

## STATE HIGHER EDUCATION PROFILES

### CALIFORNIA HIGHER EDUCATION IN CONTEXT

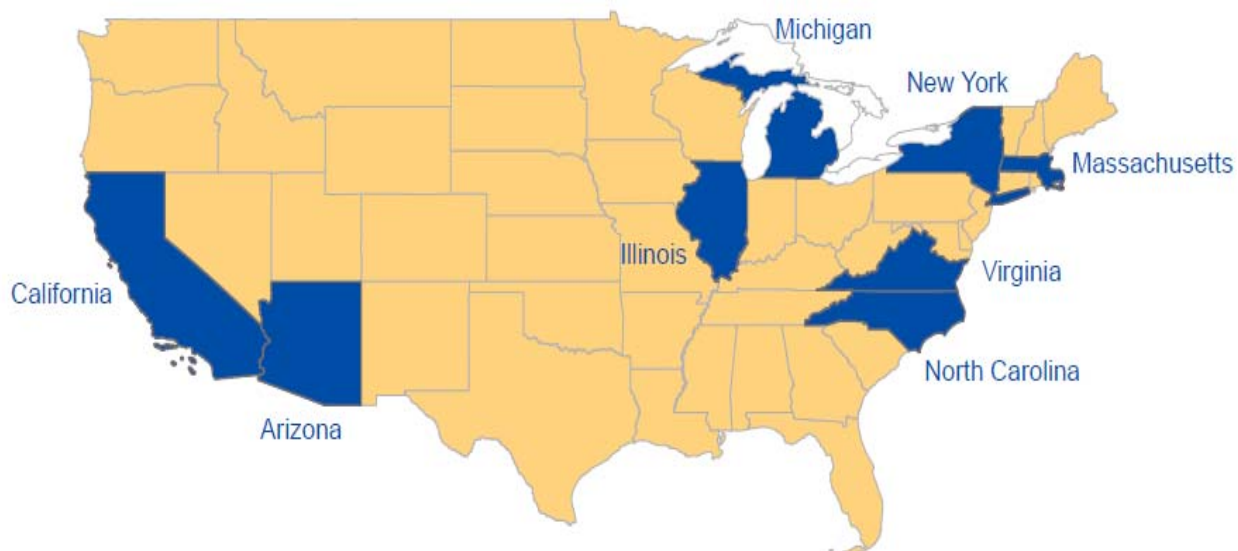
The University of California, as a land grant institution, has a unique obligation to serve the diverse ethnic and economic needs of the state. Therefore, while it is important in considering its future to look at other state public higher education models, it must be done in the context of UC's distinctive mission and role.

California is compared here with seven other states – Arizona, Illinois, Massachusetts, Michigan, New York, North Carolina, and Virginia – selected for their geographic and demographic range, and inclusion of at least one Carnegie Very High Research institution in the elite Association of American Universities (AAU). This comparison illustrates the complexities of UC's challenge in light of the historic dynamism of California's population, politics and economy. These include:

**California's vision and longstanding commitment to education.** California's strategic vision for postsecondary education, as outlined in the landmark 1960 California Master Plan for Higher Education, divides public responsibility for postsecondary education among the University of California; the California State University (CSU); and the California Community Colleges system. The result is that, unlike other states such as Massachusetts where private institutions are dominant, 84% of California postsecondary education students attend public two- or four-year colleges. As important as the vision is California's longstanding financial support for public higher education. No other comparator state has enjoyed such sustained levels of state investment. However the current economic crisis threatens this commitment as state support continues to erode with each downturn in the economy.

**California's demographic and economic challenges.** California's population, which has grown and evolved throughout the state's history, is now not just the largest in the nation, but it is also among the most diverse. And while both State Gross Domestic Product and average incomes remain high, so does its poverty rate. In combination with continued erosion in state support for higher education, these factors pose formidable challenges for the University of California. In California's favor are UC's continuing high levels of quality and innovation, as measured by its six-campus membership in the AAU, its leadership in science and engineering research, and its status as the largest university recipient of federal research funds.

**California's economic competitiveness.** The University of California has long played a pivotal role in providing both the teaching and research that help drive California's economy in an increasingly global economy. Yet declining state investments in higher education have coincided with reduced levels of educational attainment, which are necessary for maintaining a vibrant state economy.



## STATE MODELS OF HIGHER EDUCATION

The 1960 California Master Plan for Higher Education transformed a collection of uncoordinated and competing colleges and universities into a coherent system and unique model of higher education. It achieved this by assigning each public segment – the University of California (UC), the California State University (CSU), and the California Community Colleges (CCC) – its own distinctive mission and pool of students, while maintaining the principle of universal access and choice.

The Master Plan is widely credited for creating new avenues for educational attainment, as well as for ushering in decades of economic prosperity in California.

Four key elements of the California Master Plan model include: (1) the differentiation of functions, (2) the governance structure, (3) access and admissions pools, and (4) transfer policy. While some states in the comparison group have adopted similar elements within their higher education models, none has adopted the same overall combination of elements that comprise the California Master Plan model of higher education.

