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## **THE EFFECTS OF A CHANGING FINANCIAL CONTEXT ON THE UNIVERSITY OF CALIFORNIA\***

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### **ABSTRACT**

California's loss of capital gains and stock options revenue during the recent economic downturn was one of the worst in the nation, and the resulting fiscal crisis led to reductions in State appropriations to the University of 15% over the past four years, while enrollments grew by 19%. This article examines the effects of this reduction in State funding and outlines the actions taken by the University of California to minimize the impact of these reductions in State funding. Despite sharp increases, student tuition and fee increases offset less than one-third of the total cut. Those additional tuition and fee revenues were, however, targeted and offset much of the impact on instructional programs, though there were large cuts in other areas. The University took steps to streamline administrative processes and to make better use of limited State funds by utilizing technology and leveraging the power of a multi-campus system to minimize the impact on academic support budgets. Nevertheless, the quality of the educational program has been affected, graduate student support levels are below those of the University's competitors, and salaries for both faculty and staff are well below market. In the short run, the University of California seems to have avoided some of the more serious effects of the loss of State funds on the academic program; the long term prospects, however, are less clear.

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\* This paper is forthcoming as a chapter in *What's Happening to Public Higher Education*, ed. Ronald G. Ehrenberg (Washington D.C.: American Council on Education, 2006).

## LARGE TRENDS IN CALIFORNIA

At the beginning of the 21<sup>st</sup> century, California's fiscal problems are consistent with the trends identified by Ray Sheppach (2003), the Executive Director of the National Governor's Association. Despite a relatively mild recession, California has experienced a fiscal crisis caused by two structural factors: an eroding tax base and an explosion in health care costs.

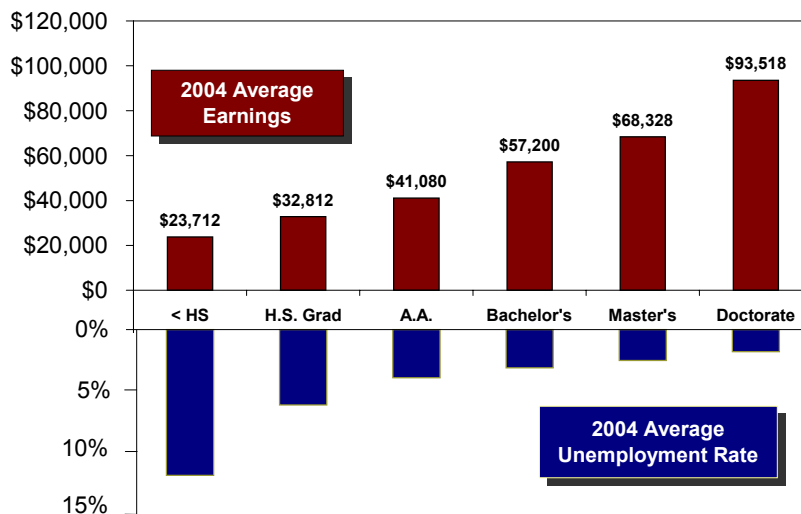
Also consistent with national trends, the percentage of the State budget going to higher education, including the University of California, has been declining over the past four decades, and the current fiscal crisis has led to more budget cuts and tuition & fee increases over the past four years. As we will argue in the next two sections, the changing nature of the economy and the demographics of the state have increased the importance of higher education, but State appropriations to the University of California have declined.

### The Importance of UC to California's Economy and Quality of Life

#### *Economic Trends*

The last two economic downturns have had a disproportionate effect on California's economy. With the downturn in the aerospace industry, Californians suffered more than those in most states during the long and deep recession of the early 1990s. While there was some recovery during the Internet Boom period of the late 1990s, California was also hit particularly hard when the Internet Bubble burst in the spring of 2000. Policy makers in California realize the need to stimulate job creation to reduce unemployment rates, but restoring California's competitive advantage in a global, knowledge-based economy means not just more jobs, but more well-paying jobs.

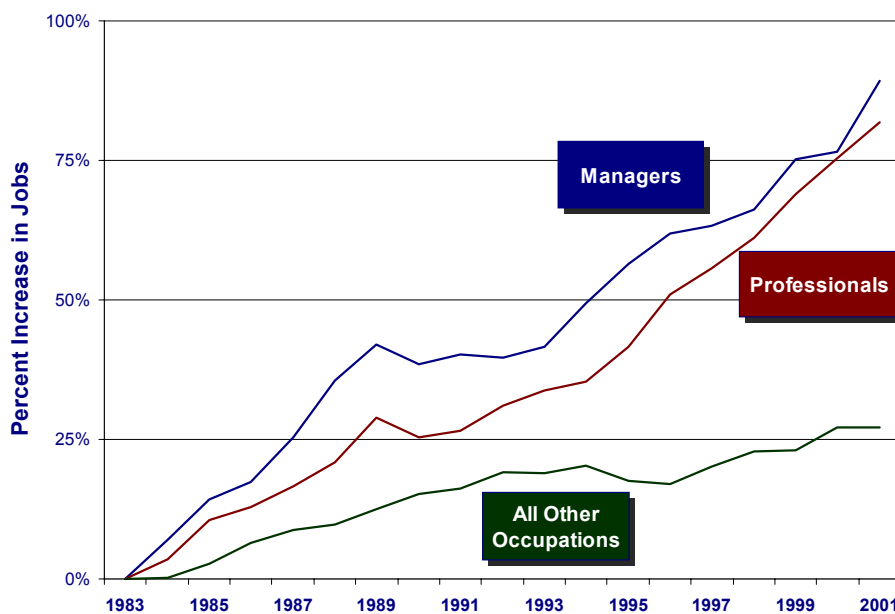
**Figure 1. U.S. Average Earnings and Unemployment Rates by Level of Education**



Source: Bureau of Labor Statistics

With the shift to a knowledge-based economy, more of a product's value is added *before* and *after* manufacturing by professionals and managers who typically have advanced levels of education and skills. As a result, employers are willing to pay an "education premium" for these workers. As the national data in Figure 1 show, incomes are higher and unemployment rates are lower on average for those with more education. Even though the sample size does not permit the Bureau of Labor Statistics to produce these data by state, it is reasonable to assume that these relationships hold in California as well. The only way to raise average income in California, therefore, is to move the workforce to the more advanced levels of education on the right side of Figure 1, since we cannot compete on the basis of low-skilled jobs with those in other countries who are willing to work for one-tenth of U.S. wages.

**Figure 2. Percent Increase in California Jobs by Occupational Category**



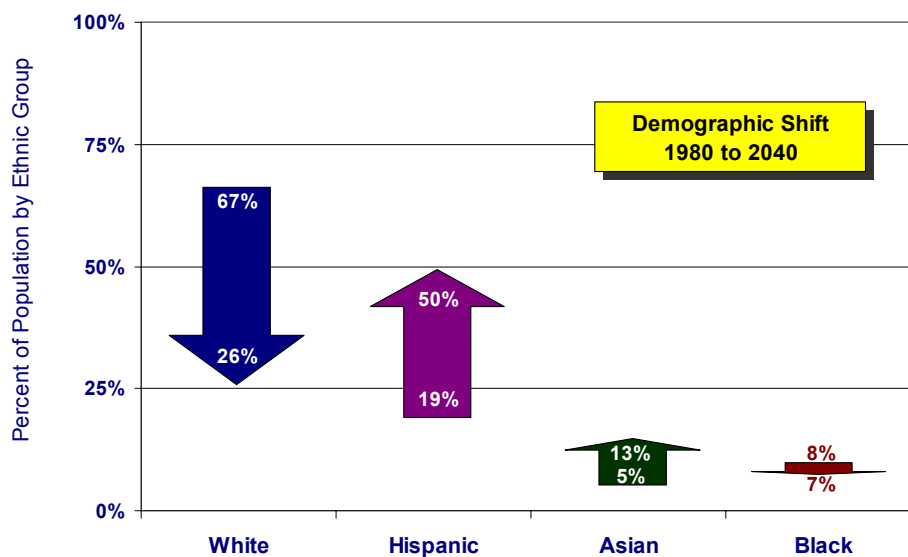
The University of California has always been important to the economy and the quality of life of the state's citizens, but it is even more important today with the shift to more of a knowledge-based economy. As a result, there is increasing interest from business and government leaders in technology transfer and the production of what Peter Drucker (1959) called "knowledge workers." These professionals and managers are not only the lifeblood of knowledge-based industries, but also the ones who add the most value to products and services in all industries.

