



Defunding Higher Education

What Are the Effects on College Enrollment?

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*Supported with funding from the Donald Bren Foundation and
The James Irvine Foundation*



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SUMMARY

California's financial commitment to higher education has been compromised by fiscal crises and competing state priorities. Despite large increases in the demand for higher education, state general fund spending in this area has declined notably over the past ten years. California now spends more on corrections than on its public universities.

This report examines the effects of this disinvestment on the enrollment rates of recent high school graduates at the University of California (UC), the California State University (CSU), and the California Community Colleges. Key findings include:

- Increasingly, high school graduates in California are less likely to enroll in any four-year college.
- Enrollment rates at UC and CSU have fallen by one-fifth over the past five years, from about 22 percent of all high school graduates to below 18 percent.
- Among the state's most highly prepared high school graduates, the enrollment rate has declined even more—from around 67 percent to 55 percent.
- Many opt for overcrowded community colleges, but increases in enrollment rates there do not make up for the declines at UC and CSU.
- A small but notable share of those who were eligible and even accepted into UC and CSU do not attend college anywhere.

These enrollment declines have occurred as California's public colleges and universities have employed various strategies to balance their budgets. Those strategies include cutting courses, programs, and student services, as well as making administrative cuts. Certain policies and practices have been designed to limit enrollment, including capping enrollment at more desirable campuses. From a student perspective, the increased tuition and fees at UC and CSU campuses have been the most dramatic change, and community college students have faced greater difficulties in finding classes.

Increased state funding for higher education would almost certainly reverse these trends. A proposed tax initiative could lead to increased revenue for the state, with policy-makers explicitly identifying higher education as a primary beneficiary if the initiative passes. Regardless of the success of the initiative, steps could and should be taken to ensure that higher education expenditures are allocated in as efficient a manner as possible. One suggestion, for example, would fund the state's colleges on the basis of student outcomes, such as courses and degrees completed, as well as enrollment. But without additional revenue, such steps are not likely to fully overcome the overall decline in state support for higher education.

If current enrollment trends persist, California faces an alarming loss of college graduates—at a time when the state needs to be developing a more highly skilled workforce to ensure its future prosperity. PPIC has projected that the state will fall one million college graduates short of economic demand by 2025 unless enrollment and graduation rates improve substantially. Had enrollment rates not declined over the past few years, California would be on a path toward closing this workforce gap. Instead, it looms as large as ever.

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Introduction

California, once a leader in higher education, is falling behind other states and nations in developing the highly skilled workforce necessary for our future prosperity. By 2025, two of every five jobs in California will require a bachelor's degree (Reed 2008), and nationwide, more than 60 percent of all new jobs will require some form of postsecondary education (including associate's degrees and certificates as well as bachelor's degrees).¹ Yet the enrollment rates of recent high school graduates in California's public colleges and universities have not kept pace with rising demand. For the first time in our state's history, young adults in California are less likely than older adults to have graduated from college (Johnson 2010). If current trends persist, PPIC projects that the state will fall one million college graduates short of economic demand by 2025.²

The size of this gap means that the state cannot rely on just one approach to closing it. Rather, the state will need more high school graduates to earn certificates and degrees from technical and community colleges and more to graduate from four-year institutions. Reaching underrepresented groups, particularly the large and growing Latino student population, is key to closing the gap.³

California's ongoing budget crises have dramatically reduced state support for higher education. The University of California (UC) and the California State University (CSU) have responded by reducing costs, increasing tuition and fees, and limiting enrollment. Along with the California Community Colleges (CCC), they have reduced course offerings and other resources for students.⁴ These restrictions vary across institutions and campuses but are likely to be felt most strongly among recent high school graduates as they decide whether to enroll in college.