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### Differentiation of Functions

The California Master Plan's differentiation of degree-granting authority is prescribed in state law to promote the efficient allocation of state resources by minimizing duplication across the segments – UC, CSU, and the CCC – particularly for high-cost doctoral and professional education programs. One state in the comparison group, Massachusetts, is similar to California in prescribing different functions for three segments of higher education. The other six states in the comparison group do not formally differentiate between “research universities” and “state colleges”, and the ability to offer doctoral degree programs is open to any public four-year institution. All states in the comparison group allow the two-year institutions to offer associate's degrees only.

Degree-Granting Authority for Four-Year Institutions		
Model	Description	States
<i>Statutory Authority</i>	The mission and degree-granting authority of each of the state's three segments of higher education is prescribed within state law: <ul style="list-style-type: none"> <li>• Research universities award doctoral and professional degrees.</li> <li>• State colleges provide educational programs through the master's degree level. Doctoral degree programs may be offered jointly with a research university.</li> </ul>	California Massachusetts
<i>State-Level Approval Required</i>	Doctoral and professional degree programs may be offered by any public four-year institution if authorized by the statewide postsecondary education board and/or the legislature.	Arizona Illinois New York North Carolina Virginia
<i>Institutional Prerogative</i>	All public four-year institutions are autonomous and free to offer doctoral and professional degree programs.	Michigan

<sup>1</sup> In 2006 SB 724 authorized CSU to award a Doctor of Education (Ed.D.) in educational leadership.

## Governance Structures

California’s “segmented systems” governance model is also found in Massachusetts and North Carolina. The other five comparison states, however, provide a variety of different governance structure models.

- In states with “**segmented systems**” (*California, Massachusetts and North Carolina*) separate boards govern distinct types of institutions (e.g., research universities, state colleges, community colleges).
- In New York, which has a “**consolidated governance system**”, one board governs both public two- and four-year institutions.
- In Michigan, which has an “**institutional board**”, the governing board has full authority over a single institution. In Michigan, all governance, for both two-year and four-year institutions, is undertaken by separate institutional governing boards.
- Several states have various combinations of “**segmented**” and “**institutional**” boards (*Arizona, Illinois and Virginia*). In these states, a board governs one segment and all other public institutions are governed by institutional boards. In Arizona the segment of four-year institutions is governed by a single board, whereas the community colleges are governed by individual institutional boards. In Illinois and Virginia the reverse is true – community colleges are governed by a single board, while each of the four-year public institutions is governed by an institutional board.

*California is the only state with a “segmented” governance system that provides universal access*

## Access and Admissions Pools

The California Master Plan establishes the principle of universal access and choice, and differentiation of admissions pools for the three California segments. California residents in the top one-eighth or top one-third of the statewide high school graduating class who apply on time are guaranteed a place somewhere in the UC or CSU system, respectively. Only Arizona follows a similar model.

Four-Year Institution Admissions Models		
Model	Description	States
<i>Statewide Admissions Guarantee</i>	Admission to a public four-year higher education institution is guaranteed to a top percentage of high school graduates.	California Arizona
<i>Institutional Prerogative</i>	No guaranteed statewide admission to a public four-year postsecondary institution. Admission criteria are determined by, and may differ among, the individual institutions within the state. A higher education governing board may set minimum admission requirements in some cases.	Illinois Massachusetts Michigan New York North Carolina Virginia

There are two common admissions models for two-year public higher education institutions:

- Open access for all - *California, Illinois, Michigan, New York, North Carolina, and Virginia*
- High school diploma or equivalent required for admission - *Arizona and Massachusetts*

## Transfer Policy

The California Master Plan makes the transfer function an essential component of its commitment to access. Eligible community college transfer students are to be provided a place in the upper division of UC and CSU, and are to be given priority over freshmen in the admissions process.

*Access is enhanced by  
California's unique  
transfer policy*

No other state surveyed explicitly *prioritizes* transfer admissions.

Articulation Between Two and Four-year Institutions		
Model	Description	States
<i>Statewide Standard</i>	Governing boards or state coordinating boards have established statewide articulation agreements and transfer policies.	Arizona Massachusetts North Carolina
<i>Systemwide Standard</i>	Governing board establishes policies for transfers between two-year and four-year institutions within its purview.	New York
<i>Institutional Prerogative</i>	States have established common requirements for transfer of general education coursework only, allowing governing boards at four-year institutions to develop articulation agreements with two-year institutions on a case-by-case basis.	California Illinois Michigan Virginia

Sources: Conversations with state coordinating boards in Arizona, Illinois, Virginia, North Carolina; institutional and coordinating board websites; state education codes; ECS Postsecondary Governance Structure Database; Aims C. McGuinness, "Governance and Coordination: Definitions and Distinctions," ECS Policy Brief, December 2001<sup>1</sup>

## DEMOGRAPHICS

### State Population and Racial/Ethnic Diversity

At 36.6 million, California's population is the largest in the United States and is nearly twice as large as New York, the next largest state in our comparison. California's population is dispersed with major concentrations in northern and southern urban coastal areas and smaller inland densities across vast rural agricultural and mountainous regions. Consistent with California's high immigration rate, a significant proportion (42.5%) of its population speaks a language other than English at home – a much higher rate relative to the comparator states.

