
Higher Education Formulas and Funding in Other States

**Presentation to the
Commission to Develop the Maryland
Model for Funding Higher Education**

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State-level Funding Formulas/Guidelines

- A majority of states use a formula or guideline to distribute funds to two- and/or four-year public institutions
- Formulas/guidelines for public higher education have been in use in the United States since World War II
- Original purpose to distribute funds in rational and equitable manner
- Over time have become means to determine institutional funding needs and allocate funds

Source: *Funding Formula Use in Higher Education*, MGT of America, March 2001

Formulas Used for Many Purposes

- By the state higher education agency or governing board to recommend resources for each institution to the legislature and governor
- By the legislative and executive budget offices to evaluate higher education budget requests
- By the governing or coordinating board and/or legislature to measure and reward productivity
- By the state higher education agency to distribute the state's higher education budget allocation to each institution

Goal of Formulas Shifted Over Time

- Equitably allocate resources
- Determine adequate level of funding
 - Scope and missions of institutions increased and diversified
 - Growing enrollments
 - More competition for funding
- Provide stable and predictable funding level

Use of Formulas Varies

- In most states total institutional needs are not determined by a formula
- Additions are made to the formula amount to recognize special needs/missions
- Subtractions are made to recognize total funds available due to competition for funding from other State agencies, revenue shortfalls
- Formulas may be all-inclusive or for specific program areas

Designing a Formula is Complex

- No two campuses are alike
 - Different institutional missions
 - Different capacities to perform missions
 - Different inputs, *e.g.*, enrollment, student profile
- Changes in mission, capacity, inputs can challenge formula
- Formulas tend to become more complex over time as adjustments are made to more accurately reflect differences

Guiding Principles for Formulas

- 14 desired characteristics in state higher education funding formulas
- Often tend to be in opposition to one another – balancing act
- Provide objective framework for evaluating current and future funding policies, alternatives
- Develop accepted set of guiding principles to provide rationale for decision making

Characteristics of an Optimal Formula

- Equitable
- Adequacy-driven
- Goal-based
- Mission-sensitive
- Size-sensitive
- Responsive
- Adaptable to Economic Conditions
- Concerned with Stability
- Simple to Understand
- Adaptable to Special Situations
- Reliant on Valid and Reliable Data
- Flexible
- Incentive-based
- Balanced

| Characteristic | Summary Description |
|--|--|
| A. Equitable | The funding formula should provide both horizontal equity (equal treatment of equals) and vertical equity (unequal treatment of unequals) based on size, mission, and growth characteristics of the institutions. |
| B. Adequacy-driven | The funding formula should determine the funding level needed by each institution to fulfill its approved mission. |
| C. Goal-based | The funding formula should incorporate and reinforce the broad goals of the state for its system of colleges and universities as expressed through approved missions, quality expectations and performance standards. |
| D. Mission-sensitive | The funding formula should be based on the recognition that different institutional missions (including differences in degree levels, program offerings, student readiness for college success, and geographic location) require different rates of funding. |
| E. Size-sensitive | The funding formula should reflect the impact that relative levels of student enrollment have on funding requirements, including economies of scale. |
| F. Responsive | The funding formula should reflect changes in institutional workloads and missions as well as changing external conditions in measuring the need for resources. |
| G. Adaptable to Economic Conditions | The funding formula should have the capacity to apply under a variety of economic situations, such as when the state appropriations for higher education are increasing, stable, or decreasing. |

| Characteristic | Summary Description |
|--|--|
| H. Concerned with Stability | The funding formula should not permit shifts in funding levels to occur more quickly than institutional managers can reasonably be expected to respond. |
| I. Simple to Understand | The funding formula should effectively communicate to key participants in the state budget process how changes in institutional characteristics and performance and modifications in budget policies will affect funding levels. |
| J. Adaptable to Special Situations | The funding formula should include provisions for supplemental state funding for unique activities that represent significant financial commitments and that are not common across the institutions. |
| K. Reliant on Valid and Reliable Data | The funding formula should rely on data that are appropriate for measuring differences in funding requirements and that can be verified by third parties when necessary. |
| L. Flexible | The funding formula should be used to estimate funding requirements in broad categories; it is not intended for use in creating budget control categories. |
| M. Incentive-based | The funding formula should provide incentives for institutional effectiveness and efficiency and should not provide any inappropriate incentives for institutional behavior. |
| N. Balanced | The funding formula should achieve a reasonable balance among the sometimes competing requirements of each of the criteria listed above. |