The Bureau of Labor Statistics aggregates hundreds of occupations into eleven major categories. As Figure 2 shows, the fastest growing occupational categories in California are professional and managerial jobs. In the early 1980s, one-fourth of all jobs in the state were in these two categories. Today they represent one-third of California's jobs. Most of these jobs require at least a baccalaureate degree, and many require a Master's or doctorate. However, California's four-year colleges and universities have not been meeting these needs. A study conducted by the Public Policy Institute of California (Betts 2000) estimates that only half of the college graduates hired in California — to fill new positions or to replace those who leave — were educated in this state.

### Demographic Trends

California is a large and rapidly growing state, and more of its citizens will want and need a university education for those professional and managerial jobs. The state's population grew from 24 million in 1980 to 37 million in 2005. State demographers estimate continued growth, to 44 million in 2020 and 52 million by 2040. These are impressive growth figures, but the shift in the ethnic composition of the population is even more dramatic. Over that 60-year period, Hispanics will increase from 19% of the total population to 50%, Asians will increase from 5% to 13%, while non-Hispanic Caucasians will decline from 67% to 26%. The percentage of African-Americans will remain the same, 8% and 7%, respectively. (See Figure 3.)

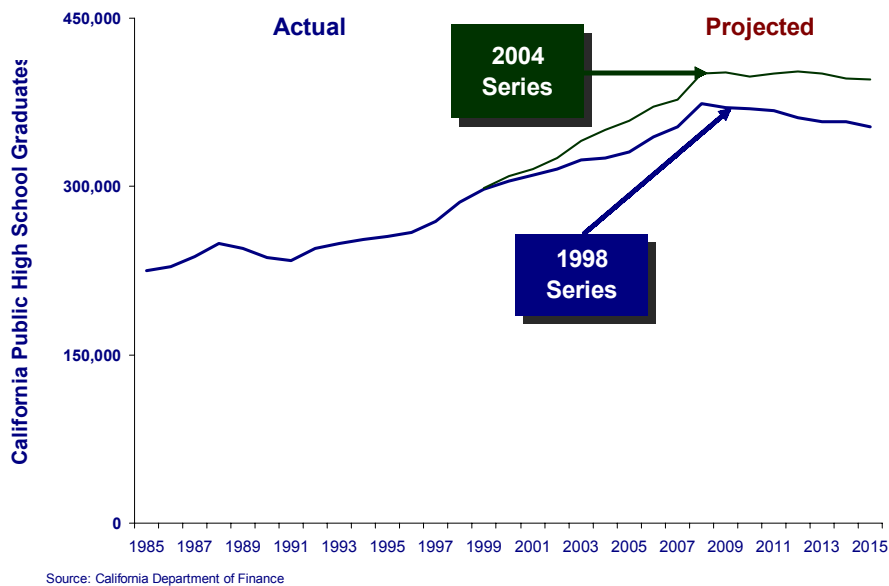
**Figure 3. Change in the Ethnic Composition of California's Population between 1980 and 2040**



Source: California Department of Finance, Demographic Research Unit, May 2004

Demographers have forecast sharp growth in the number of high school graduates during the current decade. Called "Tidal Wave II," this bulge moving through the public schools reflects not only the echo of the baby boom but also high birthrates and immigration levels in California. Figure 4 shows two forecasts for the number of high school graduates in California. The 1998 series was available when the University's long-range enrollment plan was developed in 1999. The most recent projection reflects even greater growth with a plateau, not a dip, after 2008.

Policy makers expect the University to provide a pathway to upward social mobility for California's new citizens. Meanwhile, UC's actual enrollments have grown even faster than those envisioned in the University's 1999 enrollment plan, because the demographers underestimated the actual growth in high school graduates and because a larger percentage of those who meet the University's eligibility requirements are applying for admission to the UC campuses. As a result, the University is hiring faculty and constructing new facilities, including a new campus, as fast as possible.

**Figure 4. Two Forecasts of California High School Graduates**

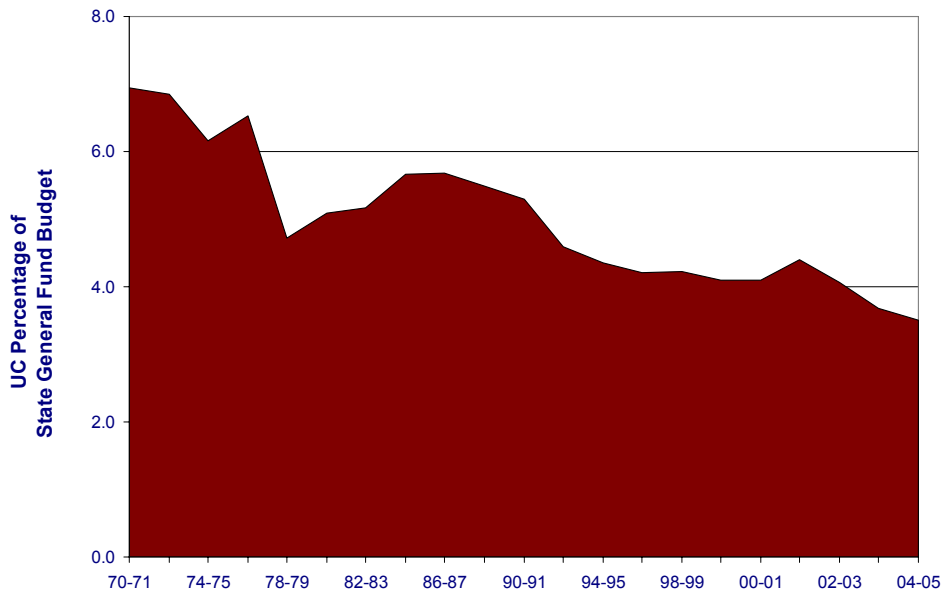
The UC Board of Regents has expressed concern about maintaining quality during this period of unprecedented growth, and that was *before* the economic recession and the onset of California's current fiscal crisis. Therefore, the Regents have been monitoring a series of qualitative benchmarks and early warning indicators during this period of rapid growth (University of California 2002; 2003).

### Less Taxpayer Support for Higher Education

When looking at levels of taxpayer support for higher education, it is important to separate the short-term effects of the business cycle from long-term trends. As shown in Figure 5, higher education's lower priority is not simply the effect of California's current fiscal crisis. The decline in the University of California's share of State General Fund expenditures from 7% to 3.5% has occurred over the past 35 years. During this period taxes have been cut and other spending priorities, such as prisons, health care, and social service programs, have consumed a larger share of State spending. For example, the sharpest drop occurred in 1978 — the year voters approved Proposition 13, which lowered property taxes and required the State to backfill the lost school revenue with State General Funds.

