



# Commonfund Higher Education Price Index

2019 Update

commonfund  
INSTITUTE

This page intentionally left blank.

## Table of Contents

---

<b>HIGHER EDUCATION PRICE INDEX INTRODUCTION</b>	<b>1</b>
Executive Summary	1
About HEPI	1
The HEPI Tables	2
<b>HIGHER EDUCATION PRICE INDEX ANALYSIS</b>	<b>5</b>
HEPI for 2019	5
Highlights of 2019 Study	6
Supporting Data	6
5-Year Changes in Cost Factors: Figure 2 Analysis	7
HEPI for FY2019 versus a 5-Year Average: Figure 3 Analysis	8
Sensitivity Analysis of the 8 HEPI Regression Components: Figure 4 Analysis	9
Sensitivity of HEPI to a 5 Percent Increase in Faculty Salaries or Miscellaneous Services: Figure 5 Analysis	10

## About Commonfund Institute

---

Commonfund Institute houses the education and research activities of Commonfund and provides the entire 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. It provides a wide variety of resources, including conferences, seminars and roundtables on topics such as endowments and governance; proprietary and third-party research such as the Commonfund Benchmark Studies®; publications including the Commonfund Higher Education Price Index® (HEPI); and events such as the annual Commonfund Forum and Investment Stewardship Academy.

# Higher Education Price Index Introduction

---

## Executive Summary

Commonfund Higher Education Price Index (HEPI) data show that inflation for colleges and universities was 2.5 percent for fiscal year 2019, a decline from the two previous years when prices rose 2.9 percent and 3.4 percent for FY2018 and FY2017, respectively. Of the last five years, FY2019 represented the third-highest HEPI inflation rate, as the rate for FY2015 was 2.0 percent and for FY2016 it was 1.4 percent.

Of the eight components tracked by HEPI, FY2019 costs rose in three of the eight components tracked by HEPI, declined in four and were unchanged in one. Overall, cost increases moderated compared with last year owing in large part to a decline in the inflation rate for faculty salaries, which is the single largest component in the index. Faculty salaries—the most heavily-weighted HEPI component at 35 percent of the index—showed the second largest reduction in its inflation rate, rising 2.0 percent in FY2019 versus 2.8 percent in FY2018; utilities tied with faculty salaries, rising 0.9 percent in FY2019 and 1.7 percent in FY2018. The other component to decline in its rate of inflation was supplies and materials, which rose 4.1 percent in FY2019 compared with 4.3 percent in FY2018. Fringe benefits showed the greatest reduction in its inflation rate, rising 2.4 percent in FY2019 versus 3.5 percent in FY2018.<sup>1</sup> The miscellaneous services component was unchanged, rising 2.4 percent in both fiscal years.

The second-largest component of the index, clerical costs at an 18 percent weight, rose 3.5 percent in FY2019, up from 2.9 percent in FY2018. Administrative salaries, representing 11 percent of the index, rose 2.4 percent, once again a modest change compared with last year's 2.2 percent. After that in weighting, service employee costs at 8 percent showed the highest increase of the

eight HEPI components, tied with clerical costs of 60 basis points, rising 4.0 percent after a 3.4 percent increase in FY2018.

## 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 almost 60 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 subsequent years, in keeping with its commitment to improving and expanding the index, Commonfund Institute has expanded HEPI to include additional calculations and measures.

HEPI is compiled using data items from publicly-available sources that are released at different points in the academic fiscal year, from July 1 through the following June 30. We use this data, as it is released, to calculate HEPI forecasts that are released each April, June and August. The final report is released in December each year.

---

<sup>1</sup> In 2015, the American Association of University Professors (AAUP) began using a new methodology that was not directly comparable with the past; therefore, data on faculty salaries and fringe benefits, as well as information by region and type of institution, was excluded from the 2016 and 2017 HEPI reports. The conversion has been completed and data on faculty salaries and fringe benefits is now included. Additionally, due to this modification, the FY2018 HEPI number has been restated to 2.9 percent (from 2.8 percent).

IMPORTANT NOTES: In 2015, the American Association of University Professors (AAUP) began using a new methodology that was not directly comparable with the past; therefore, data on faculty salaries and fringe benefits was excluded from the 2016 and 2017 HEPI reports. The conversion has been completed and data on faculty salaries and fringe benefits is now included. Additionally, due to this modification, the FY2018 HEPI number has been restated to 2.9 percent (from 2.8 percent). The FY2015-FY2017 numbers have also been restated.

