commonfund

2014 HEPI

HIGHER EDUCATION PRICE INDEX

HIGHER EDUCATION PRICE INDEX INTRODUCTION

About HEPI

The Higher Education Price Index (HEPI) is an inflation index designed specifically for use by institutions of higher education. Compiled from data reported by government agencies and industry sources, HEPI measures the average relative level in the price of a fixed market basket of goods and services purchased by colleges and universities each year through current fund educational and general expenditures, excluding research. A more accurate indicator of cost changes for colleges and universities than the Consumer Price Index (CPI), HEPI is used primarily to project future budget increases required to preserve purchasing power. With compilations dating back to 1961, HEPI offers more than 50 continuous years of higher education inflation data. It is an essential tool enabling schools to determine increases in funding necessary to maintain both real purchasing power and investment.

In 2005, Commonfund Institute assumed responsibility for the index and the proprietary model used to calculate HEPI's values from Research Associates of Washington, D.C. In 2007, in keeping with its commitment to improving and expanding the index, Commonfund Institute inaugurated two additional HEPI services:

- HEPI calculated by type of institution for six different categories of public and private colleges and universities, and
- the monthly release, beginning in January of each year, of a forecast of HEPI for the coming fiscal year end.

In 2009, two further improvements were introduced, aligning the estimates and the final HEPI calculation with the July-June academic fiscal year and making available HEPI calculated by region.

HEPI forecasts are provided monthly from January through June of each year. The HEPI report is published using the July HEPI figure, which may be subject to a further small adjustment when the last of the underlying data items are finalized in November.

All HEPI services are provided free of charge via Commonfund Institute's website at www.commonfund.org.

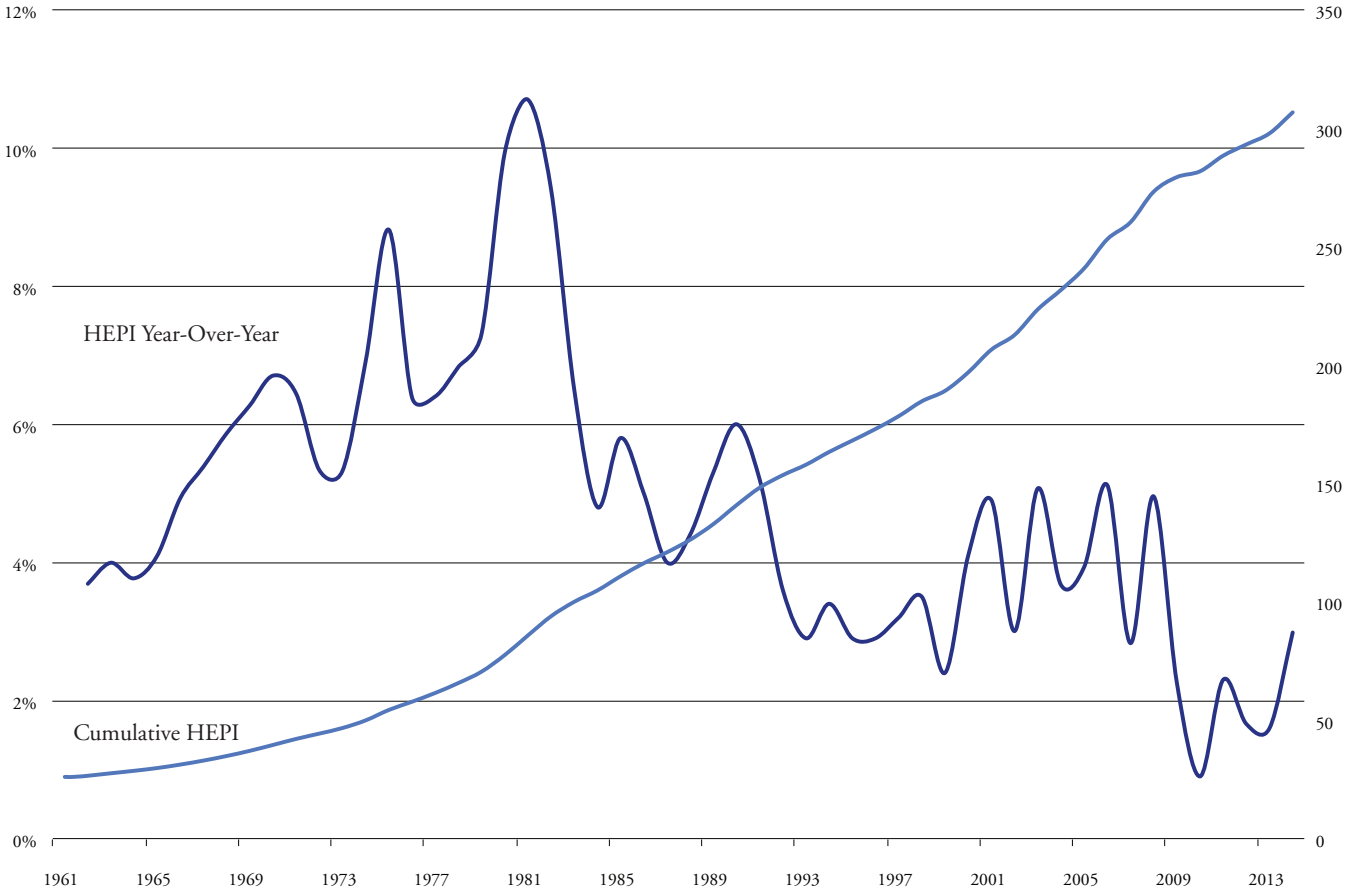
About Commonfund Institute

Commonfund Institute was founded to house the education and research activities of Commonfund and to provide the community of long-term investors with investment information and professional development programs. Commonfund Institute is dedicated to the advancement of investment knowledge and the promotion of best practices in financial management. Commonfund Institute provides a wide variety of resources, including conferences, seminars and roundtables on topics such as endowment and treasury management; proprietary and third-party research and publications including the annual NACUBO-Commonfund Study of Endowments®, the Council on Foundations-Commonfund Study of Investments for Private Foundations™ and the Commonfund Benchmarks Studies®; and events such as the annual Commonfund Endowment Institute and the Commonfund Prize for the best contribution to endowment investment research. Its broad range of programs and services is designed to serve financial practitioners, fiduciaries and scholars.

The HEPI Tables

The chart below shows HEPI from FY1961 to FY2014. Table A on page 3 summarizes HEPI and CPI for the same period. Table B on page 4 summarizes the regression formula used since FY2002 to calculate HEPI. Table C on page 11 shows HEPI for public and private institutions, as a whole and by type of institution. Table D on page 15 shows HEPI for all educational institutions by region. HEPI data beginning with FY2002 have been restated to reflect the methodological improvements adopted in 2009. Tables E and F on pages 21 and 22 trace the purchasing power of current salaries of full-time professors compared with previous years, using data from selected public and private institutions.

HIGHER EDUCATION PRICE INDEX 1961 - 2014



This chart traces the Higher Education Price Index (HEPI) from 1961 to 2014. Cumulative HEPI is represented by the steadily increasing blue line, indexed to 100 for 1983, and should be read using the right-hand scale. The jagged line traces percentage year-over-year changes in HEPI and should be read using the left-hand scale. In this chart and in the supporting data in Table A on page 3, the HEPI is presented in two ways-as an index level and as a year-over-year percent change. HEPI data beginning with FY2002 have been restated to reflect the methodological improvements adopted in 2009.

TABLE A

HISTORICAL SUMMARY OF HIGHER EDUCATION PRICE INDEX AND CONSUMER PRICE INDEX FY1961 TO FY2014

	College and university operations		Consumer prices			College and university operations		Consumer prices	
Fiscal year	HEPI Index Value 1983 = 100	Yearly % Change	CPI Index Value 1983 = 100	Yearly % Change	Fiscal year	HEPI Index Value 1983 = 100	Yearly % Change	CPI Index Value 1983 = 100	Yearly % Change
1961	25.6	–	30.3	–	1991	148.2	5.2%	136.4	5.4%
1962	26.5	3.7%	30.6	1.0%	1992	153.5	3.6%	140.8	3.2%
1963	27.6	4.0%	31.0	1.1%	1993	157.9	2.9%	145.2	3.1%
1964	28.6	3.8%	31.4	1.4%	1994	163.3	3.4%	148.8	2.5%
1965	29.8	4.1%	31.8	1.3%	1995	168.1	2.9%	153.2	3.0%
1966	31.3	4.9%	32.6	2.3%	1996	173.0	2.9%	157.4	2.7%
1967	32.9	5.4%	33.5	3.0%	1997	178.4	3.2%	161.9	2.9%
1968	34.9	5.9%	34.6	3.3%	1998	184.7	3.5%	164.8	1.8%
1969	37.1	6.3%	36.3	4.8%	1999	189.1	2.4%	167.6	1.7%
1970	39.5	6.7%	38.5	5.9%	2000	196.9	4.1%	172.5	2.9%
1971	42.1	6.4%	40.5	5.2%	2001	208.7	6.0%	178.4	3.4%
1972	44.3	5.3%	41.9	3.6%	2002	212.7	1.9%	181.6	1.8%
1973	46.7	5.3%	43.6	3.9%	2003	223.5	5.1%	185.5	2.2%
1974	49.9	6.9%	47.5	8.9%	2004	231.7	3.7%	189.6	2.2%
1975	54.3	8.8%	52.8	11.2%	2005	240.8	3.9%	195.3	3.0%
1976	57.8	6.4%	56.5	7.1%	2006	253.1	5.1%	202.7	3.8%
1977	61.5	6.4%	59.8	5.8%	2007	260.3	2.8%	208.0	2.6%
1978	65.7	6.8%	63.8	6.8%	2008	273.2	5.0%	215.7	3.7%
1979	70.5	7.3%	69.8	9.3%	2009	279.3	2.3%	218.7	1.4%
1980	77.5	9.9%	79.1	13.3%	2010	281.8	0.9%	220.8	1.0%
1981	85.8	10.7%	88.2	11.6%	2011	288.4	2.3%	225.3	2.0%
1982	93.9	9.4%	95.8	8.7%	2012	293.2	1.7%	231.9	2.9%
1983	100.0	6.5%	100.0	4.3%	2013	297.8	1.6%	235.7	1.7%
1984	104.8	4.8%	103.7	3.7%	2014	306.7	3.0%	239.4	1.6%
1985	110.8	5.8%	107.7	3.9%					
1986	116.3	5.0%	110.8	2.9%					
1987	120.9	4.0%	113.3	2.2%					
1988	126.2	4.4%	118.0	4.1%					
1989	132.8	5.3%	123.5	4.7%					
1990	140.8	6.0%	129.4	4.8%					

Sources: HEPI, Research Associates of Washington and Commonfund Institute, July 1 – June 30 data
CPI, U.S. Department of Labor, data is calculated to July 1 – June 30 (annual published CPI is computed over the calendar 12-month period)