**Table 1: Total Population and non-English Language Speakers**

	Population (2007) <sup>2</sup>		% who speak other than English at home <sup>3</sup>
	(Millions)	Rank	
<b>California</b>	<b>36.6</b>	<b>1</b>	<b>42.5%</b>
New York	19.3	3	28.8%
Illinois	12.9	5	21.8%
Michigan	10.1	8	9.0%
North Carolina	9.1	10	9.6%
Virginia	7.7	12	13.1%
Massachusetts	6.5	14	20.2%
Arizona	6.3	16	28.0%

*California has the advantage of size, but also the challenges of meeting the needs of its diverse population*

Source: U.S. Census Bureau, *Chronicle of Higher Education Almanac 2008-9*

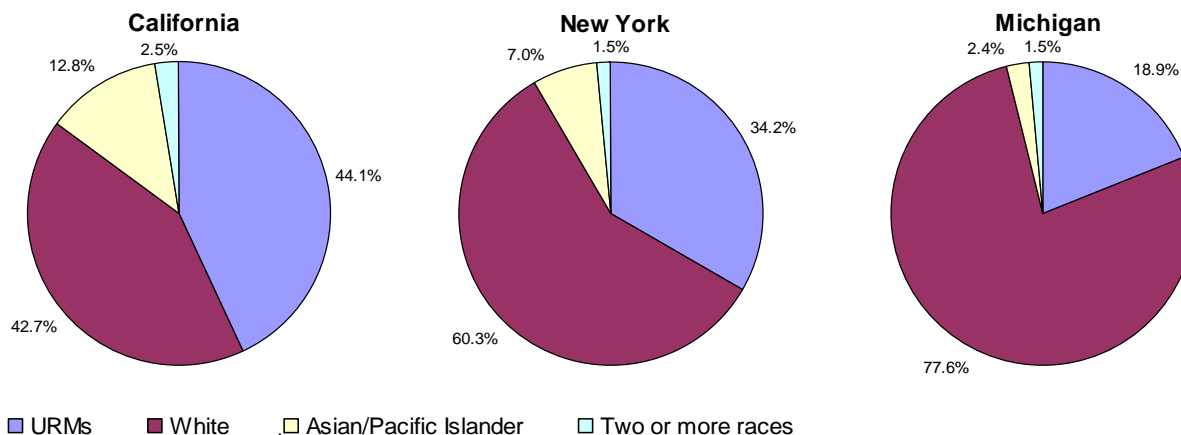
Like Arizona and New York, California has a more ethnically diverse population, in sharp contrast to states like Michigan and Massachusetts.

**Table 2 and Chart 1: State Population Diversity<sup>4</sup>**

	White	Black	Hispanic	Asian/Pacific Islander	Other*
<b>California</b>	<b>42.7%</b>	<b>6.7%</b>	<b>36.2%</b>	<b>12.8%</b>	<b>3.7%</b>
New York	60.3%	17.3%	16.4%	7.0%	2.0%
Illinois	65.0%	15.0%	14.9%	4.4%	1.5%
Michigan	77.6%	14.3%	4.0%	2.4%	2.1%
North Carolina	67.5%	21.7%	7.0%	2.0%	2.3%
Virginia	67.3%	19.9%	6.6%	4.9%	2.0%
Massachusetts	79.7%	6.9%	8.2%	5.0%	1.6%
Arizona	59.1%	4.0%	29.6%	2.7%	6.4%

Source: U.S. Census Bureau 2007 population estimates.

Notes: \* "Other" includes American Indian/Alaskan Native and persons of more than one race. Percentages may not total to 100%.



Underrepresented Minorities (URMs) includes American Indian/Alaskan Native, Black and Hispanic.

## Student Racial/Ethnic Diversity

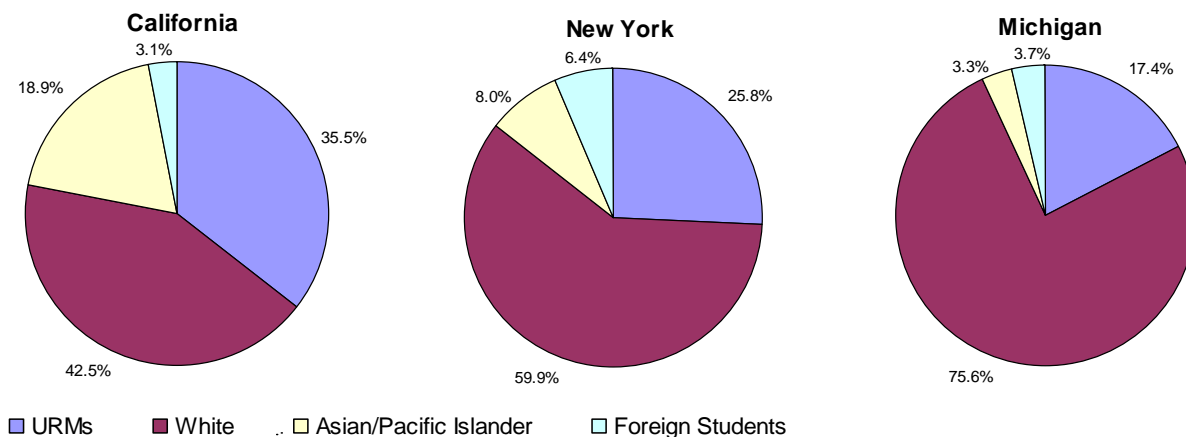
Consistent with its diverse population, California's higher education enrollment likewise shows racial/ethnic diversity. However, the proportions do not directly reflect those of the minority population in the state, as proportionately more Asian students enroll in higher education than Native American/Alaskan Native, Black and Hispanic students.

