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# TECHNICAL PAPER A

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

### Introduction

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

### The Consumer Perspective

The student, parent, or student aid provider most often views higher education prices relative to how much they pay for other goods and services. The Consumer Price Index for Urban Consumers (CPI-U), most often used for these comparisons, evaluates the growth of tuition and fees against other consumer prices.

The CPI-U "market basket" consists of: housing (forty-two percent of the index), transportation (nineteen percent), food and beverages (eighteen percent), apparel and upkeep (seven percent), medical care (five percent), entertainment (four percent), and other goods and services (five percent). To calculate the CPI-U, the Bureau of Labor Statistics measures average changes in the prices paid for these goods and services in twenty-seven 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 over the past twenty years. While consumer prices as measured by CPI-U grew by forty percent between 1990 and 2002, the cost of medical care grew by seventy-five percent,<sup>1</sup> and tuition and fees for four-year public colleges and universities grew by 120 percent. U.S. income per capita grew by fifty-eight percent 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.

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<sup>1</sup> "Economic Report of the President." February 2003. Appendix B, table B-60: "Consumer Price Indexes for Major Expenditure Classes" (<http://w3.access.gpo.gov/usbudget/fy2004/sheets/b60.xls>).

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## 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 (seventy-five percent) on salaries and benefits for faculty and staff, then utilities, supplies, books and library materials, and computing. Trends in the cost of these items don't necessarily run parallel to the average price increases 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 from 1961 on. This index is based on the market basket of expenditures for colleges and universities. To estimate price changes for components in this market basket, it uses trends in 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; he used regression analysis to estimate price increases from 2002-03, and made available for purchase *College and University Higher Education Price Index: 2003 Update*, which explains the procedures he used to develop estimated price increases for higher education in recent years.

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

- While the HEPI has been useful, it has not been universally accepted because 1) it is a privately developed analysis, and 2) 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 policy makers 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 has decided not to maintain a successor to the HEPI. But *over an extended period of time*, differences between market basket of higher education cost increases and CPI market basket cost increases are material. The most fundamental problem is that the largest expenditure for higher education is salaries for educated people. In the past twenty years, such people have attracted increasingly higher compensation in both the private and public sectors, including colleges and universities.

SHEEO proposes 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 includes salaries and benefits for private sector white-collar workers, excluding sales occupations. The GDP IPD reflects general price inflation in the U.S. economy.<sup>2</sup> 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

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<sup>2</sup> *Gross Domestic Product (GDP) is the total market value of all final goods and services produced in the country in a given year, 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.*

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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 accounted for roughly seventy-five percent of college and university expenditures in 1972, the HECA is based on a market basket with two components—personnel costs (seventy-five percent of the index), and non-personnel costs (twenty-five percent). We have constructed the HECA based on the growth of the ECI for seventy-five percent of costs, and the growth of the GDP IPD for twenty-five percent of costs. While the higher education market basket may have changed since 1972, the information available suggests that this allocation remains roughly accurate.

Table 7 displays three indices from fiscal years 1990 to 2002—the CPI-U, HEPI, and the suggested HECA. For comparison purposes, per capita income growth is shown.

**Table 7**

**CPI-U, HEPI, HECA, and Per Capita Personal Income,  
Indexed to Fiscal 1990**

Fiscal Year Ending	CPI-U <sup>1</sup>	HEPI <sup>2</sup>	HECA <sup>3</sup>	Per Capita Personal Income <sup>4</sup>
1990	100.00	100.00	100.00	100.00
1991	105.47	105.26	104.44	102.30
1992	108.85	109.02	108.05	107.09
1993	112.25	112.14	111.93	110.05
1994	115.15	115.98	115.39	114.14
1995	118.46	119.39	118.61	118.82
1996	121.68	122.87	121.80	124.00
1997	125.15	126.70	125.19	129.84
1998	127.38	131.18	129.14	137.41
1999	129.59	134.30	132.85	142.45
2000	133.33	139.84	138.33	152.05
2001	137.89	146.66	143.94	155.39
2002	140.34	153.69	148.83	157.53

**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. Personal income data are calendar year.

**Sources:**

1. U.S. Bureau of Labor Statistics.
2. Kent Halstead, Research Associates of Washington, DC.
3. SHEEO, from BLS and BEA data.
4. U.S. Dept. of Commerce, Bureau of Economic Analysis: State Personal Income.

## Summary of the Indices

Between fiscal years 1990 and 2002:

- Consumer prices grew by forty percent;
- Provider prices for higher education grew fifty-four percent (as measured by the HEPI);
- Provider prices for higher education grew forty-nine percent (as estimated by the proposed HECA); and
- Per capita income grew fifty-eight percent.