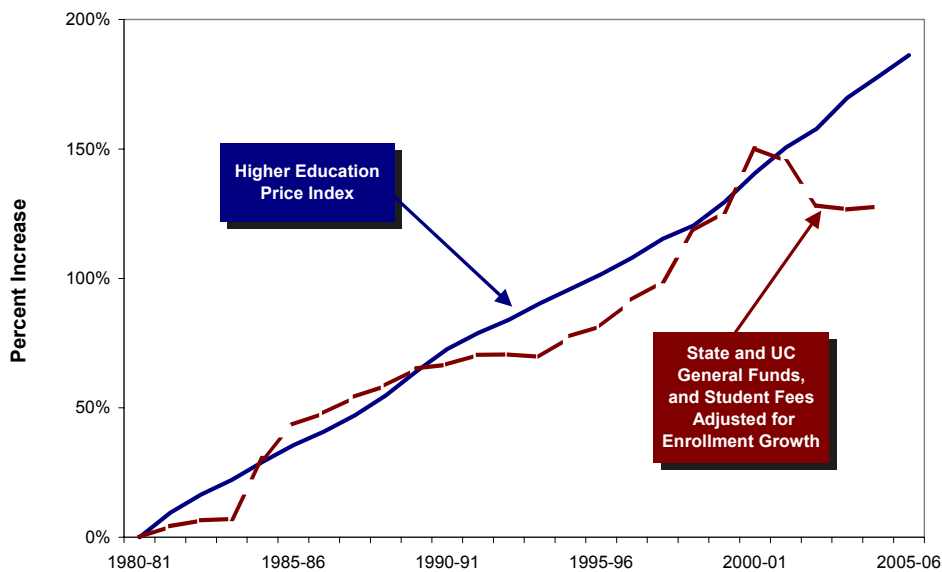
The economic recessions at the beginning of the 1980s, '90s and the current decade resulted in declining State revenue and less support for higher education. In fact, testimony before the Assembly Higher Education Committee last fall indicated that higher education typically is cut more than average during economic downturns, and receives above average increases during better periods, though it does not catch up to past levels. Politicians justify this pattern because colleges and universities, unlike many other State programs, have an alternate revenue source (i.e., tuition and fees).

**Figure 5. University of California’s Declining Share of the State General Fund Budget**



During each of the last three economic downturns — in the early 1980s, '90s, and the current decade — the State appropriation to the University of California and other core financial support fell behind (see Figure 6).

**Figure 6. University of California Funding Lags during Recessions and Catches Up When the Economy Rebounds**



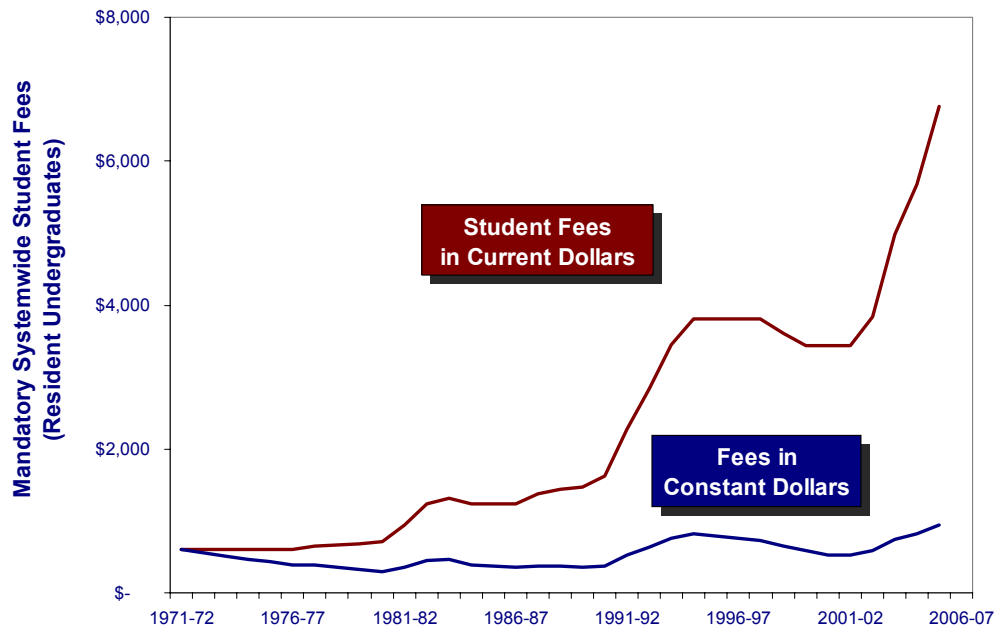
Source: UCOP Budget Office

The solid line in Figure 6 is the Higher Education Price Index, which reflects increasing prices for college and university spending, analogous to the CPI for consumer spending. The dashed line in the graph is the amount of core financial support (State appropriation, tuition and fee revenues, and other UC General Funds) per student.

In the early 1980s, after Proposition 13 had passed, State funding did not keep pace with the high rates of inflation at that time and salaries fell behind the market. In the mid-1980s, Governor Deukmejian made a conscious effort to provide catch-up funding for public higher education, but there were more budget cuts during the long and deep recession of the early 1990s. Once again tuition and fees were raised to offset a portion of the cut (approximately one-fourth). During the economic boom period of the late 1990s, Governor Davis provided catch-up funding and blocked student fee increases, but there have been severe budget cuts and sharp fee increases again over the past four years.

Californians have been proud of the state's "no tuition" policy, even though what the University of California calls student fees are now as high as tuition at other leading public universities. The boom and bust nature of student fee increases in California, shown in Figure 7, tracks the business cycle. During periods of economic growth, governors and legislators have brought down fee increases. In contrast, student fees have been increased sharply to offset partially the budget cuts during economic downturns. Over the long term, however, student fees are approximately where they would have been if the 1971-72 level had been adjusted annually for the growth in California's per capita personal income.

**Figure 7. Undergraduate Fees in Current and Constant Dollars**



## SHORT-TERM EFFECTS OF CALIFORNIA'S FISCAL CRISIS

### What Caused the Current Fiscal Crisis?

California's recession early in the current decade was relatively mild and short-lived. Why, then, was the State thrown into a fiscal crisis? Even though the state was hard hit by the energy crisis, it did not cause the fiscal crisis because the State sold bonds to create the cash to purchase long-term energy contracts at lower rates. Because ratepayers will be paying back these bonds for many, many years, this action by the governor and the legislature in effect took the energy crisis off the State General Fund books. Rather than the energy crisis, California's fiscal crisis was caused by an over commitment on a permanent basis of temporary tax revenue from the Internet Bubble.

During the late 1990s, high tech companies offered stock options to attract scientists, engineers, programmers, managers, and executives. While the Internet Bubble was rising, many employees made more on their stock options than their salaries, and investors experienced extraordinary gains on their investments in these companies. Because capital gains and stock options are taxed as ordinary income in California, the State General Fund experienced extraordinary growth.

Capital Gains and Stock Options Revenue was only 6% of the State General Fund in 1995, but had grown to 25% at the peak in 2000. Unfortunately, too much of this temporary revenue increase was spent for continuing programs and services. When the Internet Bubble burst, Capital Gains and Stock Options Revenue declined precipitously. Between 2000 and 2002 the State General Fund lost \$12.4 billion in revenue from this source. This sudden drop in State General Fund Revenue could not have happened at a worse time for higher education, which was trying to expand at unprecedented rates to accommodate the increase in high school graduates, commonly called "Tidal Wave II."