**Table 3 and Chart 2: Total State Higher Education Enrollment (fall 2006)<sup>5</sup>**

	White	Black	Hispanic	Asian/ Pacific Islander	Other*
<b>California</b>	<b>42.5%</b>	<b>7.7%</b>	<b>26.9%</b>	<b>18.9%</b>	<b>4.0%</b>
New York	59.9%	13.8%	11.5%	8.0%	6.8%
Arizona	63.5%	9.7%	16.0%	3.8%	6.9%
Illinois	64.8%	14.3%	11.8%	5.7%	3.4%
North Carolina	66.8%	24.5%	2.8%	2.6%	3.3%
Virginia	67.5%	19.7%	4.0%	5.7%	3.0%
Massachusetts	71.9%	8.1%	6.4%	7.2%	6.4%
Michigan	75.6%	13.8%	2.8%	3.3%	4.5%

Source: *Chronicle of Higher Education Almanac 2008-9*

Notes: \* "Other" Includes American Indian/Alaskan Native and Foreign Students.  
Figures based on fall 2006 undergraduate and graduate/professional student enrollment.



Underrepresented Minorities (URMs) includes American Indian/Alaskan Native, Black and Hispanic

## ECONOMIC INDICATORS

### Educational Attainment and Measures of Prosperity

Consistent with its size, California enjoys the largest State Gross Domestic Product (GDP) in the U.S. The strength of California's higher education institutions contributes to its rank by educating the state's workforce, conducting research, creating economic incubators, and attracting industry that requires highly skilled and highly paid workers.

Although per capita income in California is relatively high, so is the poverty rate. A combination of factors contribute to this paradox, including high immigration rates from developing countries and pockets of urban and rural poverty among an otherwise high-earning population. This highlights an area of challenge for California higher education planning. California's high school dropout rate is significant, which appears to relate fairly closely with the state poverty rate. Massachusetts's exceptionally high concentration of adults with at least a Bachelor's degree is consistent with its equally high national ranking on per capita personal income.

*Degrees drive high per capita personal incomes – a distinction that belongs not to California but to Massachusetts*

**Table 4: GDP Compared to Personal Income, Poverty Rate, and Level of Education**

	2007 State GDP <sup>6</sup>		2007 Per Capita Personal Income <sup>7</sup>		Adults with a Bachelor's Degree or Higher (2006) <sup>8</sup>		Poverty Rate (2005-2006) <sup>9</sup>		HS Dropout rate (2006)* <sup>10</sup>	
	(\$Billions)	Rank	Dollars	Rank	Percent	Rank	Percent	Rank (low to high)	Percent	Rank (low to high)
<b>California</b>	<b>\$1,800</b>	<b>1</b>	<b>\$41,800</b>	<b>7</b>	<b>29.8%</b>	<b>17</b>	<b>12.7%</b>	<b>34</b>	<b>34.2%</b>	<b>38</b>
New York	\$1,100	3	\$46,400	6	32.2%	10	14.3%	39	35.6%	40
Illinois	\$610	5	\$41,000	13	31.2%	15	11.0%	20	25.0%	19
North Carolina	\$400	9	\$33,700	36	25.6%	30	13.5%	36	34.8%	39
Virginia	\$380	11	\$41,700	8	32.1%	12	8.9%	6	31.7%	33
Michigan	\$380	12	\$34,400	33	26.1%	29	12.6%	32	33.1%	36
Massachusetts	\$350	13	\$49,000	3	40.4%	2	11.1%	21	25.3%	20
Arizona	\$250	17	\$32,800	41	24.5%	37	14.8%	40	32.2%	34

Sources: Census Bureau, Bureau of Economic Analysis, NCHEMS Information Center

Notes: \* The High School Dropout rate represents the proportion of 2002 9<sup>th</sup> graders who did not graduate from High School in 2006. GDP figures rounded to nearest \$10 million. Per capita personal income figures rounded to nearest \$100.

## Research Dollars Stimulate Economies

Universities in California conduct significantly more research in science and engineering than universities in comparator states. California universities also receive more research funds from federal agencies. However, research and development funding per capita in the state lags behind Massachusetts, New York and North Carolina.