Emerging Trends

- More detailed categories – some states have found that adding more complexity had adverse results
- More non-formula categories – formula approach not adequate to meet needs of unique/specialized programs
- More focus on quality and performance – focus shifting from equity and adequacy to outcomes achieved with funding received

Two-year Higher Education Profile of Selected States

| <u>State Name</u> | <u>% of High School Graduates Going Directly to College</u> | <u>Postsecondary Institutions (Public 2-yr)</u> | <u>% of Public 2-yr Enrollment Compared to All Undergraduate</u> | <u>Postsecondary Institutions (Private 2-yr)</u> | <u>% of Private 2-yr Enrollment Compared to All Undergraduate</u> | <u>Students Enrolled by Level – Undergraduate</u> |
|-------------------|---|---|--|--|---|---|
| California | 44% | 110 | 65.8% | 63 | 1.9% | 2,107,426 |
| Colorado | 58% | 15 | 34.1% | 17 | 3.7% | 248,396 |
| Connecticut | 61% | 12 | 32.9% | 3 | 1.8% | 139,071 |
| Florida | 54% | 24 | 37.3% | 32 | 2.5% | 761,390 |
| Illinois | 55% | 48 | 54.4% | 12 | 0.9% | 667,249 |
| Kentucky | 57% | 23 | 38.6% | 15 | 3.7% | 210,589 |
| Maryland | 59% | 16 | 47.1% | 4 | 1.2% | 252,340 |
| Massachusetts | 63% | 16 | 26.0% | 9 | 1.4% | 328,335 |
| Michigan | 59% | 30 | 39.9% | 5 | 0.6% | 529,083 |
| New Jersey | 63% | 19 | 47.3% | 2 | 0.5% | 321,494 |
| New York | 68% | 35 | 29.8% | 52 | 3.6% | 914,620 |
| North Carolina | 64% | 59 | 47.8% | 6 | 0.7% | 417,786 |
| Pennsylvania | 59% | 21 | 22.4% | 90 | 6.0% | 571,322 |
| South Carolina | 67% | 20 | 42.8% | 5 | 1.1% | 184,413 |
| Texas | 52% | 67 | 52.4% | 37 | 1.9% | 1,082,667 |
| Utah | 44% | 6 | 19.6% | 5 | 2.0% | 176,909 |
| Virginia | 58% | 24 | 42.6% | 11 | 1.2% | 360,484 |
| Washington | 43% | 35 | 60.4% | 3 | 0.2% | 310,944 |
| West Virginia | 53% | 9 | 18.4% | 12 | 2.9% | 85,388 |

Source: National Center for Public Policy and Higher Education's *Measuring up Report Card, 2006 (Academic year 2003-2004)*