For 2019, data analyzed by type of institution and by region was not available at the time of publication. We hope to have it available in the future.

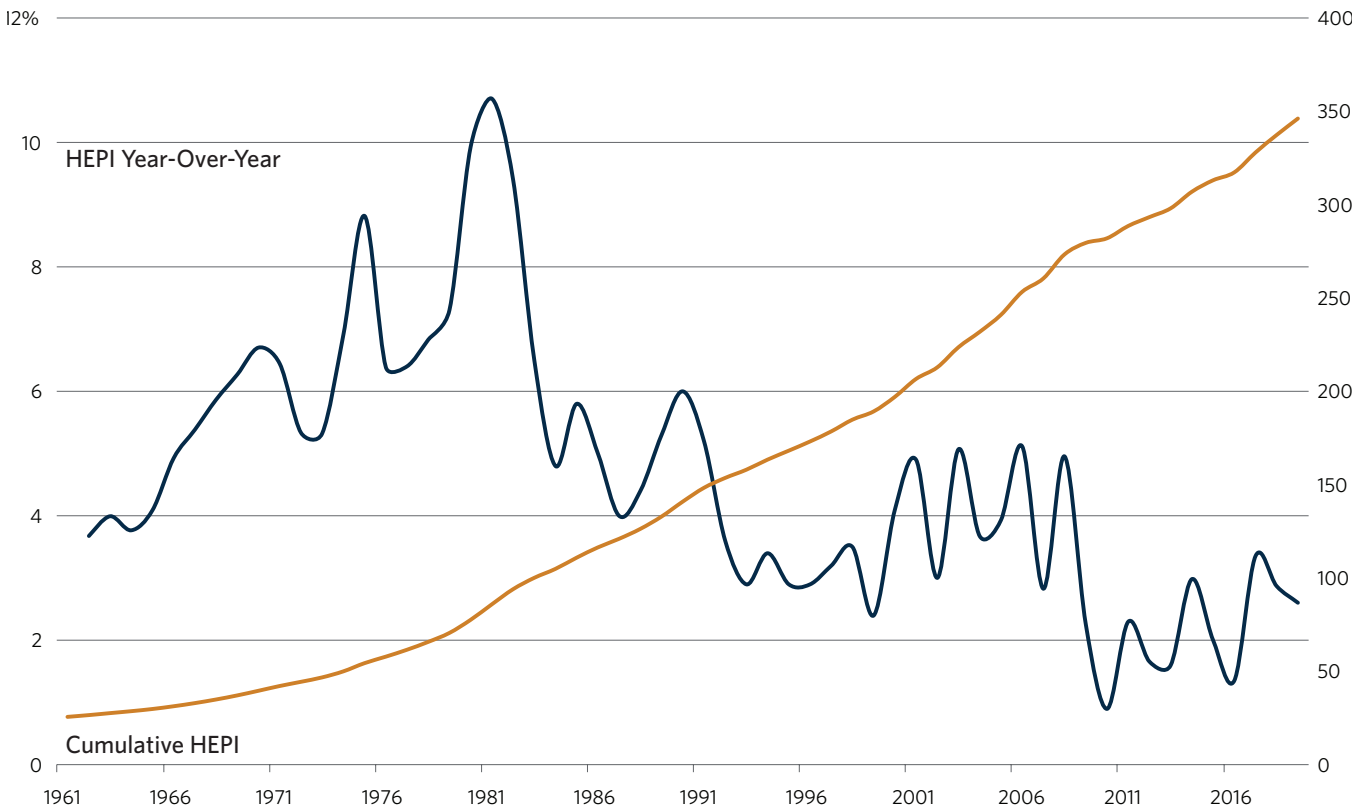
HEPI data is provided free of charge via Commonfund's website at [www.commonfund.org/HEPI](http://www.commonfund.org/HEPI) where you can sign-up to receive forecasts and the full HEPI report.

### The HEPI Tables

The chart below shows HEPI from fiscal years 1961 to 2019. 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. HEPI data beginning with FY2002 have been restated to reflect methodological improvements adopted in 2009. HEPI data beginning with FY2002 have been restated to reflect the methodological improvements adopted in 2009.

