Office of Financial Management

# Higher Education
# Per-Student Funding Comparisons

September 2008

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## Introduction

The Legislature, in the 2007 legislative session (Second Substitute Senate Bill 5806), directed the Office of Financial Management (OFM) to determine per-student funding levels at higher education institutions comparable to institutions in Washington. RCW 28B.15.068 (see Appendix A) directs OFM to define the 60th percentile of total per-student funding at similar public institutions of higher education in the global challenge states;[1] to adjust for regional cost-of-living differences; and to develop a funding trajectory for each four-year institution of higher education and for the community and technical college system as a whole such that state appropriations plus tuition and fees revenue allow Washington to reach its funding goal of the 60$^{th}$ percentile of global challenge states by 2017. This report is submitted to the governor, the Higher Education Coordinating Board, and the education and fiscal committees of the Legislature in response to the directive.

*This report is organized around the requirements of the legislation as follows:*

1) *Comparable institutions - determination within the eight global challenge states*
2) *Collection of tuition and appropriations data by institution*
3) *Calculation of the 60$^{th}$ percentile per-student funding level and adjustment for spatial cost-of-living differences*
4) *Development of funding trajectories*
5) *Summary*

## Identification of Comparable Institutions

The legislation calls for comparison to "similar public institutions of higher education in the global challenge states," while adjusting for differences in program offerings and in the relative mix of lower division, upper division, and graduate students. To develop this list of similar institutions, the Carnegie Classification system was used to identify global challenge state institutions where the mix of full- and part-time students, the selectivity, and the transfer-in rates were similar to each of the Washington institutions. This process, choosing these characteristics, led to a list of ***comparable*** institutions specific to this study; they are not necessarily the same as ***peer*** institutions.

[1] The global challenge states (GCS) are California, Colorado, Connecticut, Maryland, Massachusetts, New Jersey, Virginia, and Washington – the states ranking highest in the New Economy Index of 2002. [www.neweconomyindex.org/states/2002/]

Traditionally, higher education institutions have identified sets of "peer institutions" which are used for comparison of financial items such as tuition and faculty salaries as well as accountability measures such as retention rates and graduation rates. Because of the larger number of institutions used in national comparisons, the peer institution analysis can use a more tailored definition of what is a peer institution and still result in a relatively large comparison group in total. When comparing to institutions within a subset of states, precise comparison groups would limit the total number of comparable institutions for the analysis. For example, for Washington State University, established peer institutions are land grant institutions with a school of veterinary medicine – 21 institutions, in all. Connecticut Maryland, Massachusetts, and New Jersey – the majority of the seven comparison global challenge states – have no such institutions. The land-grant institutions from those states were included in the per-student funding comparison group, however.

The regional institutions have 278 peers according to the HECB, a small subset of which are in the comparable institution list for this study. Since the Washington Community and Technical College system was to be treated "as a whole," institutions making up each of the other states' equivalent system were included.

The primary data sources used to identify comparable institutions were the institutional characteristics and enrollment data contained in the Integrated Postsecondary Education Data System (IPEDS).[2] The institutional characteristics contained in IPEDS include a set of descriptive categories defined by the Carnegie Foundation. In the Carnegie system, the Undergraduate Profile classification describes the undergraduate population with respect to three characteristics: (1) the proportion of part- and full-time students; (2) standardized test scores of first-year students; and (3) the share of entering students who transfer from another institution.

A summary of the criteria used to select comparable institutions follows; full detail is contained in Appendix B:

*University of Washington (all campuses):*

> Institutions classified as comparable to the University of Washington were those classified as "Research Universities (very high research activity)" in the Carnegie 2005 Classification with a medical school. If there was no such institution in a state, data for the research institution was combined with data for the medical school.

*Washington State University (all campuses):*

> Land grant universities classified in the Carnegie 2005 Classification as "Research Universities (very high research activity)" were selected as the set of comparable institutions for Washington State University. The institution with a veterinary school was selected if more than one institution in a state fell in this category.

*Central Washington University:*

> Comparable institutions for Central Washington University were selected based on these criteria: a) "Master's Colleges & Universities (larger programs)" or "Master's Colleges & Universities (medium programs)", b) Fall 2005 FTE enrollment between

[2] The Integrated Postsecondary Education Data System (IPEDS) is the postsecondary data collection system of the U.S. National Center for Education Statistics. Focus areas for data collection are enrollments, program completions, graduation rates, faculty and staff, finances, institutional prices, and student financial aid.

6,300 and14,999, and c) undergraduate profile categorized as "Full-time four-year, more selective, higher transfer in" or "Full-time four-year, selective, higher transfer in" or "Medium full-time four-year, selective, high transfer in."

*Eastern Washington University:*

Institutions with Carnegie Classification 2005 Basic of "Master's Colleges and Universities (larger programs)" along with Fall 2005 FTE enrollment of 7,400 to 15,999 were selected as comparable institutions for Eastern Washington University. Because of program similarities, California State University-Bakersfield (FTE enrollment 6,441) was included in the set. The list was reduced based on the Carnegie Classification 2005 Undergraduate Profile characteristics.

*Western Washington University:*

Comparable institutions for Central Washington University were selected based on these criteria: a) "Master's Colleges & Universities (larger programs)", b) Fall 2005 FTE enrollment of 8,000-17,999, and c) undergraduate profile categorized as "Fulltime four-year, more selective, higher transfer in" or "Full-time four-year, selective, higher transfer in" or "Fulltime four-year, more selective, lower transfer in" or "Medium full-time four-year, selective, high transfer in."

*The Evergreen State College:*

Comparable institutions for the Evergreen State College met the following criteria: a) Carnegie Classification 2005 Basic: "Baccalaureate Colleges--Arts & Sciences" or "Master's Colleges & Universities (medium programs)" or "Master's Colleges & Universities (smaller programs)", b) Fall 2005 FTE enrollment between 3,000 and 7,999 and c) Highest Level of Offering: Master's degree or Post-master's certificate.

*Community and Technical Colleges:*

Public two-year institutions that were part of each state's community and technical college system were selected as the set of institutions comparable to Washington's Community and Technical College system. In order to compare Washington's community and technical college system to those in the other global challenge states, data from these institutions were aggregated to the state level.

## Tuition, Fees, and Appropriations Data

Fiscal Year 2006-07 tuition and fees, state appropriations and local appropriations data from IPEDS were used for the determination of funding levels by institution. Specific definitions of these items are detailed in Appendix C. For baccalaureate institutions, funding consisted of tuition and fees plus state appropriations. For community and technical colleges, funding consisted of tuition and fees plus both state appropriations and local appropriations.[3]

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[3] Colorado institutions proved to be an anomaly beginning with 2005-06 because of conversion to a voucher system. What had been a state appropriation was split into two line items in the IPEDS finance data. One part, the College Opportunity Fund, was paid to undergraduate students and considered as tuition and fees. Another component was considered as a fee for service and reported as "other operating." For Colorado institutions only, beginning in 2005-06, the revenue amounts reported in "other operating" were used to obtain an

For some systems, IPEDS finance data were published for system offices in addition to individual institutions. In these cases, for purposes of this report, the system data were distributed proportionally to individual institutions based on Fall 2006 FTE enrollment.[4]

## Adjustment for Regional Cost-of-Living Differences

There is not an accepted, standard method for adjusting for regional price variation, nor is there a data source that is well-suited by itself for this purpose. In order to account for regional cost-of-living differences, OFM developed a method to account for spatial cost-of-living variation primarily based on the ACCRA cost-of-living index (COLI) and U.S. Housing and Urban Development (HUD) Fair Market Rent (FMR) data. A summary of the methodology follows; a full description is in Appendix D. Cost-of-living information by county and institution are listed in Appendix G.

For global challenge state institutions in a city or county with ACCRA COLI data, the COLI index number was used for this study. COLI data are designed to reflect general living costs and are available for areas smaller than the state level; therefore they were a reasonable option for making cost-of-living adjustments. For areas outside the ACCRA set a statistical relationship was developed between ACCRA (dependent variable) and two-bedroom FMR (independent variable) to estimate the cost of living for areas without ACCRA data.

Next an adjustment factor was calculated by taking the inverse of the cost-of-living number. Then within each comparison group, the factors were scaled such that the Washington institution's cost-of-living index was the basis; that is, the adjustment factor for the Washington institution equaled one.

Educational institutions face a variety of costs, of which salaries are only a portion. Other costs faced by institutions may or may not be affected by regional cost of living. Therefore, one option was to make a partial adjustment for cost-of-living differences; a fraction of funding was adjusted while the remainder was unadjusted. Salaries, one could reason, could be a component that is likely influenced by local price levels. Appendix H provides details on how employee compensation as share of total expenses was calculated to allow for a partial adjustment for cost of living.

The per-student funding levels are thus presented in three ways: (1) no cost-of-living adjustment, (2) partial adjustment based on salary and fringe benefits as a proportion of modified total core expenses, and (3) full adjustment (100% of expenses are adjusted for cost of living).

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equivalent to that reported as state appropriations in prior years. Most likely the result is an overstated total funding amount. It did not change Colorado's ranking in funding per FTE or affect the calculation of the 60th percentile funding levels, however, since Colorado institutions consistently rank at the low end of the continuum.

[4] An alternative approach to allocating system office finance amounts for appropriations would be to use the distribution of state appropriations among the institutions to allocate the system office amounts.

## Per-Student Funding Levels

The following tables show the 2006-07 per-student funding levels for the Washington institutions and community college system, as well as the comparable institutions from other global challenge states. The tables include funding levels that were adjusted for regional cost-of-living differences as well as unadjusted levels.

### University of Washington

| Institution | State | $ Per FTE (unadjusted) | $ Per FTE (partial COLA) | $ Per FTE (full COLA) |
|---|---|---|---|---|
| University of California-Davis | CA | $24,753 | $24,288 | $24,019 |
| University of California-Irvine | CA | $18,631 | $16,300 | $14,545 |
| University of California-Los Angeles | CA | $27,062 | $24,284 | $22,646 |
| University of California-San Diego | CA | $20,592 | $18,947 | $17,861 |
| University of Colorado –All campuses | CO | $14,085 | $13,723 | $13,537 |
| University of Connecticut + medical | CT | $26,013 | $26,387 | $26,495 |
| University of Massachusetts - Amherst + medical | MA | $23,235 | $24,171 | $24,825 |
| University of Maryland - College Park + Baltimore | MD | $24,595 | $23,111 | $22,529 |
| Rutgers Total + Medical | NJ | $29,361 | $28,373 | $27,996 |
| University of Virginia - Main Campus | VA | $20,185 | $21,396 | $21,768 |
| **University of Washington - all campuses** | **WA** | **$19,744** | **$19,744** | **$19,744** |

| | $ Per FTE (Unadjusted) | $ Per FTE (Partial COLA) | $ Per FTE (Full COLA) |
|---|---|---|---|
| University of Washington | $ 19,744 | $ 19,744 | $ 19,744 |
| 60th Percentile | $ 24,658 | $ 24,217 | $ 23,195 |
| Difference | -$ 4,914 | -$ 4,472 | -$ 3,451 |
| % Change to Achieve 60th Percentile | + 25% | + 23% | + 17% |

## Washington State University

| Institution | State | $ Per FTE (unadjusted) | $ Per FTE (partial COLA) | $ Per FTE (full COLA) |
|---|---|---|---|---|
| University of California-Davis | CA | $24,753 | $21,441 | $19,523 |
| Colorado State University | CO | $9,268 | $9,573 | $9,707 |
| University of Connecticut | CT | $19,765 | $17,089 | $16,363 |
| University of Massachusetts-Amherst | MA | $21,803 | $19,663 | $18,934 |
| University of Maryland-College Park | MD | $21,356 | $17,364 | $15,900 |
| Rutgers Total | NJ | $20,537 | $17,156 | $15,916 |
| Virginia Polytechnic Institute and State University | VA | $18,315 | $18,358 | $18,374 |
| **Washington State University** | **WA** | **$17,317** | **$17,317** | **$17,317** |

| | $ Per FTE (Unadjusted) | $ Per FTE (Partial COLA) | $ Per FTE (Full COLA) |
|---|---|---|---|
| Washington State University | $ 17,317 | $ 17,317 | $ 17,317 |
| 60th Percentile | $ 21,029 | $ 17,960 | $ 17,570 |
| Difference | -$ 3,711 | -$ 643 | -$ 252 |
| % Change to Achieve 60th Percentile | + 21% | + 4% | + 1% |

## Central Washington University

| Institution | State | $ Per FTE (unadjusted) | $ Per FTE (partial COLA) | $ Per FTE (full COLA) |
|---|---|---|---|---|
| California State University-Chico | CA | $10,875 | $10,722 | $10,672 |
| Humboldt State University | CA | $14,515 | $14,176 | $14,050 |
| Sonoma State University | CA | $12,559 | $10,522 | $9,641 |
| Central Connecticut State University | CT | $13,766 | $12,553 | $11,891 |
| Southern Connecticut State University | CT | $13,543 | $12,264 | $11,789 |
| Bridgewater State College | MA | $12,180 | $9,783 | $9,280 |
| University of Massachusetts-Dartmouth | MA | $15,731 | $14,089 | $13,387 |
| Salisbury University | MD | $10,853 | $10,951 | $10,974 |
| Rowan University | NJ | $15,172 | $13,182 | $12,608 |
| Montclair State University | NJ | $13,691 | $11,697 | $11,116 |
| William Paterson University of New Jersey | NJ | $15,457 | $12,788 | $12,316 |
| Radford University | VA | $10,000 | $10,360 | $10,468 |
| **Central Washington University** | **WA** | **$10,214** | **$10,214** | **$10,214** |

| | $ Per FTE | $ Per FTE | $ Per FTE |
|---|---|---|---|
| Central Washington University | $ 10,214 | $ 10,214 | $ 10,214 |
| 60th Percentile | $ 13,736 | $ 12,438 | $ 11,850 |
| Difference | -$ 3,522 | -$ 2,224 | -$ 1,637 |
| % Change to Achieve 60th Percentile | + 34% | + 22% | + 16% |

## Eastern Washington University

| Institution | State | $ Per FTE (unadjusted) | $ Per FTE (partial COLA) | $ Per FTE (full COLA) |
|---|---|---|---|---|
| California State University-Bakersfield | CA | $12,293 | $11,282 | $10,905 |
| California State University-San Bernardino | CA | $10,276 | $8,945 | $8,379 |
| California State University-Chico | CA | $10,875 | $10,186 | $9,962 |
| Central Connecticut State University | CT | $13,766 | $12,042 | $11,100 |
| Southern Connecticut State University | CT | $13,543 | $11,693 | $11,005 |
| Bridgewater State College | MA | $12,180 | $9,272 | $8,663 |
| University of Massachusetts-Dartmouth | MA | $15,731 | $13,466 | $12,496 |
| Towson University | MD | $11,122 | $9,550 | $9,029 |
| Rowan University | NJ | $15,172 | $12,531 | $11,769 |
| Montclair State University | NJ | $13,691 | $11,125 | $10,376 |
| William Paterson University of New Jersey | NJ | $15,457 | $12,092 | $11,497 |
| Radford University | VA | $10,000 | $9,825 | $9,772 |
| **Eastern Washington University** | **WA** | **$10,385** | **$10,385** | **$10,385** |

| | $ Per FTE (Unadjusted) | $ Per FTE (Partial COLA) | $ Per FTE (Full COLA) |
|---|---|---|---|
| Eastern Washington University | $ 10,385 | $ 10,385 | $ 10,385 |
| 60th Percentile | $ 13,632 | $ 11,529 | $ 10,965 |
| Difference | -$ 3,247 | -$ 1,144 | -$ 580 |
| % Change to Achieve 60th Percentile | + 31% | + 11% | + 6% |

## The Evergreen State College

| Institution | State | $ Per FTE (unadjusted) | $ Per FTE (partial COLA) | $ Per FTE (full COLA) |
|---|---|---|---|---|
| California State University-Stanislaus | CA | $11,478 | $11,190 | $11,115 |
| Humboldt State University | CA | $14,515 | $14,393 | $14,348 |
| California State University-San Marcos | CA | $12,470 | $10,299 | $9,368 |
| California State University-Monterey Bay | CA | $18,463 | $15,652 | $14,886 |
| Eastern Connecticut State University | CT | $13,822 | $13,357 | $13,216 |
| Westfield State College | MA | $11,518 | $10,942 | $10,658 |
| Worcester State College | MA | $12,186 | $11,865 | $11,749 |
| Coppin State University | MD | $11,297 | $10,635 | $10,033 |
| Ramapo College of New Jersey | NJ | $14,063 | $12,139 | $11,660 |
| Christopher Newport University | VA | $10,730 | $10,574 | $10,529 |
| Longwood University | VA | $11,825 | $12,438 | $12,730 |
| University of Mary Washington | VA | $12,247 | $10,044 | $9,409 |
| **The Evergreen State College** | **WA** | **$14,549** | **$14,549** | **$14,549** |

| | $ Per FTE (Unadjusted) | $ Per FTE (Partial COLA) | $ Per FTE (Full COLA) |
|---|---|---|---|
| The Evergreen State College | $ 14,549 | $ 14,549 | $ 14,549 |
| 60th Percentile | $ 12,381 | $ 12,029 | $ 11,714 |
| Difference | $ 2,169 | $ 2,520 | $ 2,836 |
| % Change to Achieve 60th Percentile | - 15% | - 17% | - 19% |

## Western Washington University

| Institution | State | $ Per FTE (unadjusted) | $ Per FTE (partial COLA) | $ Per FTE (full COLA) |
|---|---|---|---|---|
| California Polytechnic State University-San Luis | CA | $12,546 | $11,717 | $11,423 |
| California State Polytechnic University-Pomona | CA | $11,439 | $9,406 | $8,678 |
| California State University-Chico | CA | $10,875 | $11,277 | $11,408 |
| Central Connecticut State University | CT | $13,766 | $13,084 | $12,711 |
| Southern Connecticut State University | CT | $13,543 | $12,857 | $12,601 |
| Towson University | MD | $11,122 | $10,534 | $10,339 |
| Rowan University | NJ | $15,172 | $13,856 | $13,477 |
| Montclair State University | NJ | $13,691 | $12,290 | $11,882 |
| William Paterson University of New Jersey | NJ | $15,457 | $13,509 | $13,165 |
| James Madison University | VA | $10,912 | $11,313 | $11,466 |
| Radford University | VA | $10,000 | $10,915 | $11,190 |
| **Western Washington University** | **WA** | **$10,740** | **$10,740** | **$10,740** |

| | $ Per FTE (Unadjusted) | $ Per FTE (Partial COLA) | $ Per FTE (Full COLA) |
|---|---|---|---|
| Western Washington University | $ 10,740 | $ 10,740 | $ 10,740 |
| 60th Percentile | $ 13,543 | $ 12,290 | $ 11,882 |
| Difference | -$ 2,803 | -$ 1,550 | -$ 1,141 |
| % Change to Achieve 60th Percentile | + 26% | + 14% | + 11% |

## State Community & Technical College Systems

| State | $ Per FTE (unadjusted) | $ Per FTE (partial COLA) | $ Per FTE (full COLA) |
|---|---|---|---|
| California | $ 8,405 | $ 7,193 | $ 6,749 |
| Colorado | $ 5,129 | $ 5,490 | $ 5,715 |
| Connecticut | $ 10,711 | $ 9,795 | $ 9,571 |
| Massachusetts | $ 8,902 | $ 8,235 | $ 7,955 |
| Maryland | $ 10,995 | $ 10,337 | $ 10,088 |
| New Jersey | $ 6,703 | $ 6,225 | $ 5,915 |
| Virginia | $ 6,547 | $ 6,612 | $ 6,638 |
| **Washington** | **$ 7,228** | **$ 7,228** | **$ 7,228** |

| | $ Per FTE (Unadjusted) | $ Per FTE (Partial COLA) | $ Per FTE (Full COLA) |
|---|---|---|---|
| Washington Community and Technical Colleges | $ 7,228 | $ 7,228 | $ 7,228 |
| 60th Percentile | $ 8,704 | $ 7,818 | $ 7,472 |
| Difference | -$ 1,475 | -$ 590 | -$ 244 |
| % Change to Achieve 60th Percentile | + 20% | + 8% | + 3% |

## Development of Funding Trajectories

The preceding tables show the calculated 60th percentile per-student funding levels for each of the baccalaureate institutions as well as for the community and technical college system. Individual trajectories were developed based on the assumption that the funding at each Washington institution would attain the 60th percentile of per-student funding in 2017. The per-student funding levels at the comparable institutions were assumed to continue to grow at the same overall rate as they have in recent years. To calculate this rate of change, historical funding levels were determined from IPEDS data for 2002-03 through 2006-07. This led to a calculated annual average growth rate for each set of comparable institutions. It should be noted that the growth in funding here includes both inflation (price level changes) and general spending changes; there is no distinction made between the two.

Therefore a 60th percentile 2017 target was determined for each Washington institution and the community college system: the global challenge state 60th percentile starting point (2006-07) rises each year by the assumed annual growth rate until 2017. Then the trajectory was determined using the Washington institution's starting point (2006-07 per-student funding level) and the target 2017 level. Those two points dictated the annual rate of change needed for the Washington institution to reach the 60th percentile in per-student funding in 2017.

The following charts and tables each show six trajectories: the comparable institution's 60th percentile growth through 2017 and the Washington trajectory through 2017, each with full cost-of-living adjustment, partial adjustment, and no adjustment.

The charts displayed here do not assume enrollment growth, as funding new enrollments is a budgetary/legislative decision and because per-student funding levels are independent of the number of students on a particular campus. However, adding new enrollments impacts the total funding necessary to reach the target per-student funding level. OFM has developed a model that displays the impact of enrollment changes on total funding; this tool is available upon request.