**Table 5: Spending on Research & Development**

	Total R&D Spending from all Sources (FY 2006) <sup>11</sup>		Total Federal Spending on College and Univ. R&D (FY 2006) <sup>12</sup>	
	(\$Millions)	Per Capita*	(\$Millions)	Per Capita*
Massachusetts	\$2,160	\$335	\$1,480	\$230
New York	\$3,790	\$196	\$2,070	\$107
North Carolina	\$1,710	\$189	\$1,080	\$119
<b>California</b>	<b>\$6,495</b>	<b>\$178</b>	<b>\$3,460</b>	<b>\$95</b>
Michigan	\$1,470	\$146	\$750	\$75
Illinois	\$1,825	\$142	\$925	\$72
Virginia	\$945	\$123	\$395	\$51
Arizona	\$765	\$121	\$295	\$47

Sources: *Chronicle of Higher Education Almanac 2008-9*; National Science Foundation (NSF)

Notes: \* Per capita spending based on 2007 U.S. Census Bureau Estimate of State Population. Figures rounded to nearest \$5 million. Includes expenditures on science and engineering research only. Total R&D Sources may include the federal government, state and local governments, industry, and the institution itself, among others. Total federal spending covers federal obligations (funds set aside for payments), which institutions do not always receive in the year in which they were obligated. Federal agencies may include HHS, NSF, Dept. of Defense, Dept. of Agriculture, Dept. of Energy and NASA.

*California universities receive the largest share of research funding –  
but lag other states on a per capita basis*

## HIGHER EDUCATION BY STATE

### Mix of Public vs. Private Institutions

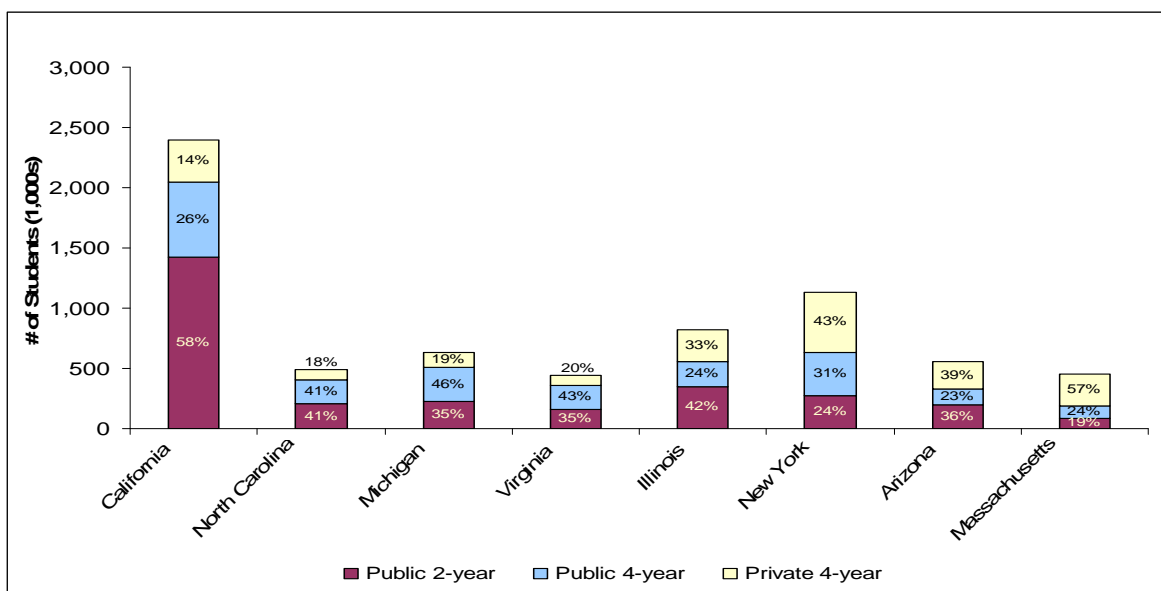
While California's investment in higher education has historically been among the highest in the nation in total state funds dedicated to public institutions and student financial aid, this support has eroded substantially during the current economic crisis. However, as recently as 2007-08, California appropriated \$11.6 billion to fund 112 public two-year and 35 public four-year institutions.

*California is more dependent than other states on its public higher education institutions*