## HIGHER EDUCATION PRICE INDEX

1961 - 2019



This chart traces the Higher Education Price Index (HEPI) from 1961 to 2019. Cumulative HEPI is represented by the steadily increasing orange 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, 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**

Fiscal Years 1961 to 2019

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%	2015	312.9	2.0%	241.1	0.7%
1986	116.3	5.0%	110.8	2.9%	2016	317.1	1.4%	242.8	0.7%
1987	120.9	4.0%	113.3	2.2%	2017	327.8	3.4%	247.2	1.8%
1988	126.2	4.4%	118.0	4.1%	2018	337.4	2.9%	252.8	2.3%
1989	132.8	5.3%	123.5	4.7%	2019	345.9	2.5%	256.9	1.6%
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 July 1 - June 30 (annual published CPI is computed over the calendar 12-month period)

IMPORTANT NOTE: Two of the main HEPI cost factors, faculty salaries and fringe benefits, are derived from faculty compensation data published by the American Association of University Professors (AAUP), which in FY2016 began using a new methodology that is not comparable with the past. Due to this change in methodology, in this year's report we have used what we believe are reasonable estimates for changes in faculty salaries and fringe benefits to aid in the transition from FY2015 to subsequent years.

**TABLE B**

**HIGHER EDUCATION PRICE INDEX 2008 - 2019**

Regression analysis of components—Fiscal Years 1961 to 2019

	Fiscal	Regression HEPI	Faculty salaries	Administrative salaries	Clerical	Service Employees	Fringe Benefits	Miscellaneous services	Supplies and materials	Utilities
Index Value	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
	2015	312.9	306.4	381.9	280.4	248.4	484.0	279.8	190.7	183.5
	2016	317.1	318.6	393.3	289.1	253.3	481.9	285.7	179.5	146.5
	2017	327.8	326.4	405.2	297.3	262.7	503.6	290.7	180.1	167.8
	2018	337.4	335.6	414.1	305.9	271.6	521.1	297.8	187.9	170.7
2019	345.9	342.2	424.1	316.6	282.5	533.3	304.8	195.6	172.3	
Standard Deviation	2002-2019	39.3	36.9	57.2	33.0	27.1	79.0	30.6	23.8	34.2
Yearly% change	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%	2.1%
	2014	3.0%	2.2%	1.1%	1.9%	1.1%	4.8%	1.8%	11.2%	8.1%
	2015	2.0%	1.8%	4.2%	2.1%	2.6%	5.6%	2.1%	-4.8%	-13.2%
	2016	1.4%	4.0%	3.0%	3.1%	2.0%	-0.4%	2.1%	-5.8%	-20.2%
	2017	3.4%	2.5%	3.0%	2.8%	3.7%	4.5%	1.7%	0.3%	14.5%
	2018	2.9%	2.8%	2.2%	2.9%	3.4%	3.5%	2.4%	4.3%	1.7%
2019	2.5%	2.0%	2.4%	3.5%	4.0%	2.4%	2.4%	4.1%	0.9%	

IMPORTANT NOTE: Two of the main HEPI cost factors, faculty salaries and fringe benefits, are derived from faculty compensation data published by the American Association of University Professors (AAUP), which in FY2016 began using a new methodology that is not directly comparable with the past. Due to this change in methodology, in this year's report we have used what we believe are reasonable estimates for changes in faculty salaries and fringe benefits to aid in the transition from FY2015 to FY2017 and beyond.

**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
Admin	0.104289477
Clerical	0.18408585
Service	0.082314791
Fringe	0.131020859
Services	0.022899544
Supplies	0.055138426
Utilities	0.068247106