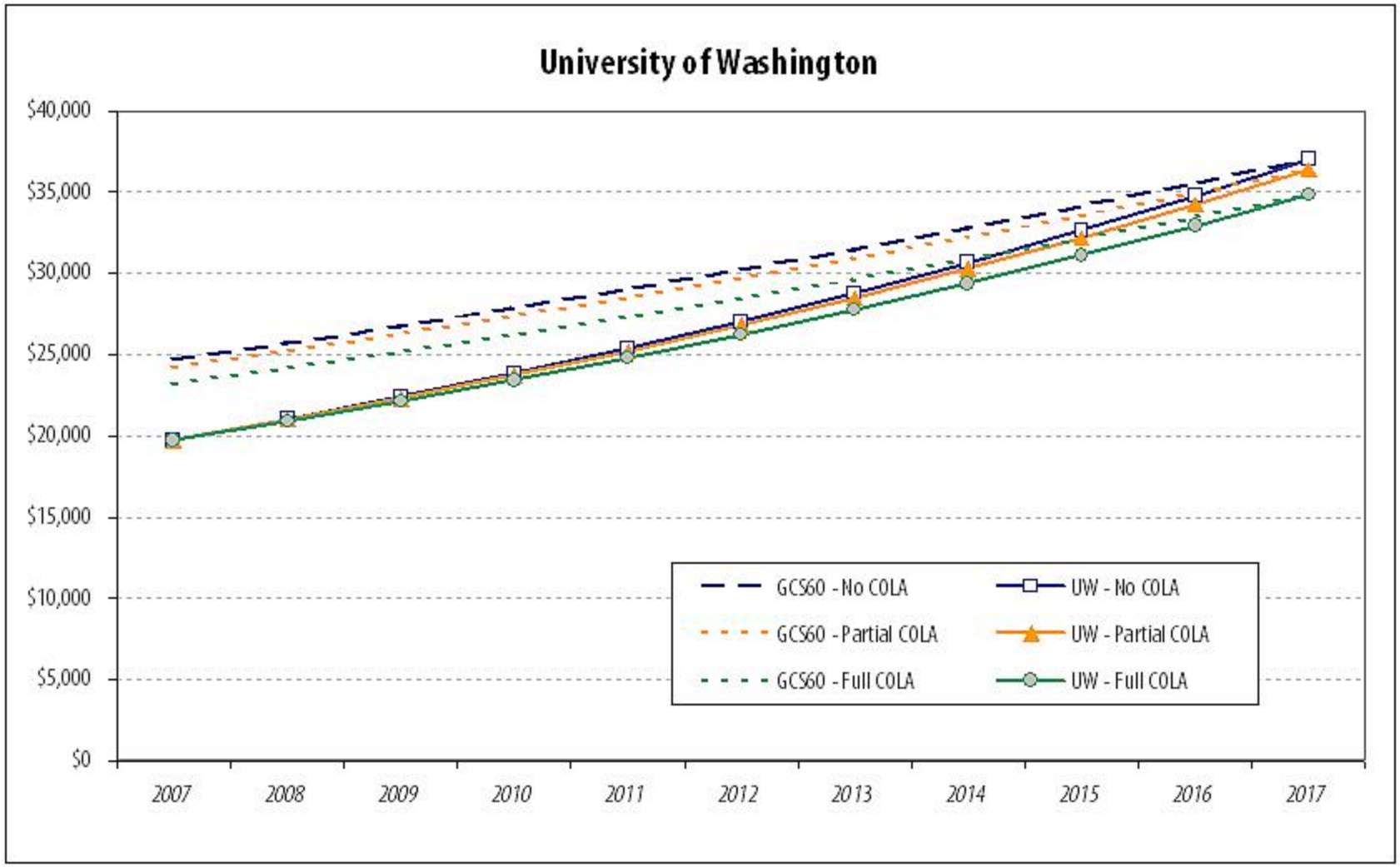
# UW

| GCS 60th Percentile Trajectory Growth | 4.15% |
|---|---|

| | | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | Annual Growth Rate |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ***No Cost-of-Living Adjustment*** | | | | | | | | | | | | | |
| **GCS 60** | With trajectory growth | $24,658 | $25,682 | $26,747 | $27,857 | $29,013 | $30,216 | $31,470 | $32,776 | $34,135 | $35,552 | $37,027 | 4.15% |
| **UW** | Trajectory growth & to 60%ile | $19,744 | $21,026 | $22,390 | $23,843 | $25,390 | $27,038 | $28,793 | $30,661 | $32,651 | $34,770 | $37,027 | 6.49% |
| ***Partial Cost-of-Living Adjustment*** | | | | | | | | | | | | | |
| **GCS 60** | With trajectory growth | $24,217 | $25,221 | $26,268 | $27,358 | $28,493 | $29,675 | $30,906 | $32,188 | $33,524 | $34,915 | $36,363 | 4.15% |
| **UW** | Trajectory growth & to 60%ile | $19,744 | $20,988 | $22,309 | $23,714 | $25,207 | $26,795 | $28,482 | $30,276 | $32,182 | $34,209 | $36,363 | 6.30% |
| ***Full Cost-of-Living Adjustment*** | | | | | | | | | | | | | |
| **GCS 60** | With trajectory growth | $23,195 | $24,157 | $25,160 | $26,203 | $27,291 | $28,423 | $29,602 | $30,830 | $32,109 | $33,442 | $34,829 | 4.15% |
| **UW** | Trajectory growth & to 60%ile | $19,744 | $20,897 | $22,118 | $23,409 | $24,777 | $26,224 | $27,755 | $29,376 | $31,092 | $32,907 | $34,829 | 5.84% |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | FTE | 38,628 | | | | | | | | | | | |
| No COLA | Total Funding | | 762.7 | 812.2 | 864.9 | 921.0 | 980.8 | 1,044 | 1,112 | 1,184 | 1,261 | 1,343 | 1,430 | in $ millions |
| | Change from previous year | | - | 49.5 | 52.7 | 56.1 | 59.8 | 63.7 | 67.8 | 72.2 | 76.9 | 81.9 | 87.2 | |
| Partial COLA | Total Funding | | 762.7 | 810.7 | 861.8 | 916.0 | 973.7 | 1,035 | 1,100 | 1,169 | 1,243 | 1,321 | 1,405 | |
| | Change from previous year | | - | 48.0 | 51.1 | 54.3 | 57.7 | 61.3 | 65.2 | 69.3 | 73.6 | 78.3 | 83.2 | |
| Full COLA | Total Funding | | 762.7 | 807.2 | 854.4 | 904.3 | 957.1 | 1,013 | 1,072 | 1,135 | 1,201 | 1,271 | 1,345 | |
| | Change from previous year | | - | 44.5 | 47.1 | 49.9 | 52.8 | 55.9 | 59.2 | 62.6 | 66.3 | 70.1 | 74.2 | |

"Trajectory growth" is assumed annual change in per-student funding for the GCS 60th percentile. It includes inflation (price level changes) and general spending changes.


University of Washington
$40,000
$35,000
$30,000
$25,000
$20,000
$15,000
$10,000
$5,000
$0
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
GCS60 - No COLA
GCS60 - Partial COLA
GCS60 - Full COLA
UW - No COLA
UW - Partial COLA
UW - Full COLA

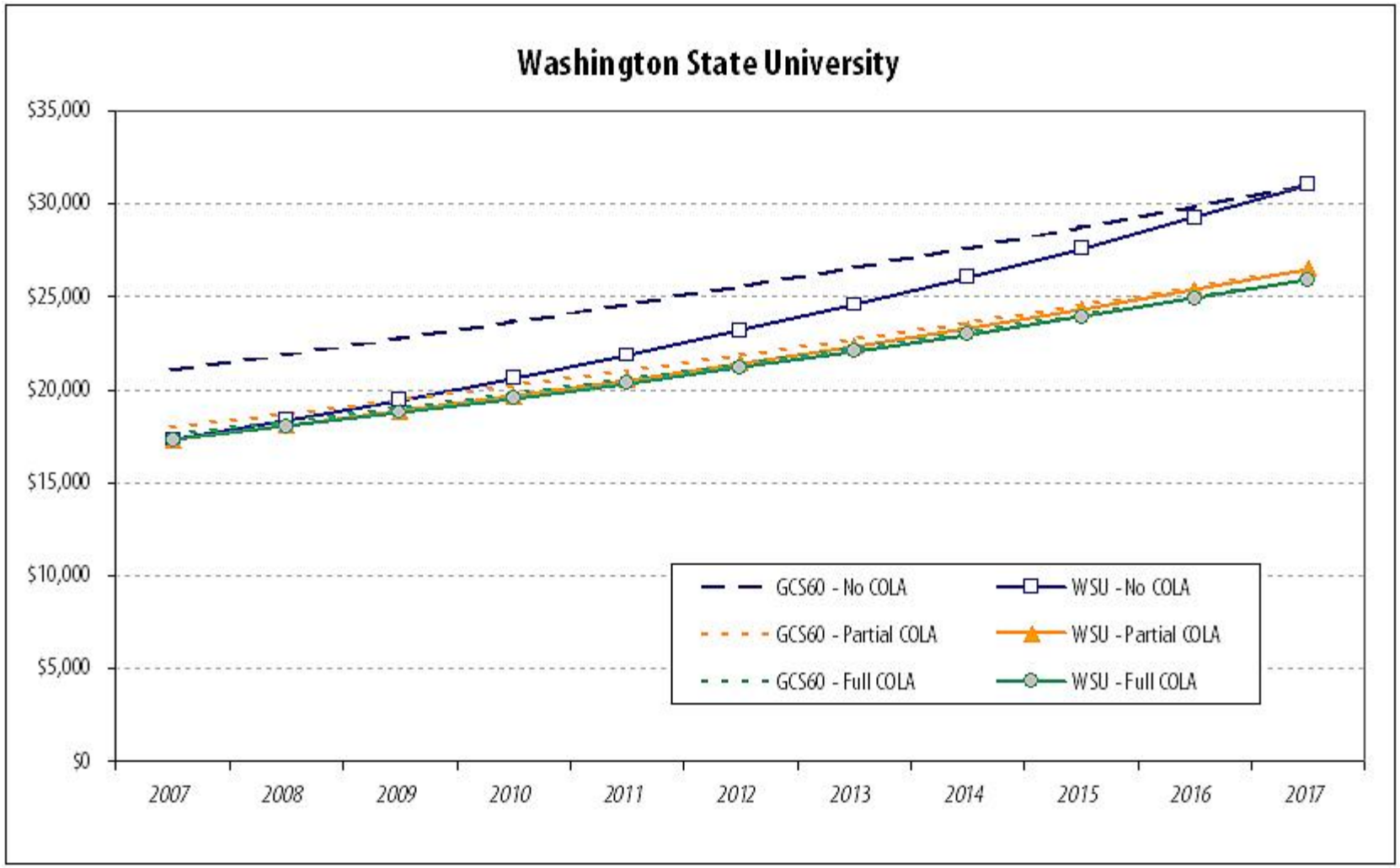
# WSU

| GCS 60th Percentile Trajectory Growth | 3.97% |
|---|---|

| | | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | Annual Growth Rate |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ***No Cost-of-Living Adjustment*** | | | | | | | | | | | | | |
| **GCS60** | With trajectory growth | $21,029 | $21,863 | $22,730 | $23,632 | $24,569 | $25,544 | $26,557 | $27,611 | $28,706 | $29,845 | $31,029 | 3.97% |
| **WSU** | Trajectory growth & to 60%ile | $17,317 | $18,357 | $19,460 | $20,628 | $21,867 | $23,180 | $24,573 | $26,048 | $27,613 | $29,271 | $31,029 | 6.01% |
| ***Partial Cost-of-Living Adjustment*** | | | | | | | | | | | | | |
| **GCS60** | With trajectory growth | $17,960 | $18,673 | $19,414 | $20,184 | $20,985 | $21,817 | $22,683 | $23,582 | $24,518 | $25,491 | $26,502 | 3.97% |
| **WSU** | Trajectory growth & to 60%ile | $17,317 | $18,070 | $18,855 | $19,675 | $20,530 | $21,423 | $22,354 | $23,326 | $24,340 | $25,398 | $26,502 | 4.35% |
| ***Full Cost-of-Living Adjustment*** | | | | | | | | | | | | | |
| **GCS60** | With trajectory growth | $17,570 | $18,267 | $18,991 | $19,745 | $20,528 | $21,342 | $22,189 | $23,069 | $23,984 | $24,936 | $25,925 | 3.97% |
| **WSU** | Trajectory growth & to 60%ile | $17,317 | $18,030 | $18,773 | $19,546 | $20,350 | $21,188 | $22,061 | $22,969 | $23,915 | $24,900 | $25,925 | 4.12% |

| | | FTE | 21,064 | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| No COLA | Total Funding | | 364.8 | 386.7 | 409.9 | 434.5 | 460.6 | 488 | 518 | 549 | 582 | 617 | 654 | in $ millions |
| | Change from previous year | | - | 21.9 | 23.2 | 24.6 | 26.1 | 27.7 | 29.3 | 31.1 | 33.0 | 34.9 | 37.0 | |
| Partial COLA | Total Funding | | 364.8 | 380.6 | 397.2 | 414.4 | 432.5 | 451 | 471 | 491 | 513 | 535 | 558 | |
| | Change from previous year | | - | 15.9 | 16.5 | 17.3 | 18.0 | 18.8 | 19.6 | 20.5 | 21.4 | 22.3 | 23.3 | |
| Full COLA | Total Funding | | 364.8 | 379.8 | 395.4 | 411.7 | 428.7 | 446 | 465 | 484 | 504 | 524 | 546 | |
| | Change from previous year | | - | 15.0 | 15.6 | 16.3 | 17.0 | 17.7 | 18.4 | 19.1 | 19.9 | 20.7 | 21.6 | |

"Trajectory growth" is assumed annual change in per-student funding for the GCS 60th percentile. It includes inflation (price level changes) and general spending changes.


Washington State University
$35,000
$30,000
$25,000
$20,000
$15,000
$10,000
$5,000
$0
2007
2008
2009
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2015
2016
2017
GCS60 - No COLA
GCS60 - Partial COLA
GCS60 - Full COLA
WSU - No COLA
WSU - Partial COLA
WSU - Full COLA

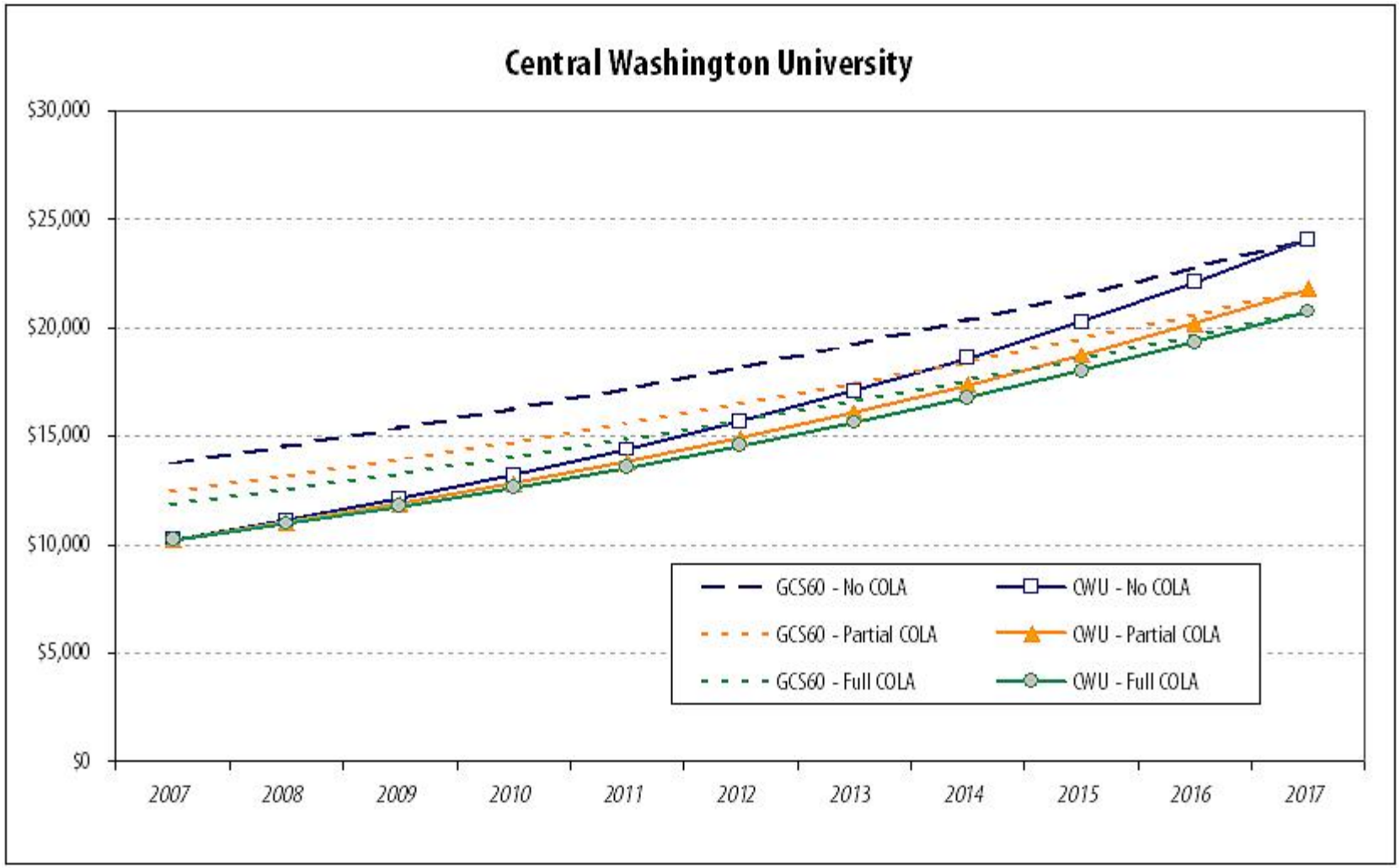
# CWU

| GCS 60th Percentile Trajectory Growth | 5.77% |
|---|---|

| | | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | Annual Growth Rate |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ***No Cost-of-Living Adjustment*** | | | | | | | | | | | | | |
| **GCS60** | With trajectory growth | $13,736 | $14,528 | $15,365 | $16,252 | $17,189 | $18,180 | $19,228 | $20,337 | $21,510 | $22,750 | $24,062 | 5.77% |
| **CWU** | Trajectory growth & to 60%ile | $10,214 | $11,127 | $12,123 | $13,208 | $14,389 | $15,677 | $17,079 | $18,608 | $20,272 | $22,086 | $24,062 | 8.95% |
| ***Partial Cost-of-Living Adjustment*** | | | | | | | | | | | | | |
| **GCS60** | With trajectory growth | $12,438 | $13,155 | $13,914 | $14,716 | $15,565 | $16,462 | $17,411 | $18,415 | $19,477 | $20,601 | $21,789 | 5.77% |
| **CWU** | Trajectory growth & to 60%ile | $10,214 | $11,018 | $11,885 | $12,820 | $13,829 | $14,918 | $16,092 | $17,359 | $18,725 | $20,199 | $21,789 | 7.87% |
| ***Full Cost-of-Living Adjustment*** | | | | | | | | | | | | | |
| **GCS60** | With trajectory growth | $11,850 | $12,534 | $13,256 | $14,021 | $14,829 | $15,685 | $16,589 | $17,546 | $18,557 | $19,628 | $20,760 | 5.77% |
| **CWU** | Trajectory growth & to 60%ile | $10,214 | $10,964 | $11,770 | $12,635 | $13,564 | $14,561 | $15,632 | $16,781 | $18,014 | $19,338 | $20,760 | 7.35% |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | FTE | 9,770 | | | | | | | | | | | |
| No COLA | Total Funding | 99.8 | 108.7 | 118.4 | 129.0 | 140.6 | 153 | 167 | 182 | 198 | 216 | 235 | in $ millions |
| | Change from previous year | - | 8.9 | 9.7 | 10.6 | 11.5 | 12.6 | 13.7 | 14.9 | 16.3 | 17.7 | 19.3 | |
| Partial COLA | Total Funding | 99.8 | 107.6 | 116.1 | 125.3 | 135.1 | 146 | 157 | 170 | 183 | 197 | 213 | |
| | Change from previous year | - | 7.9 | 8.5 | 9.1 | 9.9 | 10.6 | 11.5 | 12.4 | 13.3 | 14.4 | 15.5 | |
| Full COLA | Total Funding | 99.8 | 107.1 | 115.0 | 123.4 | 132.5 | 142 | 153 | 164 | 176 | 189 | 203 | |
| | Change from previous year | - | 7.3 | 7.9 | 8.5 | 9.1 | 9.7 | 10.5 | 11.2 | 12.1 | 12.9 | 13.9 | |

"Trajectory growth" is assumed annual change in per-student funding for the GCS 60th percentile. It includes inflation (price level changes) and general spending changes.


Central Washington University
$30,000
$25,000
$20,000
$15,000
$10,000
$5,000
$0
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
GCS60 - No COLA
GCS60 - Partial COLA
GCS60 - Full COLA
CWU - No COLA
CWU - Partial COLA
CWU - Full COLA

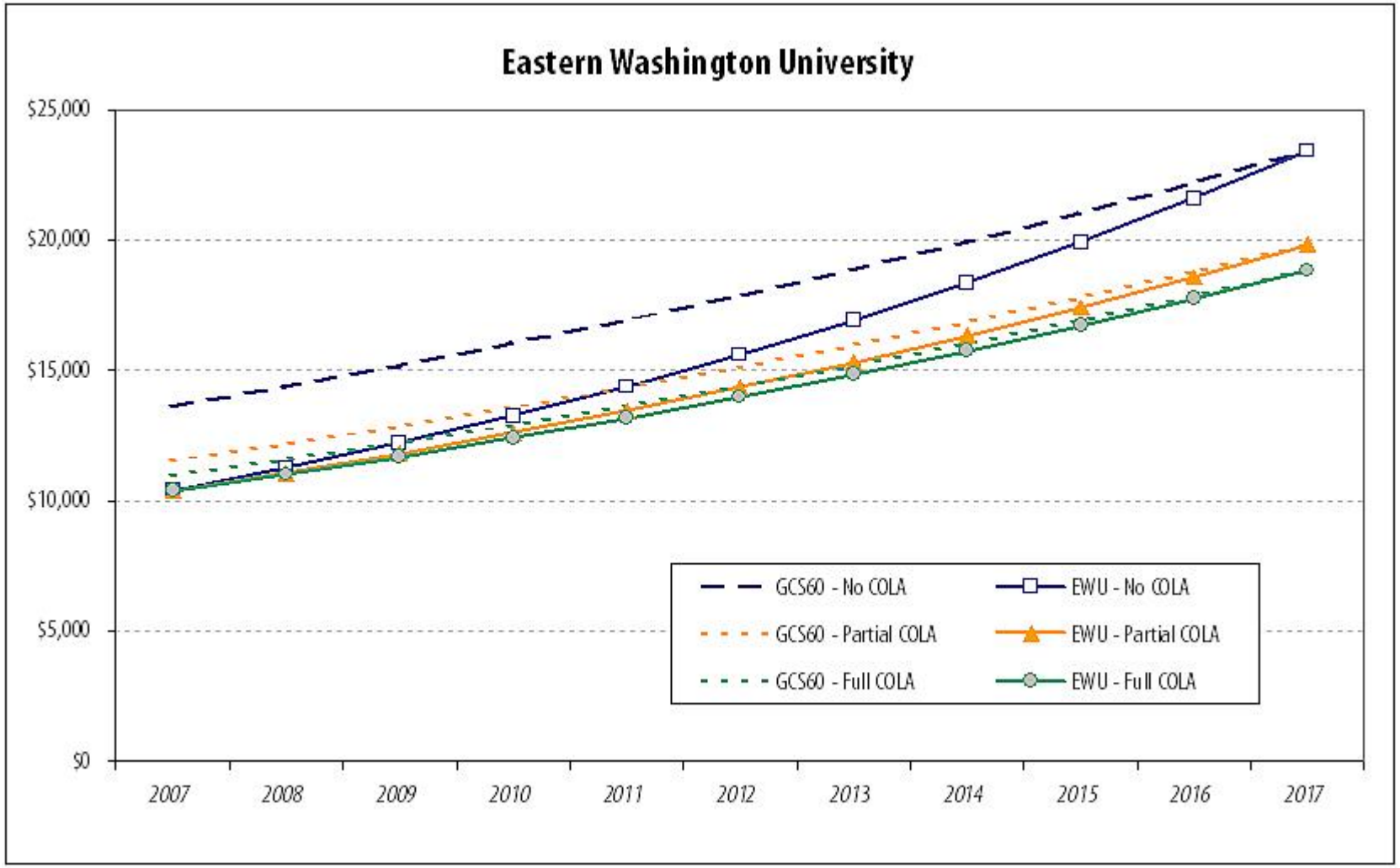
# EWU

| GCS 60th Percentile Trajectory Growth | 5.57% |
|---|---|

| | | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | Annual Growth Rate |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ***No Cost-of-Living Adjustment*** | | | | | | | | | | | | | |
| **GCS60** | With trajectory growth | $13,632 | $14,391 | $15,193 | $16,040 | $16,934 | $17,877 | $18,873 | $19,925 | $21,035 | $22,208 | $23,445 | 5.57% |
| **EWU** | Trajectory growth & to 60%ile | $10,385 | $11,266 | $12,222 | $13,259 | $14,383 | $15,604 | $16,928 | $18,364 | $19,922 | $21,612 | $23,445 | 8.48% |
| ***Partial Cost-of-Living Adjustment*** | | | | | | | | | | | | | |
| **GCS60** | With trajectory growth | $11,529 | $12,171 | $12,849 | $13,565 | $14,321 | $15,119 | $15,962 | $16,851 | $17,790 | $18,782 | $19,828 | 5.57% |
| **EWU** | Trajectory growth & to 60%ile | $10,385 | $11,079 | $11,819 | $12,609 | $13,451 | $14,350 | $15,309 | $16,331 | $17,422 | $18,586 | $19,828 | 6.68% |
| ***Full Cost-of-Living Adjustment*** | | | | | | | | | | | | | |
| **GCS60** | With trajectory growth | $10,965 | $11,576 | $12,221 | $12,902 | $13,621 | $14,380 | $15,181 | $16,027 | $16,920 | $17,863 | $18,858 | 5.57% |
| **EWU** | Trajectory growth & to 60%ile | $10,385 | $11,023 | $11,701 | $12,420 | $13,184 | $13,994 | $14,855 | $15,768 | $16,737 | $17,766 | $18,858 | 6.15% |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | FTE | 9,988 | | | | | | | | | | | |
| No COLA | Total Funding | 103.7 | 112.5 | 122.1 | 132.4 | 143.7 | 156 | 169 | 183 | 199 | 216 | 234 | in $ millions |
| | Change from previous year | - | 8.8 | 9.5 | 10.4 | 11.2 | 12.2 | 13.2 | 14.3 | 15.6 | 16.9 | 18.3 | |
| Partial COLA | Total Funding | 103.7 | 110.7 | 118.0 | 125.9 | 134.3 | 143 | 153 | 163 | 174 | 186 | 198 | |
| | Change from previous year | - | 6.9 | 7.4 | 7.9 | 8.4 | 9.0 | 9.6 | 10.2 | 10.9 | 11.6 | 12.4 | |
| Full COLA | Total Funding | 103.7 | 110.1 | 116.9 | 124.1 | 131.7 | 140 | 148 | 157 | 167 | 177 | 188 | |
| | Change from previous year | - | 6.4 | 6.8 | 7.2 | 7.6 | 8.1 | 8.6 | 9.1 | 9.7 | 10.3 | 10.9 | |

"Trajectory growth" is assumed annual change in per-student funding for the GCS 60th percentile. It includes inflation (price level changes) and general spending changes.