Four-year Higher Education Profile of Selected States

| <u>State Name</u> | <u>% of High School Graduates Going Directly to College</u> | <u>Postsecondary Institutions (Public 4-yr)</u> | <u>% of Public 4-yr Enrollment Compared to All Undergraduate</u> | <u>Postsecondary Institutions (Private 4-yr)</u> | <u>% of Private 4-yr Enrollment Compared to All Undergraduate</u> | <u>Students Enrolled by Level – Undergraduate</u> |
|-------------------|---|---|--|--|---|---|
| California | 44% | 34 | 22.8% | 192 | 9.5% | 2,107,426 |
| Colorado | 58% | 13 | 48.3% | 32 | 13.9% | 248,396 |
| Connecticut | 61% | 10 | 35.5% | 20 | 29.7% | 139,071 |
| Florida | 54% | 16 | 40.8% | 91 | 19.3% | 761,390 |
| Illinois | 55% | 12 | 22.4% | 100 | 22.3% | 667,249 |
| Kentucky | 57% | 8 | 44.3% | 30 | 13.4% | 210,589 |
| Maryland | 59% | 13 | 40.3% | 23 | 11.3% | 252,340 |
| Massachusetts | 63% | 15 | 24.1% | 82 | 48.5% | 328,335 |
| Michigan | 59% | 15 | 41.9% | 55 | 17.6% | 529,083 |
| New Jersey | 63% | 14 | 36.6% | 24 | 15.6% | 321,494 |
| New York | 68% | 43 | 30.8% | 177 | 35.8% | 914,620 |
| North Carolina | 64% | 16 | 35.9% | 46 | 15.7% | 417,786 |
| Pennsylvania | 59% | 44 | 37.0% | 105 | 34.6% | 571,322 |
| South Carolina | 67% | 13 | 40.0% | 25 | 16.2% | 184,413 |
| Texas | 52% | 42 | 36.2% | 62 | 9.6% | 1,082,667 |
| Utah | 44% | 7 | 56.4% | 9 | 22.0% | 176,909 |
| Virginia | 58% | 15 | 38.9% | 49 | 17.2% | 360,484 |
| Washington | 43% | 11 | 27.6% | 32 | 11.8% | 310,944 |
| West Virginia | 53% | 12 | 66.0% | 10 | 12.7% | 85,388 |

Source: National Center for Public Policy and Higher Education's *Measuring up Report Card, 2006 (Academic year 2003-2004)*

Higher Education Appropriations

| | State Appropriations for Higher Education (\$ in 000's) | | % of Total State General Funds | | State Appropriations for Higher Education (\$ in 000's) | | % of Total State General Funds |
|-----------------|---|------------------|--------------------------------|---------------------|---|--------------------|--------------------------------|
| | FY 2001 | FY 2006 | FY 2006 | | FY 2001 | FY 2006 | FY 2006 |
| California | \$8,922,931 | \$10,146,382 | 11.1% | New York | \$3,479,112 | \$4,390,661 | 9.4% |
| Colorado | 746,478 | 597,454 | 8.4% | North Carolina | 2,398,489 | 2,962,113 | 17.4% |
| Connecticut | 706,032 | 832,019 | 5.7% | Pennsylvania | 2,005,364 | 2,047,114 | 8.3% |
| Florida | 2,761,253 | 3,297,571 | 12.7% | South Carolina | 880,120 | 790,144 | 14.0% |
| Illinois | 2,719,734 | 2,641,164 | 10.9% | Texas | 4,511,814 | 5,242,541 | 16.2% |
| Kentucky | 1,001,625 | 1,207,616 | 14.3% | Utah | 547,506 | 677,668 | 16.1% |
| Maryland | 1,174,619 | 1,268,850 | 10.3% | Virginia | 1,629,776 | 1,594,605 | 10.5% |
| Massachusetts | 1,077,226 | 966,366 | 3.8% | Washington | 1,333,911 | 1,536,329 | 11.3% |
| Michigan | 2,222,274 | 2,012,271 | 22.3% | West Virginia | 387,432 | 346,670 | 9.7% |
| New Jersey | \$1,664,194 | \$2,029,443 | 7.2% | U.S. Average | \$1,212,768 | \$1,348,417 | 12.5% |

Source: Grapevine, <http://grapevine.ilstu.edu>, National Association of State Budget Officers