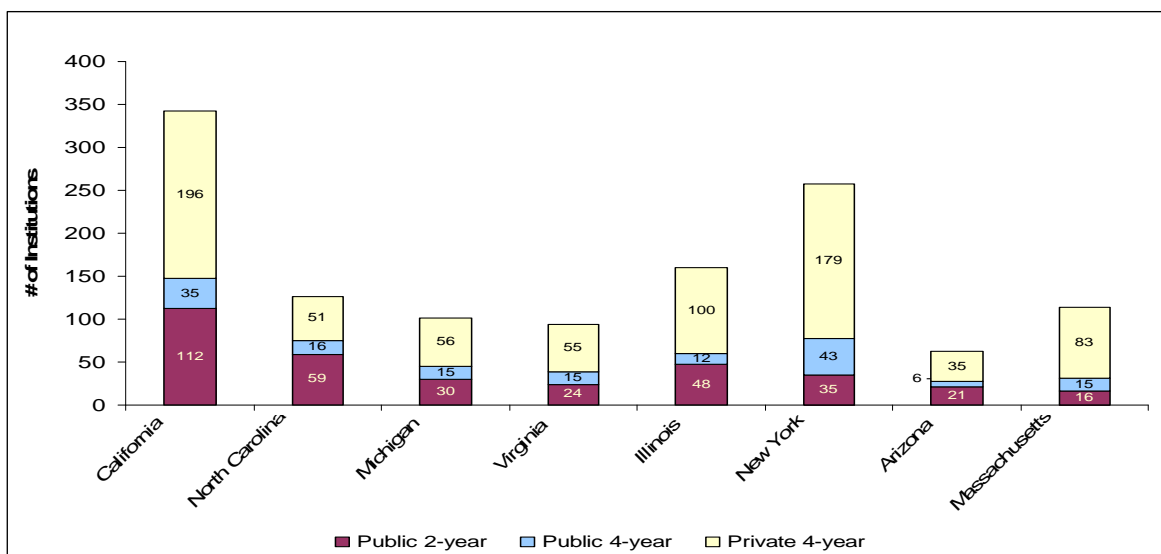
Consequently, higher proportions (84%) of students enroll in public institutions (predominantly in community colleges) than in the other states surveyed. By contrast, private four-year institutions are predominant in Massachusetts, where only 43% of students enroll in public institutions.

**Chart 3: Public and Private Institutions: Total Enrollments and Number of Institutions by Type (fall 2006)<sup>13</sup>**

#### Student Enrollments by Type of Institution



#### Number of Institutions by Type



Sources: *Chronicle of Higher Education Almanac 2008-09*, U.S. Dept. of Education (IPEDS) fall 2006 enrollment data

Note: Percentages may not total to 100% due to exclusion of data from private two-year institutions.

## Public and Private Prestige

Membership in the Association of American Universities (AAU) is reserved for the 62 leading research universities in the United States and Canada – institutions distinguished by the breadth and quality of their graduate education and research. Notably, California is home to a significant number of both public and private AAU member institutions. California’s six public AAU members are UC campuses: Berkeley, Davis, Irvine, Los Angeles, San Diego, and Santa Barbara.

**Table 6: Number of AAU Institutions<sup>14</sup>**

	Public	Private	Total
<b>California</b>	<b>6</b>	<b>3</b>	<b>9</b>
New York	2	5	7
Illinois	1	2	3
Massachusetts	0	3	3
Michigan	2	0	2
North Carolina	1	1	2
Arizona	1	0	1
Virginia	1	0	1

*California provides not just broad access, but also quality: the state is home to the greatest number of AAU institutions of any state*

Source: Association of American Universities (AAU)

The following table compares the oldest California AAU institutions, Los Angeles with a medical school and Berkeley without, to selected AAU institutions in the comparator states. California ranks medium in terms of enrollment of underrepresented minorities and high on economically disadvantaged students (reflected in the percent of Pell Grant recipients). Relatively high state support has promoted both high quality and access while keeping resident tuition and fee costs relatively low. In contrast, Michigan, in an effort to sustain quality in the face of declining state support, opted to increase the percent of non-resident students paying high tuition. This strategy has come at the expense of access, reflected in the low numbers of underrepresented minorities and Pell Grant recipients.

**Table 7: Characteristics of Selected AAU Institutions**

	Student Characteristics <sup>15</sup>				Financial			
	Enrollment	% of URM <sup>‡</sup>	% Non-Resident	% Undergrads w Pell Grants <sup>16</sup>	State Approp./ FTE Student	Tuition & Fees State Res	Non Res.	
<b>Berkeley</b>	H	M	M	H	M	L	H	
<b>Los Angeles*</b>	H	M	M	H	H	L	H	
<b>Illinois</b>	VH	L	M	M	L	M	H	
<b>Michigan*</b>	VH	L	H	L	L	M	H	
<b>Arizona*</b>	H	H	H	M	M	L	M	
<b>SUNY Buffalo *</b>	M	L	M	H	H	L	L	
<b>North Carolina*</b>	M	M	M	M	H	L	M	
<b>Virginia*</b>	M	L	H	L	L	L	H	
<b>Harvard*</b>	M	M	N/A	L	N/A	H	H	
<b>MIT</b>	L	M	N/A	M	N/A	H	H	
<b>KEY:</b>	Low (L)	< 20K	<15%	<10%	<15%	<\$10K	<\$10K	<\$15K
	Medium (M)	20-30K	15-20%	10-20%	15-25%	\$10K-\$15K	\$10-\$20K	\$15-\$25K
	High (H)	30-40K	>20%	>20%	>25%	>\$15K	>\$20K	>\$25K
	Very High (VH)	> 40K						

Sources: U.S. Department of Education (IPEDS); *Economic Diversity of Colleges* website; *Washington Monthly “College Guide”*  
Based on fall 2007 enrollment and finance data.