Eastern Washington University
$25,000
$20,000
$15,000
$10,000
$5,000
$0
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
GCS60 - No COLA
GCS60 - Partial COLA
GCS60 - Full COLA
EWU - No COLA
EWU - Partial COLA
EWU - Full COLA

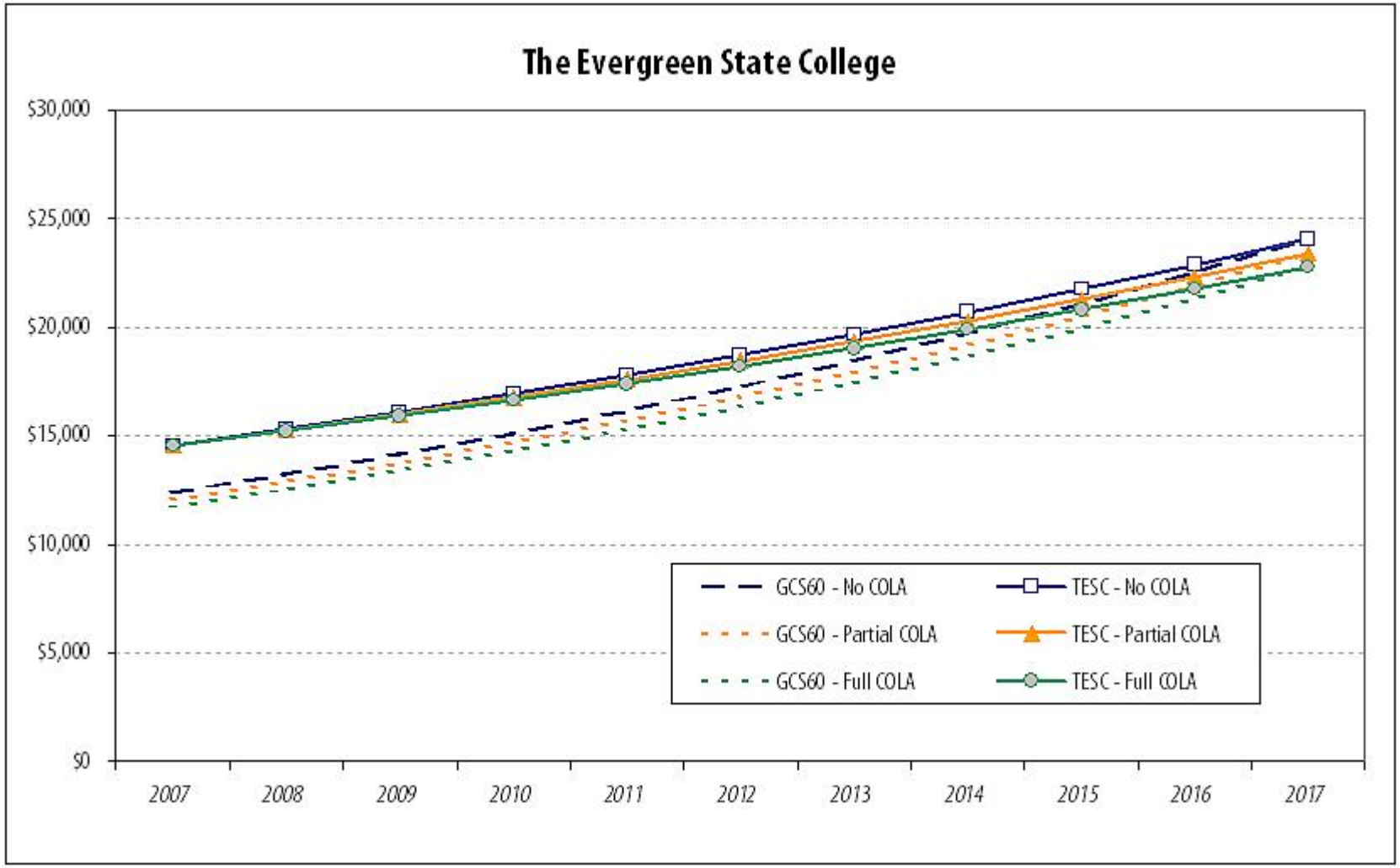
# TESC

| GCS 60th Percentile Trajectory Growth | 6.87% |
|---|---|

| | | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | Annual Growth Rate |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ***No Cost-of-Living Adjustment*** | | | | | | | | | | | | | |
| **GCS 60** | With trajectory growth | $12,381 | $13,231 | $14,140 | $15,112 | $16,150 | $17,260 | $18,446 | $19,713 | $21,067 | $22,515 | $24,062 | 6.87% |
| **TESC** | Trajectory growth & to 60%ile | $14,549 | $15,300 | $16,089 | $16,920 | $17,792 | $18,710 | $19,676 | $20,691 | $21,758 | $22,881 | $24,062 | 5.16% |
| ***Partial Cost-of-Living Adjustment*** | | | | | | | | | | | | | |
| **GCS 60** | With trajectory growth | $12,029 | $12,856 | $13,739 | $14,683 | $15,692 | $16,770 | $17,922 | $19,154 | $20,469 | $21,876 | $23,379 | 6.87% |
| **TESC** | Trajectory growth & to 60%ile | $14,549 | $15,256 | $15,997 | $16,774 | $17,589 | $18,443 | $19,339 | $20,278 | $21,263 | $22,296 | $23,379 | 4.86% |
| ***Full Cost-of-Living Adjustment*** | | | | | | | | | | | | | |
| **GCS 60** | With trajectory growth | $11,714 | $12,518 | $13,378 | $14,297 | $15,280 | $16,330 | $17,451 | $18,650 | $19,932 | $21,301 | $22,765 | 6.87% |
| **TESC** | Trajectory growth & to 60%ile | $14,549 | $15,216 | $15,912 | $16,641 | $17,402 | $18,199 | $19,032 | $19,904 | $20,815 | $21,768 | $22,765 | 4.58% |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | FTE | 4,009 | | | | | | | | | | | |
| No COLA | Total Funding | | 58.3 | 61.3 | 64.5 | 67.8 | 71.3 | 75 | 79 | 83 | 87 | 92 | 96 | in $ millions |
| | Change from previous year | | - | 3.0 | 3.2 | 3.3 | 3.5 | 3.7 | 3.9 | 4.1 | 4.3 | 4.5 | 4.7 | |
| Partial COLA | Total Funding | | 58.3 | 61.2 | 64.1 | 67.2 | 70.5 | 74 | 78 | 81 | 85 | 89 | 94 | |
| | Change from previous year | | - | 2.8 | 3.0 | 3.1 | 3.3 | 3.4 | 3.6 | 3.8 | 3.9 | 4.1 | 4.3 | |
| Full COLA | Total Funding | | 58.3 | 61.0 | 63.8 | 66.7 | 69.8 | 73 | 76 | 80 | 83 | 87 | 91 | |
| | Change from previous year | | - | 2.7 | 2.8 | 2.9 | 3.1 | 3.2 | 3.3 | 3.5 | 3.7 | 3.8 | 4.0 | |

"Trajectory growth" is assumed annual change in per-student funding for the GCS 60th percentile. It includes inflation (price level changes) and general spending changes.


The Evergreen State College
$30,000
$25,000
$20,000
$15,000
$10,000
$5,000
$0
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
GCS60 - No COLA
GCS60 - Partial COLA
GCS60 - Full COLA
TESC - No COLA
TESC - Partial COLA
TESC - Full COLA

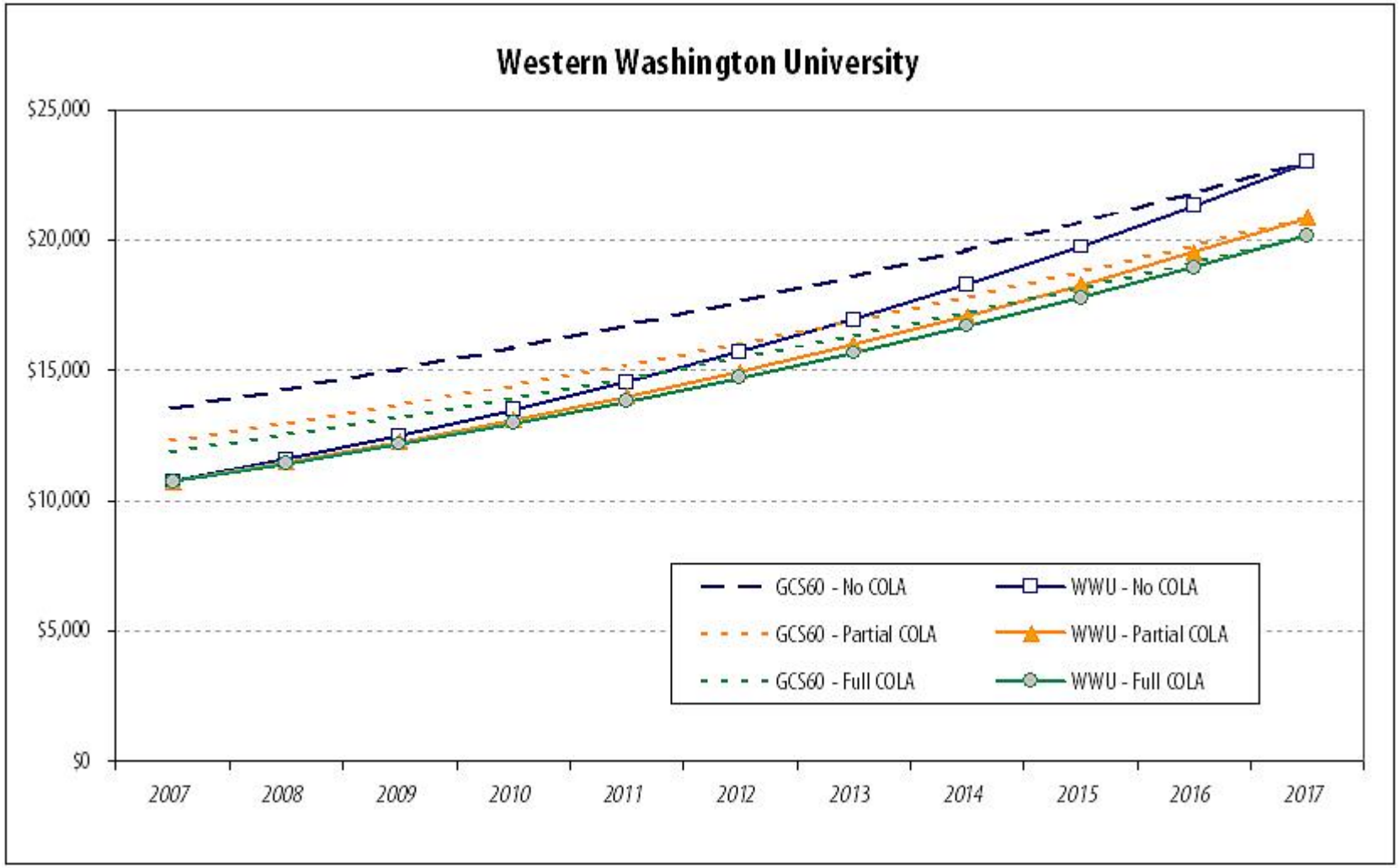
# WWU

| GCS 60th Percentile Trajectory Growth | 5.44% |
|---|---|

| | | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | Annual Growth Rate |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ***No Cost-of-Living Adjustment*** | | | | | | | | | | | | | |
| **GCS 60** | With trajectory growth | $13,543 | $14,280 | $15,057 | $15,876 | $16,739 | $17,650 | $18,610 | $19,623 | $20,690 | $21,816 | $23,002 | 5.44% |
| **WWU** | Trajectory growth & to 60%ile | $10,740 | $11,590 | $12,508 | $13,497 | $14,565 | $15,718 | $16,962 | $18,304 | $19,753 | $21,316 | $23,002 | 7.91% |
| ***Partial Cost-of-Living Adjustment*** | | | | | | | | | | | | | |
| **GCS 60** | With trajectory growth | $12,290 | $12,959 | $13,664 | $14,407 | $15,191 | $16,018 | $16,889 | $17,808 | $18,776 | $19,798 | $20,875 | 5.44% |
| **WWU** | Trajectory growth & to 60%ile | $10,740 | $11,478 | $12,267 | $13,110 | $14,011 | $14,973 | $16,002 | $17,102 | $18,277 | $19,533 | $20,875 | 6.87% |
| ***Full Cost-of-Living Adjustment*** | | | | | | | | | | | | | |
| **GCS 60** | With trajectory growth | $11,882 | $12,528 | $13,210 | $13,928 | $14,686 | $15,485 | $16,327 | $17,216 | $18,152 | $19,140 | $20,181 | 5.44% |
| **WWU** | Trajectory growth & to 60%ile | $10,740 | $11,440 | $12,184 | $12,978 | $13,823 | $14,722 | $15,681 | $16,702 | $17,789 | $18,947 | $20,181 | 6.51% |

| | | FTE | 13,085 | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| No COLA | Total Funding | | 140.5 | 151.7 | 163.7 | 176.6 | 190.6 | 206 | 222 | 240 | 258 | 279 | 301 | in $ millions |
| | Change from previous year | | - | 11.1 | 12.0 | 13.0 | 14.0 | 15.1 | 16.3 | 17.6 | 19.0 | 20.5 | 22.1 | |
| Partial COLA | Total Funding | | 140.5 | 150.2 | 160.5 | 171.5 | 183.3 | 196 | 209 | 224 | 239 | 256 | 273 | |
| | Change from previous year | | - | 9.7 | 10.3 | 11.0 | 11.8 | 12.6 | 13.5 | 14.4 | 15.4 | 16.4 | 17.6 | |
| Full COLA | Total Funding | | 140.5 | 149.7 | 159.4 | 169.8 | 180.9 | 193 | 205 | 219 | 233 | 248 | 264 | |
| | Change from previous year | | - | 9.1 | 9.7 | 10.4 | 11.1 | 11.8 | 12.5 | 13.4 | 14.2 | 15.2 | 16.1 | |

"Trajectory growth" is assumed annual change in per-student funding for the GCS 60th percentile. It includes inflation (price level changes) and general spending changes.


Western Washington University
$25,000
$20,000
$15,000
$10,000
$5,000
$0
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
GCS60 - No COLA
GCS60 - Partial COLA
GCS60 - Full COLA
WWU - No COLA
WWU - Partial COLA
WWU - Full COLA

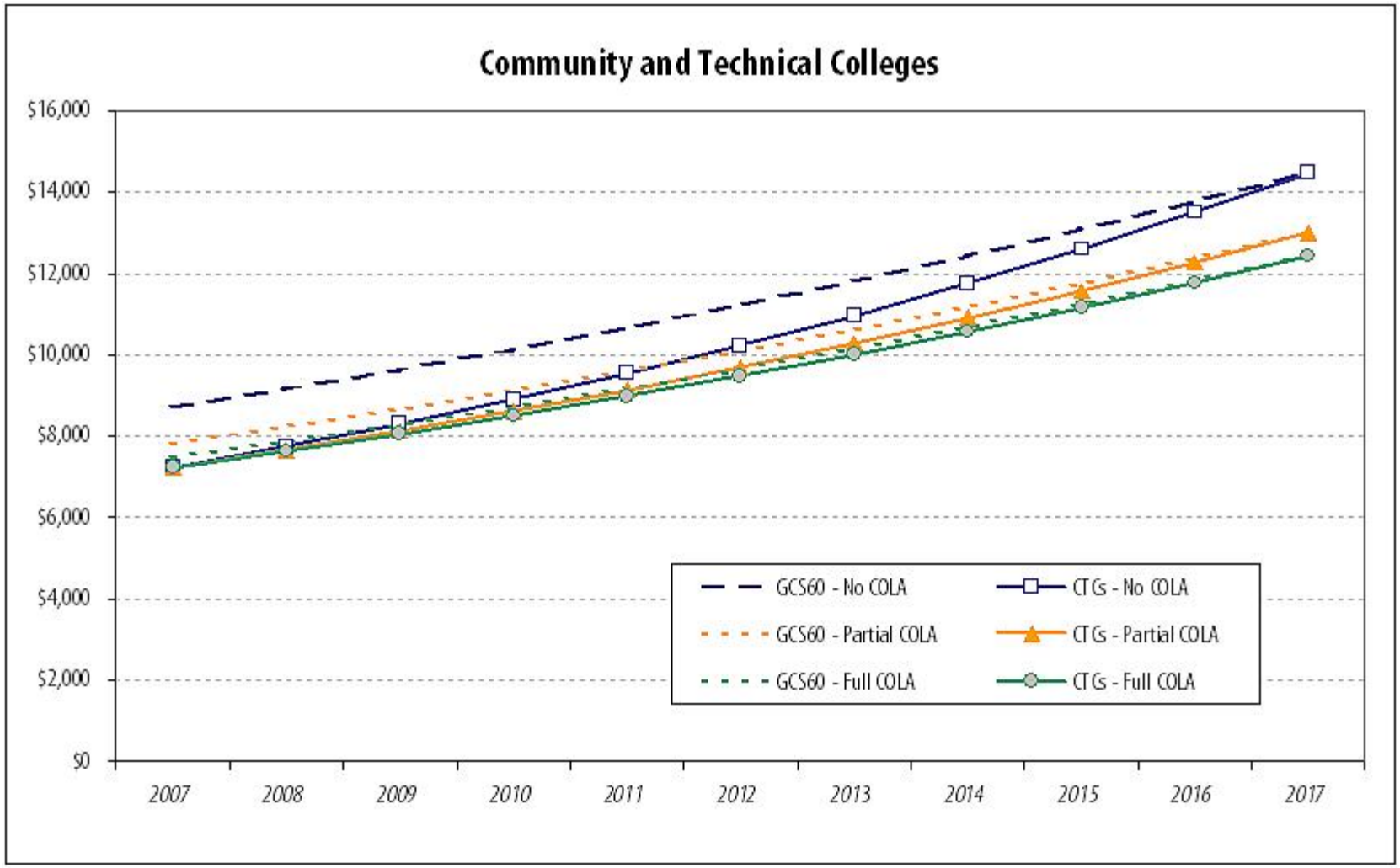
# Community and Technical Colleges

| GCS 60th Percentile Trajectory Growth | 5.22% |
|---|---|

| | | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | Annual Growth Rate |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ***No Cost-of-Living Adjustment*** | | | | | | | | | | | | | |
| **GCS 60** | With trajectory growth | $8,704 | $9,158 | $9,637 | $10,140 | $10,670 | $11,227 | $11,814 | $12,431 | $13,080 | $13,763 | $14,482 | 5.22% |
| **CTC** | Trajectory growth & to 60%ile | $7,228 | $7,748 | $8,306 | $8,904 | $9,544 | $10,231 | $10,968 | $11,757 | $12,603 | $13,510 | $14,482 | 7.20% |
| ***Partial Cost-of-Living Adjustment*** | | | | | | | | | | | | | |
| **GCS 60** | With trajectory growth | $7,818 | $8,227 | $8,656 | $9,109 | $9,584 | $10,085 | $10,612 | $11,166 | $11,750 | $12,363 | $13,009 | 5.22% |
| **CTC** | Trajectory growth & to 60%ile | $7,228 | $7,666 | $8,130 | $8,622 | $9,143 | $9,697 | $10,284 | $10,906 | $11,567 | $12,267 | $13,009 | 6.05% |
| ***Full Cost-of-Living Adjustment*** | | | | | | | | | | | | | |
| **GCS 60** | With trajectory growth | $7,472 | $7,863 | $8,274 | $8,706 | $9,161 | $9,639 | $10,143 | $10,672 | $11,230 | $11,817 | $12,434 | 5.22% |
| **CTC** | Trajectory growth & to 60%ile | $7,228 | $7,631 | $8,056 | $8,505 | $8,980 | $9,480 | $10,009 | $10,566 | $11,156 | $11,777 | $12,434 | 5.57% |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | FTE | *120,568* | | | | | | | | | | | |
| No COLA | Total Funding | 871.5 | 934.2 | 1,001.4 | 1,073.5 | 1,150.7 | 1,234 | 1,322 | 1,418 | 1,520 | 1,629 | 1,746 | in $ millions |
| | Change from previous year | - | 62.7 | 67.2 | 72.1 | 77.3 | 82.8 | 88.8 | 95.2 | 102.0 | 109.4 | 117.2 | |
| Partial COLA | Total Funding | 871.5 | 924.2 | 980.2 | 1,039.5 | 1,102.4 | 1,169 | 1,240 | 1,315 | 1,395 | 1,479 | 1,568 | |
| | Change from previous year | - | 52.8 | 55.9 | 59.3 | 62.9 | 66.7 | 70.8 | 75.1 | 79.6 | 84.4 | 89.5 | |
| Full COLA | Total Funding | 871.5 | 920.0 | 971.3 | 1,025.5 | 1,082.6 | 1,143 | 1,207 | 1,274 | 1,345 | 1,420 | 1,499 | |
| | Change from previous year | - | 48.6 | 51.3 | 54.1 | 57.2 | 60.4 | 63.7 | 67.3 | 71.0 | 75.0 | 79.2 | |

"Trajectory growth" is assumed annual change in per-student funding for the GCS 60th percentile. It includes inflation (price level changes) and general spending changes.