Higher Education Appropriations Relative to Personal Income

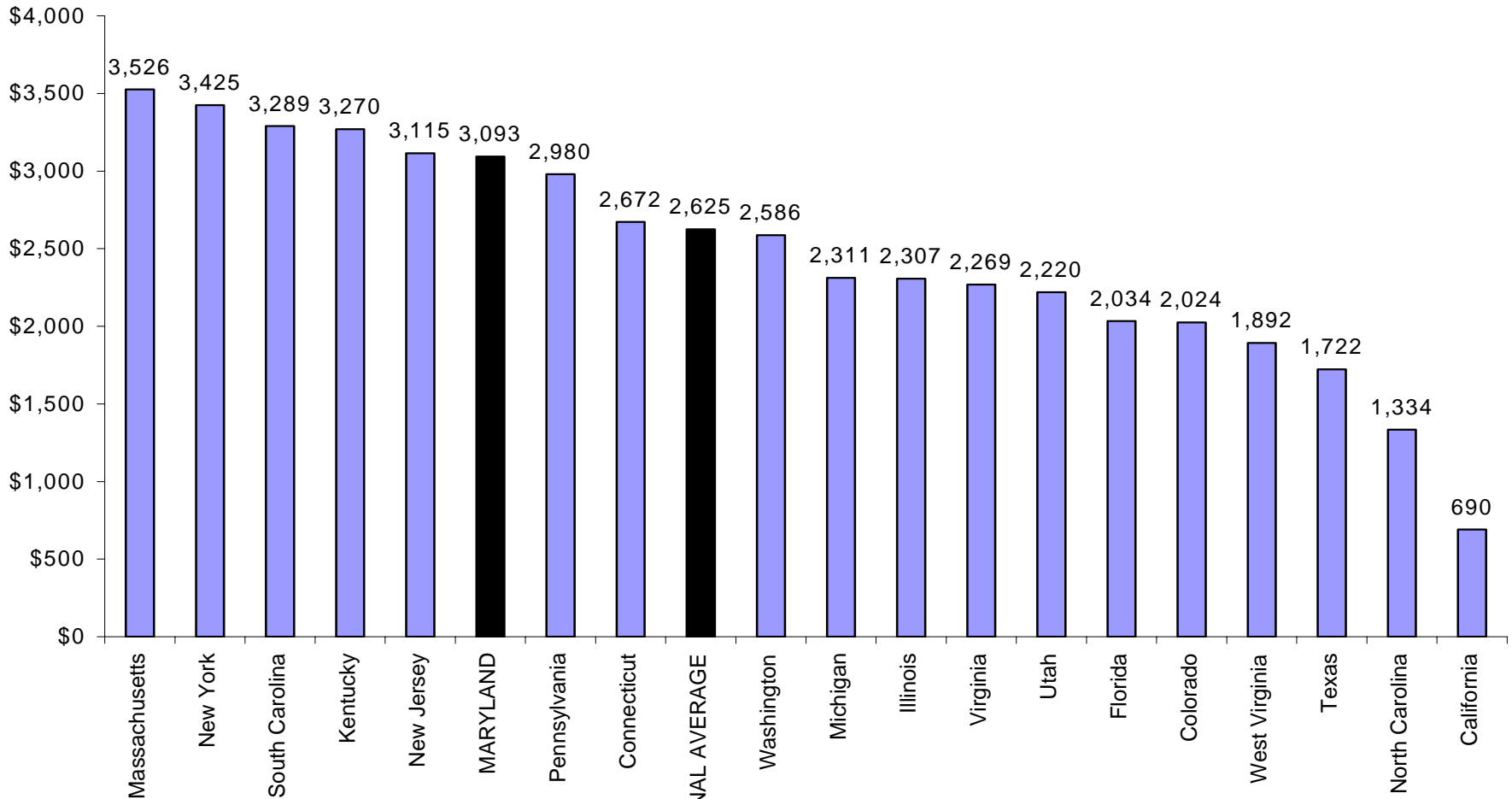
| | Appropriations per \$1,000 in Personal Income | | | | State Personal Income per Capita | | Appropriations per \$1,000 in Personal Income | | | | State Personal Income per Capita |
|-----------------|--|-----------|-------------|-----------|--|---------------------|--|------|---------------|------|--|
| | FY 2001 | | FY 2006 | | CY 2006 | | FY 2001 | | FY 2006 | | CY 2006 |
| | \$ | Rank | \$ | Rank | | | \$ | Rank | \$ | Rank | |
| California | \$8.19 | 21 | \$7.69 | 18 | \$38,978 | New York | \$5.28 | 43 | \$5.77 | 35 | \$42,527 |
| Colorado | 5.21 | 44 | 3.45 | 49 | 39,196 | North Carolina | 11.02 | 4 | 11.08 | 3 | 32,278 |
| Connecticut | 5.02 | 47 | 5.04 | 43 | 49,812 | Pennsylvania | 5.53 | 41 | 4.76 | 44 | 36,718 |
| Florida | 6.07 | 40 | 5.49 | 39 | 35,778 | South Carolina | 8.97 | 18 | 6.62 | 26 | 29,557 |
| Illinois | 6.84 | 35 | 5.75 | 36 | 38,265 | Texas | 7.66 | 24 | 7.12 | 23 | 34,352 |
| Kentucky | 10.17 | 12 | 10.27 | 9 | 29,391 | Utah | 10.26 | 11 | 10.11 | 10 | 29,120 |
| Maryland | 6.52 | 38 | 5.45 | 40 | 44,180 | Virginia | 7.43 | 27 | 5.65 | 37 | 39,130 |
| Massachusetts | 4.55 | 48 | 3.49 | 48 | 46,080 | Washington | 7.14 | 28 | 7.01 | 25 | 37,477 |
| Michigan | 7.57 | 26 | 6.09 | 33 | 33,644 | West Virginia | 9.81 | 14 | 7.37 | 20 | 27,895 |
| New Jersey | \$5.16 | 45 | \$5.36 | 42 | 46,329 | U.S. Average | \$7.97 | | \$7.32 | | \$35,083 |