Notes: \* Institution includes an integral Medical School

‡ Underrepresented Minorities

## **Additional Measures of Quality and Success**

The Washington Monthly<sup>17</sup> has created its own rankings of public and private institutions of higher education, based on what colleges do for the country. The metrics used fall into three categories – Social Mobility, Research, and Service – which align closely with the principles of the California Master Plan for Higher Education. UC campuses are highly rated in this comparison, with **Berkeley, San Diego and Los Angeles ranked first, second, and third, respectively.** In their most recent rankings for 2009, the Washington Monthly introduction states:

***“The University of California system in particular stands out, grabbing the top three spots – including number-one-ranked Berkeley – and six of the top twenty-five. UC campuses enroll unusually large numbers of low-income students while maintaining research funding, and sending a healthy number of students into service programs like the Peace Corps. Tragically, budget cuts stemming from the current California Budget Fiasco are putting all of that at risk.”***

Source: *Introduction: A Different Kind of College Ranking* Washington Monthly, September/October 2009

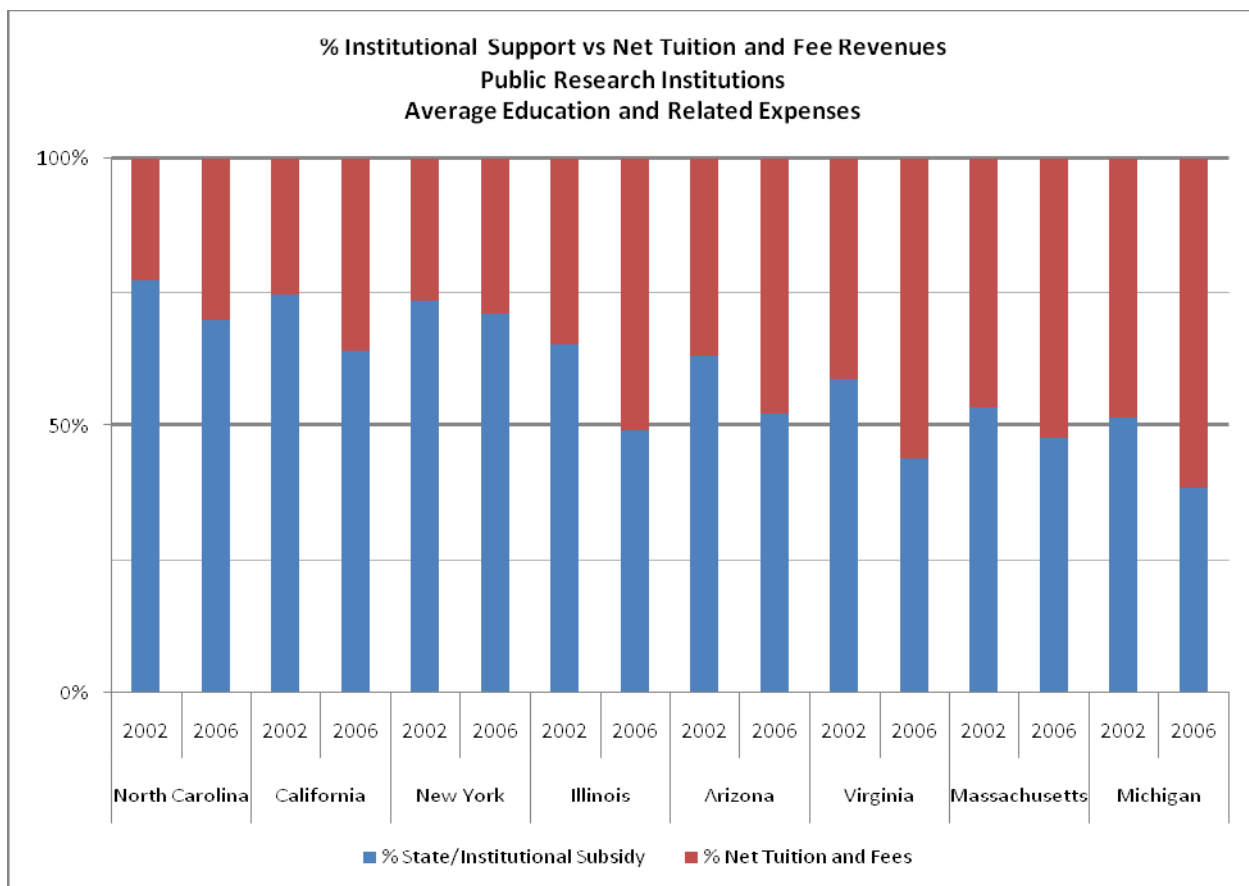
## ERODING SUPPORT OF PUBLIC RESEARCH INSTITUTIONS

The economic challenges facing the University of California follow national trends in declining state support for four-year public research institutions. This trajectory presents a daunting challenge to the state's economic competitiveness at the very time the educational needs of its diverse population are growing.

*Continued decline in California's investment in UC is reallocating the cost of a high quality college education from the state to students and their families*

The erosion in state support not only threatens quality, but has resulted in the reallocation of costs for higher education to students and their families, which also threatens access. The Delta Project analyzes trends in both the cost of providing instruction (faculty salaries, academic and administrative support) as well as funding shifts between institutional revenue (primarily state sources) and revenue from student tuition and fees. The transformation from state-supported to state-assisted is clearly illustrated in the four years covered by the study. For example, Illinois, Virginia, Massachusetts, and Michigan all moved from a model where institutional support was the primary contributor to a new model where students are picking up more than half of their educational expenses through increased tuition and fees. Not captured in this analysis are significant subsequent cuts to state support, passed on to higher education in response to the current recession. This will inevitably lead to sharper increases in student costs.