Community and Technical Colleges
$16,000
$14,000
$12,000
$10,000
$8,000
$6,000
$4,000
$2,000
$0
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
GCS60 - No COLA
GCS60 - Partial COLA
GCS60 - Full COLA
CTGs - No COLA
CTGs - Partial COLA
CTGs - Full COLA

## Summary

The following table summarizes each Washington institution's per-student funding trajectory growth rates needed to achieve the 60th percentile among comparable global challenge state institutions.

| | Assumed Annual Growth Rate of GCS 60th Percentile | Growth Rate Needed to Achieve 60th Percentile in 2017 | | |
|---|---|---|---|---|
| | | No Cost-of-Living Adjustment | Partial Cost-of-Living Adjustment | Full Cost-of-Living Adjustment |
| University of Washington | 4.15 % | 6.49 % | 6.30 % | 5.84 % |
| Washington State University | 3.97 % | 6.01 % | 4.35 % | 4.12 % |
| Central Washington University | 5.77 % | 8.95 % | 7.87 % | 7.35 % |
| Eastern Washington University | 5.57 % | 8.48 % | 6.68 % | 6.15 % |
| Western Washington University | 5.44 % | 7.91 % | 6.87 % | 6.51 % |
| The Evergreen State College | 6.87 % | 5.16 % | 4.86 % | 4.58 % |
| Community and Technical College System | 5.22 % | 7.20 % | 6.05 % | 5.57 % |

These numbers summarize the results of a detailed process to establish lists of comparable institutions, adjust for program and enrollment differences, account for reporting irregularities, and adjust for spatial cost-of-living variations. While this report reflects a concerted effort to address data issues and use reasonable methodologies, there were numerous challenges.

### Selecting similar institutions of higher education

Using the global challenge states as a comparison group is a departure from the usual process of identifying peer or comparable institutions based solely on institutional characteristics. While the global challenge states might be similar to Washington with respect to the new economy index, it does not necessarily follow that the higher education institutions in those states are the most suitable for comparing per-student funding.

### Cost-of-living adjustment

The adjustment for regional differences in cost of living posed the greatest challenge of all requirements. First, there is not a standard, accepted method for controlling for spatial cost-of-living differences. The index produced by ACCRA was a step in the right direction, as it is intended to capture regional variation in the costs facing households. However, the ACCRA data does not cover all areas in which there is a comparable institution. Second, while Fair Market Rent has a strong correlation with the cost-of-living index and the estimate is reasonable for many regions, there are areas such as Whitman County where the estimated index is likely to be inaccurate. One potential resolution to the problem of using FMR to estimate a cost-of-living index would be to purchase cost-of-living data from a private firm for all areas represented by comparison institutions. However, the cost of doing so may be prohibitive. Third, the concept of 'per-student funding' does not fit perfectly with the notion

of cost of living. This was addressed by including a partial cost-of-living adjustment, but that is only an estimate of the cost variation that institutions face.

**Construction of trajectories**

The cost-of-living adjustment, as applied to the starting point (2006-07), was intended to put the comparable institutions and Washington institutions on equal footing for comparisons of current per-student funding. The trajectories were built on the assumption that average recent growth rates will continue. Each Washington institution's per-student funding was assumed to grow at that average rate plus make up the difference to reach the 60th percentile level.

These assumed growth rates do not distinguish between funding changes that are attributed to inflation (overall price level changes) and real funding changes. That is not of consequence, however, due to the assumptions inherent in the methodology. For the adjusted or partially adjusted scenarios the study methodology implicitly assumed that the growth to 2017 will be equal to the average rate within a given set of comparables and the real versus inflation components of that growth are also the same for each. This ensures that each Washington institution's per-student funding corresponds to the 60$^{th}$ percentile level in 2017. The historical proportion of inflation versus real change in the growth rate is immaterial unless growth in that time frame was atypical. Assumptions inherent in the unadjusted scenario are less restrictive: the proportion of funding growth that is inflation versus real is not relevant since an adjustment for price level is not assumed for the starting point or in 2017.

## Appendix A: Text of RCW 28B.15.068

### 28B.15.068
### Tuition fees increase limitations — State funding goals — Reports — "Global challenge states."

(1) Beginning with the 2007-08 academic year and ending with the 2016-17 academic year, tuition fees charged to full-time resident undergraduate students may increase no greater than seven percent over the previous academic year in any institution of higher education. Annual reductions or increases in full-time tuition fees for resident undergraduate students shall be as provided in the omnibus appropriations act, within the seven percent increase limit established in this section. To the extent that state appropriations combined with tuition and fee revenues are insufficient to achieve the total per-student funding goals established in subsection (2) of this section, the legislature may revisit state appropriations, authorized enrollment levels, and changes in tuition fees for any given fiscal year.

(2) The state shall adopt as its goal total per-student funding levels, from state appropriations plus tuition and fees, of at least the 60th percentile of total per-student funding at similar public institutions of higher education in the global challenge states. In defining comparable per-student funding levels, the office of financial management shall adjust for regional cost-of-living differences; for differences in program offerings and in the relative mix of lower division, upper division, and graduate students; and for accounting and reporting differences among the comparison institutions. The office of financial management shall develop a funding trajectory for each four-year institution of higher education and for the community and technical college system as a whole that when combined with tuition and fees revenue allows the state to achieve its funding goal for each four-year institution and the community and technical college system as a whole no later than fiscal year 2017. The state shall not reduce enrollment levels below fiscal year 2007 budgeted levels in order to improve or alter the per-student funding amount at any four-year institution of higher education or the community and technical college system as a whole. The state recognizes that each four-year institution of higher education and the community and technical college system as a whole have different funding requirements to achieve desired performance levels, and that increases to the total per-student funding amount may need to exceed the minimum funding goal.

(3) By September 1st of each year beginning [in] 2008, the office of financial management shall report to the governor, the higher education coordinating board, and appropriate committees of the legislature with updated estimates of the total per-student funding level that represents the 60th percentile of funding for comparable institutions of higher education in the global challenge states, and the progress toward that goal that was made for each of the public institutions of higher education.

(4) As used in this section, "global challenge states" are the top performing states on the new economy index published by the progressive policy institute as of July 22, 2007. The new economy index ranks states on indicators of their potential to compete in the new economy. At least once every five years, the office of financial management shall determine if changes to the list of global challenge states are appropriate. The office of financial management shall report its findings to the governor and the legislature.

## Appendix B: Comparable Institutions Used for Per-Student Funding Study

For each Washington public baccalaureate institution and for the Community & Technical College system, a set of comparable institutions have been identified, based on the 2005 Carnegie Classification system, on fall FTE enrollment, and on programmatic offerings.

The primary data source used to identify comparable institutions is the Integrated Postsecondary Education Data System (IPEDS), specifically (1) institutional characteristics files (HD2005 and HD2006), (2) enrollment files (EF2005A and EF2006A), and (3) finance (F0607_F1A), downloaded in July 2008. Institutions with veterinary schools were identified using information provided on the Association of American Veterinary Medical Colleges website.[5] Identification of public two-year institutions that are part of state community and technical college systems was based on information obtained from the higher education websites for each state.[6]

The **Carnegie Classification 2005: Basic** categorization was the beginning point for the identification of a set of comparable institutions for the baccalaureate institutions. The following categories were used:

**Doctorate-granting Universities.** Includes institutions that award at least 20 doctoral degrees per year (excluding doctoral-level degrees that qualify recipients for entry into professional practice, such as the JD, MD, PharmD, DPT, etc.). Doctoral institutions were classified by the level of research activity as determined by the Carnegie Foundation using a variety of sources.[7]

- Research Universities (very high research activity)
- Research Universities (high research activity)
- Doctoral/Research Universities

**Master's Colleges and Universities.** Includes institutions that award at least 50 master's degrees per year.

- Master's Colleges and Universities (larger programs) – those awarding at least 200 master's degrees in 2003-04
- Master's Colleges and Universities (medium programs) – those awarding 100 to 199 master's degrees in 2003-04

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[5] Association of American Veterinary Medical Colleges website: [www.aavmc.org/]

[6] California Postsecondary Education Commission [www.cpec.ca.gov/]; California Community Colleges System Office (CCCSO) [www.cccco.edu/]Colorado Department of Higher Education [highered.colorado.gov]; Connecticut Department of Higher Education [www.ctdhe.org/]; Maryland Higher Education Commission [ www.mhec.state.md.us/]; Massachusetts Department of Higher Education [www.mass.edu/]; New Jersey Commission on Higher Education [www.state.nj.us/highereducation/]; and State Council of Higher Education for Virginia [www.schev.edu/].

[7] The Carnegie Foundation used the following items to create two indices of research activity: research & development (R&D) expenditures in science and engineering (S&E; "science and engineering" is defined by National Science Foundation (NSF) to include the social sciences); R&D expenditures in non-S&E fields; S&E research staff (postdoctoral appointees and other non-faculty research staff with doctorates); doctoral conferrals in humanities fields, in social science fields, in STEM (science, technology, engineering, and mathematics) fields, and in other fields (e.g., business, education, public policy, social work). One index represented the overall level of research activity and the other represented per-capita research activity. Institutions that were very high on *either* index were assigned to the "very high" group, while institutions that were high on at least one (but very high on neither) were assigned to the "high" group. Remaining institutions and those not represented in the NSF data collections were assigned to the "Doctoral/Research Universities" category. [ www.carnegiefoundation.org/classifications/]

Master's Colleges and Universities (smaller programs) – those awarding 50 to 99 master's degrees in 2003-04

**Baccalaureate Colleges.** Includes institutions where baccalaureate degrees represent at least 10 percent of all undergraduate degrees and that award fewer than 50 master's degrees or fewer than 20 doctoral degrees per year.

Baccalaureate Colleges—Arts & Sciences (those with at least half of bachelor's degree majors in arts and sciences)

Baccalaureate Colleges—Diverse Fields (those with less than half of bachelor's degree majors in arts and sciences)

Baccalaureate/Associate's Colleges (those where bachelor's degrees represent at least 10 percent but less than half of undergraduate degrees)

For some baccalaureate institutions, the **Carnegie Classification 2005: Undergraduate Profile** categorization was used in identifying comparable institutions. This classification describes the undergraduate population with respect to three characteristics: the proportion of part- and full-time students; standardized test scores of first-year students; and the share of entering students who transfer from another institution.

There are three components to this category:

**Part-time/Full-time**:

**Higher part-time**. At least 40 percent of undergraduates enrolled part-time.

**Medium full-time**. 60 to 79 percent of undergraduates enrolled full-time.

**Full-time**. At least 80 percent of undergraduates enrolled full-time

**Selectivity** – based on Carnegie Foundation analysis of 25$^{th}$ percentile standardized test scores for entering freshmen:

**Inclusive**. These institutions either did not report test score data or the scores indicate that they extend educational opportunity to a wide range of students with respect to academic preparation and achievement.

**Selective**. Roughly the middle two-fifths of baccalaureate institutions.

**More selective**. Roughly the top fifth of baccalaureate institutions.

**Transfer rate**:

**Lower transfer-in**. Fewer than 20 percent of entering undergraduates are transfer students.

**Higher transfer-in**. 20 percent or more of entering undergraduates are transfer students.

The tables that follow show, for each Washington institution or system, the detail for the set of comparable institutions used in this study. For some systems, IPEDS finance data are published for system offices in addition to individual institutions. In these cases the system data is allocated to individual institutions based on Fall 2006 FTE enrollment. The institutions for which system finance data is allocated are indicated by an asterisk (*) by the institution name. The system offices with associated finance data are:

## Appendix B: Comparable Institutions Used for Per-Student Funding Study

| IPEDS Unit ID | Institution Name | State |
|---|---|---|
| 110501 | California State University-Chancellors Office | California |
| 124557 | University of California System Administration Central Office | California |
| 446978 | Colorado State University System Office | Colorado |
| 164146 | University System of Maryland | Maryland |
| 166665 | University of Massachusetts-Central Office | Massachusetts |

In some instances, enrollment is reported by campus within a system, but finance data for all campuses is reported with a single institution, usually the main campus. The University of Connecticut and Rutgers University follow this pattern, so enrollment for all campuses is associated with finance data reported for the main campus.

## Appendix B: Comparable Institutions Used for Per-Student Funding Study

### University of Washington

IPEDS Unit IDs:
236948 - University of Washington-Seattle Campus
377555 - University of Washington-Bothell Campus
377564 - University of Washington-Tacoma Campus

Fall 2005 FTE Enrollment (IPEDS): 38,220 Fall 2006 FTE Enrollment (IPEDS): 38,628
Carnegie 2005 Basic: Research Universities (very high research activity)
Carnegie Classification 2005 Undergraduate Profile: Full-time four-year, more selective, higher transfer-in

Criteria for comparable institutions:
Institutions classified as "Research Universities (very high research activity)" with medical school.
Data for the research institution is combined with data for the medical school if the medical school is not included as part of institution record.

Enrollment and/or finance data for a single institution may be the sum of those items for multiple campuses, which are indicated in the table below. In some instances, noted by asterisk (*), system finance data has been allocated over the member institutions based on FTE enrollment.

| Comparable Institution | IPEDS Unit ID | Institution Name | State |
|---|---|---|---|
| 1 | 110662 | University of California-Los Angeles* | California |
| 2 | 110680 | University of California-San Diego* | California |
| 3 | 110644 | University of California-Davis* | California |
| 4 | 110653 | University of California-Irvine* | California |
| 5 | 126614 | University of Colorado at Boulder | Colorado |
| | 126562 | University of Colorado at Denver and Health Sciences Center | |
| | 126580 | University of Colorado at Colorado Springs | |
| | 128300 | University of Colorado System Office | |
| 6 | 129020 | University of Connecticut | Connecticut |
| | 436818 | University of Connecticut-Tri-Campus (enrollment only) | |
| | 436827 | University of Connecticut-Avery Point (enrollment only) | |
| | 436836 | University of Connecticut-Stamford (enrollment only) | |
| | 243762 | The University of Connecticut School of Medicine and Dentistry | |
| 7 | 163286 | University of Maryland-College Park* | Maryland |
| | 163259 | University of Maryland-Baltimore* | |
| 8 | 166629 | University of Massachusetts-Amherst* | Massachusetts |
| | 166708 | University of Massachusetts Medical School Worcester* | |
| 9 | 186371 | Rutgers University-Camden (enrollment only) | New Jersey |
| | 186380 | Rutgers University-New Brunswick/Piscataway | |
| | 186399 | Rutgers University-Newark (enrollment only) | |
| | 187222 | University of Medicine and Dentistry of New Jersey | |
| 10 | 234076 | University of Virginia-Main Campus | Virginia |

*plus allocated finance data associated with system office

## Appendix B: Comparable Institutions Used for Per-Student Funding Study

### Washington State University

IPEDS Unit ID: 236939

Fall 2005 FTE Enrollment (IPEDS): 21,061 Fall 2006 FTE Enrollment (IPEDS): 21,064
Carnegie 2005 Basic: Research Universities (very high research activity)
Carnegie Classification 2005 Undergraduate Profile: Full-time four-year, selective, higher transfer-in

Criteria for comparable institutions:

One land grant institution classified as "Research Universities (very high research activity)" per state. Institution with veterinary school selected if more than one institution falls in this Carnegie 2005: Basic category.

Enrollment and/or finance data for a single institution may be the sum of those items for multiple campuses, which are indicated in the table below. In some instances, noted by asterisk (*), system finance data has been allocated over the member institutions based on FTE enrollment.

| Comparable Institution | IPEDS Unit ID | Institution Name | State |
|---|---|---|---|
| 1 | 110644 | University of California-Davis* | California |
| 2 | 126818 | Colorado State University (main campus)* | Colorado |
| 3 | 129020 | University of Connecticut | Connecticut |
| | 436818 | University of Connecticut-Tri-Campus (enrollment only) | |
| | 436827 | University of Connecticut-Avery Point (enrollment only) | |
| | 436836 | University of Connecticut-Stamford (enrollment only) | |
| 4 | 163286 | University of Maryland-College Park* | Maryland |
| 5 | 166629 | University of Massachusetts-Amherst* | Massachusetts |
| 6 | 186371 | Rutgers University-Camden (enrollment only) | New Jersey |
| | 186380 | Rutgers University-New Brunswick/Piscataway | |
| | 186399 | Rutgers University-Newark (enrollment only) | |
| 7 | 233921 | Virginia Polytechnic Institute and State University | Virginia |

*plus allocated finance data associated with system office

## Central Washington University

IPEDS Unit ID: 234827

Fall 2005 FTE Enrollment (IPEDS): 9,373 Fall 2006 FTE Enrollment (IPEDS): 9,770
Carnegie 2005 Basic: Master's Colleges & Universities (larger programs)
Carnegie Classification 2005 Undergraduate Profile: Full-time four-year, selective, higher transfer-in

Criteria for comparable institutions:

- Carnegie Classification 2005 Basic: "Master's Colleges & Universities (larger programs)" or "Master's Colleges & Universities (medium programs)"
- Fall 2005 FTE enrollment: 6,300-14,999
- Carnegie Classification 2005 Undergraduate Profile: "Fulltime four-year, more selective, higher transfer in" or "Full-time four-year, selective, higher transfer in" or "Medium full-time four-year, selective, high transfer in"

In some instances, noted by asterisk (*), system finance data has been allocated over the member institutions based on FTE enrollment.

| Comparable Institution | IPEDS Unit ID | Institution Name | State |
|---|---|---|---|
| 1 | 110538 | California State University-Chico* | California |
| 2 | 115755 | Humboldt State University* | California |
| 3 | 123572 | Sonoma State University* | California |
| 4 | 128771 | Central Connecticut State University | Connecticut |
| 5 | 130493 | Southern Connecticut State University | Connecticut |
| 6 | 163851 | Salisbury University* | Maryland |
| 7 | 165024 | Bridgewater State College | Massachusetts |
| 8 | 167987 | University of Massachusetts-Dartmouth* | Massachusetts |
| 9 | 185590 | Montclair State University | New Jersey |
| 10 | 184782 | Rowan University | New Jersey |
| 11 | 187444 | William Paterson University of New Jersey | New Jersey |
| 12 | 233277 | Radford University | Virginia |

## Appendix B: Comparable Institutions Used for Per-Student Funding Study

### Eastern Washington University

IPEDS Unit ID: 235097

Fall 2005 FTE Enrollment (IPEDS): 9,690 Fall 2006 FTE Enrollment (IPEDS): 9,988
Carnegie 2005 Basic: Master's Colleges & Universities (larger programs)
Carnegie Classification 2005 Undergraduate Profile: Full-time four-year, selective, higher transfer-in

Criteria for comparable institutions:

- Institutions with Carnegie Classification 2005 of "Master's Colleges and Universities (larger programs)."
- Fall 2005 FTE enrollment of 7,400 to 15,999 with the addition of California State University-Bakersfield (FTE enrollment 6,441) because of program similarities.
- Carnegie Classification 2005 Undergraduate Profile: Institutions classified as "Medium full-time four-year, selective, higher transfer-in," "Full-time four-year, inclusive" where student achievement levels are available from sources other than IPEDS, and "Full-time four-year, selective, higher transfer-in."

Enrollment and/or finance data for a single institution may be the sum of those items for multiple campuses, which are indicated in the table below. In some instances, noted by asterisk (*), system finance data has been allocated over the member institutions based on FTE enrollment.

| Comparable Institution | IPEDS Unit ID | Institution Name | State |
|---|---|---|---|
| 1 | 110486 | California State University-Bakersfield* | California |
| 2 | 110538 | California State University-Chico* | California |
| 3 | 110510 | California State University-San Bernardino* | California |
| 4 | 128771 | Central Connecticut State University | Connecticut |
| 5 | 130493 | Southern Connecticut State University | Connecticut |
| 6 | 164076 | Towson University* | Maryland |
| 7 | 165024 | Bridgewater State College | Massachusetts |
| 8 | 167987 | University of Massachusetts-Dartmouth* | Massachusetts |
| 9 | 185590 | Montclair State University | New Jersey |
| 10 | 184782 | Rowan University | New Jersey |
| 11 | 187444 | William Paterson University of New Jersey | New Jersey |
| 12 | 233277 | Radford University | Virginia |

## Western Washington University

IPEDS Unit ID: 237011

Fall 2005 FTE Enrollment (IPEDS): 13,270 Fall 2006 FTE Enrollment (IPEDS): 13,085
Carnegie 2005 Basic: Master's Colleges & Universities (larger programs)
Carnegie Classification 2005 Undergraduate Profile: Full-time four-year, selective, higher transfer-in

Criteria for comparable institutions:

Carnegie Classification 2005 Basic: "Master's Colleges & Universities (larger programs)"
Fall 2005 FTE enrollment: 8,000-17,999
Carnegie Classification 2005 Undergraduate Profile: "Fulltime four-year, more selective, higher transfer in" or "Full-time four-year, selective, higher transfer in" or "Fulltime four-year, more selective, lower transfer in" or "Medium full-time four-year, selective, high transfer in"

In some instances, noted by asterisk (*), system finance data has been allocated over the member institutions based on FTE enrollment.

| Comparable Institution | IPEDS Unit ID | Institution Name | State |
|---|---|---|---|
| 1 | 110422 | California Polytechnic State University-San Luis Obispo* | California |
| 2 | 110529 | California State Polytechnic University-Pomona* | California |
| 3 | 110538 | California State University-Chico* | California |
| 4 | 128771 | Central Connecticut State University | Connecticut |
| 5 | 130493 | Southern Connecticut State University | Connecticut |
| 6 | 164076 | Towson University* | Maryland |
| 7 | 185590 | Montclair State University | New Jersey |
| 8 | 184782 | Rowan University | New Jersey |
| 9 | 187444 | William Paterson University of New Jersey | New Jersey |
| 10 | 232423 | James Madison University | Virginia |

## Appendix B: Comparable Institutions Used for Per-Student Funding Study

### The Evergreen State College

IPEDS Unit ID: 235167

Fall 2005 FTE Enrollment (IPEDS): 4,063 Fall 2006 FTE Enrollment (IPEDS): 4,009
Carnegie 2005 Basic: Master's Colleges & Universities (smaller programs)
Carnegie Classification 2005 Undergraduate Profile: Full-time four-year, selective, higher transfer-in

Criteria for comparable institutions:

Carnegie Classification 2005 Basic: "Baccalaureate Colleges--Arts & Sciences" or "Master's Colleges & Universities (medium programs)" or "Master's Colleges & Universities (smaller programs)"
Fall 2005 FTE enrollment: 3,000-7,999
Highest Level of Offering: Master's degree or Post-master's certificate
Exclude Thomas Edison State College (NJ), which has large distance learning component, and Mesa State College (CO) because of issues with finance data. Both have very low state appropriations as share of core revenues.