# Higher Education Price Index Analysis

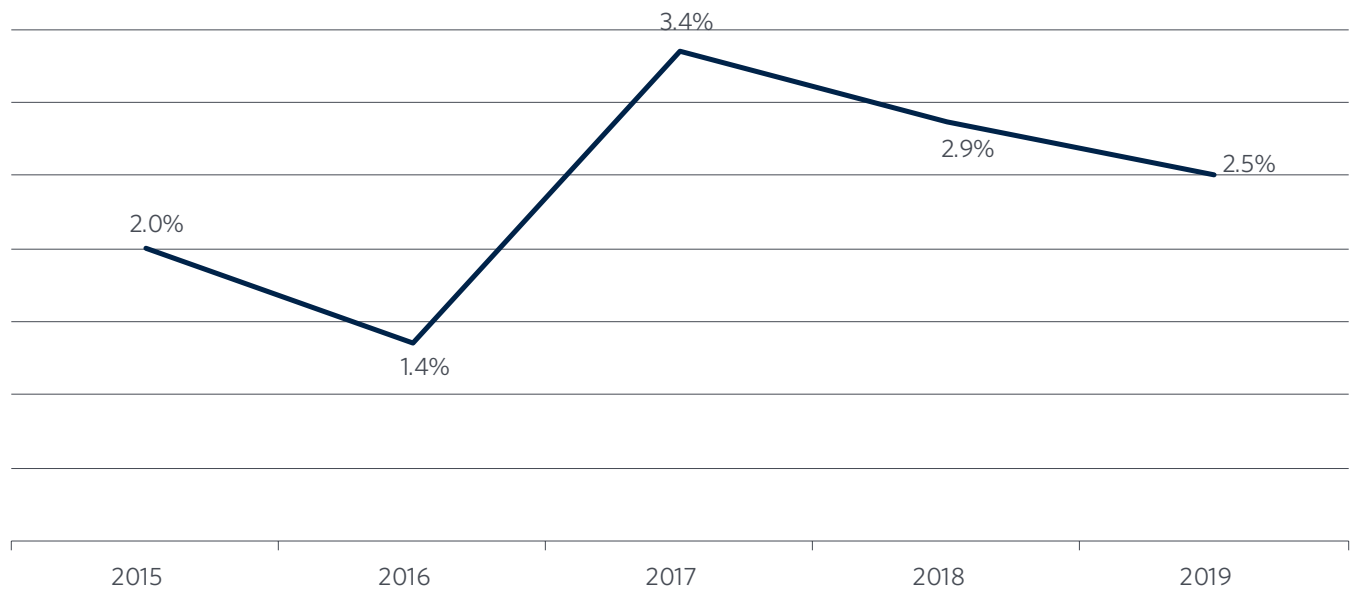
## HEPI for 2019

For fiscal year 2019, which ended on June 30, the HEPI calculation reveals that inflation for colleges and universities was 2.5 percent, representing a decline from FY2018's 2.9 percent and FY2017's 3.4 percent. Nevertheless, FY2019 inflation was higher than FY2015's 2.0 percent and FY2016's 1.4 percent. Thus (beginning with FY2014 as a base), the rate of inflation measured by HEPI declined in four of the past five years.

**FIGURE 1**

### THE HIGHER EDUCATION PRICE INDEX

Fiscal years 2015 - 2019



- There are eight cost factor components that contribute to the HEPI regression calculation: faculty salaries, administrative salaries, clerical costs, service employee costs, 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 salaries, clerical salaries and fringe benefits.



## Highlights of 2019 Study

Costs for FY2019 rose in three of the eight components tracked by HEPI, declined in four others and remained unchanged in the final one. The chief source of the year-over-year decline in the rate of HEPI inflation was faculty salaries; this most heavily-weighted component in the index increased 2.0 percent in FY2019 versus 2.8 percent in FY2018. The other component to decline in its rate of inflation was utilities, which rose 0.9 percent in FY2019 versus 1.7 percent in FY2018. Annual increases of 0.6 percent were found in clerical costs and service employee costs. For FY2019, the greatest deviation from the five-year average was in the supplies and materials component, which rose 4.1 percent compared with its five-year average of -0.4 percent.