TABLE B

HIGHER EDUCATION PRICE INDEX 2002 – 2014

REGRESSION ANALYSIS OF COMPONENTS—FY1961 TO FY2001

	Fiscal	Regression HEPI	Faculty salaries	Administrative salaries	Clerical	Service Employees	Fringe Benefits	Miscellaneous services	Supplies and materials	Utilities
Index Value	2002	212.7	222.7	236.4	205.4	189.6	277.1	205.8	128.2	118.1
	2003	223.5	229.4	255.7	211.1	193.9	292.3	209.5	132.2	157.6
	2004	231.7	234.2	263.3	217.1	197.6	312.8	216.4	135.6	176.4
	2005	240.8	240.7	274.0	223.4	201.4	327.2	222.7	145.5	200.2
	2006	253.1	248.2	287.7	229.5	205.5	343.7	228.8	158.1	255.7
	2007	260.3	257.6	299.2	237.7	213.6	360.8	238.3	165.3	220.6
	2008	273.2	268.1	314.0	245.1	220.5	380.7	246.4	180.0	252.0
	2009	279.3	277.3	330.9	251.6	226.7	394.4	253.1	181.6	213.8
	2010	281.8	280.6	337.6	255.2	230.0	402.8	255.8	179.3	193.6
	2011	288.4	284.5	343.2	260.2	233.2	417.6	260.3	193.9	201.5
	2012	293.2	289.6	352.3	264.8	235.7	425.3	264.6	203.9	191.7
	2013	297.8	294.6	362.4	269.8	239.4	437.5	269.4	180.0	195.6
	2014	306.7	301.0	366.4	274.8	242.0	458.3	274.2	200.2	211.4
Standard Deviation	2002-2014	30.3	26.6	43.3	23.1	18.4	57.7	23.4	26.0	36.2
Yearly % Change	2002	1.9%	3.8%	3.1%	3.9%	3.8%	5.9%	3.0%	-2.7%	-30.0%
	2003	5.1%	3.0%	8.2%	2.8%	2.3%	5.5%	1.8%	3.1%	33.5%
	2004	3.7%	2.1%	3.0%	2.8%	1.9%	7.0%	3.3%	2.6%	11.9%
	2005	3.9%	2.8%	4.1%	2.9%	1.9%	4.6%	2.9%	7.3%	13.5%
	2006	5.1%	3.1%	5.0%	2.7%	2.0%	5.0%	2.7%	8.7%	27.7%
	2007	2.8%	3.8%	4.0%	3.6%	4.0%	5.0%	4.2%	4.5%	-13.7%
	2008	5.0%	4.1%	5.0%	3.1%	3.2%	5.5%	3.4%	8.9%	14.2%
	2009	2.3%	3.4%	5.4%	2.7%	2.8%	3.6%	2.7%	0.9%	-15.1%
	2010	0.9%	1.2%	2.0%	1.4%	1.4%	2.1%	1.1%	-1.3%	-9.5%
	2011	2.3%	1.4%	1.7%	2.0%	1.4%	3.7%	1.8%	8.2%	4.1%
	2012	1.7%	1.8%	2.7%	1.7%	1.1%	1.8%	1.7%	5.2%	-4.9%
	2013	1.6%	1.7%	2.9%	1.9%	1.6%	2.9%	1.8%	-11.7%	2.0%
	2014	3.0%	2.2%	1.1%	1.9%	1.1%	4.8%	1.8%	11.2%	8.1%

Summary Output

Regression Statistics

Multiple R	0.999998904
R Square	0.999997809
Adjusted R Square	0.999997261
Standard Error	0.096391663
Observations	41

Coefficients

Intercept	-0.286286907
Faculty	0.353741718
Administrative	0.104289477
Clerical	0.184085850
Service	0.082314791
Fringe	0.131020859
Services	0.022899544
Supplies	0.055138426
Utilities	0.068247106

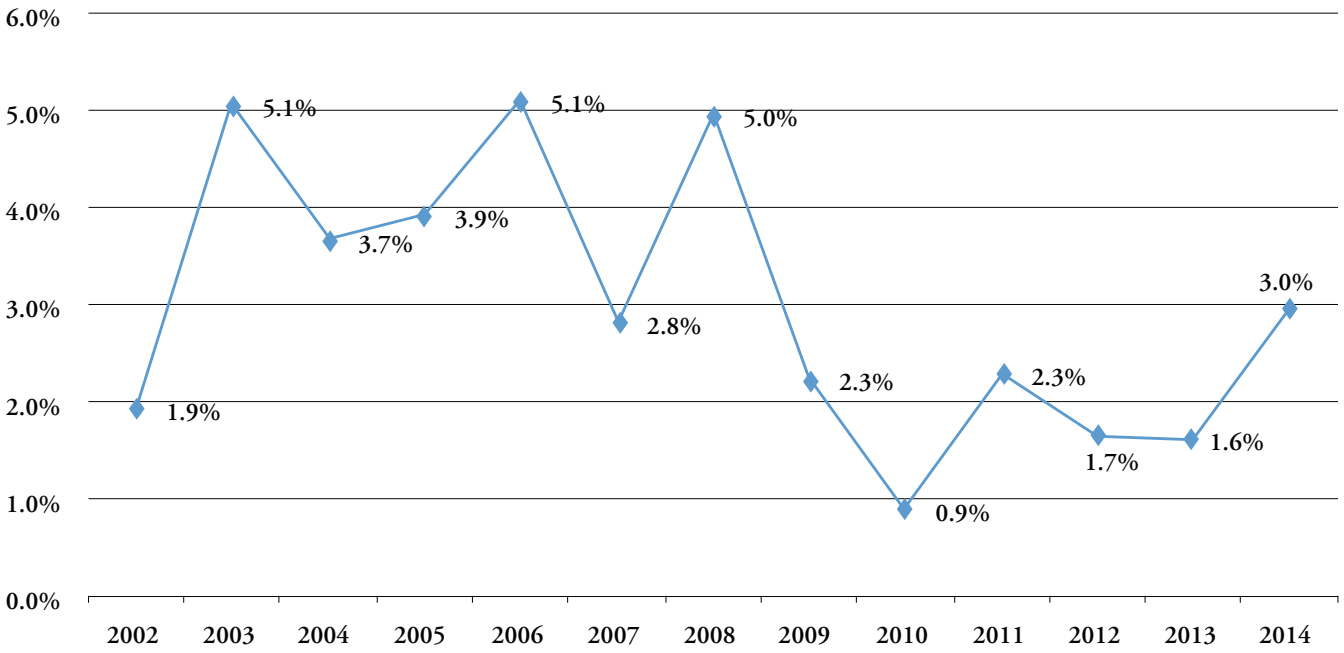
HIGHER EDUCATION PRICE INDEX ANALYSIS

HEPI FOR 2014

For fiscal 2014, which ended on June 30, the HEPI calculation reveals that inflation for colleges and universities was 3.0 percent, a substantial increase of 87.5 percent from the 1.6 percent rate for FY2013. HEPI for FY2014 was 140 basis points (1.4 percentage points) above the 1.6 percent rate for FY2013 and 130 basis points (1.3 percentage points) above the 1.7 percent rate for FY2012.

FIGURE 1

The Higher Education Price Index FY2002 - 2014



There are eight cost factors that contribute to the HEPI regression calculation: faculty salaries, administrative salaries, clerical salaries, service employee salaries, fringe benefits, miscellaneous services, supplies and materials, and utilities. The regression equation assigns a different weighting to each cost factor, and therefore a change in one component may influence the final HEPI calculation more than another. The components that are most heavily weighted are faculty and clerical salaries and fringe benefits.

The cause of the strong increase in HEPI from FY2013 to FY2014 was a surge in the rates of inflation for two cost factors -- supplies and materials and utilities -- combined with smaller increases in the inflation rates for fringe benefits and faculty salaries. These increases were offset by decreases in the inflation rates for administrative salaries and service employee salaries. There was no change in the inflation rates for clerical salaries and miscellaneous services. The weighting of supplies and materials in the regression equation that determines the final HEPI is only 5.5 percent, but the price movements of this cost factor have been very volatile in recent years. This inflation rate, which was -1.3 percent – a deflation – in FY2010, rebounded to 8.2 percent in FY2011 and then declined to 5.2 percent in FY2012 before dropping sharply again to a deflation rate of -11.7 percent in FY2013 and rising strongly to FY2014's 11.2 per-

cent. Utilities also carry a relatively small regression weighting of 6.8 percent but have similarly been very volatile, going from a deflation rate of -9.5 percent in FY2010 to an inflation rate of 4.1 percent in FY2011 before posting a deflationary -4.9 percent rate in FY2012, a relatively modest 2.0 percent inflation rate in FY2013, and this year's sharply higher inflation rate of 8.1 percent.

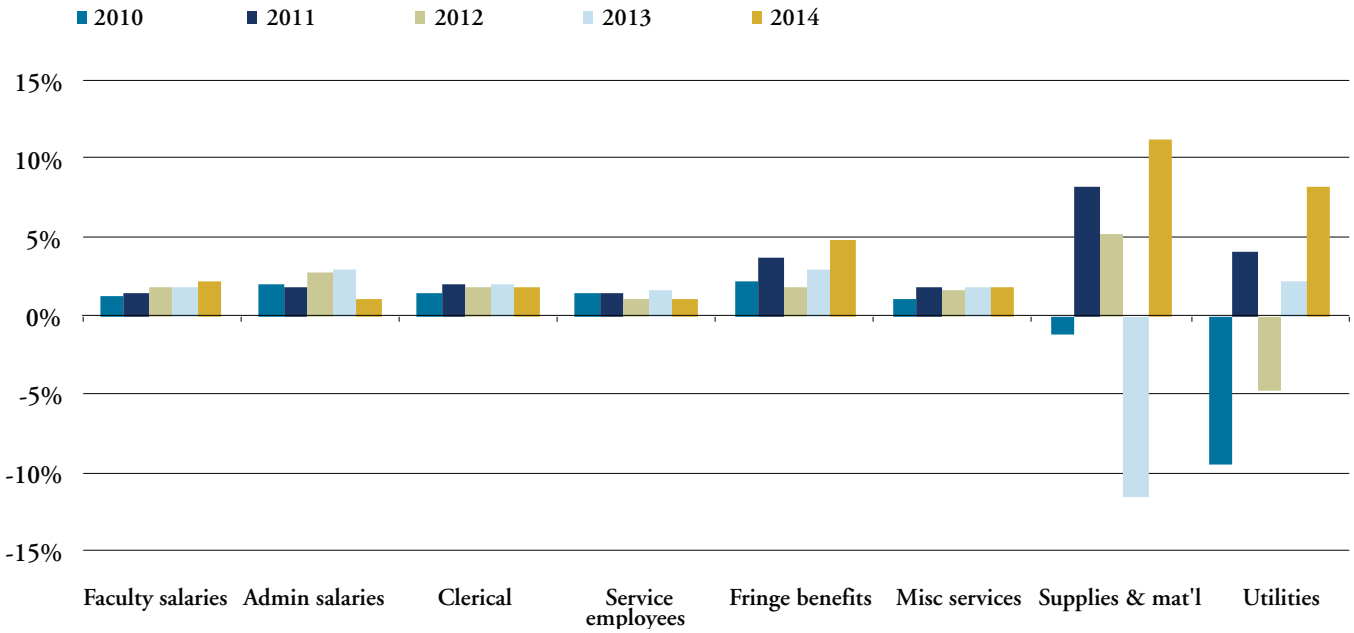
Fringe benefits and faculty salaries, on the other hand, carry heavier weightings in the regression equation of 13.1 percent and 35.4 percent, respectively, but have experienced much less volatility. The inflation rate for fringe benefits ranged from 1.8 percent to 3.7 percent between FY2010 and FY2013 before jumping to 4.8 percent in FY2014 from FY2013's 2.9 percent. Faculty salaries' inflation rates exhibited an even more moderate movement, staying between 1.2 percent and 1.8 percent between FY2010 and FY2013 prior to this year's increase to 2.2 percent from last year's 1.7 percent.