### How Did It Affect the University of California's Budget?

Even before California's current fiscal crisis, many of the UC Regents expressed concern about the University's ability to maintain quality during this period of rapid growth. That concern grew to alarm between 2001 and 2004, as each Governor's Budget contained more cuts and as the governor imposed mid-year cuts to help the State adjust to lower revenue estimates.

Over a four-year period the State appropriation to the University of California *fell* by 15% while enrollment *grew* by 19%. Instead of rising from \$3.3 billion to \$4.2 billion to pay for enrollment growth and adjust for inflation, the UC State appropriation fell to \$2.7 billion (see Figure 8). In spite of the sharp student fee increases shown in Figure 7, less than one-third of the \$1.5 billion shortfall shown in Figure 8 was offset by tuition and fee increases.



**Figure 8. Actual State Funding for UC in Comparison to a Normal Workload Budget under an Agreement with the Governor**

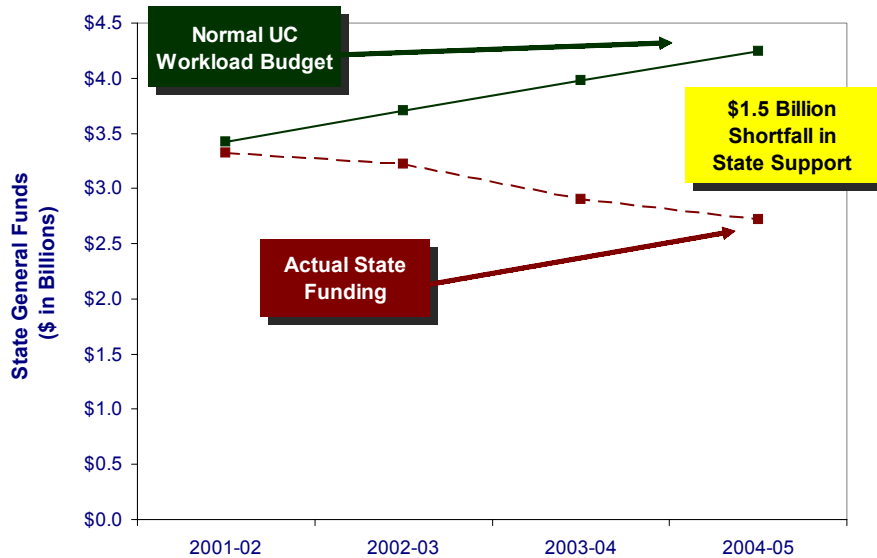
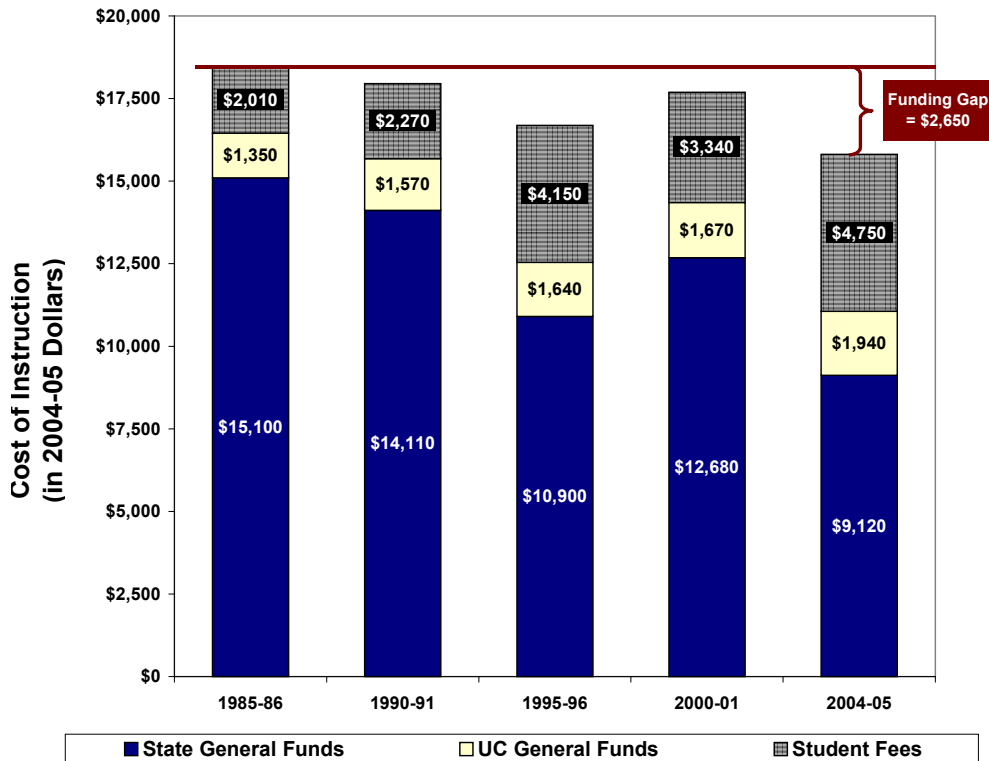


Figure 9 helps to make sense of these large numbers by comparing what it costs to educate a student today with the cost in 1985 – before the long, deep recession in the early 1990s and the current fiscal crisis. All numbers in Figure 9 are in today’s dollars.

**Figure 9. The \$2,650 Funding Gap in Resources Available to Educate a UC Student**



In 1985-86 it cost approximately \$9,000 to educate a UC student. After adjusting for inflation, that number would be approximately twice as large in 2004-05. In the mid-1980s, more than 80% of the money came from the State appropriation, which is the solid portion at the bottom of each bar. Over the last 20 years, the State dollars per student have declined from \$15,100 to \$9,120. As a result, the State is now funding less than 60% of the cost of instruction. Student fees have increased substantially to offset some, but not all, of the loss of State dollars. As a result, the University of California is spending \$2,650 less now than it was in 1985-86 to educate a student. Rising prices are *not* due to University costs spiraling out of control. Students are paying more today solely because the State subsidy has declined.

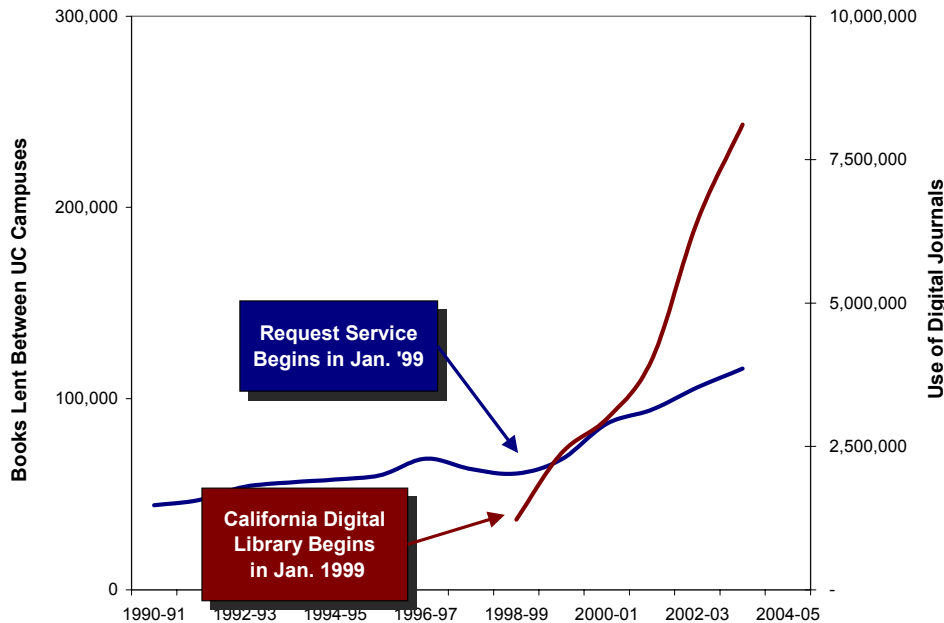
Regarding this shortfall of \$1.5 billion in State funding, UC President Dynes (2005) has said: [It] has affected the quality of a UC education because the University has less money to spend on each student. The \$2,650 funding gap means larger classes, less time with faculty outside the classroom, fewer library resources, and more obsolete equipment. It also means that students are paying a larger share of the cost of their education and getting less for it.