Higher Education Appropriations Relative to Population

| | Appropriations per Capita | | | | Population | | Appropriations per Capita | | | | Population |
|-----------------|---------------------------|-----------|---------------|-----------|--------------|---------------------|---------------------------|------|-----------------|------|--------------|
| | FY 2001 | | FY 2006 | | 1-Jul-06 | | FY 2001 | | FY 2006 | | 1-Jul-06 |
| | \$ | Rank | \$ | Rank | | | \$ | Rank | \$ | Rank | |
| California | \$262.42 | 11 | \$280.64 | 10 | 36,458 | New York | \$183.12 | 37 | \$227.31 | 28 | 19,306 |
| Colorado | 172.52 | 41 | 128.12 | 49 | 4,753 | North Carolina | 296.90 | 4 | 341.55 | 5 | 8,857 |
| Connecticut | 206.91 | 30 | 237.67 | 21 | 3,505 | Pennsylvania | 163.22 | 45 | 165.02 | 45 | 12,441 |
| Florida | 172.05 | 42 | 185.59 | 39 | 18,090 | South Carolina | 218.74 | 24 | 186.05 | 38 | 4,321 |
| Illinois | 218.63 | 25 | 206.90 | 32 | 12,832 | Texas | 215.37 | 27 | 228.65 | 26 | 23,508 |
| Kentucky | 247.38 | 13 | 289.42 | 9 | 4,206 | Utah | 244.08 | 15 | 272.12 | 14 | 2,550 |
| Maryland | 221.14 | 23 | 227.00 | 29 | 5,616 | Virginia | 229.41 | 18 | 210.81 | 31 | 7,643 |
| Massachusetts | 169.32 | 44 | 150.21 | 46 | 6,437 | Washington | 225.66 | 21 | 244.18 | 20 | 6,396 |
| Michigan | 223.21 | 22 | 199.22 | 34 | 10,096 | West Virginia | 214.35 | 28 | 191.10 | 36 | 1,818 |
| New Jersey | \$197.33 | 31 | \$233.18 | 23 | 8,725 | U.S. Average | \$217.96 | | \$236.60 | | 5,976 |