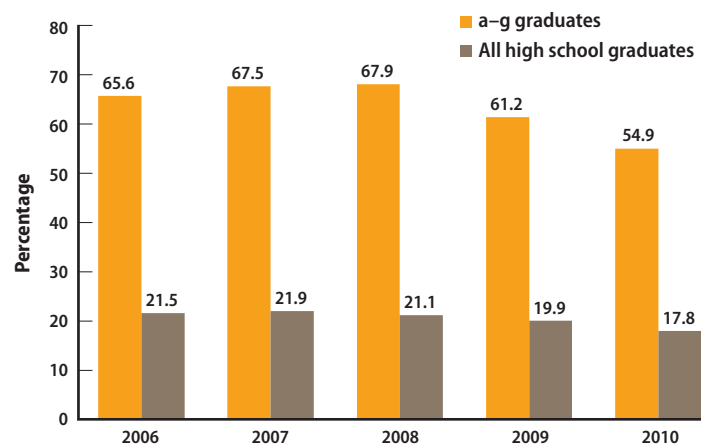
In this report, we examine the effects that these fiscal crises have had on student enrollment at the state's public colleges and universities. We focus on the college enrollment of recent high school graduates because this is a pivotal point in an individual's educational direction. The vast majority of students who earn a college degree, including an associate's degree, first enter college shortly

after graduating from high school. Changes in the share of high school graduates who enroll in college have long-term implications for the state.⁵ Declines in enrollment rates mean that California's future workforce will be less skilled and less able to meet the demands of an economy that increasingly rewards more highly educated workers.

California's budget crises have dramatically reduced state support for higher education.

Our key finding is that the share of recent California high school graduates enrolling in the state's public colleges and universities has declined over the past five years. Enrollment rates to UC and CSU have fallen by one-fifth, from about 22 percent to below 18 percent. Among the state's most highly prepared high school graduates—those completing the a–g courses required for admission to UC and CSU—the enrollment rate has declined from around 67 percent to 55 percent (Figure 1).

Figure 1. Enrollment rates of recent high school graduates to UC and CSU have declined



SOURCE: Author's calculations based on California Postsecondary Education Commission (CPEC) (2010).
NOTE: Data are restricted to California high school graduates and residents.

To understand these declines, we first describe reductions in state support for higher education, then we assess the responses of the state's public colleges and universities. Finally, we examine trends in student enrollment and conclude with a discussion of policy implications and recommendations.

Reductions in State Support for Higher Education

Despite large increases in the number of high school graduates, state general fund spending on higher education has declined notably. In 2010–11, the state spent \$1.6 billion less on higher education than it did ten years earlier.⁶ These declines partly reflect California's severe recession and lower general fund revenues. But they also reflect changing state priorities: Declines in higher education expenditures have exceeded those for other state functions. For example, over the past ten years, general fund expenditures for higher education have *fallen* 9 percent, whereas general fund expenditures for corrections and rehabilitation have *increased* 26 percent.⁷ Indeed, the state now spends substantially more on corrections and rehabilitation than it does on its public universities (UC and CSU combined).⁸ It is worth noting that between 2003 and 2010, the prison population increased 1 percent, whereas CSU and UC enrollment (full-time-equivalent students) increased 13 percent.⁹

This decline in the budgetary priority of higher education is part of a much longer historical trend. In the mid-1970s, for example, the state spent almost four times more on higher education than on corrections, and almost 18 percent of all general fund expenditures went to higher education. Today, higher education receives around 12 percent (Figure 2).