The combined effect of the increases in these four factors was to offset decreases in administrative and service employee salaries and zero change in the inflation rate for clerical salaries and miscellaneous services, resulting in the increase in the overall HEPI from 1.6 percent in FY2013 to 3.0 percent in FY2014.

Figure 2 shows a graphical representation of the changes in these cost factors from FY2010-14. For FY2014, supplies and materials had an inflation rate of 11.2 percent, up strongly from last year's deflation rate of -11.7 percent. Utilities had an inflation rate of 8.1 percent, also up sharply from last year's 2.0 percent rate. Inflation in fringe benefits was 4.8 percent, up from 2.9 percent in FY2013, while faculty salaries rose at a rate of 2.2 percent, up from 1.7 percent the previous year. Clerical salaries and miscellaneous services costs rose by 1.9 percent and 1.8 percent, respectively, both unchanged from FY2013. Administrative salaries rose at a rate of 1.1 percent, down significantly from last year's 2.9 percent rate, while service employee salaries also rose at a 1.1 percent rate, down from last year's 1.6 percent.

FIGURE 2

Annual Percentage Changes in the Eight HEPI Cost Factors, Fiscal Years 2010 - 2014



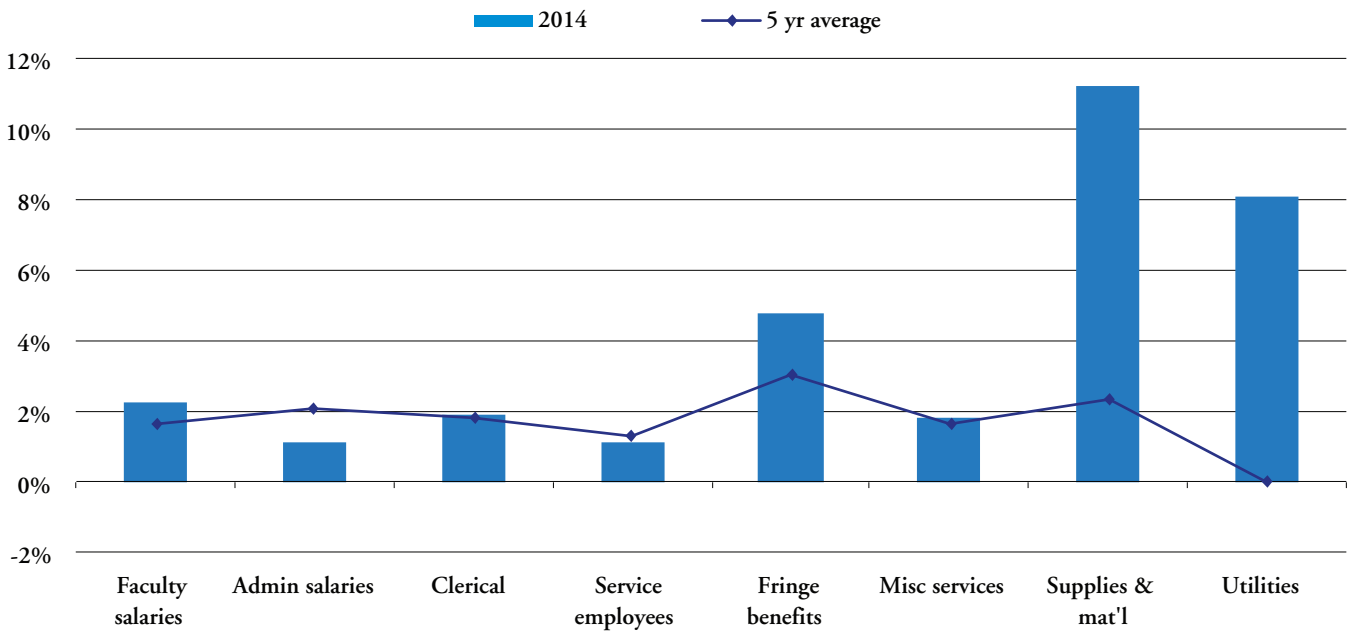
HEPI for FY2014 versus a Five-Year Average

Figure 3 shows the results of a longer-term analysis of HEPI's components that compares the reported rates for FY2014 against their historical five-year averages. On this basis, the greatest deviation from the five-year average was in the category of supplies and materials, which saw a high inflation rate of 11.2 percent for FY2014, 890 basis points higher than the five-year average of 2.3 percent. The second-highest difference, in utility costs, was 810 basis points higher than the five-year average for this factor, at 8.1 percent versus 0.0 percent. For fringe benefits, the FY2014 reading of 4.8 percent was 170 basis points above the five-year average of 3.1 percent. A large negative difference, of 100 basis points, was observed for administrative salaries, where the FY2014 rate of 1.1 percent was lower than the five-year average of 2.1 percent.

The four other factors had FY2014 readings that were only slightly higher or lower than their five-year averages. For faculty salaries, the positive difference was a relatively modest 50 basis points, while for miscellaneous services and clerical salaries the positive differences were just 20 and 10 basis points, respectively. And in one case, service employee salaries, the FY2014 rate was slightly below the five-year average, at 1.1 percent versus its five-year average of 1.3 percent, a difference of 20 basis points.

FIGURE 3

Annual Percentage Changes in the Eight HEPI Cost Factors vs. 5-year average



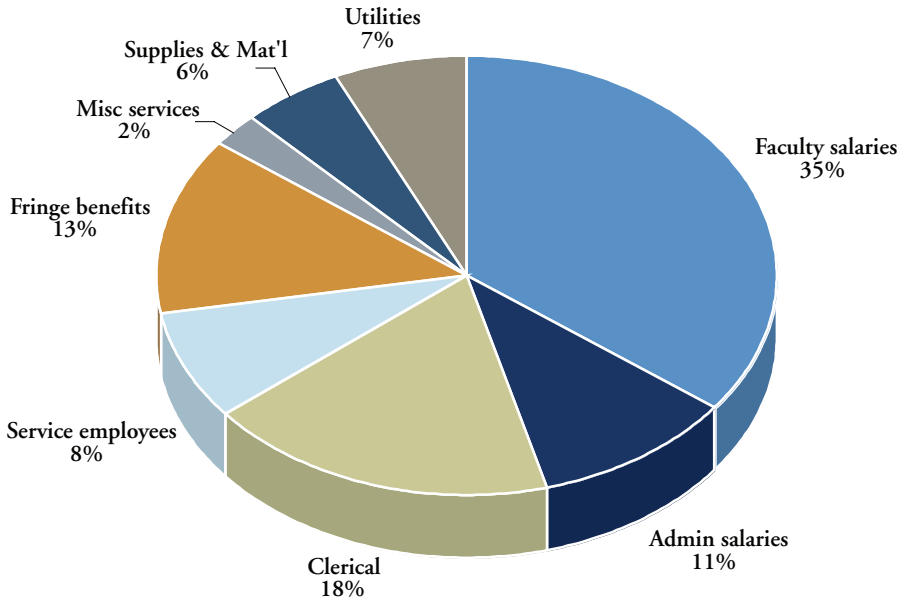
Over the five-year period, utilities rates have seen the most volatility, owing to strong positive and negative movements in this cost factor. Deflationary rates of -15.1 percent and -9.5 percent were reported in FY2009 and FY2010, respectively. FY2011 saw a relatively modest increase of 4.1 percent, but FY2012 reintroduced deflation in the form of a -4.9 percent rate while in FY2013 inflation returned with a rate of 2.0 percent and, as we have seen, a higher rate of 8.1 percent in FY2014. Inflation in materials and supplies has been nearly as volatile, particularly in the FY2013-FY2014 period, which saw a pronounced swing from a deflation rate of -11.7 percent to this year's inflation rate of 11.2 percent -- a difference of 2,290 basis points. In the aftermath of the financial crisis of 2008-09, inflation in factors other than utilities and materials and supplies has been markedly subdued, leading to less volatility in nearly all the factors. This year's increased 4.8 percent inflation in fringe benefits, however -- the highest rate since FY2008 -- may be a harbinger of inflationary pressures that may emerge in other cost factors in the future.

Sensitivity Analysis of the Eight HEPI Regression Components

Figure 4 shows how the HEPI regression equation assigns a different weighting to each cost factor. Owing to the large variance in these weightings (a difference of 33 percentage points between the high and low), an increase in one component may influence the final HEPI calculation more than an identical increase in another. Those components that are most heavily weighted are faculty and clerical salaries and fringe benefits. Utilities represent the third-lowest weighting and supplies and materials the second-lowest, facts that have served to mitigate somewhat the effect of the extreme volatility that has characterized these cost factors in recent years.

FIGURE 4

HEPI Cost Factor Weightings



The sensitivity analysis in Figure 5 shows that a 5 percent increase in faculty salaries, the largest component of HEPI, from an index value of 301.0 to 316.1, has the effect of increasing HEPI by 180 basis points, keeping all other components constant. However, a similar 5 percent increase in the index for miscellaneous services, the smallest component, has the effect of adding only 10 basis points to HEPI.

FIGURE 5

Sensitivity of HEPI to a 5 percent increase in Faculty Salaries or Miscellaneous Services

	Total	Faculty salaries	Admin salaries	Clerical	Service employees	Fringe benefits	Misc. services	Supplies & mat'l	Utilities
Current									
Index Value	306.7	301.0	366.4	274.8	242.0	458.3	274.2	200.2	211.4
Yearly % Change	3.0%	2.2%	1.1%	1.9%	1.1%	4.8%	1.8%	11.2%	8.1%
Scenario: Faculty Salaries up 5%									
Index Value	312.0	316.1	366.4	274.8	242.0	458.3	274.2	200.2	211.4
Yearly % Change	**4.8%**	7.3%	1.1%	1.9%	1.1%	4.8%	1.8%	11.2%	8.1%
△	180 b.p.	**510 b.p.**							
Scenario: Misc. Services up 5%									
Index Value	307.0	301.0	366.4	274.8	242.0	458.3	287.9	200.2	211.4
Yearly % Change	3.1%	2.2%	1.1%	1.9%	1.1%	4.8%	6.9%	11.2%	8.1%
△	**10 b.p.**						**510 b.p.**		

HIGHER EDUCATION PRICE INDEX FOR DIFFERENT TYPES OF EDUCATIONAL INSTITUTIONS

Public vs. Private Institutions - FY2014

As noted earlier, beginning in FY2007 Commonfund expanded its HEPI service to include calculations of HEPI for eight categories of educational institution:

- Public institutions as a whole
- Public doctoral degree-granting institutions
- Public masters' degree-granting institutions
- Public two-year colleges
- Private institutions as a whole
- Private doctoral degree-granting institutions
- Private masters' degree-granting institutions
- Private baccalaureate institutions

These indices were calculated using the appropriate faculty salary and fringe benefit information for each type of institution, while holding the other six HEPI cost factors constant. Table C, on the next page, shows HEPI for FY2002-2014 for these institutions.