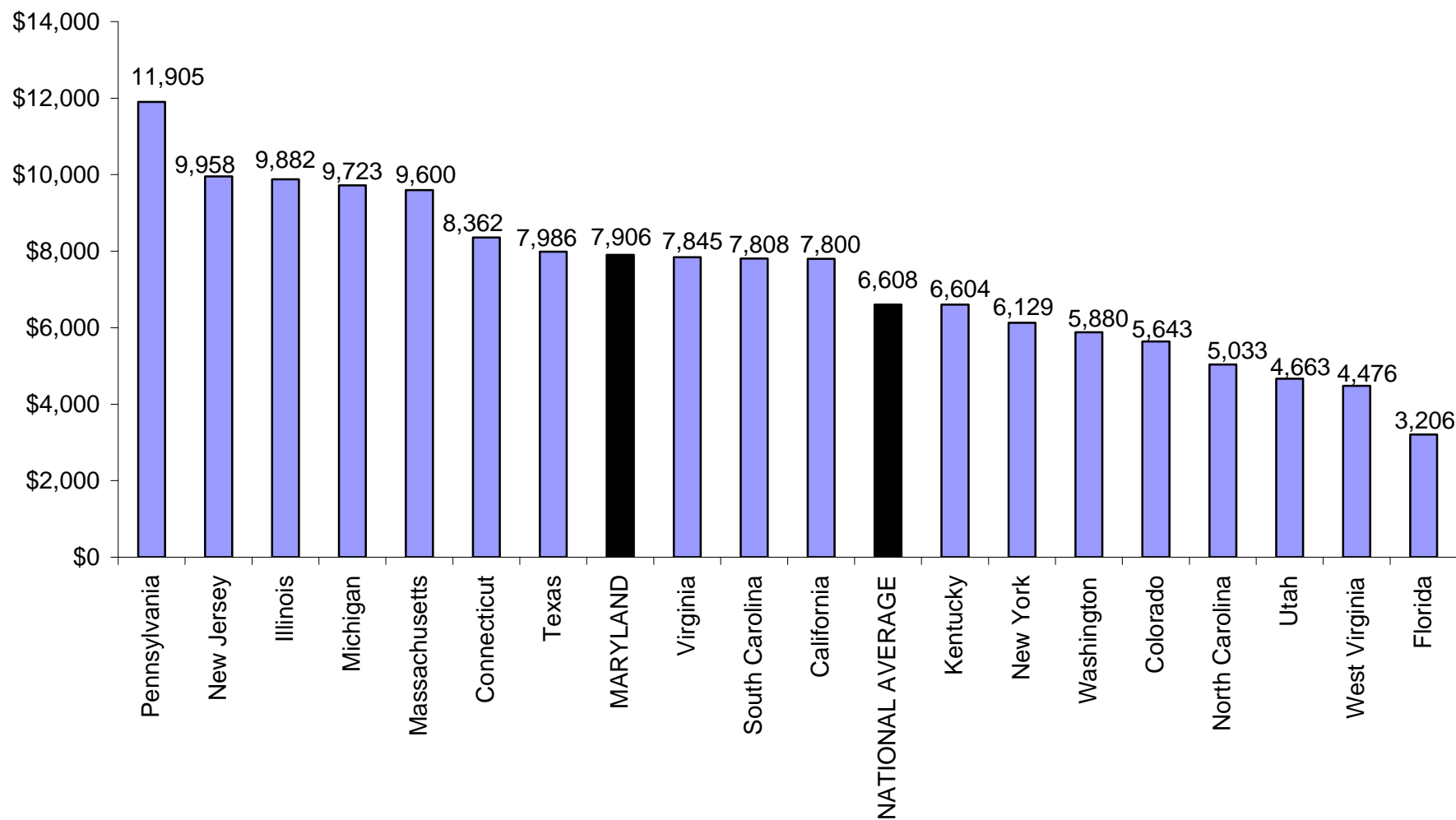
Source: Grapevine, U.S. Census Bureau

Resident Tuition and Required Fees Community Colleges 2006-2007

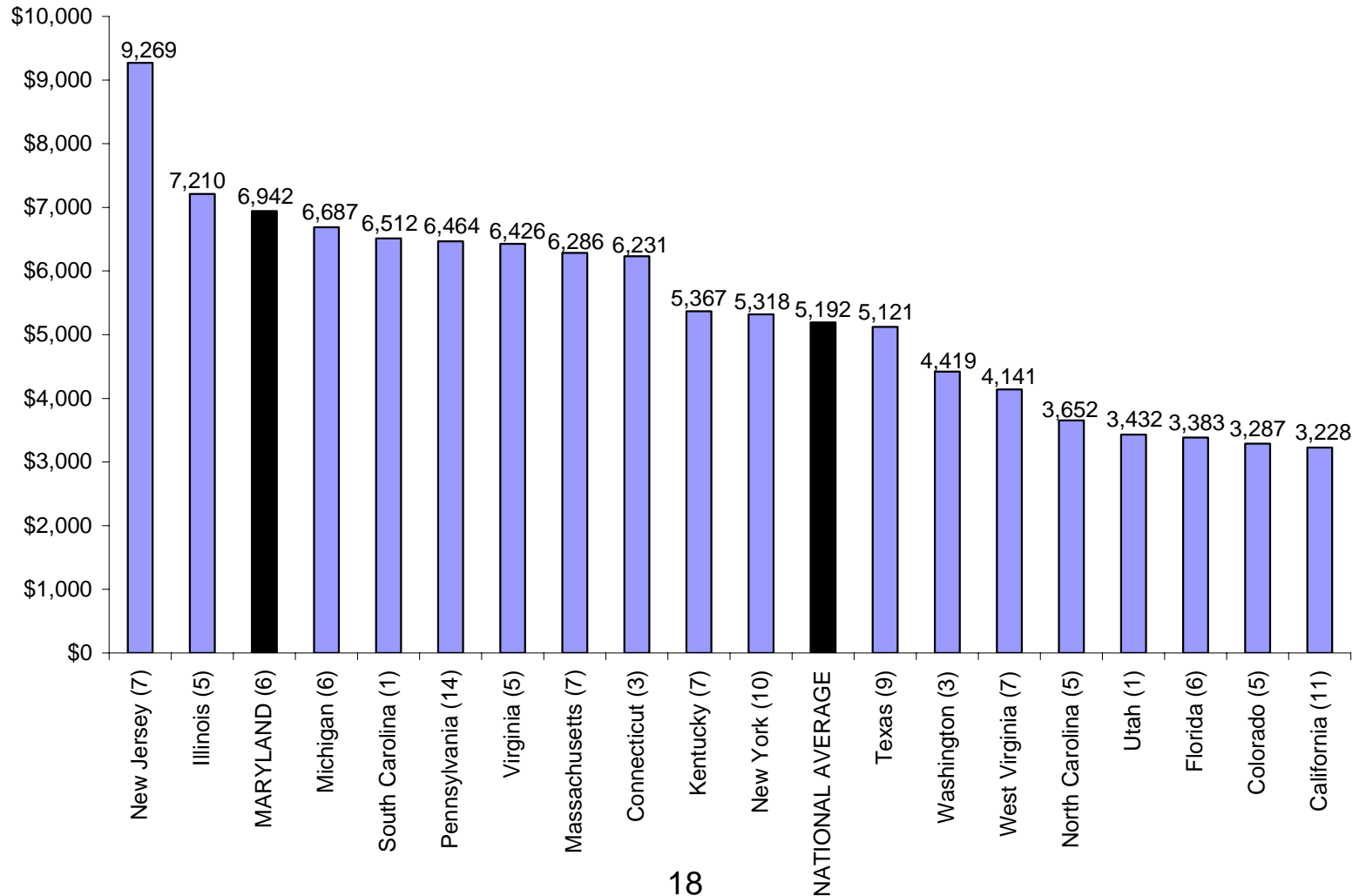


Note: National average does not include South Dakota

Resident Undergraduate Tuition and Required Fees Flagship Universities 2006-2007



Resident Undergraduate Tuition and Required Fees Comprehensive Colleges and Universities 2006-2007



Note: National average does not include Alaska, Delaware, Hawaii, and Wyoming.

() indicates number of institutions.

2004 Tuition Relative to Income Community Colleges

| | Average Tuition | Tuition as % of | | | Average Tuition | Tuition as % of | |
|-----------------|-----------------|-------------------------|------------------------|---------------------|-----------------|-------------------------|------------------------|
| | | Median Household Income | 30th Percentile Income | | | Median Household Income | 30th Percentile Income |