Note: An analysis of "Research expenses as a percent of total core expenses" revealed little variance among the remaining peers and Evergreen. (0-1% of core expenses are in Research for all institutions).

In some instances, noted by asterisk (*), system finance data has been allocated over the member institutions based on FTE enrollment.

| Comparable Institution | IPEDS Unit ID | Institution Name | State |
|---|---|---|---|
| 1 | 409698 | California State University-Monterey Bay* | California |
| 2 | 366711 | California State University-San Marcos* | California |
| 3 | 110495 | California State University-Stanislaus* | California |
| 4 | 115755 | Humboldt State University* | California |
| 5 | 129215 | Eastern Connecticut State University | Connecticut |
| 6 | 162283 | Coppin State University* | Maryland |
| 7 | 168263 | Westfield State College | Massachusetts |
| 8 | 168430 | Worcester State College | Massachusetts |
| 9 | 186201 | Ramapo College of New Jersey | New Jersey |
| 10 | 231712 | Christopher Newport University | Virginia |
| 11 | 232566 | Longwood University | Virginia |
| 12 | 232681 | University of Mary Washington | Virginia |

## Appendix B: Comparable Institutions Used for Per-Student Funding Study

### Washington Community and Technical College System Comparable Institutions

Criteria: Public community and technical colleges (districts), state supported. (Institutions supported by city or county governments, or by local school districts are excluded from this list.)

These institutions will be analyzed at the state level.

| | | | |
|---|---|---|---|
| 1 | 108807 | Alan Hancock Joint Community College District<br>Allan Hancock College | California |
| 2 | 109350 | Antelope Valley Community College District<br>Antelope Valley College | California |
| 3 | 109907 | Barstow Community College District<br>Barstow Community College | California |
| 4 | 110246 | Butte-Glenn Community College District<br>Butte College | California |
| 5 | 110334 | Cabrillo Community College District<br>Cabrillo College | California |
| 6 | 111887 | Cerritos Community College District<br>Cerritos College | California |
| 7 | 111920<br>366401 | Chabot-Las Positas Community College District<br>Chabot College<br>Las Positas College | California |
| 8 | 111939 | Chaffey Community College District<br>Chaffey College | California |
| 9 | 112172 | Citrus Community College District<br>Citrus College | California |
| 10 | 112376<br>112385<br>115126<br>120342 | Coast Community College District Office<br>Coastline Community College<br>Golden West College<br>Orange Coast College | California |
| 11 | 112817<br>112826<br>113634<br>117894 | Contra Costa Community College District Office<br>Contra Costa College<br>Diablo Valley College<br>Los Medanos College | California |
| 12 | 395362 | Copper Mountain Community College District<br>Copper Mountain College | California |
| 13 | 113573 | Desert Community College District<br>College of the Desert | California |
| 14 | 112686<br>113980 | El Camino Community College District<br>El Camino College-Compton Center<br>El Camino College | California |
| 15 | 114433 | Feather River Community College District<br>Feather River College | California |
| 16 | 114831<br>113333<br>114716 | Foothill-De Anza Community College District<br>De Anza College<br>Foothill College | California |

**Washington Community and Technical College System Comparable Institutions** (continued)

| | | | |
|---|---|---|---|
| 17 | 114938 | Gavilan Community College District<br>Gavilan College | California |
| 18 | 115001 | Glendale Community College District<br>Glendale Community College | California |
| 19 | 115287<br>113218<br>115296 | Grossmont-Cuyamaca Community College District<br>Cuyamaca College<br>Grossmont College | California |
| 20 | 115393 | Hartnell Community College District<br>Hartnell College | California |
| 21 | 115861 | Imperial Community College District<br>Imperial Valley College | California |
| 22 | 109819<br>111896<br>121363 | Kern Community College District<br>Bakersfield College<br>Cerro Coso Community College<br>Porterville College | California |
| 23 | 117195 | Lake Tahoe Community College District<br>Lake Tahoe Community College | California |
| 24 | 117274 | Lassen Community College District<br>Lassen Community College | California |
| 25 | 117645 | Long Beach Community College District<br>Long Beach City College | California |
| 26 | 117681<br>113856<br>117788<br>117690<br>117867<br>117706<br>117715<br>117724<br>117733<br>125471 | Los Angeles Community College District Office<br>East Los Angeles College<br>Los Angeles City College<br>Los Angeles Harbor College<br>Los Angeles Mission College<br>Los Angeles Pierce College<br>Los Angeles Southwest College<br>Los Angeles Trade Technical College<br>Los Angeles Valley College<br>West Los Angeles College | California |
| 27 | 117900<br>109208<br>113096<br>444219<br>122180 | Los Rios Community College District Office<br>American River College<br>Cosumnes River College<br>Folsom Lake College<br>Sacramento City College | California |
| 28 | 118347 | Marin Community College District<br>College of Marin | California |
| 29 | 118684 | Mendocino-Lake Community College District<br>Mendocino College | California |
| 30 | 118718 | Merced Community College District<br>Merced College | California |
| 31 | 118912 | MiraCosta Community College District<br>MiraCosta College | California |

**Washington Community and Technical College System Comparable Institutions** (continued)

| | | | |
|---|---|---|---|
| 32 | 119067 | Monterey Peninsula Community College District<br>Monterey Peninsula College | California |
| 33 | 119164 | Mt. San Antonio Community College District<br>Mt. San Antonio College | California |
| 34 | 119216 | Mt. San Jacinto Community College District<br>Mt. San Jacinto Community College | California |
| 35 | 119331 | Napa Valley Community College District<br>Napa Valley College | California |
| 36 | 120023<br>113236<br>114859 | North Orange County Community College District<br>Cypress College<br>Fullerton College | California |
| 37 | 120290 | Ohlone Community College District<br>Ohlone College | California |
| 38 | 120953 | Palo Verde Community College District<br>Palo Verde College | California |
| 39 | 120971 | Palomar Community College District<br>Palomar College | California |
| 40 | 121044 | Pasadena Area Community College District<br>Pasadena City College | California |
| 41 | 121178<br>125170<br>108667<br>117247<br>118772 | Peralta Community College System Office<br>Berkeley City College<br>College of Alameda<br>Laney College<br>Merritt College | California |
| 42 | 438665<br>121619<br>399212 | Rancho Santiago Community College District Office<br>Santa Ana College<br>Santiago Canyon College | California |
| 43 | 121707 | Redwoods Community College District<br>College of the Redwoods | California |
| 44 | 121886 | Rio Hondo Community College District<br>Rio Hondo College | California |
| 45 | 121901 | Riverside Community College District<br>Riverside Community College | California |
| 46 | 428426<br>113111<br>123527 | San Bernardino Community College District<br>Crafton Hills College<br>San Bernardino Valley College | California |
| 47 | 122320<br>122339<br>122375<br>122384 | San Diego Community College District-District Office<br>San Diego City College<br>San Diego Mesa College<br>San Diego Miramar College | California |
| 48 | 112190 | San Francisco Community College District<br>City College of San Francisco | California |
| 49 | 122658 | San Joaquin Delta Community College District<br>San Joaquin Delta College | California |

**Washington Community and Technical College System Comparable Institutions** (continued)

| | | | |
|---|---|---|---|
| 50 | 122737<br>114266<br>122746 | San Jose-Evergreen Community College District<br>Evergreen Valley College<br>San Jose City College | California |
| 51 | 113193 | San Luis Obispo Community College District<br>Cuesta College | California |
| 52 | 122782<br>111434<br>122791<br>123509 | San Mateo County Community College District<br>Canada College<br>College of San Mateo<br>Skyline College | California |
| 53 | 122889 | Santa Barbara Community College District<br>Santa Barbara City College | California |
| 54 | 111461 | Santa Clarita Community College District<br>College of the Canyons | California |
| 55 | 122977 | Santa Monica Community College District<br>Santa Monica College | California |
| 56 | 123217 | Sequoias Community College District<br>College of the Sequoias | California |
| 57 | 123299 | Shasta-Tehama-Trinity Joint Community College District<br>Shasta College | California |
| 58 | 123341 | Sierra Joint Community College District<br>Sierra College | California |
| 59 | 123484 | Siskiyou Joint Community College District<br>College of the Siskiyous | California |
| 60 | 123563 | Solano Community College District<br>Solano Community College | California |
| 61 | 123013 | Sonoma County Community College District<br>Santa Rosa Junior College | California |
| 62 | 432144<br>116439<br>122205 | South Orange County Community College District<br>Irvine Valley College<br>Saddleback College | California |
| 63 | 123800 | Southwestern Community College District<br>Southwestern College | California |
| 64 | 123925<br>114789<br>117052 | State Center Community College District<br>Fresno City College<br>Reedley College | California |
| 65 | 125019<br>119137<br>120421<br>125028 | Ventura County Community College System Office<br>Moorpark College<br>Oxnard College<br>Ventura College | California |
| 66 | 125091 | Victor Valley Community College District<br>Victor Valley College | California |
| 67 | 448637<br>125462<br>448594 | West Hills Community College District<br>West Hills College-Coalinga<br>West Hills College-Lemoore | California |

**Washington Community and Technical College System Comparable Institutions** (continued)

| | | | |
|---|---|---|---|
| 68 | 124113 | West Kern Community College District<br>Taft College | California |
| 69 | 125222<br>118930<br>125499 | West Valley Mission Community College District Office<br>Mission College<br>West Valley College | California |
| 70 | 126100<br>112561<br>118976 | Yosemite Community College District Office<br>Columbia College<br>Modesto Junior College | California |
| 71 | 126119 | Yuba Community College District<br>Yuba College | California |
| 72 | 126289 | Arapahoe Community College | Colorado |
| 73 | 126748 | Colorado Northwestern Community College | Colorado |
| 74 | 126863 | Community College of Aurora | Colorado |
| 75 | 126942 | Community College of Denver | Colorado |
| 76 | 127200 | Front Range Community College | Colorado |
| 77 | 127389 | Lamar Community College | Colorado |
| 78 | 127617 | Morgan Community College | Colorado |
| 79 | 127732 | Northeastern Junior College | Colorado |
| 80 | 127778 | Otero Junior College | Colorado |
| 81 | 127820 | Pikes Peak Community College | Colorado |
| 82 | 127884 | Pueblo Community College | Colorado |
| 83 | 127909 | Red Rocks Community College | Colorado |
| 84 | 128258 | Trinidad State Junior College | Colorado |
| 85 | 126915 | Delta Montrose Technical College | Colorado |
| 86 | 127158 | Emily Griffith Opportunity School | Colorado |
| 87 | 128036 | San Juan Basin Technical College | Colorado |
| 88 | 128151 | T H Pickens Technical Center | Colorado |
| 89 | 128577 | Asnuntuck Community College | Connecticut |
| 90 | 129367 | Capital Community College | Connecticut |
| 91 | 130396 | Gateway Community College | Connecticut |
| 92 | 129543 | Housatonic Community College | Connecticut |
| 93 | 129695 | Manchester Community College | Connecticut |
| 94 | 129756 | Middlesex Community College | Connecticut |
| 95 | 129729 | Naugatuck Valley Community College | Connecticut |
| 96 | 130040 | Northwestern Connecticut Community College | Connecticut |
| 97 | 130004 | Norwalk Community College | Connecticut |
| 98 | 130217 | Quinebaug Valley Community College | Connecticut |
| 99 | 129808 | Three Rivers Community College | Connecticut |
| 101 | 130606 | Tunxis Community College | Connecticut |
| 102 | 161688 | Allegany College of Maryland | Maryland |
| 103 | 161767 | Anne Arundel Community College | Maryland |
| 104 | 161864 | Baltimore City Community College | Maryland |

### **Washington Community and Technical College System Comparable Institutions** (continued)

| | | | |
|---|---|---|---|
| 105 | 405872 | Carroll Community College | Maryland |
| 106 | 162104 | Cecil Community College | Maryland |
| 107 | 162168 | Chesapeake College | Maryland |
| 108 | 162122 | College of Southern Maryland | Maryland |
| 109 | 162557 | Frederick Community College | Maryland |
| 110 | 162609 | Garrett College | Maryland |
| 111 | 162690 | Hagerstown Community College | Maryland |
| 112 | 162706 | Harford Community College | Maryland |
| 113 | 162779 | Howard Community College | Maryland |
| 114 | 163426 | Montgomery College | Maryland |
| 115 | 163657 | Prince George's Community College | Maryland |
| 116 | 434672 | The Community College of Baltimore County | Maryland |
| 100 | 164313 | Wor-Wic Community College | Maryland |
| 117 | 164775 | Berkshire Community College | Massachusetts |
| 118 | 165033 | Bristol Community College | Massachusetts |
| 119 | 165112 | Bunker Hill Community College | Massachusetts |
| 120 | 165194 | Cape Cod Community College | Massachusetts |
| 121 | 165981 | Greenfield Community College | Massachusetts |
| 122 | 166133 | Holyoke Community College | Massachusetts |
| 123 | 166647 | Massachusetts Bay Community College | Massachusetts |
| 124 | 166823 | Massasoit Community College | Massachusetts |
| 125 | 166887 | Middlesex Community College | Massachusetts |
| 126 | 166957 | Mount Wachusett Community College | Massachusetts |
| 127 | 167312 | North Shore Community College | Massachusetts |
| 128 | 167376 | Northern Essex Community College | Massachusetts |
| 129 | 167534 | Quinsigamond Community College | Massachusetts |
| 130 | 167631 | Roxbury Community College | Massachusetts |
| 131 | 167905 | Springfield Technical Community College | Massachusetts |
| 132 | 183655 | Atlantic Cape Community College | New Jersey |
| 133 | 183743 | Bergen Community College | New Jersey |
| 134 | 183859 | Brookdale Community College | New Jersey |
| 135 | 183877 | Burlington County College | New Jersey |
| 136 | 183938 | Camden County College | New Jersey |
| 137 | 184180 | County College of Morris | New Jersey |
| 138 | 184205 | Cumberland County College | New Jersey |
| 139 | 184481 | Essex County College | New Jersey |
| 140 | 184791 | Gloucester County College | New Jersey |
| 141 | 184995 | Hudson County Community College | New Jersey |
| 142 | 185509 | Mercer County Community College | New Jersey |
| 143 | 185536 | Middlesex County College | New Jersey |
| 144 | 185873 | Ocean County College | New Jersey |
| 145 | 186034 | Passaic County Community College | New Jersey |
| 146 | 186645 | Raritan Valley Community College | New Jersey |

### **Washington Community and Technical College System Comparable Institutions** (continued)

| | | | |
|---|---|---|---|
| 147 | 186469 | Salem Community College | New Jersey |
| 148 | 247603 | Sussex County Community College | New Jersey |
| 149 | 187198 | Union County College | New Jersey |
| 150 | 245625 | Warren County Community College | New Jersey |
| 151 | 231536 | Blue Ridge Community College | Virginia |
| 152 | 231697 | Central Virginia Community College | Virginia |
| 153 | 231873 | Dabney S Lancaster Community College | Virginia |
| 154 | 231882 | Danville Community College | Virginia |
| 155 | 232052 | Eastern Shore Community College | Virginia |
| 156 | 232195 | Germanna Community College | Virginia |
| 157 | 232414 | J Sargeant Reynolds Community College | Virginia |
| 158 | 232450 | John Tyler Community College | Virginia |
| 159 | 232575 | Lord Fairfax Community College | Virginia |
| 160 | 232788 | Mountain Empire Community College | Virginia |
| 161 | 232867 | New River Community College | Virginia |
| 162 | 232946 | Northern Virginia Community College | Virginia |
| 163 | 233019 | Patrick Henry Community College | Virginia |
| 164 | 233037 | Paul D Camp Community College | Virginia |
| 165 | 233116 | Piedmont Virginia Community College | Virginia |
| 166 | 233310 | Rappahannock Community College | Virginia |
| 167 | 233639 | Southside Virginia Community College | Virginia |
| 168 | 233648 | Southwest Virginia Community College | Virginia |
| 169 | 233754 | Thomas Nelson Community College | Virginia |
| 170 | 233772 | Tidewater Community College | Virginia |
| 171 | 233903 | Virginia Highlands Community College | Virginia |
| 172 | 233949 | Virginia Western Community College | Virginia |
| 173 | 234377 | Wytheville Community College | Virginia |

## Appendix B: Comparable Institutions Used for Per-Student Funding Study

### Washington Community and Technical College System Institutions

| | | | |
|---|---|---|---|
| Washington Community and Technical College System | 235671 | Bates Technical College | Washington |
| | 234669 | Bellevue Community College | |
| | 234696 | Bellingham Technical College | |
| | 234711 | Big Bend Community College | |
| | 439190 | Cascadia Community College | |
| | 234845 | Centralia College | |
| | 234933 | Clark College | |
| | 234951 | Clover Park Technical College | |
| | 234979 | Columbia Basin College | |
| | 235103 | Edmonds Community College | |
| | 235149 | Everett Community College | |
| | 235334 | Grays Harbor College | |
| | 235343 | Green River Community College | |
| | 235431 | Highline Community College | |
| | 235699 | Lake Washington Technical College | |
| | 235750 | Lower Columbia College | |
| | 236188 | Olympic College | |
| | 236258 | Peninsula College | |
| | 235237 | Pierce College at Fort Steilacoom | |
| | 439145 | Pierce College at Puyallup | |
| | 236382 | Renton Technical College | |
| | 236513 | Seattle Community College-Central Campus | |
| | 236072 | Seattle Community College-North Campus | |
| | 236504 | Seattle Community College-South Campus | |
| | 381529 | Seattle Vocational Institute | |
| | 236610 | Shoreline Community College | |
| | 236638 | Skagit Valley College | |
| | 236656 | South Puget Sound Community College | |
| | 236692 | Spokane Community College | |
| | 236708 | Spokane Falls Community College | |
| | 236753 | Tacoma Community College | |
| | 236887 | Walla Walla Community College | |
| | 236975 | Wenatchee Valley College | |
| | 237039 | Whatcom Community College | |
| | 237109 | Yakima Valley Community College | |

## Appendix C: Integrated Postsecondary Education Data System (IPEDS) – Selected Definitions

The **Integrated Postsecondary Education Data System (IPEDS)**collection, conducted by the National Center for Education Statistics, began in 1986 and involves annual institution-level data collections. All postsecondary institutions that have a Program Participation Agreement with the Office of Postsecondary Education (OPE), U.S. Department of Education (throughout IPEDS referred to as "Title IV") are required to report data using a web-based data collection system. IPEDS currently consists of the following components: Institutional Characteristics (IC); 12-month Enrollment (E12); Completions (C); Human Resources (HR) composed of Employees by Assigned Position (EAP), Fall Staff (S),and Salaries (SA); Fall Enrollment (EF); Graduation Rates (GRS); Finance (F); and Student Financial Aid (SFA).

### Enrollment

**Full-time student:**

**Undergraduate** — A student enrolled for 12 or more semester credits, or 12 or more quarter credits, or 24 or more contact hours a week each term.
**Graduate** — A student enrolled for 9 or more semester credits, or 9 or more quarter credits, or a student involved in thesis or dissertation preparation that is considered full time by the institution.
**First-professional** — As defined by the institution.

**Part-time student :**

**Undergraduate** — A student enrolled for either 11 semester credits or less, or 11 quarter credits or less, or less than 24 contact hours a week each term.
**Graduate** — A student enrolled for either 8 semester credits or less, or 8 quarter credits or less.
**First-professional** — As defined by the institution.

**First-professional student** — A student enrolled in any of the following degree programs :

Chiropractic (D.C. or D.C.M.)
Dentistry (D.D.S. or D.M.D.)
Law (L.L.B., J.D.)
Medicine (M.D.)
Optometry (O.D.)
Osteopathic Medicine (D.O.)
Pharmacy (Pharm.D.)
Podiatry (D.P.M., D.P., or Pod.D.)
Theology (M.Div., M.H.L., B.D., or Ordination)
Veterinary Medicine (D.V.M.)

**Calculation of FTE students (using fall student headcounts)** — The number of FTE students is calculated based on fall student headcounts as reported by the institution on the IPEDS Enrollment (EF) component (Part A). The full-time equivalent (headcount) of the institution's part-time enrollment is estimated by multiplying the factors noted below times the part-time headcount. These are then added to the full-time enrollment headcounts to obtain an FTE for all students enrolled in the fall.

Part-time undergraduate enrollment
- Public 4-year (.403543)
- Public 2-year and <2-year (.335737)

Part-time first-professional enrollment
Public 4-year (.600000)
Part-time graduate enrollment
Public 4-year (.361702)

## Expenses

**Core expenses** — Total expenses for the essential education activities of the institution. Core expenses for public institutions reporting under GASB standards include expenses for instruction, research, public service, academic support, student services, institutional support, operation and maintenance of plant, depreciation, scholarships and fellowships, interest and other operating and non-operating expenses. Core expenses for FASB (primarily private, not-for-profit and for-profit) institutions include expenses on instruction, research, public service, academic support, student services, institutional support, net grant aid to students, and other expenses. For both FASB and GASB institutions, core expenses exclude expenses for auxiliary enterprises (e.g., bookstores, dormitories), hospitals, and independent operations.

Core expenses derived for public institutions using the new GASB 34/35 standard are calculated as the sum of:
Instruction (F1C011)
Research (F1C021)
Public service (F1C031)
Academic support (F1C051)
Student services (F1C061)
Institutional support (F1C071)
Operation maintenance of plant (F1C081)
Depreciation (F1C091)
Scholarships and fellowships expenses (F1C101)
Other expenses and deductions (F1C141)
Total non-operating expenses and deductions (F1C181)

**Instruction** — A functional expense category that includes expenses of the colleges, schools, departments, and other instructional divisions of the institution and expenses for departmental research and public service that are not separately budgeted. Includes general academic instruction, occupational and vocational instruction, community education, preparatory and adult basic education, and regular, special, and extension sessions. Also includes expenses for both credit and non-credit activities. Excludes expenses for academic administration where the primary function is administration (e.g., academic deans). Information technology expenses related to instructional activities if the institution separately budgets and expenses information technology resources are included (otherwise these expenses are included in academic support). FASB institutions include actual or allocated costs for operation and maintenance of plant, interest, and depreciation. GASB institutions do not include operation and maintenance of plant or interest, but may, as an option, distribute depreciation expense.

**Research (expense)** — A functional expense category that includes expenses for activities specifically organized to produce research outcomes and commissioned by an agency either external to the institution or separately budgeted by an organizational unit within the institution. The category includes institutes and research centers, and individual and project

research. This function does not include non-research sponsored programs (e.g., training programs). Also included are information technology expenses related to research activities if the institution separately budgets and expenses information technology resources (otherwise these expenses are included in academic support.) FASB institutions include actual or allocated costs for operation & maintenance of plant, interest, and depreciation. GASB institutions do not include operation & maintenance of plant or interest but may, as an option, distribute depreciation expense.

**Public service (expense)** — A functional expense category that includes expenses for activities established primarily to provide non-instructional services beneficial to individuals and groups external to the institution. Examples are conferences, institutes, general advisory service, reference bureaus, and similar services provided to particular sectors of the community. This function includes expenses for community services, cooperative extension services, and public broadcasting services. Also includes information technology expenses related to the public service activities if the institution separately budgets and expenses information technology resources (otherwise these expenses are included in academic support). FASB institutions include actual or allocated costs for operation and maintenance of plant, interest, and depreciation. GASB institutions do not include operation and maintenance of plant or interest, but may, as an option, distribute depreciation expense.