### **How Did UC Adjust to the Budget Cuts?**

The UC Board of Regents and the President tried to minimize the effect of the budget cuts on the educational program by cutting administration, State-supported research, and public service programs first. They also raised student fees and out-of-state tuition to offset most of the direct impact on the educational program. As California's fiscal crisis entered its third and fourth years, however, this strategy collapsed and all parts of the budget were eventually affected. Consequently, faculty and staff salaries fell behind the market, academic support budgets suffered, facilities budgets were not adjusted for higher energy costs, the deferred maintenance backlog grew, graduate student support levels did not match those of peer institutions, etc.

Over the past four years the University has looked for greater efficiencies to make more effective use of its limited State funding. For example, Academic Support budget cuts have affected its libraries. However, the University took advantage of being a multi-campus system and utilized technology to improve access to its library collections. The California Digital Library allows students and faculty from every campus to request articles from more than 7,000 journals available to UC scholars online. These articles are delivered electronically to the desktop, rather than by trucks driving between campuses.

As shown in Figure 10, interlibrary book loans have increased from 44,000 to 116,000. Meanwhile, the electronic delivery of research journal articles to the desktop has skyrocketed from 1.2 million to 8.1 million. The cost-effective California Digital Library has been a great success, but there is an important lesson to be learned from this project: the University is now reaping the benefits of investments in technology made in better times. The campuses have identified some other cost-saving measures in Academic Support functions that cannot be implemented because the University does not have the resources to make the necessary up-front investments.

**Figure 10. Library Resource Sharing among UC Campuses**

The University has also taken steps recently to streamline and reduce costs in its business operations:

- **Strategic Procurement Initiative.** This initiative leverages the enormous buying power of a multi-campus system to lower costs from vendors. In addition to better prices, this initiative will allow the University to buy goods and services more efficiently and to monitor prices more closely.
- **Information Technology Procurement.** The University has greatly expanded its coordination of computer hardware and software procurement, which will save our departments significant dollars each year.
- **Debt Restructuring.** The University took advantage of historically low interest rates to refinance over \$1.1 billion in outstanding bonds for capital projects. This initiative will provide substantial savings in debt service over the next 32 years.

In short, the University of California has taken a number of steps to streamline its administrative processes and leverage the power of a multi-campus system. Nevertheless, there is simply no way to compensate for the cumulative effects of cuts shown in Figures 8 and 9, even with the sharp student fee increases shown in Figure 7.

## HOW HAVE THE RECENT BUDGET CUTS AND FEE INCREASES AFFECTED UC'S EDUCATIONAL PROGRAMS?

State taxpayer support for higher education declined over the last three decades, while tuition increases at public colleges and universities have offset only a fraction of those cuts (Kane & Orszag 2004; Rizzo 2003). In contrast, private funding and tuition have

increased steadily at private universities during this period. As a result, the gap in available resources between public and private universities has grown (Ehrenberg 2004). Some (cf., Ehrenberg 2000; 2004) have concluded that:

- Faculty recruitment and retention at public universities have been affected by low faculty salaries, which are well behind those of private universities;
- Public universities have substituted non tenure-track faculty for ladder rank positions to save money, which has consequences for the quality of the educational experience;
- Budget cuts at public universities have led to higher student/faculty ratios and larger class sizes, which affect the quality of undergraduate education;
- The growing gaps in funding for graduate students and academic support services, such as libraries, reduce the quality of the educational experience at public universities and affect their ability to recruit the best graduate students; and
- Less state subsidy and higher prices could be prohibitive for low-income students and will squeeze middle class families.

As demonstrated in the first two sections of this paper, the long-term national trend toward a declining percentage of the state budget appropriated to higher education is also true of California, as is the short-term budget-cutting at the beginning of the current decade. Indeed, the devastating impact of the collapse of the Internet Bubble has arguably been harder on California's technology-heavy economy than other states. Had the State's loss of tax revenue resulted in proportionate cuts to higher education, the impact on California's colleges and universities would have been catastrophic – changing in fundamental ways the very nature of the institutions.

The catastrophe was avoided, however, by borrowing billions to cover non-energy related operating budget shortfalls and shifting much of the financial impact to future generations. While not catastrophic, the University of California has nevertheless experienced very large budget cuts. In the remainder of this section we will examine whether the effects of these fiscal forces on the University of California are consistent with the national trends for public universities.

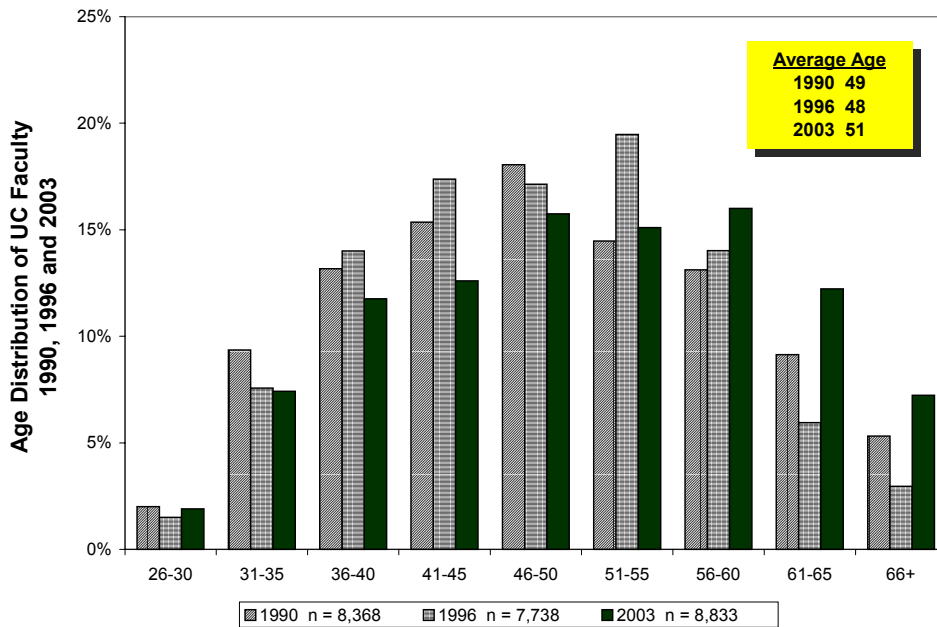
### **Has Faculty Recruitment and Retention Been Affected by Lagging Salaries?**

#### ***UC Must Hire 7,000 Faculty Between 1998 and 2010***

Faculty demographics reflect a combination of retirements and separations, as well as new hires. The period of rapid expansion of student enrollment to accommodate Tidal Wave II has also been a period of increased retirement of UC faculty.