TABLE C

HIGHER EDUCATION PRICE INDEX 2002 – 2014 BY MAJOR CATEGORIES OF PUBLIC AND PRIVATE EDUCATIONAL INSTITUTIONS										
		NATIONAL	PUBLIC INSTITUTIONS				PRIVATE INSTITUTIONS			
	Fiscal year	Total	Total	Doctoral	Master's	2 Year College	Total	Doctoral	Master's	Baccalaureate
Index Value	2002	212.7	211.5	225.8	215.2	212.8	219.4	241.2	222.6	224.2
	2003	223.5	222.3	238.0	227.1	225.3	230.1	253.4	234.3	236.3
	2004	231.7	230.0	246.4	233.9	231.4	240.0	265.2	244.5	245.2
	2005	240.8	239.0	257.1	243.0	239.9	249.5	277.0	251.7	254.5
	2006	253.1	251.1	270.9	254.0	250.5	262.5	291.4	268.2	266.8
	2007	260.3	258.4	279.9	262.2	259.2	269.5	301.2	272.8	273.9
	2008	273.2	271.2	295.2	275.0	273.9	282.5	315.4	285.6	287.9
	2009	279.3	276.8	302.1	280.6	275.5	290.5	325.7	295.8	295.7
	2010	281.8	279.3	305.2	281.6	278.3	292.0	327.7	296.0	296.2
	2011	288.4	285.7	311.9	289.6	286.1	298.5	336.7	301.5	301.8
	2012	293.2	290.2	318.0	292.0	290.9	304.7	347.4	305.7	306.5
	2013	297.8	293.2	325.5	294.2	286.3	312.1	354.6	312.6	313.1
	2014	306.7	302.5	334.3	301.1	295.9	322.1	366.3	319.9	323.7
Yearly % Change	2002	1.9%	2.0%	3.2%	1.9%	2.4%	1.6%	4.0%	1.5%	1.6%
	2003	5.1%	5.1%	5.4%	5.5%	5.9%	4.9%	5.0%	5.3%	5.4%
	2004	3.7%	3.5%	3.6%	3.0%	2.7%	4.3%	4.7%	4.4%	3.7%
	2005	3.9%	3.9%	4.3%	3.9%	3.7%	3.9%	4.4%	2.9%	3.8%
	2006	5.1%	5.1%	5.4%	4.5%	4.4%	5.2%	5.2%	6.5%	4.8%
	2007	2.8%	2.9%	3.3%	3.2%	3.5%	2.7%	3.4%	1.7%	2.7%
	2008	5.0%	5.0%	5.5%	4.9%	5.7%	4.8%	4.7%	4.7%	5.1%
	2009	2.3%	2.0%	2.3%	2.1%	0.6%	2.8%	3.3%	3.6%	2.7%
	2010	0.9%	0.9%	1.0%	0.4%	1.0%	0.5%	0.6%	0.1%	0.2%
	2011	2.3%	2.3%	2.2%	2.8%	2.8%	2.2%	2.7%	1.8%	1.9%
	2012	1.7%	1.6%	2.0%	0.8%	1.7%	2.1%	3.2%	1.4%	1.6%
	2013	1.6%	1.0%	2.4%	0.7%	-1.6%	2.4%	2.1%	2.3%	2.2%
	2014	3.0%	3.2%	2.7%	2.3%	3.4%	3.2%	3.3%	2.3%	3.4%

In recent years, HEPI has generally increased more rapidly at private institutions than at their public counterparts. In FY2010 private institutions as a whole reported a HEPI rate that was 40 basis points lower than their public counterparts, while in FY2011 private institutions' HEPI was just 10 basis points lower than that reported for public institutions. In FY2012 the HEPI for private institutions was 2.1 percent, 50 basis points higher than the 1.6 percent calculated for public institutions and in FY2013 it was 2.4 percent, a substantial 140 basis points higher than the 1.0 percent for public institutions. For FY2014, there was no difference in the overall HEPI for the two types of institution; HEPI for both private and public institutions was the same 3.2 percent rate. Examining the index components, inflation in faculty salaries was 50 basis points higher at private institutions, at 2.6 percent versus 2.1 percent for public institutions, but inflation in fringe benefits was higher at public institutions, at 6.0 percent versus 5.0 percent for private institutions, a difference of 100 basis points.

Examining changes in HEPI by institutional classification, public doctoral institutions had a HEPI of 2.7 percent, up from 2.4 percent in FY2013, while for private doctoral institutions the HEPI was 3.3 percent, up from 2.1 percent, for a difference of 60 basis points between public and private doctoral institutions. Faculty salaries rose at a 2.6 percent rate at public doctoral institutions, up from 2.1 percent last year, and at a 3.4 percent rate at private doctoral institutions, unchanged from FY2012. Fringe benefits rose 2.7 percent at public doctoral institutions, a substantial decline to just over half of last year's 5.2 percent inflation rate, and 3.8 percent at private doctoral institutions, up from 2.0 percent the previous year.

HEPI at public master's degree-granting institutions increased substantially in FY2014, to 2.3 percent from last year's 0.7 percent. The same 2.3 percent rate was reported by private master's degree-granting institutions, unchanged from last year. Public master's degree-granting institutions had an inflation rate for faculty salaries of 1.3 percent, up from 0.6 percent last year, while for private institutions the rate was 1.2 percent, down slightly from FY2013's 1.6 percent. Fringe benefit costs at master's degree-granting public institutions rose at a rate of 2.9 percent compared with just 0.4 percent for FY2013, while at private institutions fringe benefit costs rose by 3.2 percent, a marked decline from last year's 6.1 percent.

Turning to undergraduate institutions, the data for public two-year colleges and private baccalaureate institutions are not directly comparable for a number of reasons, notably the difference in the period of matriculation. For this year, however, the two types of institution reported the same overall HEPI rate, of 3.4 percent. For public two-year institutions this represented a substantial increase from last year's deflationary -1.6 percent rate, while for private baccalaureate-granting institutions it represented an increase from 2.1 percent in FY2013.

Cost Factor Differences by Institution Type

As shown in Figures 6 and 7, faculty salaries – the most heavily weighted component of HEPI – saw an increase of 2.1 percent at public institutions while rising 2.6 percent at private institutions. Faculty salaries at public doctoral institutions saw an increase of 2.6 percent, while public master's institutions saw a 1.3 percent increase and two-year colleges saw faculty salary costs rise by 2.2 percent. Faculty salaries at private doctoral institutions rose at a rate of 3.4 percent; salaries at private master's institutions rose 1.2 percent, while baccalaureate institutions reported a 1.9 percent increase.

FIGURE 6

FY2014 Faculty Salaries - Public Institutions

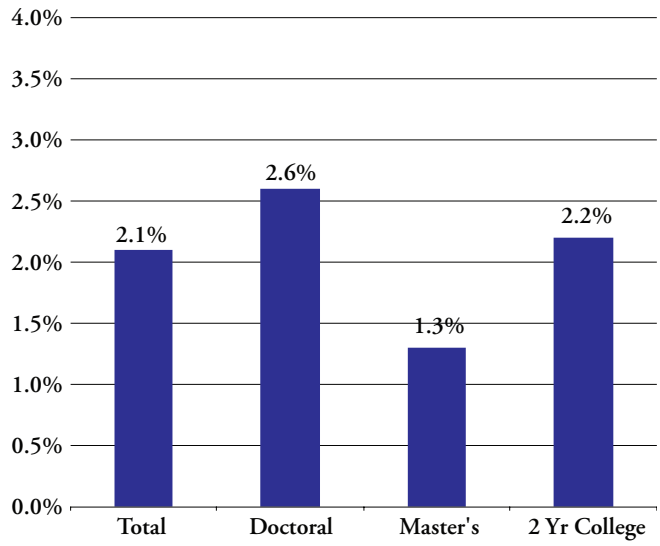
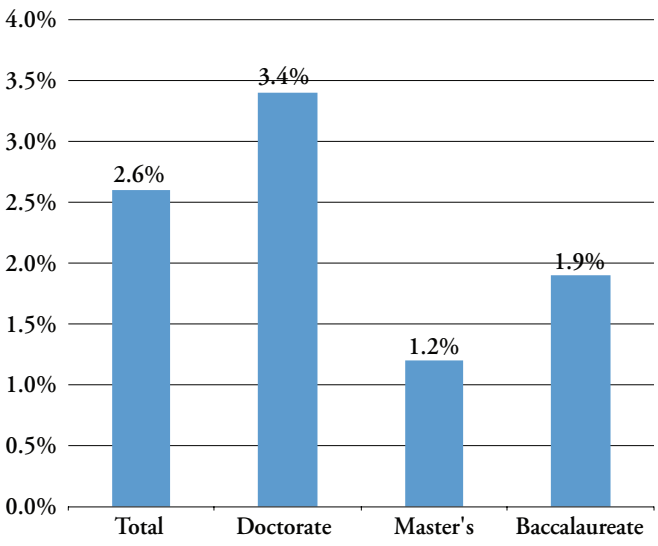


FIGURE 7

FY2014 Faculty Salaries - Private Institutions



Figures 8 and 9 show that at public institutions, fringe benefit costs rose 6.0 percent compared with 5.0 percent at private institutions. Within public institutions, doctoral institutions saw a rise in fringe benefit costs of 2.7 percent. The cost of fringe benefits for public master's degree-granting institutions rose at a rate of 2.9 percent for FY2014, while at two-year colleges fringe benefit costs rose at a rate of 7.0 percent.

Fringe benefits for private doctoral institutions rose by 3.8 percent. At private master's degree-granting institutions, fringe benefits rose by 3.2 percent, while at baccalaureate institutions the rise in fringe benefit costs was a substantial 6.7 percent.