**Academic support** — A functional expense category that includes expenses of activities and services that support the institution's primary missions of instruction, research, and public service. It includes the retention, preservation, and display of educational materials (for example, libraries, museums, and galleries); organized activities that provide support services to the academic functions of the institution (such as a demonstration school associated with a college of education or veterinary and dental clinics if their primary purpose is to support the instructional program); media such as audiovisual services; academic administration (including academic deans but not department chairpersons); and formally organized and separately budgeted academic personnel development and course and curriculum development expenses. Also included are information technology expenses related to academic support activities; if an institution does not separately budget and expense information technology resources, the costs associated with the three primary programs will be applied to this function and the remainder to institutional support. Under FASB standards this includes actual or allocated costs for operation and maintenance of plant, interest, and depreciation. Under GASB standards this does not include operation and maintenance of plant or interest but may include depreciation expense.

**Student services (expenses)** — A functional expense category that includes expenses for admissions, registrar activities, and activities whose primary purpose is to contribute to students emotional and physical well - being and to their intellectual, cultural, and social development outside the context of the formal instructional program. Examples include student activities, cultural events, student newspapers, intramural athletics, student organizations, supplemental instruction outside the normal administration, and student records. Intercollegiate athletics and student health services may also be included except when operated as self - supporting auxiliary enterprises. Also may include information technology expenses related to student service activities if the institution separately budgets and expenses information technology resources (otherwise these expenses are included in institutional support.) FASB institutions include actual or allocated costs for operation and

maintenance of plant, interest, and depreciation. GASB institutions do not include operation and maintenance of plant or interest but may, as an option, distribute depreciation expense.

**Institutional support** — A functional expense category that includes expenses for the day-to-day operational support of the institution. Includes expenses for general administrative services, central executive-level activities concerned with management and long range planning, legal and fiscal operations, space management, employee personnel and records, logistical services such as purchasing and printing, and public relations and development. Also includes information technology expenses related to institutional support activities. If an institution does not separately budget and expense information technology resources, the costs associated with student services and operation and maintenance of plant will also be applied to this function. FASB institutions include actual or allocated costs for operation and maintenance of plant, interest and depreciation. GASB institutions do not include operation and maintenance of plant or interest, but may, as an option, distribute depreciation expense.

**Operation and maintenance of plant (expenses)** — A functional expense category that includes expenses for operations established to provide service and maintenance related to campus grounds and facilities used for educational and general purposes. Specific expenses include utilities, fire protection, property insurance, and similar items. This function does not include amounts charged to auxiliary enterprises, hospitals, and independent operations. Also includes information technology expenses related to operation and maintenance of plant activities if the institution separately budgets and expenses information technology resources (otherwise these expenses are included in institutional support). Institutions may, as an option, distribute depreciation expense to this function. FASB institutions do not use this function. Instead these expenses are charged to or allocated to other functions.

**Depreciation** — The allocation or distribution of the cost of capital assets, less any salvage value, to expenses over the estimated useful life of the asset in a systematic and rational manner. Depreciation for the year is the amount of the allocation or distribution for the year involved.

**Scholarships and fellowships (expenses)** — That portion of scholarships and fellowships granted that exceeds the amount applied to institutional charges such as tuition and fees or room and board. The amount reported as expense excludes allowances and discounts. The FASB survey uses the term "net grants in aid to students" rather than "scholarships and fellowships."

**Interest** — The price paid (or received) for the use of money over a period of time. Interest income is one component of investment income. Interest paid by the institution is interest expense.

**Other operating:** Operating — GASB requires that revenues and expenses be separated between operating and non-operating. Operating revenues and expenses result from providing goods and services. Operating transactions are incurred in the course of the operating activities of the institution.

**Other non-operating:** Non-operating — GASB requires that revenues and expenses be separated between operating and non-operating. Operating revenues and expenses result from providing goods and services. Non-operating activities are those outside the activities that are part of the operating activities of the institution. Most government appropriations are non-operating because they are not generated by the operations of the institution.

Investment income is non-operating in most instances because institutions are not engaged in investing as an operating activity. Gifts are defined as non-operating. Non-exchange transactions generate non-operating revenues.

## Revenues

**Tuition and fees, after deducting discounts and allowances** — Tuition and fees are revenues from all tuition and fees assessed against students (net of refunds and discounts & allowances) for educational purposes. If tuition or fees are remitted to the state as an offset to the state appropriation, the total of such tuition or fees should be deducted from the total state appropriation and added to the total for tuition and fees. If an all-inclusive charge is made for tuition, board, room, and other services, a reasonable distribution is made between revenues for tuition and fees and revenues for auxiliary enterprises. Tuition and fees excludes charges for room, board, and other services rendered by auxiliary enterprises.

**State appropriations** — State appropriations are amounts received by the institution through acts of a state legislative body, except grants and contracts and capital appropriations. Funds reported in this category are for meeting current operating expenses, not for specific projects or programs.

**Local appropriations, education district taxes, and similar support** — Local appropriations, education district taxes and similar support are amounts received from property or other taxes assessed directly by or for an institution below the state level. It includes any other similar general support provided to the institution from governments below the state level, including local government appropriations.

**Other operating** — GASB requires that revenues and expenses be separated between operating and non-operating. Operating revenues and expenses result from providing goods and services. Operating transactions are incurred in the course of the operating activities of the institution. "Other" operating revenues are revenues that do not fall into the categories of tuition and fees, operating grants and contracts, sales and services of auxiliary operations or hospitals, and independent operations.

## Appendix D: Adjusting for Regional Cost-of-Living Differences

This appendix describes OFM's methods for incorporating cost-of-living adjustments to per-student funding levels in public higher education.

### Cost-of-living index vs. price index

It is important to make the conceptual distinction between a price index and a cost-of-living index. A price index measures how prices change *over time*. A cost-of-living index compares price levels across different geographic areas. For the per-student funding study, RCW 28B.15.068 states that OFM shall adjust for regional cost-of-living differences.

### Data options

There is not an accepted, standard method for adjusting for regional price variation. There are several potential sources of data, but none is well-suited by itself for this purpose: [8]

- The Consumer Price Index (CPI) (www.bls.gov/cpi), produced by the Bureau of Labor Statistics, is the most commonly cited price index. It is a measure of average change over time in the prices paid by urban consumers for a market basket of consumer goods and services. The percent change in the CPI from year to year is a measure of inflation. The CPI is produced at a national level and also for a few metropolitan areas. However, because it does not show variation for all local areas and it is designed for estimating price levels over time, it is not suitable for the per-student funding study.
- ACCRA Cost-of-Living Index (COLI) (www.coli.org), produced by the Council for Community and Economic Research, is a source of city-to-city comparisons of consumer costs. The ACCRA COLI is designed for comparing households in the highest income quintile and is based on a market basket of goods which has six weighted expenditure categories. Data are collected for around 300 metropolitan areas across the nation. See Appendix E for a description of the COLI methodology.
- Fair Market Rents (FMR), established annually by the US Department of Housing and Urban Development, are gross rent estimates for the 40th percentile of rental units[9]. HUD estimates FMRs for 530 metropolitan areas and 2,045 nonmetropolitan county areas. See Appendix F for a more detailed description of FMR.
- Basic Allowance for Housing (BAH)[10] provides uniformed members of the military with compensation for housing costs. It is based on geographic duty location, pay grade, and dependency status and is intended to provide equitable housing compensation based on housing costs in local civilian housing markets.
- Higher Education Price Index (HEPI) is an index that "measures the effects of inflation on the current operations of colleges and universities." HEPI authors recommend that the HEPI index be used "as an overall measure of inflation affecting the higher education sector, just as consumers everywhere use the national CPI as a general

[8] Other potential or related data sources: a) Cost of Living Index for the American States 1960-2000; William Berry and Richard Fording. The data are at the state level and have not been updated since 2000. b) American Association of University Professors has a regional comparison of faculty salaries, but the regions are groupings of multiple states. Neither the Berry Index nor the AAUP salary data allow for cost variation in areas smaller than the state level.

[9] http://www.huduser.org/datasets/fmr.html. The current definition of FMR is the 40th percentile rent, the dollar amount below which 40 percent of the standard-standard quality rental housing units are rented.

[10] http://perdiem.hqda.pentagon.mil/perdiem/BAH-Primer.pdf

measure of family purchasing power."[11] Because HEPI is designed to measure changes over time and does not include individual regional data, it is not suitable for the per-student funding adjustment.

## Methodology

(a) For global challenge state institutions in a city or county with ACCRA COLI data, the COLI index number was used. ACCRA is a nationwide data set, covering most metropolitan areas. Data collectors are given detailed specifications regarding the goods to be priced and timing of data collection. COLI data are designed to reflect general living costs and are available for areas smaller than the state level; therefore they were a good option for making cost-of-living adjustments.

(b) For areas outside the ACCRA set, but within the global challenge states and with a public baccalaureate or community college: a regression relationship was developed between ACCRA (dependent variable) and two bedroom FMR (independent variable). This method indicated that nearly 80 percent of the variance in cost of living (COLI) was explained by variability in housing costs.[12] The resulting relationship was used to estimate cost of living for areas without ACCRA data. Therefore, each institution (or set of institutions, as is the case with community colleges) has an index number reflecting the cost of living.

(c) An adjustment factor was calculated by taking the inverse of the cost-of-living number. Then within each comparison group, the factors were scaled such that the Washington institution's adjustment factor equals 1. For example, suppose Institution A has a COLI of 105 and Washington Institution B has a COLI of 101. A's cost of living is 4% higher than B's and the adjustment factor is 101/105 = 96.2%. B's adjustment factor is 101/101 = 1.

(d) Educational institutions face a variety of costs, of which salaries are only a portion. Other costs faced by institutions may or may not be affected by regional cost of living. Therefore, one option would be to make a *partial* adjustment for cost of living; a fraction of funding could be adjusted while the remainder is unadjusted. The results are thus presented in three ways: (1) full adjustment of funding, (2) partial adjustment, and (3) no adjustment.

## Comments and concerns about the methodology

- *"Conceptually, 'per-student funding' does not fit perfectly with the notion of cost of living."*

  Perhaps the costs that institutions face are not captured in consumer-type data such as ACCRA and rental / housing prices. OFM attempted to address this concern by developing a scenario where the per-student funding level was partially adjusted for cost of living: consumer-type data and regional costs of living would be reflected in salaries, so only the salary portion of funding was adjusted. (This is mentioned in Methodology (d) above.)

[11] Page 17, College and University Higher Education Price Index, 2004 Update.

[12] The relationship between ACCRA COLI and Base Allowance for Housing (BAH) was also tested. The FMR data had a higher correlation with ACCRA, and thus was chosen for predicting ACCRA cost of living.

- *"The cost- of- living adjustments may not be very stable over time since the ACCRA cost-of-living index is not designed for measuring inflation*."

  ACCRA is, however, designed for regional or city-to-city comparisons within any given year, which is what OFM did with the per-student funding cost-of-living adjustment. A look at the data, moreover, shows that the data did not bounce around unexpectedly: the median change of the cost-of-living index between 2006 and 2007 for areas in which there was a 4-year comparable institution was -0.2%.

- *"The proxy housing costs, as reported by Fair Market Rent, are unrepresentative within certain areas."*

  Because areas such as Whitman County, Washington, have a high percentage of rental housing geared to student rentals, the Fair Market Rent tends to be relatively low and not representative of housing costs of the long-term population. As a result, the cost-of-living index estimated by using the local Fair Market Rent as the independent variable is likely to be artificially low. An in-depth analysis of this situation has been provided by WSU institutional research staff and is included in this document as Appendix I. One potential resolution to this problem would be to purchase cost-of-living data from a private firm for all areas represented by comparison institutions. However, the cost of doing so may be prohibitive.

- *Other research*

  The Bureau of Economic Analysis is conducting research in this area[13] though it is still experimental and BEA has not adopted a methodology for spatial price deflators. The methodology seems to have potential, but in the context of this study, it would be extremely time consuming, with potentially no or small improvement over OFM's methods.

  A paper by Koo, Phillips and Sigalla[14] evaluated the ACCRA cost-of-living index. They found some significant differences to a price index they calculated using CPI data and previous research by Kokoski, Cardiff and Moulton.[15] However, the Kokoski and Koo research were based on data from 1988. ACCRA methods have been revised since then, with more emphasis on guidelines and conformance to specifications, which may reduce or eliminate the potential for bias.

  Another study by Berry, Fording and Hanson[16] used data from 1960-1995 to emphasize the potential distortion by not adjusting for geographic variations in cost of living.

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[13] Aten, Bettina. Estimates of State and Metropolitan Price Levels for Consumption Goods and Services in the United States, 2005. [http://www.bea.gov/papers/pdf/aten_estimates_state_metro_2005.pdf]

[14] Jahyeong Koo, Keith R. Phillips and Fiona D. Sigalla . "Measuring Regional Cost of Living", *Journal of Business & Economic Statistics*, Vol. 18, No. 1 (Jan., 2000), pp. 127-136.

[15] Kokoski, M.F., Cardiff, P., and Moulton, B.R. (1994). "Interarea Prices for Consumer Goods and Services: An Hedonic Approach Using CPI Data,", Working Paper 256, U.S. Department of Labor, Bureau of Labor Statistics.

[16] William D. Berry, Richard C. Fording, and Russell L. Hanson . "An Annual Cost of Living Index for the American States, 1960-1995", *The Journal of Politics*, Vol. 62, No. 2, (May, 2000), pp. 550-567.

## Appendix E: ACCRA Cost of Living Index Methodology

Taken directly from COLI website [http://www.coli.org/Method.asp]

### Review of the COLI Methodology

The ACCRA Cost of Living Index is designed to provide the best possible means to compare cost-of-living differences among urban areas based on the price of consumer goods and services appropriate for professional and managerial households in the top income quintile.

The Cost of Living Index rests on the premise that prices collected at a specified time, in strict conformance with standard specifications, provide a sound basis for constructing a reasonably accurate gauge of relative differences in the cost of consumer goods and services.

Consumer expenditures cover an almost limitless range of goods and services, and no index of consumer buying can encompass all of them. Since we can't price everything, what do we do? The standard approach, used in the ACCRA Index, is to divide consumer expenditures into categories, and then select items that represent those categories. The items used in the ACCRA Index thus are surrogates for entire categories of consumer spending. For this approach to work, price differences among urban areas for the items in the Index must accurately reflect differences for the categories they represent.

The ACCRA Cost of Living Index consists of six major categories: grocery items, housing, utilities, transportation, health care, and miscellaneous goods and services. These major categories in turn are composed of subcategories, each of which is represented by one or more items in the Index. Separate component indexes are published for each of the six major categories. We're not concerned with the extent to which consumers actually purchase the individual items in the Index. The 60 items have been chosen solely to show interarea price differences in the categories they represent. What's important, in calculating the Index, is the ratio of an urban area's average price to the average price of the same item nationwide. When we use a pound of whole frying chicken to represent poultry products, we're assuming that if an area's price for this item is 10% above the nationwide average, its prices for poultry products as a whole also are about 10% above the nationwide average.

How much the ratio for each item contributes to the Index is determined by the distribution of consumer expenditures among the categories covered by the Index. The share of consumer spending devoted to the category each item represents determines that category's importance, or weight, in the Index. The ACCRA Cost of Living Index Committee has adopted the weights based on data from the U.S. Bureau of Labor Statistics' 2004 Consumer Expenditure Survey, using the data on the proportional distribution of expenditures by households in which the reference person has a professional or managerial occupation and by households in the upper quintile of income.
Data published for the first three quarters is based on prices submitted by all participating areas. Beginning in February 2008, C2ER began publishing an annual average survey compiled from data submitted in those previous quarters. For urban areas where we have data less than three pricing periods, we developed estimated prices in order to have a complete set of observations. Thus, to calculate the annual average index, we use the actual and estimated prices as our observations to calculate an annual average price for each item. We do not weight any of the prices based on when we observe them. Thus, first pricing period prices receive the same weight in the calculation as third pricing period prices. Then, from the annual average price for each item, we calculate the index using the same BLS Consumer Expenditure Survey weights that we would for any other pricing period.

## Appendix E: ACCRA Cost of Living Index Methodology

Taken directly from COLI website [http://www.coli.org/Method.asp]

### Price Reporting

C2ER stringently reviews all prices reported, and attempts to eliminate errors and noncompliance with pricing specifications. All price data are obtained from sources deemed reliable, but no representation is made as to the complete accuracy thereof. They are published subject to errors, omissions, changes, and withdrawals without notice.

### Exclusion of Taxes

C2ER is fully cognizant that state and local taxes are an integral part of the cost of living, and that tax burdens vary widely not only among states and metropolitan areas, but even within each metropolitan area. Due to the multiplicity of state and local taxes, taxing jurisdictions, and assessment procedures, it is not feasible to calculate local tax burdens reliably. C2ER has opted to produce an index which adequately measures differences in goods and services costs, rather than to produce an inaccurate measure which attempts to incorporate taxes levied on real and intangible property, retail sales, and income.

## Appendix F: Fair Market Rents, U.S. Department of Housing and Urban Development

Taken directly from HUD website: [http://www.huduser.org/datasets/fmr/fmrover_071707R2.doc]

### Overview

Fair Market Rents (FMRs) are primarily used to determine payment standard amounts for the Housing Choice Voucher program, to determine initial renewal rents for some expiring project-based Section 8 contracts, to determine initial rents for housing assistance payment (HAP) contracts in the Moderate Rehabilitation Single Room Occupancy program (Mod Rehab), and to serve as a rent ceiling in the HOME rental assistance program. The U.S. Department of Housing and Urban Development (HUD) annually estimates FMRs for 530 metropolitan areas and 2,045 nonmetropolitan county FMR areas. By law the final FMRs for use in any fiscal year must be published and available for use at the start of that fiscal year, on October 1.

### FMR Standard

FMRs are gross rent estimates. They include the shelter rent plus the cost of all tenant-paid utilities, except telephones, cable or satellite television service, and internet service. HUD sets FMRs to assure that a sufficient supply of rental housing is available to program participants. To accomplish this objective, FMRs must be both high enough to permit a selection of units and neighborhoods and low enough to serve as many low-income families as possible. The level at which FMRs are set is expressed as a percentile point within the rent distribution of standard-quality rental housing units. The current definition used is the 40th percentile rent, the dollar amount below which 40 percent of the standard-quality rental housing units are rented. The 40th percentile rent is drawn from the distribution of rents of all units occupied by recent movers (renter households who moved to their present residence within the past 15 months). HUD is required to ensure that FMRs exclude non-market rental housing in their computation. Therefore, HUD excludes all units falling below a specified rent level determined from public housing rents in HUD's program databases as likely to be either assisted housing or otherwise at a below-market rent, and units less than two years old.

### Data Sources

HUD uses the most accurate and current data available to develop the FMR estimates. Three sources of survey data are used:

(1) *The Decennial Census* provides statistically reliable rent data for use in establishing base year FMRs. The 2000 Census data were first used for the FY2005 FMRs.

(2) The *American Community Surveys (ACS)* collects decennial census long-form style data. The first full implementation of the ACS was in 2005, and was used in the FY2008 FMRs. The 2005 ACS can, in some cases, provide a new basis for 2005, or, for most cases, be used to update the 2000 Census base FMR to 2005. It is likely that ACS data will be used more extensively when the estimates using 3-yr and 5-yr average data for smaller census areas are published.

(3) *Random digit dialing (RDD) telephone surveys* are based on a sampling procedure that uses computers to select statistically random samples of telephone numbers, dial and keep track of them, and tabulate the responses to the calls. RDD surveys are conducted in a limited number of areas each year to assess housing market conditions.

Base year FMR estimates are updated and trended forward using CPI data for rents and utilities. CPI data are available for 102 metropolitan FMR areas. Regional CPI factors are used to update the base year estimates for all FMR areas that do not have their own CPI survey. There is a lag of 15 months in the use of the most recent CPI and the midpoint of the FMR.

Additionally, HUD augments its knowledge of housing market conditions through the use of the *American Housing Surveys (AHS)*. The AHS are conducted by the Bureau of Census for HUD and have accuracy comparable to that of the decennial census. AHS data enable HUD to develop revisions between Census years for the 44 largest metropolitan areas that are surveyed on a revolving schedule of 11 areas annually.

**FMR Areas**

HUD defines FMR areas as metropolitan areas and non-metropolitan counties. With a few exceptions, the most current Office of Management and Budget (OMB) definitions of metropolitan areas are used. HUD uses the OMB definitions because of the generally close correspondence between them and housing market areas. FMRs are intended to be housing market-wide rent estimates that provide housing opportunities throughout the geographic area in which rental units are in direct competition. Exceptions include a small number of metropolitan areas whose revised OMB definitions encompass areas that are larger than HUD's definitions of housing market areas. These exception areas are denoted as "HUD Metro Fair Market Rent Areas," (HMFAs).