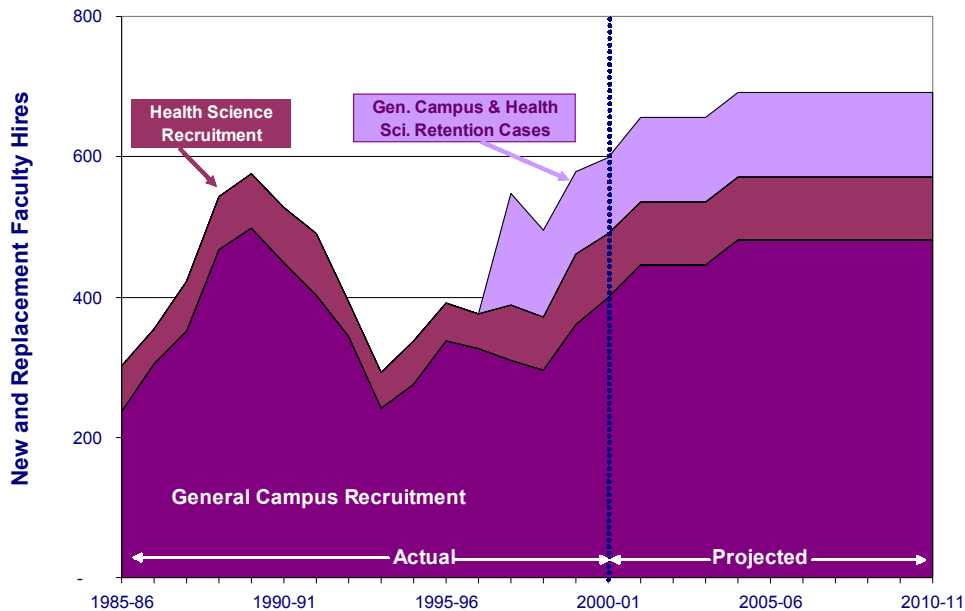
Figure 11 shows the age profile of UC faculty. The 1990 profile was before the University offered an early retirement incentive program to eligible faculty and staff (Switkes, 2001). That program, offered between 1991 and 1994, resulted in the retirement of 2,000 tenured faculty and caused the dip in faculty numbers and the drop in the average age reflected in the 1996 data. The solid bars reflect more recent data on the age distribution of the faculty. The larger percentage of faculty over age 55 portends an increasing wave of retirements and the need for even more faculty recruitment.

**Figure 11. Age Distribution of University of California Faculty at Three Points in Time**



Since 2000, UC campuses have been recruiting faculty for both growth and replacements as fast as they can. The long-range enrollment plan assumed growth of 60,000 students over a twelve-year period (1998 to 2010) and called for hiring 7,000 new faculty (an average of 585 per year). Figure 12 illustrates the model developed to estimate faculty hiring on the General Campuses and in the Health Sciences. Not shown are the unprecedented 586 hires in 2003-04, a University of California record.

**Figure 12. University of California Faculty Recruitment and Retention Plan**

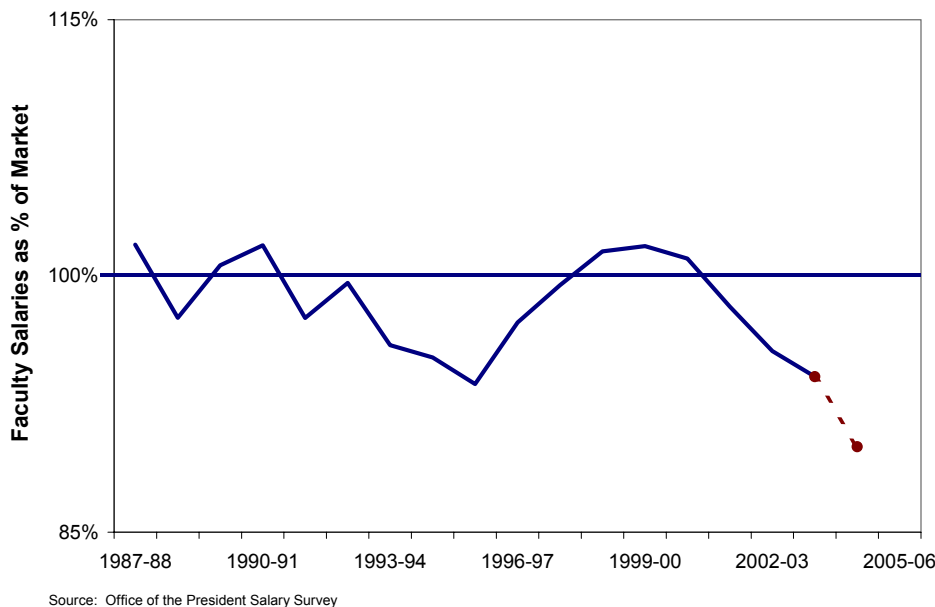


Source: UCOP Budget Office and Academic Affairs

### ***UC Faculty Salaries Are Below Market***

Faculty salaries have fallen 10% below market during California's fiscal crisis (See Figure 13). The growing lag in faculty and staff salaries is one of the areas of greatest concern as a result of years of underfunding of the University's budget. No funds were provided for salary increases for 2003-04 or 2004-05, although those faculty who were eligible for merit increases<sup>1</sup> did receive them because the University made additional internal budget cuts.

**Figure 13. Average Faculty Salaries for the University of California in Relation to Those of Peer Universities**



### ***There Has Not Yet Been a Significant Impact on Recruitment and Retention***

Had the drop in UC faculty salaries relative to its peer institutions had an effect on retention, one would have expected to see an increase in separations. However, with the exception of the increasing number of retirements noted above, the annual rates of separation for both Assistant Professors and tenured faculty continue to be very modest (varying between 1.0% and 1.3% over the past 4 years). However, the University's efforts to block faculty raids from competing universities have not been without cost. Matching outside offers of faculty being recruited by other institutions is expensive and causes unwelcome inequities in salaries among colleagues.

The faculty recruitment and start up costs for new faculty are very high and the University's recruiting difficulties are compounded by the high cost of housing in

<sup>1</sup> University of California faculty have a regular pre- and post-tenure review process that provides a detailed merit review every 2 to 4 years depending upon rank. This review continues throughout all faculty members' careers and consists of an examination of their accomplishments in teaching, research, and service by their department colleagues and the dean. On most UC campuses, the file is then evaluated by a campus-wide faculty committee with final approval by the Provost. Advancement is not automatic (see Switkes, 1999).

California. However, UC campuses have continued to hire large numbers of new faculty, including a record number in 2003-04. The University of California continues to recruit excellent faculty for a number of reasons; among them is the fact that the University offers an excellent benefits and superior retirement package. This could change, however, because Governor Schwarzenegger has proposed major changes in public retirement programs, including the one offered by the University of California. If approved in the form proposed by the Governor (either by the legislature or by the voters through the initiative process), these changes would seriously damage faculty recruitment and retention at the University of California.

### **Has the University of California Relied upon Part-Time Faculty to Cut Costs?**

To test this hypothesis, payroll records for General Campus faculty (excluding the Health Sciences) were analyzed for several years. As shown in the table below, the percent of regular faculty has remained steady for more than 20 years. The University of California has *not* reacted to the budget cuts by hiring a larger percentage of lecturers, instructors, and other temporary faculty.