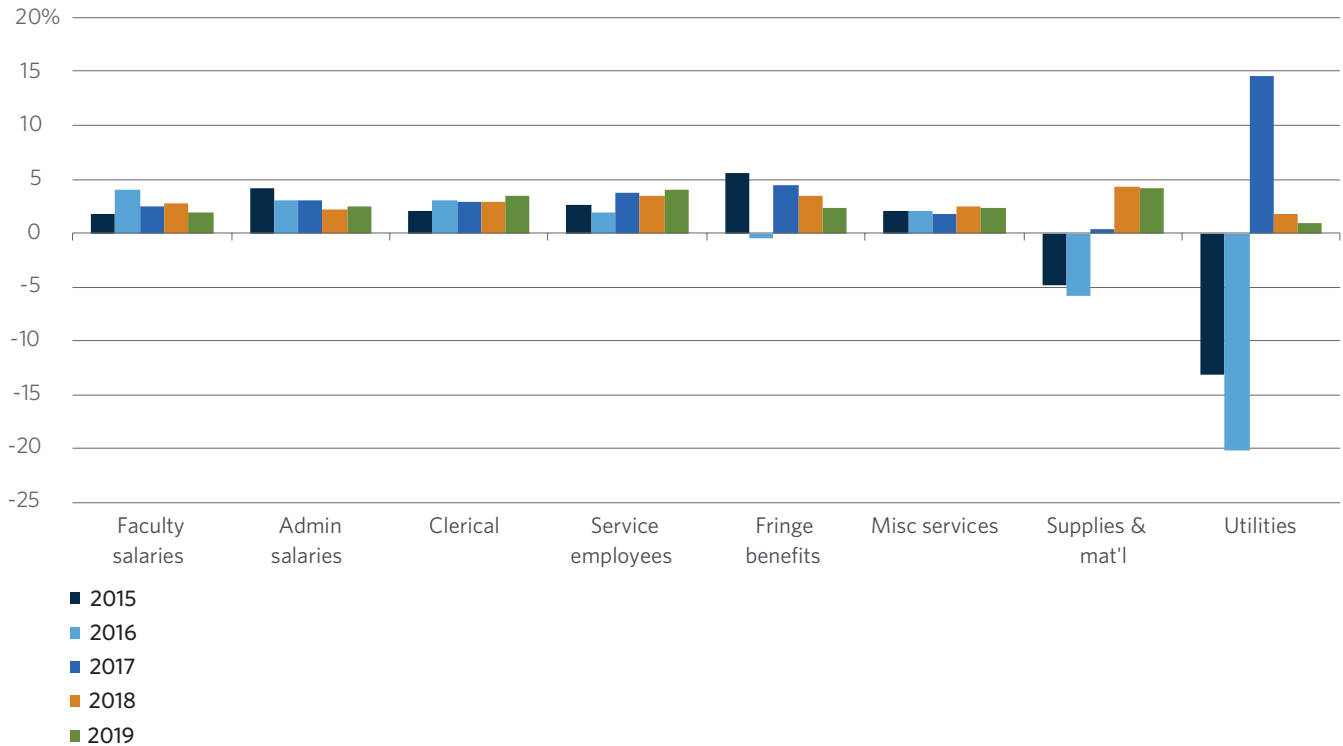
## Supporting Data

- Moderate changes in cost were seen in administrative salaries and fringe benefits. The former increased at a rate of 2.4 percent, up from 2.2 percent last year, while the latter decreased from 3.5 to 2.4 percent. Miscellaneous services was the sole component that remained level, rising 2.4 percent in both FY2018 and FY2019.
- The utilities category, which has been the most volatile component over the past five years, showed the smallest rate of increase this year, 0.9 percent. Previous changes in utilities during this timeframe included a decrease of -20.2 percent (FY2016) and an increase of 14.5 percent (FY2017). This fiscal year's annual increase in faculty salaries, 2.0 percent, was the lowest since 1.7 percent in FY2013 (which was the culmination of a four-year, post-crisis period when increases averaged just 1.5 percent).

### 5-Year Changes in Cost Factors: Figure 2 Analysis

Figure 2 shows a graphical representation of the changes in the eight cost factors from FY2015 to FY2019. Five cost factors were reasonably stable over the period, rising steadily but not dramatically in any single year. Two cost factors reflect considerable volatility. As mentioned, the most dramatic year-over-year changes have occurred in utilities, which had an inflation rate of 14.5 percent for FY2017, versus -20.2 percent for FY2016 and -13.2 percent for FY2015. This year, utilities showed the smallest rate of change in the five-year period, rising 0.9 percent following 1.7 percent a year ago. Turning to supplies and materials, prior to the beginning of the trailing five-year period in FY2014 costs spiked, rising 11.2 percent. Then, for the next three fiscal years, costs in this component declined by an average of -3.4 percent annually. Faculty salaries, accounting for the largest single share of the regression weighting, increased 2.0 percent in FY2019, which was below the trailing five-year average of 2.6 percent (although we caution again that the methodology for this computation changed beginning in FY2015).