## Appendix G: Cost-of-Living Data by County and Institution

| County / *Institution Type* / Institution | ACCRA COLI 2007 | FMR FY 2007 | Study COLI |
|---|---|---|---|
| **Alameda County, CA** | 146.6 | $1,250 | 146.6 |
| *2-year institution(s)* | | | |
| College of Alameda | | | |
| Ohlone College | | | |
| Chabot College | | | |
| Las Positas College | | | |
| Laney College | | | |
| Merritt College | | | |
| Berkeley City College | | | |
| **Butte County, CA** | | $702 | 104.6 |
| *2-year institution(s)* | | | |
| Butte College | | | |
| *4-year institution(s)* | | | |
| California State University-Chico | | | |
| **Contra Costa County, CA** | 146.6 | $1,250 | 146.6 |
| *2-year institution(s)* | | | |
| Diablo Valley College | | | |
| Los Medanos College | | | |
| Contra Costa College | | | |
| **El Dorado County, CA** | 124.7 | $992 | 124.7 |
| *2-year institution(s)* | | | |
| Lake Tahoe Community College | | | |
| **Fresno County, CA** | 119.8 | $726 | 119.8 |
| *2-year institution(s)* | | | |
| West Hills College-Coalinga | | | |
| Reedley College | | | |
| Fresno City College | | | |
| **Humboldt County, CA** | | $725 | 106.0 |
| *2-year institution(s)* | | | |
| College of the Redwoods | | | |
| *4-year institution(s)* | | | |
| Humboldt State University | | | |
| **Imperial County, CA** | | $680 | 103.2 |
| *2-year institution(s)* | | | |
| Imperial Valley College | | | |
| **Kern County, CA** | 108.0 | $646 | 108.0 |
| *2-year institution(s)* | | | |
| Taft College | | | |
| Bakersfield College | | | |
| Cerro Coso Community College | | | |
| *4-year institution(s)* | | | |
| California State University-Bakersfield | | | |
| **Kings County, CA** | | $633 | 100.2 |
| *2-year institutions(s)* | | | |
| West Hills College-Lemoore | | | |
| **Lassen County, CA** | | $698 | 104.3 |
| *2-year institutions(s)* | | | |
| Lassen Community College | | | |
| **Los Angeles County, CA** | 144.6 | $1,269 | 144.6 |
| *2-year institution(s)* | | | |
| Los Angeles City College | | | |
| Los Angeles Southwest College | | | |
| El Camino College-Compton Center | | | |
| West Los Angeles College | | | |
| Santa Monica College | | | |
| El Camino Community College District | | | |
| Rio Hondo College | | | |
| Cerritos College | | | |
| Los Angeles Harbor College | | | |
| Long Beach City College | | | |
| Pasadena City College | | | |
| Glendale Community College | | | |
| Los Angeles Mission College | | | |
| College of the Canyons | | | |
| Los Angeles Pierce College | | | |
| Los Angeles Valley College | | | |
| Citrus College | | | |
| East Los Angeles College | | | |
| Mt San Antonio College | | | |
| Antelope Valley College | | | |
| *4-year institution(s)* | | | |
| University of California-Los Angeles | | | |
| California State Polytechnic University-Pomona | | | |
| **Marin County, CA** | 168.5 | $1,551 | 168.5 |
| *2-year institution(s)* | | | |
| College of Marin | | | |
| **Mendocino County, CA** | | $779 | 109.4 |
| *2-year institutions(s)* | | | |
| Mendocino College | | | |
| **Merced County, CA** | | $657 | 101.7 |
| *2-year institutions(s)* | | | |
| Merced College | | | |
| **Monterey County, CA** | | $1,106 | 130.0 |
| *2-year institutions(s)* | | | |
| Hartnell College | | | |
| Monterey Peninsula College | | | |
| *4-year institution(s)* | | | |
| California State University-Monterey Bay | | | |
| **Napa County, CA** | 154.2 | $1,112 | 154.2 |
| *2-year institutions(s)* | | | |
| Napa Valley College | | | |

## Appendix G: Cost-of-Living Data by County and Institution

| County / *Institution Type* / Institution | ACCRA COLI 2007 | FMR FY 2007 | Study COLI |
|---|---|---|---|
| **Orange County, CA** | 155.0 | $1,485 | 155.0 |
| *2-year institutions(s)* | | | |
| Cypress College | | | |
| Irvine Valley College | | | |
| Orange Coast College | | | |
| Golden West College | | | |
| Saddleback College | | | |
| Santa Ana College | | | |
| Coastline Community College | | | |
| Fullerton College | | | |
| Santiago Canyon College | | | |
| *4-Year Institution(s)* | | | |
| University of California-Irvine | | | |
| **Placer County, CA** | 124.7 | $992 | 124.7 |
| *2-year institutions(s)* | | | |
| Sierra College | | | |
| **Plumas County, CA** | | $711 | 105.1 |
| *2-year institutions(s)* | | | |
| Feather River Community College District | | | |
| **Riverside County, CA** | 117.5 | $974 | 117.5 |
| *2-year institutions(s)* | | | |
| Palo Verde College | | | |
| College of the Desert | | | |
| Riverside Community College | | | |
| Mt. San Jacinto Community College District | | | |
| **Sacramento County, CA** | 124.7 | $992 | 124.7 |
| *2-year institutions(s)* | | | |
| Folsom Lake College | | | |
| Sacramento City College | | | |
| Cosumnes River College | | | |
| American River College | | | |
| **San Bernardino County, CA** | 117.5 | $974 | 117.5 |
| *2-year institutions(s)* | | | |
| Chaffey College | | | |
| Copper Mountain College | | | |
| Barstow Community College | | | |
| Victor Valley College | | | |
| Crafton Hills College | | | |
| San Bernardino Valley College | | | |
| *4-Year Institution(s)* | | | |
| California State University-San Bernardino | | | |
| **San Diego County, CA** | 139.5 | $1,205 | 139.5 |
| *2-year institutions(s)* | | | |
| Southwestern College | | | |
| Cuyamaca College | | | |
| Grossmont College | | | |
| Miracosta College | | | |
| Palomar College | | | |
| **San Diego County, CA** (continued) | | | |
| San Diego City College | | | |
| San Diego Mesa College | | | |
| San Diego Miramar College | | | |
| *4-Year Institution(s)* | | | |
| University of California-San Diego | | | |
| California State University-San Marcos | | | |
| **San Francisco County, CA** | 168.5 | $1,551 | 168.5 |
| *2-year institutions(s)* | | | |
| City College of San Francisco | | | |
| **San Joaquin County, CA** | | $876 | 115.5 |
| *2-year institutions(s)* | | | |
| San Joaquin Delta College | | | |
| **San Luis Obispo County, CA** | | $955 | 120.5 |
| *2-year institutions(s)* | | | |
| Cuesta College | | | |
| *4-Year Institution(s)* | | | |
| California Polytechnic State University-San Luis Obispo | | | |
| **San Mateo County, CA** | 168.5 | $1,551 | 168.5 |
| *2-year institutions(s)* | | | |
| Canada College | | | |
| Skyline College | | | |
| College of San Mateo | | | |
| **Santa Barbara County, CA** | | $1,073 | 127.9 |
| *2-year institutions(s)* | | | |
| Santa Barbara City College | | | |
| Allan Hancock College | | | |
| **Santa Clara County, CA** | 154.2 | $1,284 | 154.2 |
| *2-year institutions(s)* | | | |
| Foothill College | | | |
| De Anza College | | | |
| Gavilan College | | | |
| Mission College | | | |
| West Valley College | | | |
| San Jose City College | | | |
| Evergreen Valley College | | | |
| **Santa Cruz County, CA** | 155.0 | $1,359 | 155.0 |
| *2-year institutions(s)* | | | |
| Cabrillo College | | | |
| **Shasta County, CA** | | $680 | 103.2 |
| *2-year institutions(s)* | | | |
| Shasta College | | | |
| **Siskiyou County, CA** | | $617 | 99.2 |
| *2-year institutions(s)* | | | |
| College of the Siskiyous | | | |

## Appendix G: Cost-of-Living Data by County and Institution

| County / *Institution Type* / Institution | ACCRA COLI 2007 | FMR FY 2007 | Study COLI |
|---|---|---|---|
| **Solano County, CA** | 154.2 | $997 | 154.2 |
| *2-year institutions(s)* | | | |
| Solano Community College | | | |
| **Sonoma County, CA** | 154.2 | $1,165 | 154.2 |
| *2-year institutions(s)* | | | |
| Santa Rosa Junior College | | | |
| *4-Year Institution(s)* | | | |
| Sonoma State University | | | |
| **Stanislaus County, CA** | | $760 | 108.2 |
| *2-year institutions(s)* | | | |
| Modesto Junior College | | | |
| *4-Year Institution(s)* | | | |
| California State University-Stanislaus | | | |
| **Tulare County, CA** | | $647 | 101.1 |
| *2-year institutions(s)* | | | |
| Porterville College | | | |
| College of the Sequoias | | | |
| **Ventura County, CA** | 144.6 | $1,471 | 144.6 |
| *2-year institutions(s)* | | | |
| Ventura College | | | |
| Moorpark College | | | |
| Oxnard College | | | |
| **Yolo County, CA** | 124.7 | $910 | 124.7 |
| *4-Year Institution(s)* | | | |
| University of California-Davis | | | |
| **Yuba County, CA** | | $627 | 99.9 |
| *2-year institutions(s)* | | | |
| Yuba College | | | |
| **Adams County, CO** | 103.4 | $909 | 103.4 |
| *2-year institutions(s)* | | | |
| Front Range Community College | | | |
| **Arapahoe County, CO** | 103.4 | $909 | 103.4 |
| *2-year institutions(s)* | | | |
| Community College of Aurora | | | |
| Arapahoe Community College | | | |
| **Boulder County, CO** | | $1,041 | 125.9 |
| *4-Year Institution(s)* | | | |
| University of Colorado | | | |
| **Denver County, CO** | 103.4 | $909 | 103.4 |
| *2-year institutions(s)* | | | |
| Community College of Denver | | | |
| **El Paso County, CO** | 93.8 | $785 | 93.8 |
| *2-year institutions(s)* | | | |
| Pikes Peak Community College | | | |
| **Jefferson County, CO** | 103.4 | $909 | 103.4 |
| *2-year institutions(s)* | | | |
| Red Rocks Community College | | | |

| County / *Institution Type* / Institution | ACCRA COLI 2007 | FMR FY 2007 | Study COLI |
|---|---|---|---|
| **Larimer County, CO** | 93.9 | $802 | 93.9 |
| *4-Year Institution(s)* | | | |
| Colorado State University | | | |
| **Las Animas County, CO** | | $558 | 95.5 |
| *2-year institutions(s)* | | | |
| Trinidad State Junior College | | | |
| **Logan County, CO** | | $553 | 95.2 |
| *2-year institutions(s)* | | | |
| Northeastern Junior College | | | |
| **Morgan County, CO** | | $580 | 96.9 |
| *2-year institutions(s)* | | | |
| Morgan Community College | | | |
| **Otero County, CO** | | $519 | 93.1 |
| *2-year institutions(s)* | | | |
| Otero Junior College | | | |
| **Prowers County, CO** | | $519 | 93.1 |
| *2-year institutions(s)* | | | |
| Lamar Community College | | | |
| **Pueblo County, CO** | 87.3 | $652 | $87.3 |
| *2-year institutions(s)* | | | |
| Pueblo Community College | | | |
| *4-Year Institution(s)* | | | |
| Colorado State University - Pueblo | | | |
| **Rio Blanco County, CO** | | $720 | 105.7 |
| *2-year institutions(s)* | | | |
| Colorado Northwestern Community College | | | |
| **Fairfield County, CT** | 147.6 | $1,024 | 147.6 |
| *2-year institutions(s)* | | | |
| Housatonic Community College | | | |
| Norwalk Community College | | | |
| **Hartford County, CT** | 118.8 | $1,029 | 118.8 |
| *2-year institutions(s)* | | | |
| Tunxis Community College | | | |
| Manchester Community College | | | |
| Asnuntuck Community College | | | |
| Capital Community College | | | |
| *4-Year Institution(s)* | | | |
| Central Connecticut State University | | | |
| **Litchfield County, CT** | | $898 | 116.9 |
| *2-year institutions(s)* | | | |
| Northwestern Connecticut Community College | | | |
| **Middlesex County, CT** | 118.8 | $1,029 | 118.8 |
| *2-year institutions(s)* | | | |
| Middlesex Community College | | | |
| **New Haven County, CT** | 117.9 | $1,065 | 117.9 |
| *2-year institutions(s)* | | | |
| Gateway Community College | | | |
| Naugatuck Valley Community College | | | |

## Appendix G: Cost-of-Living Data by County and Institution

| County / *Institution Type* / Institution | ACCRA COLI 2007 | FMR FY 2007 | Study COLI |
|---|---|---|---|
| **New Haven County, CT** (continued) | | | |
| *4-Year Institution(s)* | | | |
| Southern Connecticut State University | | | |
| **New London County, CT** | 115.4 | $857 | 115.4 |
| *2-year institutions(s)* | | | |
| Three Rivers Community College | | | |
| **Tolland County, CT** | 118.8 | $1,029 | 118.8 |
| *4-Year Institution(s)* | | | |
| University of Connecticut | | | |
| **Windham County, CT** | | $782 | 109.6 |
| *2-year institutions(s)* | | | |
| Quinebaug Valley Community College | | | |
| *4-Year Institution(s)* | | | |
| Eastern Connecticut State University | | | |
| **Allegany County, MD** | | $519 | 93.1 |
| *2-year institutions(s)* | | | |
| Allegany College of Maryland | | | |
| **Anne Arundel County, MD** | 118.0 | $941 | 118.0 |
| *2-year institutions(s)* | | | |
| Anne Arundel Community College | | | |
| **Baltimore city, MD** | 118.0 | $941 | 118.0 |
| *2-year institutions(s)* | | | |
| Baltimore City Community College | | | |
| *4-Year Institution(s)* | | | |
| University of Maryland-Baltimore | | | |
| Coppin State University | | | |
| **Baltimore County, MD** | 118.0 | $941 | 118.0 |
| *2-year institutions(s)* | | | |
| The Community College of Baltimore County | | | |
| *4-Year Institution(s)* | | | |
| University of Maryland-Baltimore County | | | |
| Towson University | | | |
| **Carroll County, MD** | 118.0 | $941 | 118.0 |
| *2-year institutions(s)* | | | |
| Carroll Community College | | | |
| **Cecil County, MD** | 115.2 | $923 | 115.2 |
| *2-year institutions(s)* | | | |
| Cecil Community College | | | |
| **Charles County, MD** | 132.1 | $1,286 | 132.1 |
| *2-year institutions(s)* | | | |
| College of Southern Maryland | | | |
| **Frederick County, MD** | 132.1 | $1,286 | 132.1 |
| *2-year institutions(s)* | | | |
| Frederick Community College | | | |
| **Garrett County, MD** | | $519 | 93.1 |
| *2-year institutions(s)* | | | |
| Garrett College | | | |

| County / *Institution Type* / Institution | ACCRA COLI 2007 | FMR FY 2007 | Study COLI |
|---|---|---|---|
| **Harford County, MD** | 118.0 | $941 | 118.0 |
| *2-year institutions(s)* | | | |
| Harford Community College | | | |
| **Howard County, MD** | 118.0 | $941 | 118.0 |
| *2-year institutions(s)* | | | |
| Howard Community College | | | |
| **Montgomery County, MD** | 132.1 | $1,286 | 132.1 |
| *2-year institutions(s)* | | | |
| Montgomery College | | | |
| **Prince George's County, MD** | 132.1 | $1,286 | 132.1 |
| *2-year institutions(s)* | | | |
| Prince George's Community College | | | |
| *4-Year Institution(s)* | | | |
| University of Maryland-College Park | | | |
| **Talbot County, MD** | | $552 | 95.1 |
| *2-year institutions(s)* | | | |
| Chesapeake College | | | |
| **Washington County, MD** | | $673 | 102.8 |
| *2-year institutions(s)* | | | |
| Hagerstown Community College | | | |
| **Wicomico County, MD** | | $653 | 101.5 |
| *2-year institutions(s)* | | | |
| Wor-Wic Community College | | | |
| *4-Year Institution(s)* | | | |
| Salisbury University | | | |
| **Barnstable County, MA** | | $1,003 | 123.5 |
| *2-year institutions(s)* | | | |
| Cape Cod Community College | | | |
| **Berkshire County, MA** | 105.1 | $706 | 105.1 |
| *2-year institutions(s)* | | | |
| Berkshire Community College | | | |
| **Bristol County, MA** | 120.6 | $791 | 120.6 |
| *2-year institutions(s)* | | | |
| Bristol Community College | | | |
| *4-Year Institution(s)* | | | |
| University of Massachusetts-Dartmouth | | | |
| **Essex County, MA** | 134.7 | $1,366 | 134.7 |
| *2-year institutions(s)* | | | |
| Northern Essex Community College | | | |
| North Shore Community College | | | |
| **Franklin County, MA** | | $716 | 105.5 |
| *2-year institutions(s)* | | | |
| Greenfield Community College | | | |
| **Hampden County, MA** | | $840 | 113.3 |
| *2-year institutions(s)* | | | |
| Holyoke Community College | | | |
| Springfield Technical Community College | | | |

## Appendix G: Cost-of-Living Data by County and Institution

| County / *Institution Type* / Institution | ACCRA COLI 2007 | FMR FY 2007 | Study COLI |
|---|---|---|---|
| **Hampden County, MA** (continued) | | | |
| *4-Year Institution(s)* | | | |
| Westfield State College | | | |
| **Hampshire County, MA** | | $840 | 113.3 |
| *4-Year Institution(s)* | | | |
| University of Massachusetts-Amherst | | | |
| **Middlesex County, MA** | 131.0 | $1,366 | 131.0 |
| *2-year institutions(s)* | | | |
| Middlesex Community College | | | |
| **Norfolk County, MA** | 134.7 | $1,366 | 134.7 |
| *2-year institutions(s)* | | | |
| Massachusetts Bay Community College | | | |
| **Plymouth County, MA** | 134.7 | $1,366 | 134.7 |
| *2-year institutions(s)* | | | |
| Massasoit Community College | | | |
| *4-Year Institution(s)* | | | |
| Bridgewater State College | | | |
| **Suffolk County, MA** | 134.7 | $1,366 | 134.7 |
| *2-year institutions(s)* | | | |
| Roxbury Community College | | | |
| Bunker Hill Community College | | | |
| **Worcester County, MA** | 108.7 | $890 | 108.7 |
| *2-year institutions(s)* | | | |
| Mount Wachusett Community College | | | |
| Quinsigamond Community College | | | |
| *4-Year Institution(s)* | | | |
| Worcester State College | | | |
| **Atlantic County, NJ** | | $964 | 121.0 |
| *2-year institutions(s)* | | | |
| Atlantic Cape Community College | | | |
| **Bergen County, NJ** | 126.4 | $1,084 | 126.4 |
| *2-year institutions(s)* | | | |
| Bergen Community College | | | |
| *4-Year Institution(s)* | | | |
| Ramapo College of New Jersey | | | |
| **Burlington County, NJ** | 123.5 | $923 | 123.5 |
| *2-year institutions(s)* | | | |
| Burlington County College | | | |
| **Camden County, NJ** | 123.5 | $923 | 123.5 |
| *2-year institutions(s)* | | | |
| Camden County College | | | |
| **Cumberland County, NJ** | | $889 | 116.3 |
| *2-year institutions(s)* | | | |
| Cumberland County College | | | |
| **Essex County, NJ** | 126.4 | $1,063 | 126.4 |
| *2-year institutions(s)* | | | |
| Essex County College | | | |

| County / *Institution Type* / Institution | ACCRA COLI 2007 | FMR FY 2007 | Study COLI |
|---|---|---|---|
| **Essex County, NJ** (continued) | | | |
| *4-Year Institution(s)* | | | |
| Montclair State University | | | |
| **Gloucester County, NJ** | 123.5 | $923 | 123.5 |
| *2-year institutions(s)* | | | |
| Gloucester County College | | | |
| *4-Year Institution(s)* | | | |
| Rowan University | | | |
| **Hudson County, NJ** | 128.8 | $1,154 | 128.8 |
| *2-year institutions(s)* | | | |
| Hudson County Community College | | | |
| **Mercer County, NJ** | 126.4 | $1,084 | 126.4 |
| *2-year institutions(s)* | | | |
| Mercer County Community College | | | |
| **Middlesex County, NJ** | 126.9 | $1,257 | 126.9 |
| *2-year institutions(s)* | | | |
| Middlesex County College | | | |
| *4-Year Institution(s)* | | | |
| Rutgers University | | | |
| **Monmouth County, NJ** | 126.9 | $1,170 | 126.9 |
| *2-year institutions(s)* | | | |
| Brookdale Community College | | | |
| **Morris County, NJ** | 126.4 | $1,063 | 126.4 |
| *2-year institutions(s)* | | | |
| County College of Morris | | | |
| **Ocean County, NJ** | 126.9 | $1,170 | 126.9 |
| *2-year institutions(s)* | | | |
| Ocean County College | | | |
| **Passaic County, NJ** | 128.8 | $1,163 | 128.8 |
| *2-year institutions(s)* | | | |
| Passaic County Community College | | | |
| *4-Year Institution(s)* | | | |
| William Paterson University of New Jersey | | | |
| **Salem County, NJ** | 107.1 | $923 | 107.1 |
| *2-year institutions(s)* | | | |
| Salem Community College | | | |
| **Somerset County, NJ** | 126.9 | $1,257 | 126.9 |
| *2-year institutions(s)* | | | |
| Raritan Valley Community College | | | |
| **Sussex County, NJ** | 126.4 | $1,063 | 126.4 |
| *2-year institutions(s)* | | | |
| Sussex County Community College | | | |
| **Union County, NJ** | 126.4 | $1,063 | 126.4 |
| *2-year institutions(s)* | | | |
| Union County College | | | |
| **Warren County, NJ** | | $1,050 | 126.5 |
| *2-year institutions(s)* | | | |
| Warren County Community College | | | |

## Appendix G: Cost-of-Living Data by County and Institution

| County / *Institution Type* / Institution | ACCRA COLI 2007 | FMR FY 2007 | Study COLI |
|---|---|---|---|
| **Accomack County, VA** | | $528 | 93.6 |
| *2-year institutions(s)* | | | |
| Eastern Shore Community College | | | |
| **Alleghany County, VA** | | $502 | 92.0 |
| *2-year institutions(s)* | | | |
| Dabney S Lancaster Community College | | | |
| **Augusta County, VA** | 100.1 | $588 | 100.1 |
| *2-year institutions(s)* | | | |
| Blue Ridge Community College | | | |
| **Brunswick County, VA** | | $519 | 93.1 |
| *2-year institutions(s)* | | | |
| Southside Virginia Community College | | | |
| **Charlottesville city, VA** | 112.2 | $792 | 112.2 |
| *2-year institutions(s)* | | | |
| Piedmont Virginia Community College | | | |
| *4-Year Institution(s)* | | | |
| University of Virginia-Main Campus | | | |
| **Chesterfield County, VA** | 106.4 | $788 | 106.4 |
| *2-year institutions(s)* | | | |
| John Tyler Community College | | | |
| **Danville city, VA** | | $523 | 93.3 |
| *2-year institutions(s)* | | | |
| Danville Community College | | | |
| **Fairfax city, VA** | 136.4 | $1,286 | 136.4 |
| *2-year institutions(s)* | | | |
| Northern Virginia Community College | | | |
| **Franklin city, VA** | 91.6 | $502 | 91.6 |
| *2-year institutions(s)* | | | |
| Paul D Camp Community College | | | |
| **Frederick County, VA** | | $673 | 102.8 |
| *2-year institutions(s)* | | | |
| Lord Fairfax Community College | | | |
| **Fredericksburg city, VA** | 136.4 | $1,286 | 136.4 |
| *4-Year Institution(s)* | | | |
| University of Mary Washington | | | |
| **Hampton city, VA** | 106.8 | $844 | 1068 |
| *2-year institutions(s)* | | | |
| Thomas Nelson Community College | | | |
| **Harrisonburg city, VA** | 104.4 | $610 | 104.4 |
| *4-Year Institution(s)* | | | |
| James Madison University | | | |
| **Henrico County, VA** | 106.4 | $788 | 106.4 |
| *2-year institutions(s)* | | | |
| J Sargeant Reynolds Community College | | | |
| **Henry County, VA** | 89.5 | $502 | 89.5 |
| *2-year institutions(s)* | | | |
| Patrick Henry Community College | | | |
| **Lynchburg city, VA** | | $556 | 95.4 |
| *2-year institutions(s)* | | | |
| Central Virginia Community College | | | |
| **Middlesex County, VA** | | $604 | 98.4 |
| *2-year institutions(s)* | | | |
| Rappahannock Community College | | | |
| **Montgomery County, VA** | | $598 | 98.0 |
| *4-Year Institution(s)* | | | |
| Virginia Polytechnic Institute and State University | | | |
| **Newport News city, VA** | 106.8 | $844 | 106.8 |
| *4-Year Institution(s)* | | | |
| Christopher Newport University | | | |
| **Norfolk city, VA** | 106.8 | $844 | 106.8 |
| *2-year institutions(s)* | | | |
| Tidewater Community College | | | |
| **Orange County, VA** | | $617 | 99.2 |
| *2-year institutions(s)* | | | |
| Germanna Community College | | | |
| **Prince Edward County, VA** | | $587 | 97.3 |
| *4-Year Institution(s)* | | | |
| Longwood University | | | |
| **Pulaski County, VA** | | $502 | 92.0 |
| *2-year institutions(s)* | | | |
| New River Community College | | | |
| **Radford city, VA** | | $598 | 98.0 |
| *4-Year Institution(s)* | | | |
| Radford University | | | |
| **Roanoke County, VA** | 91.6 | $613 | 91.6 |
| *2-year institutions(s)* | | | |
| Virginia Western Community College | | | |
| **Tazewell County, VA** | | $502 | 92.0 |
| *2-year institutions(s)* | | | |
| Southwest Virginia Community College | | | |
| **Washington County, VA** | 92.3 | $502 | 92.3 |
| *2-year institutions(s)* | | | |
| Virginia Highlands Community College | | | |
| **Wise County, VA** | | $502 | 92.0 |
| *2-year institutions(s)* | | | |
| Mountain Empire Community College | | | |
| **Wythe County, VA** | | $502 | 92.0 |
| *2-year institutions(s)* | | | |
| Wytheville Community College | | | |
| **Chelan County, WA** | | $650 | 101.3 |
| *2-year institutions(s)* | | | |
| Wenatchee Valley College | | | |
| **Clallam County, WA** | | $687 | 103.6 |
| *2-year institutions(s)* | | | |
| Peninsula College | | | |