**Chart 4: Decline in Institutional Support for Education and Related Expenses<sup>18</sup>**



Source: 2007 Delta Project on Postsecondary Education Costs, Productivity and Accountability- based on IPEDS state database.

Note: Student expense data includes tuition and fees revenues from all sources (e.g., campus fees, resident and non-resident tuition, professional fees etc.); at public institutions institutional subsidies are comprised predominantly of state appropriations, but can include other sources of funds as well.

## ENDNOTES

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- <sup>1</sup> ECS Postsecondary Governance Structure Database: <http://mb2.ecs.org/reports/Report.aspx?id=221>; Aims C. McGuinness, "Governance and Coordination: Definitions and Distinctions," ECS Policy Brief, December 2001: <http://www.ecs.org/clearinghouse/31/62/3162.htm>
  - <sup>2</sup> U.S. Census Bureau ([www.census.gov](http://www.census.gov)), DP-1 Tables: "General Demographic Characteristics"; Data Set: "2007 Population Estimates": [http://factfinder.census.gov/servlet/DatasetMainPageServlet?\\_lang=en&\\_ts=269268765083&\\_ds\\_name=PEP\\_2007\\_EST&\\_program](http://factfinder.census.gov/servlet/DatasetMainPageServlet?_lang=en&_ts=269268765083&_ds_name=PEP_2007_EST&_program) (2007 estimates)
  - <sup>3</sup> *Chronicle of Higher Education Almanac Issue 2008-9*: <http://chronicle.texterity.com/chronicle/almanac200809/>; Source: U.S. Census Bureau (2006 data)
  - <sup>4</sup> U.S. Census Bureau DP-1 Tables (2007 estimates)
  - <sup>5</sup> *Chronicle of Higher Education Almanac Issue 2008-9*; Source: US Department of Education (IPEDS database: <http://nces.ed.gov>) (fall 2006 enrollment data)
  - <sup>6</sup> US Census Bureau, 2009 Statistical Abstract, Table 649 "Gross Domestic Product by State in Current and Real (2000) Dollars by State: 2000 to 2007": [http://www.census.gov/compendia/statab/cats/income\\_expenditures\\_poverty\\_wealth/gross\\_domestic\\_product\\_gdp.html](http://www.census.gov/compendia/statab/cats/income_expenditures_poverty_wealth/gross_domestic_product_gdp.html); Source: U.S. Bureau of Economic Analysis (BEA) (<http://www.bea.gov>), *GDP Per State*, press release published June 5, 2008
  - <sup>7</sup> U.S. BEA, "State Personal Income 2008": [http://www.bea.gov/newsreleases/regional/spi/SPI\\_Newsrelease.htm](http://www.bea.gov/newsreleases/regional/spi/SPI_Newsrelease.htm) (2007 revised data)
  - <sup>8</sup> U.S. Census Bureau Current Population Survey, Table 13, *2006 Annual Social and Economic Supplement*: <http://www.census.gov/population/www/socdemo/education/cps2006.html> (Figures for people 25 years old and older)
  - <sup>9</sup> *Chronicle of Higher Education Almanac Issue 2008-9*. Source: U.S. Census Bureau (average of 2005 and 2006 data)
  - <sup>10</sup> Derived from Cohort Survival Rate, as reported by the National Center for Higher Education Management Systems (NCHEMS) NCHEMS Information Center for Higher Education Policymaking and Analysis: (<http://www.higheredinfo.org/>); <http://www.higheredinfo.org/dbrowser/index.php?measure=23>
  - <sup>11</sup> *Chronicle of Higher Education Almanac Issue 2008-9*. Source: National Science Foundation (FY 2006 data)
  - <sup>12</sup> National Science Foundation (<http://www.nsf.gov>), FY 2006 data on federal support to higher education institutions: <http://www.nsf.gov/statistics/fedsupport/>
  - <sup>13</sup> *Chronicle of Higher Education Almanac Issue 2008-9*; Source: US. Department of Education (IPEDS database) (fall 2006 enrollment data)
  - <sup>14</sup> Association of American Universities, Website: <http://www.aau.edu>
  - <sup>15</sup> U.S. Department of Education IPEDS database: (fall 2007 enrollment data)
  - <sup>16</sup> Economic Diversity of Colleges, Website: <http://www.economicdiversity.org>; "2009 College Guide", *The Washington Monthly*, September/October 2009: [http://www.washingtonmonthly.com/college\\_guide/](http://www.washingtonmonthly.com/college_guide/)
  - <sup>17</sup> "2009 College Guide", *The Washington Monthly*, September/October 2009
  - <sup>18</sup> *2007 Delta Project on Postsecondary Education Costs, Productivity and Accountability*: <http://www.deltacostproject.org/>; based on U.S. Dept. of Education IPEDS state database