**FIGURE 2**  
**ANNUAL PERCENTAGE CHANGES IN THE EIGHT HEPI COST FACTORS, FISCAL YEARS 2015 - 2019**

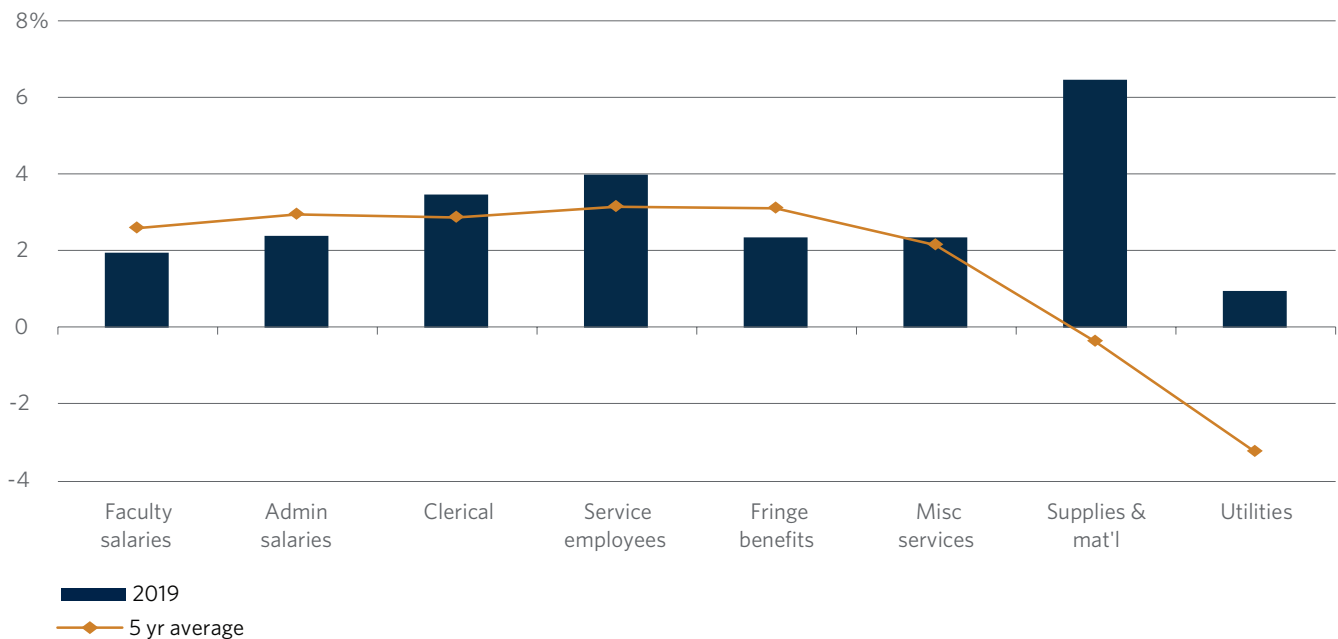


### HEPI for FY2019 versus a 5-Year Average: Figure 3 Analysis

Figure 3 shows the results of a longer-term analysis of HEPI's components, comparing the reported rates for FY2019 against their historical five-year averages.

- Of the eight cost factors, five were above their five-year average in FY2019 while three were below.
- Of the three most heavily-weighted HEPI components, cost increases in FY2019 were below their five-year average for two: faculty salaries (2.0 percent versus 2.6 percent) and fringe benefits (2.4 percent versus 3.1 percent). The third, clerical salaries, was above its five-year average, rising 3.5 percent in FY2019 versus an average of 2.9 percent.
- For FY2019, the greatest deviation from the five-year average was in the supplies and materials component, which rose 4.1 percent compared with its five-year average of -0.4 percent.
- The second-highest deviation occurred in utilities, which showed a 0.9 percent inflation rate for FY2019 versus a five-year average of -3.2 percent.
- The component showing the least deviation was miscellaneous services, which rose 2.4 percent in FY2019 compared to a five-year average of 2.1 percent. Last year, this was the category showing the second-least deviation from its five-year average.