**Table 1. The Mix of General Campus Faculty in the University of California**

|  | 1981 | 1985 | 1990 | 1995 | 2000 | 2004 |
|--|------|------|------|------|------|------|
| <b>Regular Professorial Faculty</b>                        | 79%  | 79%  | 81%  | 80%  | 78%  | 80%  |
| <b>Lecturers, Instructors, and Other Temporary Faculty</b> | 21%  | 21%  | 19%  | 20%  | 22%  | 20%  |

### **Have the Budget Cuts and Fee Increases Affected the Educational Experience?**

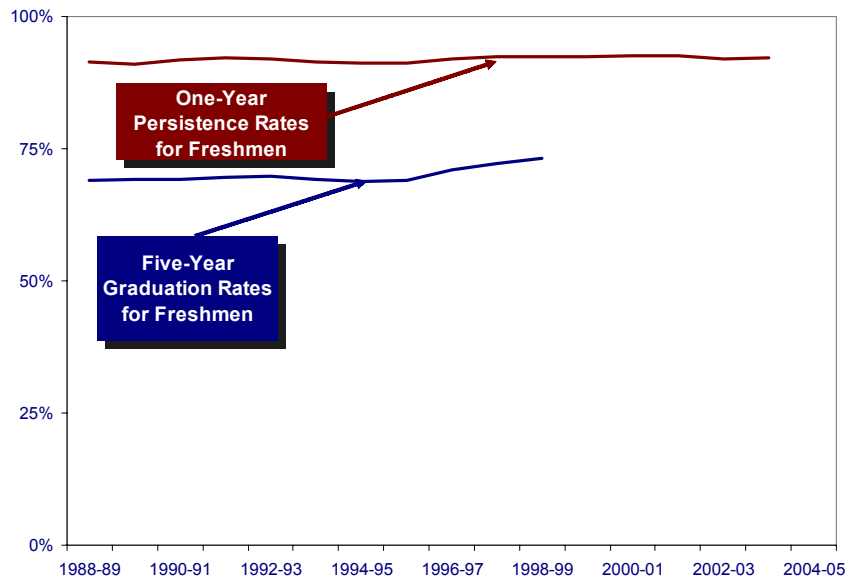
In the mid-1960s, the University's budgeted student/faculty ratio was 14.5 to 1. In the early 1970s it increased to 17.6 to 1, where it stayed for nearly 20 years. During the budget cuts of the early 1990s, it rose to 18.7 to 1. As a result, the University's student/faculty ratio is higher than the average of the four public comparison universities and much higher than those of the four private comparison schools.

During California's recent fiscal crisis, governors twice proposed further increases in the student/faculty ratio and made associated cuts in the University's budget totaling \$70 million. However, the University of California has constitutional autonomy and the Board of Regents chose not to implement those increases in the student/faculty ratio. Instead, the President was directed to cut campus budgets on a temporary basis and develop a multi-year plan to restore the \$70 million.

In addition, campuses have made it a high priority to provide students with the classes they need to graduate. Campuses made a commitment to add 1,000 lower division classes and instituted a program of freshman seminars to address concerns about large, impersonal classes. In addition, increased use of summer session and increased participation of regular faculty in summer session teaching have made it easier for undergraduates to complete their programs of study on time.

The success of these and other efforts can be seen in persistence and graduation rates (Figure 14). Ninety-two percent of the entering freshman class returns to enroll in the second year. The 5-year graduation rate for entering freshman has increased slightly over the past 10 years, from 69% to 73%. It is important to note, however, that students are taking fewer quarters to complete their degrees and the 4-year graduation rate has increased more than the 5-year rate. In a perverse way, higher fees seem to have encouraged students to complete their studies more rapidly.

**Figure 14. Persistence and Graduation Rates of Students Who Enter the University of California as Freshmen**



Source: Office of Student Academic Services

### Have Budget Cuts Affected the Ability to Recruit the Best Graduate Students?

Prior to the onset of California's fiscal crisis there was concern about the University's ability to recruit the best graduate students. Therefore, the President appointed a Commission on the Growth and Support of Graduate Students to study the problem and develop recommendations. The Commission (2001) found the most serious problem to be in doctoral fellowships. Those applicants who were offered a fellowship by a UC campus but chose to attend another university typically received an offer from the competing institution that was a net \$2,000 higher than the UC offer after accounting for differences in the cost of living in different regions.

In response, the University of California took a number of steps to close the gap. Over the next four years, however, the fees for graduate academic students almost doubled (\$3,609 in 2001-02 to \$6,897 in 2005-06) and there was widespread concern that UC offers were falling further behind. However, a follow-up study found that the fellowship offers accepted by those choosing to attend another university were still approximately \$2,000 higher than the offer from a UC campus, apparently because those competing institutions were also facing budget problems.

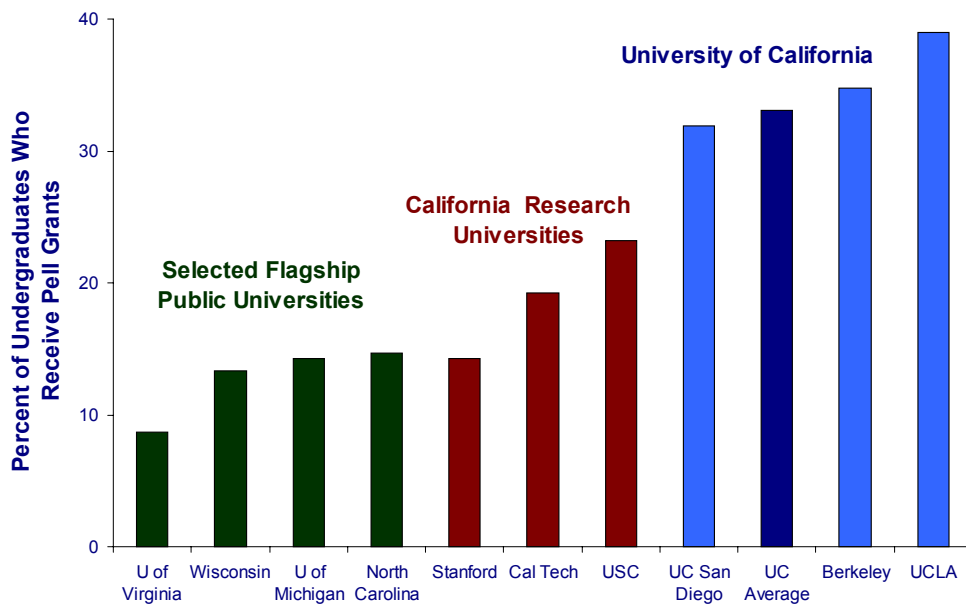


## Have Tuition Increases Affected the Enrollment or Academic Performance of Undergraduates from Low-Income Families?

In accordance with the Master Plan for Higher Education, the University of California sets its eligibility requirements to serve the top 1/8<sup>th</sup> of California high school graduates. Enrolling these students is predicated on students and their families being able to afford a University of California education. Affordability is a function of the cost of attendance and the availability of financial aid.

The University of California's financial aid programs are designed to make UC financially accessible to all students through a combination of part-time work during the academic year and work during the summer, borrowing, parental contribution in accordance with their ability to pay, and then federal, state, and UC grants and scholarships. Students from low-income families are eligible for Pell grants. In each of the past few years, UC campuses have received national acclaim for enrolling large numbers of Pell recipients. Despite the sharp increases in undergraduate fees, almost one in three UC students are Pell recipients. As shown in Figure 15, UC figures are much higher than those of other leading research universities because the University distributes an unusually large amount of institutional aid and because its eligibility pool has a large percentage of applicants from low-income families.