FIGURE 8

FY2014 Fringe Benefits - Public Institutions

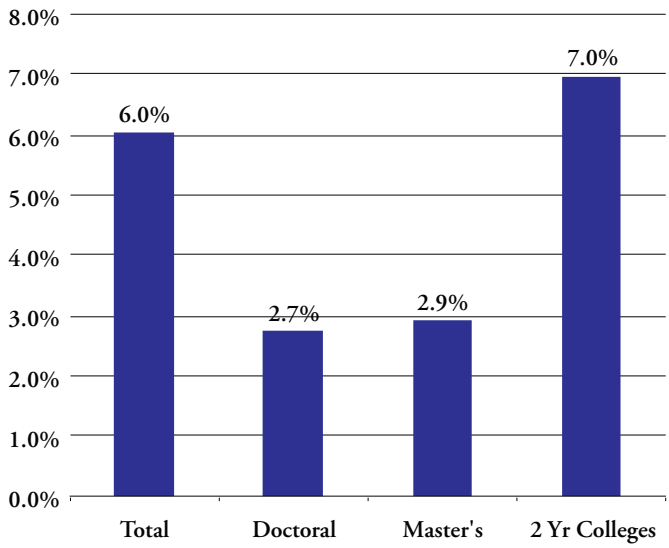
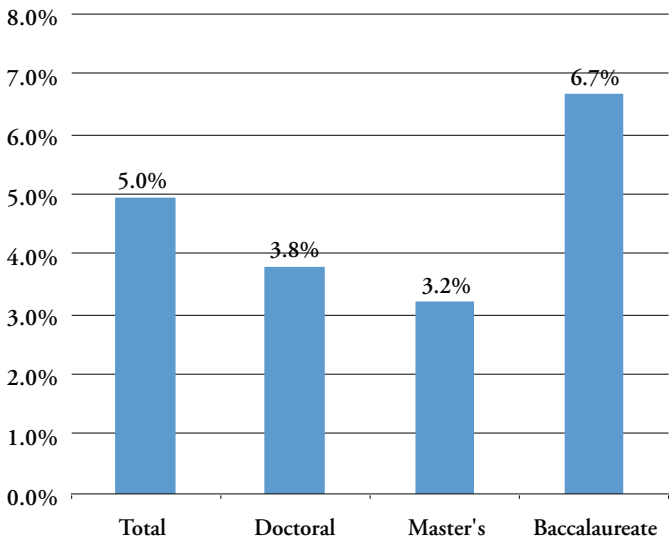


FIGURE 9

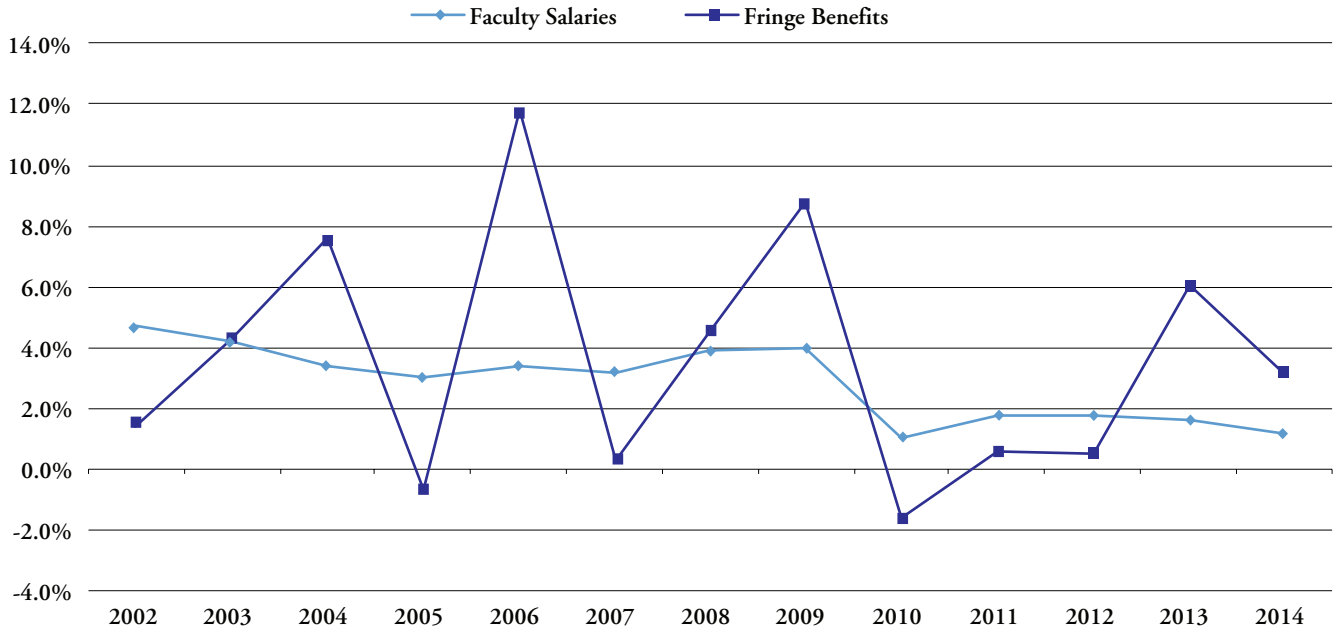
FY2013 Fringe Benefits - Private Institutions



As shown in Figure 10, over the past 12 years private master's degree-granting institutions have shown considerable volatility in the rate of change in fringe benefit costs, while salaries appear to have been more stable.

FIGURE 10

Private Master's Degree-granting Institutions



HIGHER EDUCATION PRICE INDICES FOR DIFFERENT REGIONS OF THE COUNTRY

Beginning in FY 2009, Commonfund further expanded its HEPI service to include calculations of HEPI for the nine standard census divisions of the United States:*

New England	Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont
Middle Atlantic	New Jersey, New York, Pennsylvania
East North Central	Illinois, Indiana, Michigan, Ohio, Wisconsin
West North Central	Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota
South Atlantic	Delaware, District of Columbia, Florida, Georgia, Maryland, North Carolina, Puerto Rico, South Carolina, Virginia, West Virginia
East South Central	Alabama, Kentucky, Mississippi, Tennessee
West South Central	Arkansas, Louisiana, Oklahoma, Texas
Mountain	Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, Wyoming
Pacific	Alaska, California, Guam, Hawaii, Oregon, Washington

These indices were calculated using the appropriate faculty salary and fringe benefit information for each region, while holding the other six HEPI cost factors constant. Table D below shows HEPI for FY2002-2014 for the nine regions.

TABLE D

HIGHER EDUCATION PRICE INDEX 2002-2014

SUMMARIZED BY REGION

	Fiscal Year	HEPI National	New England	Middle Atlantic	East North Central	West North Central	South Atlantic	East South Central	West South Central	Mountain	Pacific
Index Value	2002	212.7	213.2	208.6	212.0	214.0	211.9	209.9	215.3	212.2	222.5
	2003	223.5	220.3	222.1	224.8	223.0	219.3	219.9	227.2	223.4	234.0
	2004	231.7	229.9	230.7	232.4	233.1	226.8	229.8	233.1	230.3	243.2
	2005	240.8	240.4	239.8	241.2	242.6	236.3	242.1	242.0	241.8	251.1
	2006	253.1	254.1	250.0	252.1	254.5	249.5	250.7	256.2	253.2	265.5
	2007	260.3	262.5	257.3	257.6	261.5	257.5	262.1	265.2	260.0	272.1
	2008	273.2	274.0	270.0	269.5	272.2	269.8	276.3	277.3	278.2	287.8
	2009	279.3	283.2	277.1	275.8	280.6	275.2	281.9	283.2	285.0	295.3
	2010	281.8	284.2	280.7	280.1	281.8	277.6	278.6	288.3	282.9	298.3
	2011	288.4	291.8	288.5	286.3	286.9	281.6	288.1	292.4	289.8	304.4
	2012	293.2	298.3	292.8	289.2	293.7	285.1	294.2	300.2	296.0	310.5
	2013	297.8	307.4	306.0	294.9	299.2	285.7	295.5	301.0	298.4	316.3
	2014	306.7	314.2	307.2	302.1	308.5	300.1	307.4	314.0	307.2	323.7
Yearly % Change	2002	1.9%	-0.6%	1.0%	2.7%	3.6%	2.6%	1.6%	4.3%	2.8%	7.7%
	2003	5.1%	3.3%	6.5%	6.0%	4.2%	3.5%	4.8%	5.5%	5.3%	5.2%
	2004	3.7%	4.4%	3.9%	3.4%	4.5%	3.4%	4.5%	2.6%	3.0%	3.9%
	2005	3.9%	4.6%	3.9%	3.8%	4.1%	4.2%	5.4%	3.8%	5.0%	3.2%
	2006	5.1%	5.7%	4.3%	4.5%	4.9%	5.6%	3.5%	5.9%	4.7%	5.8%
	2007	2.8%	3.3%	2.9%	2.2%	2.7%	3.2%	4.6%	3.5%	2.7%	2.5%
	2008	5.0%	4.4%	4.9%	4.6%	4.1%	4.8%	5.4%	4.6%	7.0%	5.8%
	2009	2.3%	3.4%	2.6%	2.4%	3.1%	2.0%	2.0%	2.1%	2.5%	2.6%
	2010	0.9%	0.4%	1.3%	1.6%	0.4%	0.9%	-1.2%	1.8%	-0.7%	1.0%
	2011	2.3%	2.6%	2.8%	2.2%	1.8%	1.5%	3.4%	1.4%	2.4%	2.1%
	2012	1.7%	2.3%	1.5%	1.0%	2.4%	1.2%	2.1%	2.7%	2.1%	2.0%
	2013	1.6%	3.0%	4.5%	2.0%	1.9%	0.2%	0.5%	0.3%	0.8%	1.9%
	2014	3.0%	2.2%	0.4%	2.4%	3.1%	5.1%	4.0%	4.3%	2.9%	2.3%

*A map showing the regions may be found at https://www.census.gov/geo/maps-data/maps/pdfs/reference/us_regdiv.pdf

The FY2014 HEPI, which was 3.0 percent on a national basis, ranged from a high of 5.1 percent in the South Atlantic region to a low of 0.4 percent in the Middle Atlantic region.

Seven of the nine regions of the country -- East North Central, West North Central, South Atlantic, East South Central, West South Central, Mountain and Pacific -- exhibited increases in their inflation rates, in several cases substantial, while in the other two regions inflation rates fell. The South Atlantic region's HEPI increased by 490 basis points, the West South Central region's rate increased by 400 basis points, the East South Central's rate increased by 350 basis points, the Mountain region's rate increased by 210 basis points, and the West North Central's rate increased by 120 basis points. In the East North Central and Pacific regions, the rate increased by a modest 40 basis points.

In the two remaining regions, HEPI decreased. In the New England region, HEPI fell by 80 basis points, and in the Middle Atlantic region -- which last year saw the highest increase, of 4.5 percent -- it fell by 410 basis points.