| California | \$540 | 1.1% | 2.2% | New York | \$2,956 | 6.6% | 13.2% |
| Colorado | 2,210 | 4.3% | 8.6% | North Carolina | 1,136 | 2.8% | 5.5% |
| Connecticut | 2,310 | 4.2% | 8.5% | Pennsylvania | 2,417 | 5.5% | 10.2% |
| Florida | 1,688 | 4.2% | 8.1% | South Carolina | 2,731 | 7.1% | 13.3% |
| Illinois | 1,807 | 3.9% | 7.4% | Texas | 1,281 | 3.1% | 6.0% |
| Kentucky | 1,896 | 5.3% | 9.2% | Utah | 1,806 | 3.6% | 6.8% |
| Maryland | 2,675 | 4.7% | 9.0% | Virginia | 1,883 | 3.7% | 7.3% |
| Massachusetts | 3,267 | 6.3% | 12.7% | Washington | 2,142 | 4.3% | 8.7% |
| Michigan | 1,920 | 4.5% | 8.8% | West Virginia | 1,722 | 5.2% | 9.9% |
| New Jersey | \$2,647 | 4.8% | 9.5% | U.S. Average | \$2,112 | 4.7% | 9.2% |

2004 Tuition Relative to Income

Four-year Institutions

| | Average Tuition | Tuition as % of | | | Average Tuition | Tuition as % of | |