## Appendix G: Cost-of-Living Data by County and Institution

| County / *Institution Type* / Institution | ACCRA COLI 2007 | FMR FY 2007 | Study COLI |
|---|---|---|---|
| **Clark County, WA** | | $737 | 106.8 |
| *2-year institutions(s)* | | | |
| Clark College | | | |
| **Cowlitz County, WA** | | $609 | 98.7 |
| *2-year institutions(s)* | | | |
| Lower Columbia College | | | |
| **Franklin County, WA** | 93.8 | $647 | 93.8 |
| *2-year institutions(s)* | | | |
| Columbia Basin College | | | |
| **Grant County, WA** | | $593 | 97.7 |
| *2-year institutions(s)* | | | |
| Big Bend Community College | | | |
| **Grays Harbor County, WA** | | $603 | 98.3 |
| *2-year institutions(s)* | | | |
| Grays Harbor College | | | |
| **King County, WA** | 121.0 | $854 | 121.0 |
| *2-year institutions(s)* | | | |
| Bellevue Community College | | | |
| Cascadia Community College | | | |
| Lake Washington Technical College | | | |
| Renton Technical College | | | |
| Green River Community College | | | |
| Seattle Community College-North Campus | | | |
| Seattle Community College-South Campus | | | |
| Seattle Community College-Central Campus | | | |
| Shoreline Community College | | | |
| Highline Community College | | | |
| *4-Year Institution(s)* | | | |
| University of Washington | | | |
| **Kitsap County, WA** | | $782 | 109.6 |
| *2-year institutions(s)* | | | |
| Olympic College | | | |
| **Kittitas County, WA** | | $671 | 102.6 |
| *4-Year Institution(s)* | | | |
| Central Washington University | | | |
| **Lewis County, WA** | | $649 | 101.2 |
| *2-year institutions(s)* | | | |
| Centralia College | | | |
| **Pierce County, WA** | 110.1 | $788 | 110.1 |
| *2-year institutions(s)* | | | |
| Pierce College at Puyallup | | | |
| Bates Technical College | | | |
| Tacoma Community College | | | |
| Pierce College at Fort Steilacoom | | | |
| Clover Park Technical College | | | |
| **Skagit County, WA** | | $820 | 112.0 |
| *2-year institutions(s)* | | | |
| Skagit Valley College | | | |
| **Snohomish County, WA** | 121.0 | $854 | 121.0 |
| *2-year institutions(s)* | | | |
| Edmonds Community College | | | |
| Everett Community College | | | |
| **Spokane County, WA** | 95.8 | $656 | 95.8 |
| *2-year institutions(s)* | | | |
| Spokane Community College | | | |
| Spokane Falls Community College | | | |
| *4-Year Institution(s)* | | | |
| Eastern Washington University | | | |
| **Thurston County, WA** | 104.8 | $763 | 104.8 |
| *2-year institutions(s)* | | | |
| South Puget Sound Community College | | | |
| *4-Year Institution(s)* | | | |
| The Evergreen State College | | | |
| **Walla Walla County, WA** | | $601 | 98.2 |
| *2-year institutions(s)* | | | |
| Walla Walla Community College | | | |
| **Whatcom County, WA** | 109.7 | $741 | 109.7 |
| *2-year institutions(s)* | | | |
| Bellingham Technical College | | | |
| Whatcom Community College | | | |
| *4-Year Institution(s)* | | | |
| Western Washington University | | | |
| **Whitman County, WA** | | $603 | 98.3 |
| *4-Year Institution(s)* | | | |
| Washington State University | | | |
| **Yakima County, WA** | | $684 | 103.4 |
| *2-year institutions(s)* | | | |
| Yakima Valley Community College | | | |

## Appendix H: Calculation of Employee Compensation as Share of Total Expenses

The IPEDS definition of **core expenses** is the sum of all expenses in the following categories:

Instruction (01)
Research (02)
Public service (03)
Academic support (05)
Student services (06)
Institutional support (07)
Operation maintenance of plant (08)
Depreciation (09)
Scholarships and fellowships expenses (10)
Other expenses and deductions (14)
Total non-operating expenses and deductions (18)

Each of these categories is broken down into components. 'xx' corresponds to the functional categories listed above.

Current year total (F1Cxx1)
Salaries and wages (F1Cxx2)
Employee fringe benefits (F1Cxx3)
Depreciation (F1Cxx4)
All other (F1Cxx5)

Depreciation is reported either as a total amount (F1C091) and (F1C094), or by functional area (F1Cxx4).

"**Modified core expenses**," as used in this study, exclude all expenditures associated with depreciation and with non-operating expenses and deductions. So the total modified core expenses are calculated as the sum of the following IPEDS finance items:

F1C012 – Instruction: Salaries and wages
F1C013 – Instruction: Employee fringe benefits
F1C015 – Instruction: All other
F1C022 – Research: Salaries and wages
F1C023 – Research: Employee fringe benefits
F1C025 – Research: All other
F1C032 – Public Service: Salaries and wages
F1C033 – Public Service: Employee fringe benefits
F1C035 – Public Service: All other
F1C052 – Academic Support: Salaries and wages
F1C053 – Academic Support: Employee fringe benefits
F1C055 – Academic Support: All other
F1C062 – Student Services: Salaries and wages
F1C063 – Student Services: Employee fringe benefits
F1C065 – Student Services: All other
F1C072 – Institutional Support: Salaries and wages
F1C073 – Institutional Support: Employee fringe benefits
F1C075 – Institutional Support: All other
F1C082 – Operation maintenance of plant: Salaries and wages
F1C083 – Operation maintenance of plant: Employee fringe benefits
F1C085 – Operation maintenance of plant: All other

F1C102 – Scholarships and fellowships expenses: Salaries and wages
F1C103 – Scholarships and fellowships expenses: Employee fringe benefits
F1C105 – Scholarships and fellowships expenses
F1C142 – Other expenses and deductions: Salaries and wages
F1C143 – Other expenses and deductions: Employee fringe benefits
F1C145 – Other expenses and deductions: All other

The ratio of salaries, wages, and employee fringe benefits to modified core expenses is calculated by using the Salaries and wages components plus the Employee fringe benefits components of the modified core expenses as the numerator and the sum of all modified core expenses as the denominator.

## Appendix I: WSU Critique of Cost-of-Living Adjustment

# Executive Summary:
# Regional Cost-of-Living Adjustments to Institutional Funding: A Critique

Washington legislation requires cost-of-living adjustments to per-student funding goals.

**No recognized, standard method of adjusting for regional cost-of-living differences currently exists**.

- ACCRA is calculated only for urban locations; 35% of the public, 4-year institutions in the eight global challenge states are excluded from this dataset; 38% of WSU's set of comparable institutions are missing, including the WSU baseline.
- Using a regression model, OFM has created an index from the county-based, Fair Market Rents (FMR) data to use when an ACCRA index is missing.

**OFM's recommended index is problematic.**

- Differences between the ACCRA index and a calculated index from FMR data using OFM's regression model for WSU's comparator institutions range nearly 14 points, including both positive and negative values.
- Housing costs and FMR data change over time, but not at similar rates. Differences in housing and rental cost measures between Pullman and Seattle, for example, were 38% in 2004 and 8% in 2006.
- A county-based index for this purpose may be erroneous: WSU Pullman's local student population is 42% of Whitman County's population while Rutgers and University of Maryland's (WSU comparator institutions) local student populations are each 4% of their respective counties.

**A non-standard, problematic index for adjusting cost-of-living should be used on a very limited basis, if at all.**

- OFM recommends a modified core set of expenditures to use (excluding depreciation and non-operating costs). This correctly includes central administrative costs for some institutions, which are however incurred at other locations, and thus should be excluded from any regional adjustments.
- OFM recommends using the ratio of all salaries, wages and benefits to modified core expenditures as a method of calculating a partial adjustment, but salaries of Washington's civil service staff and all Washington state employee benefits are determined at the state level and are not adjusted regionally – again these expenditures should be excluded from any regional adjustments.
- More appropriate are the negotiable salaries and wages of personnel in instruction, research and public service, the central functions of higher education -- cost-of-living adjustments should be reduced to one-half of these costs due to the weaknesses in the index.

## Appendix I: WSU Critique of Cost-of-Living Adjustment

# Regional Cost-of-Living Adjustments to Institutional Funding:

# A Critique

Washington legislation (2SSB 5806) requires the adoption of a higher education funding goal that reaches the 60th percentile of per-student funding of similar institutions in the global challenge states. The legislation specifies that the Washington Office of Financial Management (OFM) shall adjust for regional cost-of-living differences, program offerings, and mix of students. However, there is no accepted, standard method for adjusting for regional price variation and there is no single source of data to use for this purpose. OFM recommends using a combination of ACCRA city-to-city price comparisons, and the county-based, Fair Market Rents (FMR) as a single index for this purpose.[17]

ACCRA, available only for urban locations and the most comprehensive metric, is designed to reflect individual preference in responding to market effects. WSU, the University of Massachusetts at Amherst, and Virginia Tech are excluded from the ACCRA data (38% of 8 comparator institutions for WSU's data). Of the 112 public 4-year institutions in the eight global challenge states, 39 institutions (35%) are not in the ACCRA data set.

OFM recommends using FMR data for those institutions missing ACCRA data and calculating an index based on a regression analysis to fill in when an ACCRA index is unavailable. FMR is county-based and although OFM found a regression relationship between FMR and ACCRA indicating that nearly 80% of the variation in cost of living can be explained by housing costs, this may not be the case when applied to land-grant institutions which are typically located in rural settings. An FMR index related to ACCRA via OFM's regression parameters for WSU's comparator institutions produces a range of difference of 13.8 points, not all in the same direction.

Table 1. ACCRA index and differences between FMR and OFM calculated indices.[18]

| Institution | County/Town | State | ACCRA COLI | FMR FY06 | FMR COLI | OFM COLI | Difference FMR - OFM |
|---|---|---|---|---|---|---|---|
| CSU | Larimer | CO | 103.4 | $775 | 110.0 | 103.4 | -6.6 |
| Rutgers | Middlesex | NJ | 130.2 | $1,187 | 138.4 | 130.2 | -8.2 |
| U Conn | Tolland/Mansfield town | CT | 117.4 | $979 | 124.1 | 117.4 | -6.7 |
| U Maryland | Prince George's | MD | 133.3 | $1,225 | 141.1 | 133.3 | -7.8 |
| U Mass | Hampshire/Amherst town | MA | | $799 | 111.7 | 111.7 | 0 |
| UC Davis | Yolo | CA | 122.8 | $879 | 117.2 | 122.8 | 5.6 |
| V Tech | Montgomery | VA | | $575 | 96.3 | 96.3 | 0 |
| WSU | Whitman | WA | | $583 | 96.8 | 96.8 | 0 |

[17] (DRAFT) Per-Student Funding Study: Adjusting for Regional Cost-of-Living Differences. Paper circulated 7/24/08, Education Data & Research Center, Washington State Office of Financial Management (OFM).
[18] OFM data (GCS_Bacc_20080720.xls) distributed by Jim Schmidt via email dated 7/21/2008.

## Appendix I: WSU Critique of Cost-of-Living Adjustment

This indicates a systematic problem in adjusting costs for rural, land-grant institutions, especially when adjusted to more urban locations. For example, WSU Pullman's local student headcount enrollment in fall 2006 was nearly 42% of the county population so that using student rental rates as a proxy for staff cost-of-living and in comparison to other locations with a different population mix may produce erroneous results at best. Assessing University of Maryland's impact as 4% of DC Metro's Prince George's County implies a very different relation to living costs.

Table 2. Local institutional student enrollment as a proportion of total county population.[19]

| Institution | County/Town | State | Local Student Enrollment Fall 06 | County Population (July 2006 est.) | Ratio Campus to County |
|---|---|---|---|---|---|
| CSU | Larimer | CO | 24,670 | 281,620 | 8.8% |
| Rutgers | Middlesex | NJ | 34,392 | 783,371 | 4.4% |
| U Conn | Tolland/Mansfield town | CT | 20,363 | 147,454 | 13.8% |
| U Maryland | Prince George's | MD | 35,102 | 834,660 | 4.2% |
| U Mass | Hampshire/Amherst town | MA | 25,593 | 152,982 | 16.7% |
| UC Davis | Yolo | CA | 30,475 | 190,589 | 16.0% |
| V Tech | Montgomery | VA | 26,371 | 88,131 | 29.9% |
| **WSU** | **Whitman** | **WA** | **17,300** | **41,404** | **41.8%** |

More troubling for an index at the foundation of long term budget planning, the FMR swings from one year to the next . WSU's comparator FMR values changed between 3.4% (WSU) to 5.9% (Rutgers) from FY06 to FY07. In one extreme instance, a WSU comparator's FMR increased 14.3% in FY 2005, while UW's FMR decreased by 9.6% in the same period. Certainly every effort should be made to minimize such instability in a multi-year funding plan.

Table 3. One-year change in FMR and ratio of local student headcount enrollment to county population.[20]

| Institution | County/Town | State | FMR FY06 | FMR FY07 | % Change |
|---|---|---|---|---|---|
| CSU | Larimer | CO | $775 | $802 | 3.5% |
| Rutgers | Middlesex | NJ | $1,187 | $1,257 | 5.9% |
| U Conn | Tolland/Mansfield town | CT | $979 | $1,029 | 5.1% |
| U Maryland | Prince George's | MD | $1,225 | $1,286 | 5.0% |
| U Mass | Hampshire/Amherst town | MA | $799 | $840 | 5.1% |
| UC Davis | Yolo | CA | $879 | $910 | 3.5% |
| V Tech | Montgomery | VA | $575 | $598 | 4.0% |
| WSU | Whitman | WA | $583 | $603 | 3.4% |

[19] Local student enrollment from institutional web sites – excludes distance and enrollment at other locations. County population estimates for July 1, 2006 from http://www.census.gov/popest/counties/CO-EST2007-01.html

[20] FY 2007 FMR by county from HUD's National Housing Locator System, https://hudapps.hud.gov/nhls/selectState.do?cmd=doInit.

## Appendix I: WSU Critique of Cost-of-Living Adjustment

Comparisons of FMR historical data for specified locations reveal widely varying annual changes, widely varying changes when comparing other locations to Pullman and widely varying annual changes comparing FMR data to housing costs. For example, in 2004, King County rental costs were 65% higher than Whitman County's while Seattle housing costs were only 27% higher than those in Pullman. Two years later, the King County rental costs were 44% higher and Seattle housing costs were 37% higher (see all data in Appendix 1). This means that differences in housing and rental rates between Pullman and Seattle were 38% in 2004 and 8% in 2006. The table below illustrates the divergence of housing and rental measures for the same locations over three reporting years and as reported in Appendix 1. Pullman data serve as the baseline comparator.

Table 4. Divergence of housing and rental measures for specific locations indexed to Pullman.[21]

| Institution | County | City State | ~2003 | 2004 | 2005 | 2006 |
|---|---|---|---|---|---|---|
| UW | King | Seattle WA | -31.4% | -38.3% | | -7.5% |
| UC Davis | Yolo | Davis CA | -8.2% | -11.2% | | -2.6% |
| CSU | Larimer | Ft Collins CO | -30.9% | -30.6% | | -25.5% |
| V Tech | Montgomery | Blacksburg VA | -3.7% | -2.0% | | 9.8% |
| WSU | Whitman | Pullman WA | | | | |

If adjustments have to be made, as required by legislation, then the lack of a national standard, the absence of consistent data for approximately one-third of the institutions, and the large, varying differences between calculated, but related COLAs and from year to year, all suggest that any adjustments should be made with caution and on a limited basis. In addition, four of WSU's comparable institutions have central administrative costs incurred at other locations which are included in the modified core expenditure totals. Since many higher education institutional costs may not be impacted by regional costs-of-living, and since some costs are incurred in other locations, a partial adjustment on a limited basis is more appropriate than a large adjustment on dubious numbers.

OFM suggests applying a partial adjustment to total expenditures in salaries, wages, and fringe benefits as a percentage of modified core expenditures per student FTE where depreciation and non-operating expenses are excluded. However, since all fringe benefits and civil service staff salaries in Washington are determined at the state level and are not regionally adjusted, these costs to the institutions should also not be adjusted regionally. Salaries and wages related to instruction, research and public service, the central functions of higher education, may then be the most appropriate costs to adjust on a limited basis, given the available data.

Table 5 below illustrates the percentage of core modified per-student funding that are: 1) all salaries, wages, and fringe benefits; 2) instructional, research, and public service (IRP) salaries and wages; and 3) one-half of IRP salaries and wages.

[21]Housing costs collected contemporaneously from HomeFair.com salary comparison site, no longer available free. FMR history (2000-2005) at http://www.huduser.org/datasets/fmr.html.

## Appendix I: WSU Critique of Cost-of-Living Adjustment

Table 5. Adjustment scenarios with modified core expenditures per student FTE, scaled to WSU (60th percentile is calculated without WSU in the mix)

| Institution Name | OFM COLA (2006) | COLA Factor WSU = 1.0 | % of exp. in All salaries, wages, and fringe benefits | % of exp. in Instructional, Research, and Public Service (IRP) salaries and wages | 1/2 of the % of exp. in IRP salaries and wages | $ per FTE (unadjusted) | $ per FTE with 1/2 COLA on IRP salaries and wages |
|---|---|---|---|---|---|---|---|
| CSU | 103.4 | 0.94 | 69.3% | 45.7% | 22.8% | $7,185 | $7,081 |
| Rutgers | 130.2 | 0.74 | 71.3% | 39.0% | 19.5% | $20,627 | $19,596 |
| U Conn | 117.4 | 0.82 | 78.1% | 39.5% | 19.8% | $22,217 | $21,447 |
| U Maryland | 133.3 | 0.73 | 70.1% | 40.6% | 20.3% | $19,508 | $18,424 |
| U Mass | 111.7 | 0.87 | 71.0% | 37.0% | 18.5% | $20,424 | $19,921 |
| UC Davis | 122.8 | 0.79 | 52.0% | 32.1% | 16.1% | $23,831 | $23,021 |
| V Tech | 96.3 | 1.01 | 72.9% | 45.9% | 22.9% | $17,315 | $17,338 |
| **WSU** | **96.8** | **1.00** | **69.2%** | **38.5%** | **19.3%** | **$16,301** | **$16,301** |
| | | | | | 60th percentile | $20,546 | $19,791 |
| | | | | | Gap to 60th percentile | -$4,245 | -$3,490 |
| | | | | | % change to 60th percentile | 26% | 21% |

In conclusion, applying regional cost-of-living adjustments to higher education per-student funding, much of which is based on state or national markets, is problematic. WSU recommends not using it at all, but if required by legislation, limiting any regional cost-of-living adjustments to a minimum and applying it to one-half of the expenditures in salaries and wages in instruction, research and public service as a percentage of total modified core expenditures. This metric attempts to adjust for regional differences in identifiable, reportable data. It also reduces its weight in the calculation to account for problems in the data and resulting weaknesses in the index. The 60th percentile funding can then be calculated without Washington State University in the mix and tracked over time.

## Appendix I: WSU Critique of Cost-of-Living Adjustment

Appendix 1. Historical Fair Market Rentals (FMR) and comparisons to housing costs.

FMR Historical Data by Fiscal Year[22]

| Institution | County | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 |
|---|---|---|---|---|---|---|---|---|---|
| UW | King | $772 | $809 | $845 | $899 | $923 | $834 | $840 | $854 |
| UCD | Yolo | $673 | $688 | $712 | $752 | $779 | $851 | $879 | $910 |
| CSU | Larimer | $668 | $681 | $703 | $727 | $739 | $750 | $775 | $802 |
| VT | Montgomery | $456 | $459 | $477 | $489 | $489 | $559 | $575 | $598 |
| WSU | Whitman | $518 | $521 | $534 | $548 | $559 | $564 | $583 | $603 |

Annual Percentage Change

| Institution | County | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 |
|---|---|---|---|---|---|---|---|---|---|
| UW | King | | 4.8% | 4.4% | 6.4% | 2.7% | -9.6% | 0.7% | 1.7% |
| UCD | Yolo | | 2.2% | 3.5% | 5.6% | 3.6% | 9.2% | 3.3% | 3.5% |
| CSU | Larimer | | 1.9% | 3.2% | 3.4% | 1.7% | 1.5% | 3.3% | 3.5% |
| VT | Montgomery | | 0.7% | 3.9% | 2.5% | 0.0% | 14.3% | 2.9% | 4.0% |
| WSU | Whitman | | 0.6% | 2.5% | 2.6% | 2.0% | 0.9% | 3.4% | 3.4% |
| average | | | 2.0% | 3.5% | 4.1% | 2.0% | 3.3% | 2.7% | 3.2% |

FMR Indexed to Pullman [23]

| Institution | County | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 |
|---|---|---|---|---|---|---|---|---|---|
| UW | King | 49.0% | 55.3% | 58.2% | 64.1% | 65.1% | 47.9% | 44.1% | 41.6% |
| UCD | Yolo | 29.9% | 32.1% | 33.3% | 37.2% | 39.4% | 50.9% | 50.8% | 50.9% |
| CSU | Larimer | 29.0% | 30.7% | 31.6% | 32.7% | 32.2% | 33.0% | 32.9% | 33.0% |
| VT | Montgomery | -12.0% | -11.9% | -10.7% | -10.8% | -12.5% | -0.9% | -1.4% | -0.8% |
| WSU | Whitman | | | | | | | | |

HomeFair.com COLA housing costs indexed to Pullman

| Institution | County | Sep-03 | Mar-04 | Apr-06 |
|---|---|---|---|---|
| UW | Seattle WA | 32.7% | 26.8% | 36.6% |
| UCD | Davis CA | 29.0% | 28.2% | 48.2% |
| CSU | Ft Collins CO | 1.8% | 1.6% | 7.4% |
| VT | Blacksburg VA | -14.5% | -14.5% | 8.4% |
| WSU | Pullman WA | | | |

Divergence of housing and rental measures

| Institution | County | City State | ~2003 | 2004 | 2005 | 2006 |
|---|---|---|---|---|---|---|
| UW | King | Seattle WA | -31.4% | -38.3% | | -7.5% |
| UC Davis | Yolo | Davis CA | -8.2% | -11.2% | | -2.6% |
| CSU | Larimer | Ft Collins CO | -30.9% | -30.6% | | -25.5% |
| V Tech | Montgomery | Blacksburg VA | -3.7% | -2.0% | | 9.8% |

[22] For historical FMR data see http://www.huduser.org/datasets/fmr.html
[23] The FMR percentage difference from Pullman

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