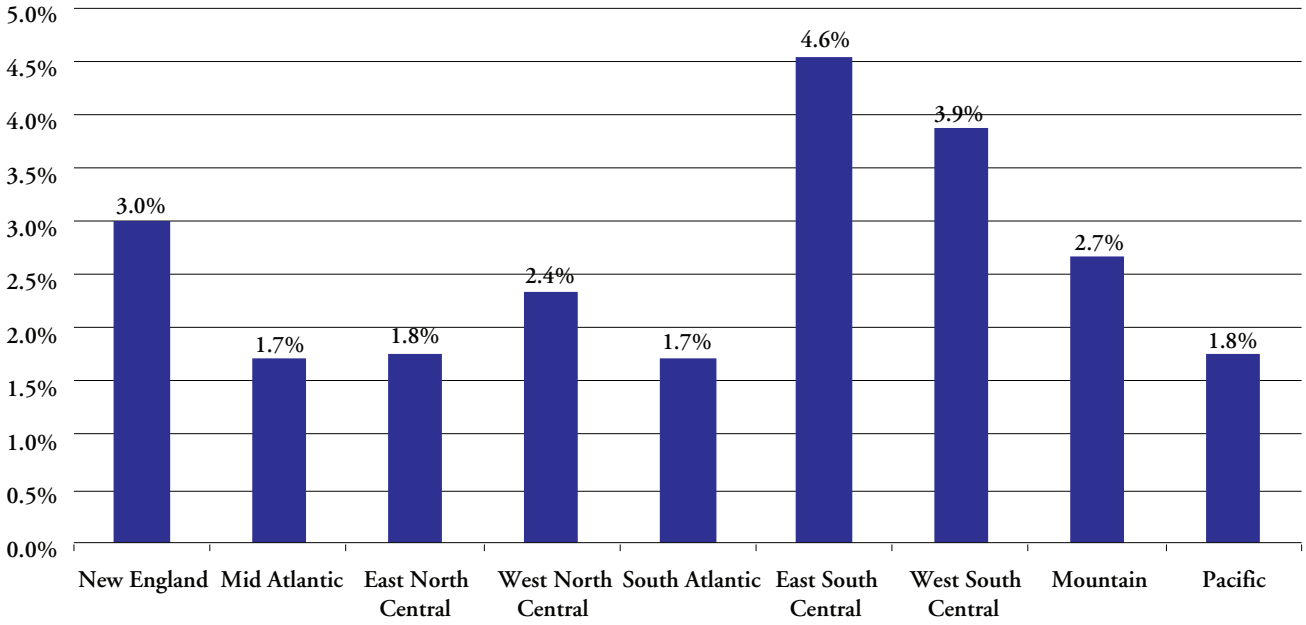
Cost Factor Differences by Region

As shown in Figure 11, faculty salaries rose most strongly in the East South Central region, by 4.6 percent, and in the West South Central region, by 3.9 percent. In the New England and Mountain regions faculty salaries rose by 3.0 percent and 2.7 percent, respectively. In the West North Central region they rose by 2.4 percent; in the East North Central and Pacific regions they rose by 1.8 percent, while in the Middle Atlantic and South Atlantic regions they rose by 1.7 percent.

Just three of the nine regions showed decreases in the inflation rate for faculty salaries from year to year. The biggest decrease occurred in the South Atlantic region, where the inflation rate fell by 170 basis points; this was followed by the New England region, where it decreased by 50 basis points, and the Middle Atlantic region, where it fell by 40 basis points. Increases in the rate were observed in the West South Central region, where it rose by 320 basis points; the East South Central region, where the increase was 290 basis points; and the Mountain region, where the rate rose by 190 basis points. In the Pacific, West North Central and East North Central regions the increase was 40 basis points, 20 basis points and 10 basis points, respectively.

FIGURE 11

FY2014 Faculty Salaries by Region

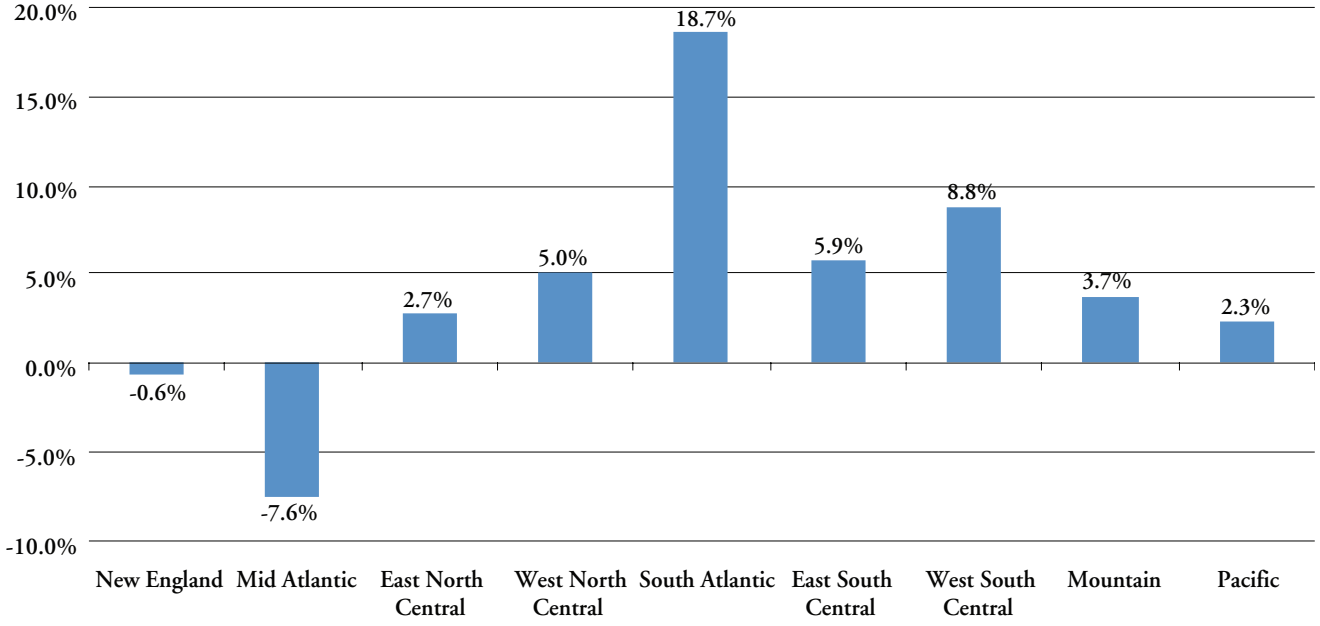


As in past years, fringe benefits, analyzed in Figure 12, exhibited the greatest volatility, surging by 18.7 percent in the South Atlantic region but declining by a deflationary -7.6 percent in the Middle Atlantic region. In the other regions, fringe benefit inflation ranged from 8.8 percent in the West South Central region and 5.9 percent in the East South Central region, through increases of 5.0 percent and 3.7 percent, respectively, in the West North Central and Mountain regions, to a more moderate 2.7 percent increase in the East North Central region and a 2.3 percent rise in the Pacific region. The only other region to report a deflationary rate was the New England region, with a -0.6 percent figure. This very wide range of inflation and deflation rates indicates, as we have noted in the past, that the forces influencing this cost factor are far from uniform.

Some pronounced year-to-year changes in benefit cost inflation rates were observed among the regions. The South Atlantic region showed the widest positive swing, of 2,670 basis points, and the West South Central region reported an increase of 1,110 basis points. The East South Central region reported an increase of 910 basis points and for the New England region the increase was 770 basis points. The Pacific region exhibited a rise of 670 basis points and the Mountain region a rise of 420 basis points, while for the West North Central region the rise was a more moderate 160 basis points. In the two remaining regions, declines in the inflation rate for benefit costs were reported. The East North Central region exhibited a decrease in fringe benefit inflation of 220 basis points, while for the Middle Atlantic region -- which went from a high rate of 18.9 percent last year to a strongly deflationary -7.6 percent this year -- the decrease was a very large 2,650 basis points.

FIGURE 12

FY2014 Fringe Benefits by Region



LIMITATIONS AND OPPORTUNITIES OF HEPI BY INSTITUTIONAL TYPE AND REGION

In providing HEPI figures and analysis by type of institution and geographical region, it is appropriate to bear in mind the limitations of the methodology employed while also recognizing the potential opportunities for users of these indices to improve their fit with their own institution.

As noted, the institutional and regional HEPI indices are derived by substituting appropriate data for faculty salaries and fringe benefits into the standard HEPI regression equation, while leaving the other six cost factors unchanged. These two categories, which together account for nearly half of the factor weighting in the HEPI equation, are the only ones for which information by institutional type and region is available. Since the other six factors, representing over half the weighting, are not changed, the institutional and regional HEPI indices are of necessity approximations and should be used accordingly.

In deriving the institutional and regional indices, the standard HEPI equation's factor weightings are also left unchanged. This is of relatively little importance in the institutional HEPI, where each category includes schools throughout the nation; in the regional HEPI, however, the weightings are kept the same because there is no standard source of information to serve as a guide to how they might be appropriately adjusted for each region.

For example, in a region where weather patterns are comparatively moderate the weighting assigned to utilities may be too high, while in a region of severe weather it might be appropriate to increase it. Users of the regional HEPI who are confident of the proportional composition of their institution's budgets, as expressed in the eight cost factors, may want to adjust the relative weightings of the factors in order to produce a HEPI that is more appropriate for their own institution.

PURCHASING POWER AND SALARIES OF FULL-TIME PROFESSORS

As part of the calculation of HEPI, the Commonfund Institute also gathers information about the salaries of full-time professors at public and private institutions. As illustrated in Tables E and F, these salaries have been restated in constant dollar terms so that they reflect the impact of inflation as measured by CPI.

Table E shows that salaries of professors at public doctoral-level institutions have increased in constant terms over the last 47 years by $17,914, evidencing an increase in real purchasing power. For public comprehensive institutions, salaries have essentially stagnated in real terms, falling slightly by $875, while at public two-year colleges they have increased by $6,781 over the 47-year period.

Table F shows that at private colleges, salaries have kept up with inflation in all categories of institution. Salaries at doctoral-level institutions have led the way with a real increase of $56,597 over 47 years, while those at comprehensive schools have increased by $23,374. Salaries at general baccalaureate institutions have increased by $23,414 over the shorter 37-year period that they have been tracked since 1977.

Comparing public and private institutions, it is apparent that salaries for professors at public doctoral-level and comprehensive institutions have lagged behind those for professors at comparable private institutions. This gap has grown in recent decades. Average salaries for full professors at doctoral-level public institutions, for example, are currently $126,981 while their counterparts at private institutions make $173,890 – a gap of more than $46,900. This gap, in real terms, was just over $8,200 in FY1967, indicating that professors at private doctoral-level institutions have benefited by an increase of more than $38,600 in real purchasing power over the intervening decades.

At comprehensive institutions, the relative positions have actually reversed. In FY1967, full professors at public comprehensive institutions made over $7,600 more than their counterparts at private institutions as measured in current dollars. By FY2013, however, this advantage had been reversed, with professors at comprehensive private institutions making $16,565 more – a gain over 47 years of more than $24,200 in real terms.