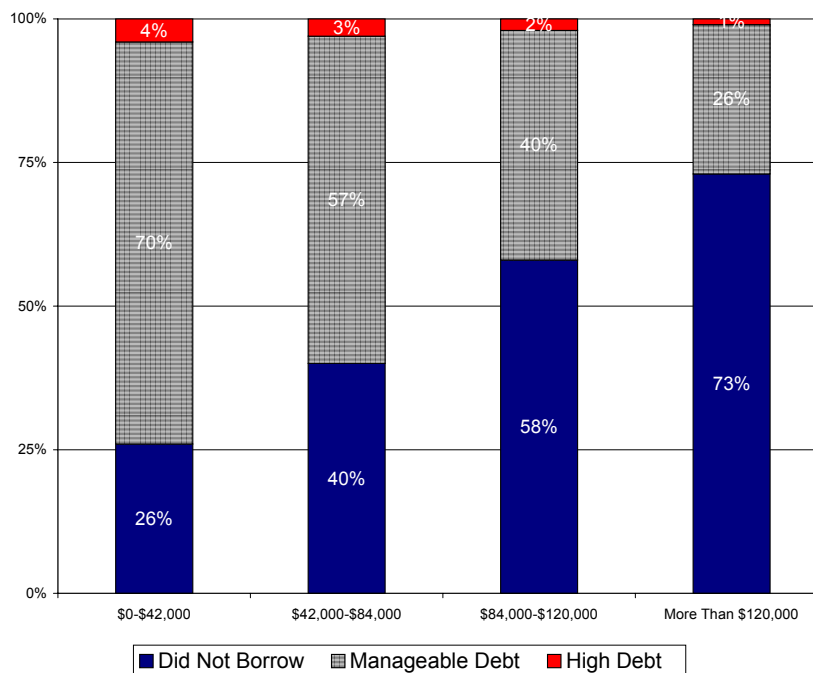
**Figure 15. Percentage of Undergraduates Who Are Pell Grant Recipients at Selected Leading Universities**



Enrolling low-income students does not necessarily mean that they will be able to stay in school and graduate. A recent presentation to the UC Board of Regents by Provost M.R.C. Greenwood (March 2005) addressed this concern. She demonstrated that first year persistence rates for low-income students (for families with incomes of less than \$40,000) were the same as those for middle-income and high-income students. Low-income students took a little longer to graduate, but graduation rates after six years were similar to those for students from middle-income families.

The University of California's enviable record in enrolling and graduating low-income students despite large student fee increases is attributable, in large part, to the availability of financial aid. Scholarships and grants, excluding loans, increased from \$730 million in 2001-02 to more than \$1 billion in 2004-05. On the national scene, this would be considered as a "moderate tuition / high aid" policy. The State legislature has increased the amount of financial aid available through the Student Aid Commission and the University of California has increased its commitment of internal funds. Current Regental policy returns 25% of the increase in undergraduate student fees in the form of financial aid. These additional dollars have been targeted so that low-income undergraduate students have not been affected by the fee increases.

**Figure 16. Debt Carried at Graduation by University of California Undergraduates by Income Level**



As a result, most low-income students are able to enroll and complete their degrees without accumulating large amounts of debt. Figure 16 shows the percentage of students who graduated in 2003-04 with no debt, manageable debt, and high debt at four income levels. In this chart, high debt is defined as debt requiring more than 9% of the average student's starting salary. As can be seen in Figure 16, many graduating seniors chose not to borrow at all, even 26% of the low-income students.

Very few UC students graduated with high debt. Even among low-income students, only 4% graduated with high debt. In addition, repayment plans are available to help them manage their debt, including extended payment plans, graduated plans, and income-contingent plans. In short, the impact of tuition and fee increases on low-income families has been minimized by sharp increases in financial aid. Access has been maintained for low-income students under the University of California's "moderate tuition / high aid" policy, but California's fiscal crisis has stretched middle-income families.

## CONCLUSION

In the section of this paper on “Less Taxpayer Support for Higher Education,” we said that it was important to separate the short-term budgetary effects of a bursting Internet Bubble from long-term trends in the funding of public higher education. The state of California has followed the long-term, national trend of governors and legislators giving a lower priority to higher education. For example, the percentage of the State General Fund Budget appropriated to the University of California declined from 7% in 1970 to 3.5% in 2004-05. Correspondingly, the State General Fund appropriation to the University as a percentage of total revenue declined from 41% to 19% over that same time period.

The short-term pattern in most states of budget cuts to higher education during the recent economic downturn has also occurred in this state. California’s loss of capital gains and stock options revenue was one of the worst in the nation and the resulting fiscal crisis led to reductions in State appropriations to the University of 15% over the past four years, while enrollments were growing by 19%.

The University of California took several actions to minimize the impact of these reductions in State funding. Despite sharp increases, student tuition and fee increases offset less than one-third of the total cut. Those additional tuition and fee revenues were, however, targeted and offset much of the impact on instructional programs, though there were large cuts in other areas. Steps were taken to streamline administrative processes to make better use of limited State funds. Also, the University utilized technology and leveraged the power of a multi-campus system to soften the effects on academic support budgets. Nevertheless, the quality of the educational program has been affected, and salaries for both faculty and staff are well below market.

To determine the effectiveness of the University of California’s strategies, we tested several hypotheses about the impact of budget cuts on public universities. We found that UC faculty salaries had fallen behind those of the privates but the gap had not substantially affected recruitment and retention. Unlike the pattern at many other public institutions, the University has not substituted more non tenure-track faculty for ladder rank positions to save money. Even though governors in California had cut budgets and proposed to increase the student/faculty ratio twice, the University chose to protect the quality of the educational program by cutting budgets in other areas temporarily and establishing a long-term plan to restore the former budgeted student/faculty ratio.

In terms of students, we found that the tuition and fee increases at the University of California had a larger impact on graduate than undergraduate students. Graduate student support, particularly fellowships for doctoral students, is behind market and the Academic Senate has made this a high priority. The impact of the tuition and fee increases on low-income undergraduate students has, however, been minimized by substantial increases in financial aid.

In short, the University of California seems to have avoided in the short run some of the more serious effects on the academic program of the loss of State funds. A new Compact with Governor Schwarzenegger ends four years of budget cutting and provides a floor for future budget increases. But what about the future? The Compact is not a guarantee of future funding but rather a good faith effort by the governor to fund it and a good faith effort on the part of the University to meet the accountability elements.

Agreements like this one have been broken in the past during economic downturns, and it could happen again.

Of course, this state faces a long list of other competing needs. Like the governors in other states, Governor Schwarzenegger is struggling with budget priorities such as below average school funding and rising health care costs. Furthermore, future governors will be faced with a huge bill for health care and other social services when the baby-boomers retire.

On the other hand, California's economy, which is currently the 6<sup>th</sup> largest in the world, is well positioned for competitiveness in the 21<sup>st</sup> century with R&D-intensive industry clusters, such as information technology and software in the Silicon Valley, aerospace in Los Angeles, and pharmaceuticals in San Diego. As the Chairman of the Federal Reserve Board, Alan Greenspan, said a few years ago, California's economy will go through its ups and downs but over the long term this state will do relatively well because it has more research universities than any other.

The ten campuses of the University of California are critical pieces of the fabric of higher education, which has been so important to the state's economy and quality of life. A decline in the quality of their educational programs and research enterprises would not be in the public interest and must not be allowed to happen.

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