|-----------------|-----------------|-------------------------|------------------------|---------------------|-----------------|-------------------------|------------------------|
| | | Median Household Income | 30th Percentile Income | | | Median Household Income | 30th Percentile Income |
| California | \$2,866 | 5.8% | 11.9% | New York | \$5,196 | 11.6% | 23.2% |
| Colorado | 2,974 | 5.8% | 11.6% | North Carolina | 3,022 | 7.5% | 14.7% |
| Connecticut | 5,565 | 10.1% | 20.4% | Pennsylvania | 6,102 | 13.8% | 25.8% |
| Florida | 2,860 | 7.1% | 13.7% | South Carolina | 5,430 | 14.0% | 26.4% |
| Illinois | 5,533 | 12.0% | 22.6% | Texas | 3,960 | 9.6% | 18.5% |
| Kentucky | 3,794 | 10.7% | 18.5% | Utah | 3,139 | 6.2% | 11.8% |
| Maryland | 5,892 | 10.3% | 19.8% | Virginia | 5,180 | 10.1% | 20.2% |
| Massachusetts | 5,265 | 10.1% | 20.5% | Washington | 3,933 | 7.9% | 16.0% |
| Michigan | 5,788 | 13.7% | 26.5% | West Virginia | 3,210 | 9.6% | 18.4% |
| New Jersey | \$7,261 | 13.1% | 26.2% | U.S. Average | \$4,394 | 9.9% | 19.2% |