TABLE E

HIGHER EDUCATION FACULTY SALARIES IN CURRENT AND CONSTANT FY2014 DOLLARS* ILLUSTRATIVE DATA

Public Faculty Salaries

Full professor average 9 – 10 month salaries by type of institution

	Category I (Doctoral-Level)			Cat IIA (Comprehensive)			Cat III (Two-Year Colleges)		
Fiscal year	Amount	Yearly %	Constant FY14 dollars	Amount	Yearly %	Constant FY14 dollars	Amount	Yearly %	Constant FY14 dollars
1967	$15,273	----	$109,067	$12,798	----	$91,392	$9,927	----	$70,890
1968	$16,160	5.8%	$111,714	$13,747	7.4%	$95,033	$10,659	7.4%	$73,686
1969	$16,900	4.6%	$111,436	$14,550	5.8%	$95,941	$11,800	10.7%	$77,807
1970	$17,750	5.0%	$110,510	$15,400	5.8%	$95,879	$12,950	9.7%	$80,626
1971	$18,600	4.8%	$110,046	$16,350	6.2%	$96,734	$14,150	9.3%	$83,718
1972	$19,678	5.8%	$112,329	$17,313	5.9%	$98,829	$15,217	7.5%	$86,864
1973	$20,545	4.4%	$112,858	$18,446	6.5%	$101,327	$17,080	12.2%	$93,824
1974	$21,400	4.2%	$107,924	$19,600	6.3%	$98,846	$18,100	6.0%	$91,282
1975	$22,648	5.8%	$102,753	$20,840	6.3%	$94,550	$19,312	6.7%	$87,617
1976	$24,277	7.2%	$102,888	$22,067	5.9%	$93,521	$20,254	4.9%	$85,838
1977	$25,210	3.8%	$100,969	$23,190	5.1%	$92,879	$21,860	7.9%	$87,552
1978	$26,420	4.8%	$99,143	$24,290	4.7%	$91,150	$23,240	6.3%	$87,210
1979	$28,000	6.0%	$96,085	$25,030	3.0%	$85,893	$23,420	0.8%	$80,368
1980	$30,120	7.6%	$91,179	$27,200	8.7%	$82,340	$25,190	7.6%	$76,255
1981	$32,850	9.1%	$89,163	$29,580	8.8%	$80,287	$26,200	4.0%	$71,113
1982	$35,680	8.6%	$89,121	$31,700	7.2%	$79,180	$27,720	5.8%	$69,238
1983	$38,180	7.0%	$91,401	$33,490	5.6%	$80,173	$30,480	10.0%	$72,968
1984	$39,770	4.2%	$91,851	$34,560	3.2%	$79,818	$31,510	3.4%	$72,774
1985	$42,560	7.0%	$94,593	$37,090	7.3%	$82,435	$33,230	5.5%	$73,856
1986	$45,560	7.0%	$98,412	$39,720	7.1%	$85,797	$34,870	4.9%	$75,321
1987	$48,740	7.0%	$102,984	$42,290	6.5%	$89,356	$37,460	7.4%	$79,150
1988	$51,080	4.8%	$103,630	$46,060	8.9%	$93,445	$38,230	2.1%	$77,560
1989	$54,240	6.2%	$105,140	$46,920	1.9%	$90,951	$41,200	7.8%	$79,863
1990	$57,520	6.0%	$106,414	$49,610	5.7%	$91,780	$43,000	4.4%	$79,552
1991	$60,450	5.1%	$106,095	$52,190	5.2%	$91,598	$45,050	4.8%	$79,067
1992	$61,950	2.5%	$105,330	$53,750	3.0%	$91,388	$47,700	5.9%	$81,102
1993	$63,250	2.1%	$104,282	$54,240	0.9%	$89,427	$47,820	0.3%	$78,842
1994	$64,860	2.5%	$104,349	$55,690	2.7%	$89,596	$49,120	2.7%	$79,026
1995	$67,560	4.2%	$105,571	$57,090	2.5%	$89,210	$51,490	4.8%	$80,460
1996	$69,750	3.2%	$106,085	$58,520	2.5%	$89,005	$51,560	0.1%	$78,419
1997	$72,220	3.5%	$106,789	$60,481	3.4%	$89,431	$52,752	2.3%	$78,002
1998	$75,154	4.1%	$109,172	$61,839	2.2%	$89,830	$53,024	0.5%	$77,025
1999	$79,284	5.5%	$113,247	$63,817	3.2%	$91,154	$55,326	4.3%	$79,026
2000	$82,535	4.1%	$114,542	$66,657	4.5%	$92,506	$57,089	3.2%	$79,228
2001	$84,007	1.8%	$112,729	$68,828	3.3%	$92,360	$57,932	1.5%	$77,739
2002	$89,631	6.7%	$118,189	$72,770	5.7%	$95,955	$60,997	5.3%	$80,431
2003	$92,387	3.1%	$119,203	$74,545	2.4%	$96,182	$65,730	7.8%	$84,808
2004	$94,606	2.4%	$119,453	$74,872	0.4%	$94,536	$64,439	-2.0%	$81,363
2005	$97,948	3.5%	$120,060	$76,665	2.4%	$93,972	$66,405	3.1%	$81,396
2006	$101,620	3.7%	$119,991	$78,884	2.9%	$93,145	$66,011	-0.6%	$77,945
2007	$106,495	4.8%	$122,577	$81,855	3.8%	$94,216	$68,424	3.7%	$78,757
2008	$111,807	5.0%	$124,093	$85,642	4.6%	$95,053	$71,936	5.1%	$79,841
2009	$115,509	3.3%	$126,437	$88,357	3.2%	$96,716	$74,933	4.2%	$82,022
2010	$116,750	1.1%	$126,582	$89,648	1.5%	$97,198	$74,103	-1.1%	$80,344
2011	$118,054	1.1%	$125,465	$89,808	0.2%	$95,446	$74,092	0.0%	$78,743
2012	$120,955	2.5%	$124,889	$88,940	-1.0%	$91,833	$73,534	-0.8%	$75,926
2013	$123,393	2.0%	$125,320	$88,988	0.1%	$90,378	$74,845	1.8%	$76,014
2014	$126,981	2.9%	$126,981	$90,517	1.7%	$90,517	$77,671	3.8%	$77,671

**Constant dollars based on inflation measured by the Consumer Price Index.*
Sources: FY1967 – FY1976, NCES; FY1977 – present, AAUP

TABLE F

HIGHER EDUCATION FACULTY SALARIES IN CURRENT AND CONSTANT FY2014 DOLLARS*

ILLUSTRATIVE DATA

Private Faculty Salaries

Full professor average 9 – 10 month salaries by type of institution

	Category I (Doctoral-Level)			Cat IIA (Comprehensive)			Cat III (Two-Year Colleges)		
Fiscal year	Amount	Yearly %	Constant FY14 dollars	Amount	Yearly %	Constant FY14 dollars	Amount	Yearly %	Constant FY14 dollars
1967	$16,425	----	$117,293	$11,722	----	$83,708			
1968	$17,057	3.8%	$117,915	$12,572	7.3%	$86,910			
1969	$18,050	5.8%	$119,019	$13,250	5.4%	$87,369			
1970	$18,950	5.0%	$117,981	$14,100	6.4%	$87,786			
1971	$19,800	4.5%	$117,146	$14,950	6.0%	$88,451			
1972	$20,775	4.9%	$118,591	$15,899	6.3%	$90,757			
1973	$21,507	3.5%	$118,142	$16,501	3.8%	$90,643			
1974	$22,600	5.1%	$113,976	$17,200	4.2%	$86,743			
1975	$23,832	5.5%	$108,124	$18,047	4.9%	$81,878			
1976	$25,368	6.4%	$107,511	$19,153	6.1%	$81,172			
1977	$27,810	9.6%	$111,383	$22,020	15.0%	$88,193	$20,780		$83,227
1978	$28,880	3.8%	$108,374	$23,380	6.2%	$87,735	$21,790	4.9%	$81,769
1979	$31,090	7.7%	$106,688	$24,830	6.2%	$85,206	$23,230	6.6%	$79,716
1980	$33,400	7.4%	$101,108	$26,160	5.4%	$79,191	$24,740	6.5%	$74,893
1981	$36,000	7.8%	$97,712	$28,710	9.7%	$77,926	$27,030	9.3%	$73,366
1982	$40,220	11.7%	$100,461	$31,530	9.8%	$78,755	$29,720	10.0%	$74,234
1983	$43,950	9.3%	$105,214	$33,750	7.0%	$80,796	$32,410	9.1%	$77,588
1984	$47,070	7.1%	$108,711	$36,000	6.7%	$83,144	$34,140	5.3%	$78,848
1985	$49,880	6.0%	$110,862	$37,980	5.5%	$84,414	$36,500	6.9%	$81,124
1986	$53,190	6.6%	$114,893	$40,170	5.8%	$86,769	$38,200	4.7%	$82,514
1987	$56,900	7.0%	$120,226	$42,680	6.2%	$90,180	$40,460	5.9%	$85,489
1988	$59,850	5.2%	$121,422	$44,010	3.1%	$89,286	$42,540	5.1%	$86,304
1989	$64,290	7.4%	$124,621	$47,010	6.8%	$91,125	$44,770	5.2%	$86,783
1990	$68,360	6.3%	$126,468	$51,000	8.5%	$94,352	$46,830	4.6%	$86,637
1991	$72,950	6.7%	$128,034	$52,820	3.6%	$92,704	$49,610	5.9%	$87,070
1992	$76,890	5.4%	$130,732	$54,980	4.1%	$93,480	$52,230	5.3%	$88,804
1993	$80,280	4.4%	$132,360	$57,060	3.8%	$94,076	$54,620	4.6%	$90,053
1994	$82,520	2.8%	$132,761	$59,610	4.5%	$95,903	$56,780	4.0%	$91,350
1995	$84,790	2.8%	$132,495	$60,830	2.0%	$95,055	$58,040	2.2%	$90,695
1996	$88,050	3.8%	$133,918	$63,430	4.3%	$96,473	$59,830	3.1%	$90,997
1997	$92,112	4.6%	$136,202	$64,468	1.6%	$95,326	$62,047	3.7%	$91,746
1998	$95,023	3.2%	$138,034	$67,282	4.4%	$97,736	$64,784	4.4%	$94,108
1999	$98,606	3.8%	$140,846	$69,509	3.3%	$99,285	$67,180	3.7%	$95,958
2000	$103,761	5.2%	$143,999	$71,547	2.9%	$99,293	$70,528	5.0%	$97,878
2001	$107,633	3.7%	$144,433	$75,143	5.0%	$100,834	$74,031	5.0%	$99,342
2002	$112,534	4.6%	$148,389	$77,310	2.9%	$101,942	$76,692	3.6%	$101,127
2003	$118,269	5.1%	$152,597	$80,011	3.5%	$103,234	$79,928	4.2%	$103,127
2004	$122,158	3.3%	$154,241	$81,570	1.9%	$102,993	$82,344	3.0%	$103,970
2005	$127,214	4.1%	$155,932	$83,986	3.0%	$102,946	$85,575	3.9%	$104,893
2006	$131,292	3.2%	$155,027	$88,800	5.7%	$104,854	$87,779	2.6%	$103,648
2007	$136,689	4.1%	$157,331	$91,197	2.7%	$104,969	$90,353	2.9%	$103,998
2008	$144,428	5.7%	$160,299	$95,114	4.3%	$105,566	$94,139	4.2%	$104,484
2009	$151,403	4.8%	$165,727	$99,555	4.7%	$108,974	$98,808	5.0%	$108,156
2010	$153,332	1.3%	$166,245	$99,963	0.4%	$108,381	$98,098	-0.7%	$106,359
2011	$157,282	2.6%	$167,155	$101,290	1.3%	$107,648	$99,976	1.9%	$106,252
2012	$162,561	3.4%	$167,848	$103,094	1.8%	$106,447	$101,568	1.6%	$104,871
2013	$167,118	2.8%	$169,728	$104,186	1.1%	$105,813	$104,335	2.7%	$105,965
2014	$173,890	4.1%	$173,890	$107,082	2.8%	$107,082	$106,641	2.2%	$106,641

**Constant dollars based on inflation measured by the Consumer Price Index.*
Sources: FY1967 – FY1976, NCES; FY1977 – present, AAUP

15 Old Danbury Road
P.O. Box 812
Wilton, CT 06897-0812

Tel 888-TCF-MAIN
Tel 203-563-5000
www.commonfund.org

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HEPI DESIGN AND USE

The design of HEPI

The Higher Education Price Index (HEPI) measures price levels from a designated reference year in which budget weights are assigned. This base year is FY1983 and is assigned a price value of 100.0 for index compilation.[1] Comparing one year's index value with that of another year reflects relative change. An index value of 115.0, for example, represents a 15 percent price increase over 1983 values. This change can also be expressed in monetary terms so that the price of $100 worth of goods and services purchased in 1983 in this example would have risen to $115. Movements of the index from one year to another are usually expressed as percent changes by dividing a later year's value by that of any earlier year and subtracting 1.00. Thus, an increase in index values from 125.6 in 1987 to 134.4 in 1988 would be a yearly increase of 134.4/125.6 = 1.07 minus 1.00, or 7 percent. The HEPI in this study represents fiscal year (July 1 to June 30) average values. Values are compiled by computer and reported to the nearest tenth, which properly suggests the degree of accuracy involved.

