President." February 2007. Appendix B, Table B-60: "Consumer Price Indexes for Major Expenditure Classes"

² Source: Washington Higher Education Coordinating Board

³ Source: Bureau of Economic Analysis

faculty salaries collected by the American Association of University Professors (AAUP), and a number of price indices generated by federal agencies.

Dr. Halstead last updated the HEPI in 2001, using regression analysis to estimate price increases for more recent years. Since 2005, Commonfund Institute has maintained the HEPI project, continuing to provide yearly updates to the data based on a regression analysis.

The HEPI has made an important contribution to our understanding of the cost increases borne by colleges and universities. Over the past years, the State Higher Education Executive Officers Association (SHEEO) and chief fiscal officers of higher education agencies discussed the feasibility and desirability of a fresh analysis of higher education cost inflation, and reached the following conclusions:

- ◆ While the HEPI has been useful, it has not been universally accepted because it is a privately developed analysis, and one of its main components, average faculty salaries, has been criticized as self-referential.
- ◆ The HEPI has not diverged dramatically from other inflation indices over short time periods. Hence, many policymakers reference indices such as the CPI-U in annual budget deliberations, especially in budgeting for projected price increases.
- ◆ It would be costly to update, refine, and maintain the HEPI in such a way that would meet professional standards for price indexing. The most labor-intensive work would be in refreshing the data in the higher education market basket.

For these reasons, SHEEO decided not to develop a successor to the HEPI. But, over an extended period of time, differences between the market basket of higher education cost increases and the CPI market basket cost increases are material. The most fundamental problem is that the largest expenditure for higher education is salaries for educated people.

SHEEO developed the Higher Education Cost Adjustment (HECA) as an alternative to the CPI-U and the HEPI for estimating inflation in the costs paid by colleges and universities. HECA is constructed from two federally developed and maintained price indices—the Employment Cost Index (ECI) and the Gross Domestic Product Implicit Price Deflator (GDP IPD). The ECI reflects employer compensation costs including wages, salaries, and benefits.⁴ The GDP IPD reflects general price inflation in the U.S. economy.⁵ The HECA has the following advantages:

1. It is constructed from measures of inflation in the broader U.S. economy;
2. It is simple, straightforward to calculate, and transparent; and
3. The underlying indices are developed and routinely updated by the Bureaus of Labor Statistics and Economic Analysis.

Because the best available data suggest that faculty and staff salaries account for roughly 75 percent of college and university expenditures, the HECA is based on a market basket with two components—personnel costs (75 percent of the index) and non-personnel costs (25 percent). SHEEO constructed the HECA based on the growth of the ECI (for 75 percent of costs) and the growth of the GDP IPD (for 25 percent of costs).

Table 1 displays the three indices—the CPI-U, HEPI, and HECA—for the years 1980 to 2017.

⁴ The Employment Cost Index (ECI) for White Collar Workers (excluding sales occupations), which has traditionally been used in SHEF, was discontinued in March 2006. The ECI for management, professional, and related occupations (not seasonally adjusted) is the closest to the discontinued index and is now used in SHEF. This index is available back to 2001, and historical SHEF data have been adjusted to represent this new series.

⁵ Gross Domestic Product (GDP) is the total market value of all final goods and services produced in the country in a given year. It is equal to total consumer, investment, and government spending, plus the value of exports, minus the value of imports. The GDP Implicit Price Deflator is current dollar GDP divided by constant dollar GDP. This ratio is used to account for the effects of inflation by reflecting the change in the prices of the bundle of goods that make up the GDP as well as changes to the bundle itself.

TABLE 1
CPI-U, HEPI, AND HECA INDEXED TO FY 2017

	CPI-U ¹	HECA ²	HEPI ³
1980	33.62	28.39	23.44
1981	37.08	31.02	25.94
1982	39.37	33.43	28.39
1983	40.63	35.40	30.24
1984	42.39	37.34	31.69
1985	43.90	38.95	33.50
1986	44.71	40.42	35.17
1987	46.34	41.83	36.56
1988	48.26	43.66	38.16
1989	50.59	45.73	40.16
1990	53.32	48.08	42.58
1991	55.56	50.20	44.81
1992	57.24	51.83	46.42
1993	58.95	53.58	47.75
1994	60.46	55.13	49.38
1995	62.17	56.63	50.83
1996	64.01	58.10	52.31
1997	65.48	59.54	53.95
1998	66.50	61.23	55.85
1999	67.97	62.88	57.18
2000	70.25	65.28	59.54
2001	72.25	67.88	63.11
2002	73.39	69.91	64.32
2003	75.07	72.18	67.58
2004	77.06	74.62	70.06
2005	79.68	77.12	72.82
2006	82.25	79.58	76.53
2007	84.59	82.41	78.71
2008	87.84	84.83	82.61
2009	87.52	86.18	84.46
2010	88.96	87.46	85.21
2011	91.77	89.33	87.21
2012	93.67	90.94	88.66
2013	95.04	92.57	90.05
2014	96.58	94.48	92.74
2015	96.69	96.08	94.74
2016	97.91	97.82	96.46
2017	100.00	100.00	100.00
5 YEAR CHANGE	6.8%	10.0%	12.8%
CHANGE SINCE 1980	197%	252%	327%

NOTES: CPI-U and HEPI are fiscal year (July 1 to June 30). HECA data are Quarter 2 of the calendar year, coinciding with the final quarter of the comparable fiscal year.

SOURCES:

1. U.S Bureau of Labor Statistics CPI Detailed Report Tables, CPI-All Urban Customers (Current Season), not seasonally adjusted.

2. SHEEO, using data from U.S. Bureau of Labor Statistics and U.S. Bureau of Economic Analysis.

3. Historical Summary of Higher Education Price Index and Consumer Price Index, Fiscal Years 1961 to 2017.

<https://www.commonfund.org/2017/12/12/post-hepi-inflation-rate-increase/>