**FIGURE 3**  
**ANNUAL PERCENTAGE CHANGES IN THE EIGHT HEPI COST FACTORS VS. 5-YEAR AVERAGE**



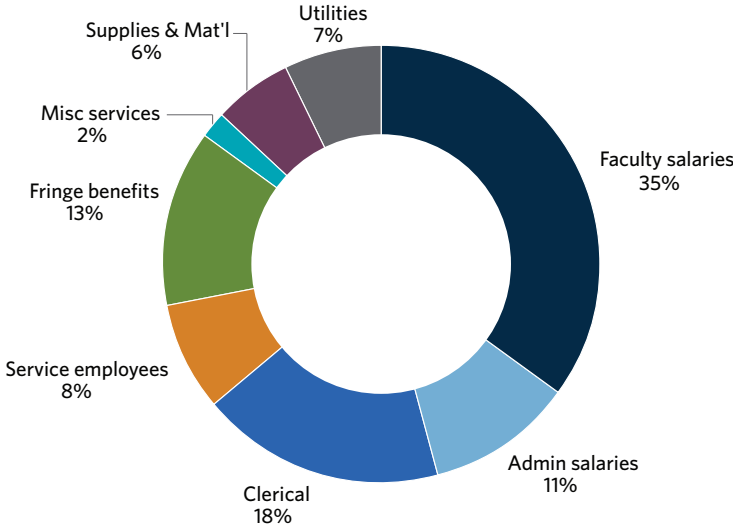
A year ago, utilities showed the greatest five-year volatility owing to a three-year period (FY2015, '16 and '17) when annual percentage price changes increased or decreased in double digits. For the past two years, price changes in this component (both increases) have averaged just 1.3 percent and supplies and materials has become the component exhibiting the greatest price volatility. Prices for this component rose 4.1 percent in FY2019 versus a five-year average of -0.4 percent, a figure shaped by price declines in FY2015, '16 and '17. The component exhibiting the least price volatility this year was miscellaneous services with a spread of 0.3 percentage point between the five-year average of 2.1 percent and the FY2019 figure of 2.4 percent. Year over year, the FY2019 figure was unchanged from FY2018 and price increases the previous three fiscal years averaged just 2.0 percent. Of the two most heavily weighted components, clerical salaries have risen at an average annual rate of 2.9 percent over the period, moderately ahead of faculty salaries' average annual increase of 2.6 percent. The spread widened in FY2019, when clerical salaries rose at a rate of 3.5 percent versus 2.0 percent for faculty salaries. Fringe benefits for FY2019 were below the five-year average with an increase of 2.4 percent compared with the five-year average of 3.1 percent.

**Sensitivity Analysis of the 8 HEPI Regression Components: Figure 4 Analysis**

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. The low weightings of these two components have served to mitigate the effect of the high volatility that has characterized these cost factors in recent years.

**FIGURE 4**  
**HEPI COST FACTOR WEIGHTINGS**



**Sensitivity of HEPI to a 5 Percent Increase in Faculty Salaries or Miscellaneous Services: Figure 5 Analysis**

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 342.2 to 359.3, has the effect of increasing HEPI by 190 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 20 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	345.9	342.2	424.1	316.6	282.5	533.3	304.8	195.6	172.3
Yearly % Change	2.5%	2.0%	2.4%	3.5%	4.0%	2.4%	2.4%	4.1%	0.9%
Scenario: Faculty Salaries up 5%									
Index Value	352.0	359.3	424.1	316.6	282.5	533.3	304.8	195.6	172.3
Yearly % Change	4.4%	7.1%	2.4%	3.5%	4.0%	2.4%	2.4%	4.1%	0.9%
Δ	<b>190 b.p.</b>	<b>510 b.p.</b>							
Scenario: Misc. Services up 5%									
Index Value	346.3	342.2	424.1	316.6	282.5	533.3	320.0	195.6	172.3
Yearly % Change	2.7%	2.0%	2.4%	3.5%	4.0%	2.4%	7.5%	4.1%	0.9%
Δ	<b>20 b.p.</b>						<b>510 b.p.</b>		

## End Notes

Data for the eight HEPI components is gathered from the following sources:

- Faculty Salaries: American Association of University Professors Survey Report
- Administrative Salaries: College and University Professional Association for HR Survey, Professional Salaries – Medians
- Clerical: U.S. Bureau of Labor Statistics Employment Cost Index
- Service Employees: U.S. Bureau of Labor Statistics Employment Cost Index
- Fringe Benefits: American Association of University Professors Survey Report
- Miscellaneous Services: U.S. Bureau of Labor Statistics Employment Cost Index
- Supplies and Materials: U.S. Bureau of Labor Statistics Producer Price Index (17 selected categories)
- Utilities: U.S. Bureau of Labor Statistics Producer Price Index (4 selected categories)

This page intentionally left blank.

commonfund

New York, NY 10017

Tel (646) 348-9201

San Francisco, CA 94111

Tel (415) 433-8800

London, United Kingdom

Tel +44 (0) 20 7872 5504

Beijing, China

Tel +86 10 5968 0198

15 Old Danbury Road

Tel 888-TCF-Main

Wilton, CT 06897

Tel (203) 563-5000

[www.commonfund.org](http://www.commonfund.org)