Since FY2002 the Higher Education Price Index (HEPI) has been based on a regression formula. The eight regression components employed represent 79.6 percent of the HEPI weighted whole in 1990. The regression-based index values are essentially equal to those resulting from complete data. The R-square value of the regression is .999997809 based on 41 observations. Regression-calculated HEPI values are not likely to vary from fully compiled values by more than 0.1 parts out of 200.0 or ±0.05 percent. The regression analysis is shown below the table.

Price index theory and design

A price index measures the effects of price change and price change only, as reflected by differences in the overall price level of a fixed group of items. The procedure in calculating the index is to measure the price level of purchased items each year, comparing the aggregate amount paid to that of the base period. The amount and quality of the selected commodities that make up the market basket being indexed must remain constant so that only the effects of price changes are reflected. The quantities represent not only annual consumption of the specific sample items actually priced by the index, but also consumption of related items for which prices are not obtained, so that the total cost of the market basket represents total spending for goods and services. Under these restrictive conditions, the change in price index values from year to year may be interpreted as the change in dollars required to offset the effects of inflation in buying the same kinds and amounts of goods and services previously purchased.

What makes a price index so valuable is that by reporting only price increases, without quality or quantity changes, the series documents the additional revenues required for continuation of "business as usual." Few financial supporters can deny that funding should at least maintain the status quo, if not improve it. Thus, price indices reliably report increased funding requirements that can be defended as essential if the same services are to be maintained. If quality changes were to be included, then the force of the argument would be lost, since justification of the added costs to improve operations is seldom obvious.

To achieve its intended purpose of reporting only price changes, a price index attempts to hold constant all other factors. A persistent and nearly irresolvable problem in this regard is eliminating the effect on prices of quality changes in purchased goods and services. When possible, a process of "linking" is used whereby the price of a new item is tied to the price of an old item by factoring out the price difference due to the change in quality involved. For personnel services, quality is fixed by specific job descriptions. Improvements in training and growth in individual talents brought to professional positions are considered constant in the sense that the present mix of new practitioners and senior personnel consistently represents the current average "state-of-the-art" in training and tenure.

A price index holds constant the mix of purchases and, implicitly, the mix of their general use by a single type of consumer. This consistency is accomplished by

[1]Once compiled, index values can be converted to any year equal to 100 simply by dividing all indices in the series by the subject year's value. Thus, a price series with the base year 1983=100.0 and 2001=195.0 can be converted to a 2001=100 base year with 1983 then equal to 100.0/195.0=51.3. Converting index values to the current (2001) base year places all adjusted figures in the most recent (2001) dollars, which is a useful, recognized point of reference.

designing and fix-weighting the index components according to the buyer's budget composition. The price series for each component must be set equal to 100 in the base year for which the budget weights are established. (FY1983 is the base year for the HEPI in this report.) Each year the price changes or price relatives (ratio of following to previous year price) for the various items being priced are weighted according to this base year expenditure pattern. The budget percentages (weights) represent the actual physical count mix of items involved. The index must not be re-weighted unless there is a substantial change in the consumer's buying pattern, which results in a different mix in the actual physical count of goods and services purchased.

To the extent that college faculty, university researchers and school teachers use different pedagogy, analyses, instruments, equipment and materials from year to year—or that institutions employ different mixes of personnel and capital to accomplish their objectives—the use of a fixed-weight index fails to price current actual practices. Also, a price index does not account for changes in the mix of students; for example, in the higher education community an increase over time in the proportion of handicapped or graduate students and the associated higher overall per-student costs would not be reflected in a price index series. Re-weighting the index is required when such changes result in large differences in the physical count proportions involved.

HEPI uses

The most frequent use colleges and schools make of the HEPI is in projecting future budget increases required to preserve purchasing power. If next year's inflation affecting current operations is expected to be 6 percent, the budget must be increased by this amount if the same level and quality of goods and services are to be purchased.

The basic nature of price indices in reflecting yearly percent changes, however, cannot be projected in the traditional manner. Incremental changes seldom exhibit trends on which an extrapolation can be based. A two- or three-year average increase in annual percentage changes is not predictive that this phenomenon will continue into the future.

HEPI can also serve the following additional uses:

- Index values may be projected into the future to estimate the degree of change in expenditures that will be necessitated by anticipated price changes. If price increases are expected, the projected index value are used to inflate expected real resource needs to equal future funding requirements in actual dollars. Usually, these real resource needs are expressed in user unit terms, e.g., constant (inflation-adjusted) dollars per full-time-equivalent student. Budget requests based on a projected HEPI account only for inflation, i.e., provision of additional funding sufficient to purchase the same resources as acquired in the previous year. Additional funding for greater student load, program expansion, and improvements in quality would need to be separately requested and justified.
- Past expenditures may be compared with movements in a price index to ascertain whether spending has kept pace with price level changes. Adjusting expenditures by an appropriate price index to convert actual or current dollars to constant dollars permits comparison over time of the real purchasing power of funding levels.
- Similarly, dollar incomes may be deflated by a price index to identify trends in the level of real purchasing power of funding by various sources.
- Price indices may be used to provide automatic inflation adjustment of various administrative and contractual transactions. The price charged for a particular service, for example, may be tied to input prices or the cost of labor as measured by an appropriate price index.

What is the Higher Education Price Index (HEPI)fi

The Higher Education Price Index (HEPI) is an inflation index, released each July, that is designed specifically for higher education and is a more accurate indicator for colleges and universities than the Consumer Price Index (CPI).

From its inception in 1961, HEPI was produced by Research Associates of Washington, D.C. In 2005, Commonfund Institute assumed management of the Index. The Institute manages the database, publishes the Index, and makes available analytical and descriptive materials using HEPI data.

HEPI forecasts are provided monthly from January through June of each year. The HEPI report is published using the July HEPI figure, which may be subject to a further small adjustment when the last of the underlying data items are finalized in November.

Why is HEPI a better price inflation measure than the CPI for colleges and universities?

Compiled from data reported by governmental and industry sources, HEPI measures the average relative level in the prices of a fixed basket of goods and services purchased by colleges and universities each year through current fund educational and general expenditures, excluding research. HEPI includes eight categories that cover most of the current operational costs of colleges and universities and is an essential tool enabling schools to determine increases in funding necessary to maintain purchasing power and investment. The CPI, on the other hand, measures goods and services that consumers buy for day-to-day living.

What are the HEPI categories?

HEPI categories are based on price data for 45 budget components that all schools can report, organized in eight component sub-indexes: faculty salaries; administrative salaries; clerical salaries; service employee salaries; fringe benefits; miscellaneous services; supplies and materials; and utilities.

How do HEPI and the CPI differ?

The bulk of educational costs are related to personnel, mainly college faculty, whose salary increases are usually different from those measured in the CPI, which includes salaries of city wage earners and salaried clerical workers. As a case in point, from 1980 to 2000 the price of goods and services purchased by colleges and universities increased by 154 percent, while inflation measured by the CPI increased by 118 percent. Using HEPI, colleges and universities would have received 16.5 percent more support per student.

While HEPI is composed of the eight categories previously mentioned, the CPI includes: food and beverage; housing; apparel; transportation; medical care; recreation; education and communication; and other goods and services. All taxes directly associated with the purchase and use of the items are included in the index.

Another difference between the two indices is the treatment of changes in quality. HEPI is a straightforward measure of costs, whereas the CPI is a measure of "quality-adjusted prices." For example, assume that it costs $2,000 to replace an older computer that originally cost $1,500. The new computer, however, is twice as fast as the old one. HEPI would report that as a $500 price increase, while the CPI would report the new computer as a $500 price decrease due to the "quality adjustment."

15 Old Danbury Road
P.O. Box 812
Wilton, CT 06897-0812

Tel 888-TCF-MAIN
Tel 203-563-5000
www.commonfund.org

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WHY IS THE CPI PROVIDED IN THE HEPI REPORT DIFFERENT FROM THE ONE(S) PUBLISHED BY THE BUREAU OF LABOR STATISTICS (BLS)?

The BLS updates CPI statistics monthly. They also provide a six- and 12-month average change; January-June, July-December and January-December. The CPI values reported on Commonfund's Web site HEPI are based on fiscal year (July 1 through June 30) 12-month averages rather than the monthly (or point-to-point) CPI values usually reported by the BLS.

WHAT IS INCLUDED IN THE ANNUAL HEPI UPDATE?

The HEPI Update contains a comprehensive analysis of the HEPI and its components for a given year, together with a sensitivity analysis and an overview of the effects of inflation on institutional funding and faculty salaries.

THE BLS PUBLISHES MONTHLY CPI UPDATES—CAN COMMONFUND DO THE SAME FOR HEPI?

In January 2006, Commonfund began publishing monthly HEPI forecasts in the last week of each month. These forecasts use data as they become available.

DOES HEPI APPLY TO ALL OPERATIONAL EXPENSES?

No, but it covers a substantial portion of standard budget expenses.

HOW IS HEPI USED?

HEPI is used primarily to project future budget increases required to preserve purchasing power. It is a measure of inflation for current operations, for budget hearings to justify the minimum funding requirements to maintain purchasing power, and a guideline for trends in other expense areas such as faculty salaries. Additional indicators include:

- Index values, which may be projected into the future to estimate the degree of change in expenditures that will be necessitated by anticipated price changes;
- Past expenditures, which may be compared with movements in a price index to ascertain whether spending has kept pace with price level changes;
- Dollar incomes, which may be deflated by a price index to identify trends in the level of real purchasing power of funding by various sources; and
- Price indexes, which may be used to provide automatic "inflation adjustment" of various administrative and contractual transactions.

WHY IS HEPI VALUABLE?

HEPI has been widely recognized as the only benchmark to effectively monitor changes in the purchasing power of higher educational institutions. Further, as many institutions have found HEPI to be a practical tool in the successful establishment of important policies, Commonfund wishes to ensure that it continues to be produced accurately and widely disseminated within the higher education community.

By reporting only price increases, without quality or quantity changes, the series documents the additional revenues required for continuation of "business as usual." To achieve this purpose, the price index attempts to hold constant all other factors, keeping constant the mix of purchases, and implicitly, the mix of their general use by a single type of consumer.