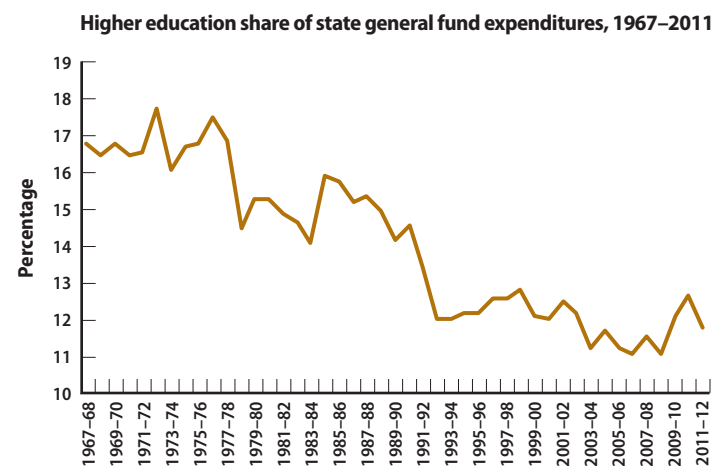
These changing priorities are not the consequence of well thought out planning and priority setting on the part of the state.¹⁰ Nor are they aligned with the desires of most Californians: In the May 2011 PPIC Statewide Survey, 68 percent of respondents *opposed* spending cuts in higher

education to reduce the state budget deficit, and 62 percent *supported* spending cuts in prisons and corrections to do so (Baldassare et al. 2011).

Policymakers often insist that their hands are tied with respect to budgeting and expenditures and that they have relatively little latitude to increase expenditures or even move funding from one area of government function to another.¹¹ And to a certain extent, the state's budget priorities are driven by federal and state requirements, voter-approved initiatives, court mandates, and caseloads. UC and CSU are especially vulnerable in this context, as there are no mandates or requirements that the state provide funding for its public universities. Community colleges are somewhat more protected, because they are part of the Proposition 98 guarantee for K–14 education.¹²

Furthermore, higher education is seen as a budget area that, unlike other government services, has the ability to compensate for cuts in state expenditures. A common and not incorrect assumption is that public colleges and universities have sources of funds, particularly students and the tuitions they pay, that are not available to other government services. (Prisoners cannot pay for the cost of their own incarceration, and it would be nonsensical for welfare recipients to pay for their welfare.) This assump-

Figure 2. Relative spending on higher education has declined



SOURCES: CPEC (2010); LAO (2011).

NOTES: Data for 1967–2010 show the higher education share of state general fund expenditures. Figures for 2011–12 are estimates.

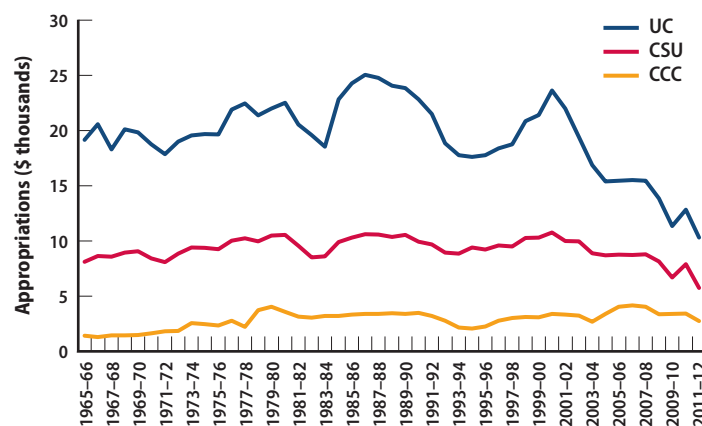
tion makes higher education vulnerable to cuts during tough budgetary times, when policymakers tend to focus on solving short-term issues rather than on addressing long-term needs.

The state has also, perhaps unintentionally, shifted spending priorities among the UC, CSU, and CCC systems. Specifically, community colleges have grown as a share of higher education spending, whereas funding for CSU and especially UC has declined. In the 2010–11 budget, community colleges received over 40 percent of all general fund expenditures that were devoted to any of the three segments.¹³ This emphasis on funding community colleges is new. In the late 1960s, community colleges received only about 18 percent of general fund higher education expenditures, and even as recently as a decade ago, community colleges received less than one-third of higher education expenditures. The large increase in the share of funding devoted to the community colleges over the past ten years does not correspond with a large increase in enrollment. Indeed, the number of students in community colleges increased 21 percent from 2000 to 2010, compared to 40 percent at UC and 21 percent at CSU.¹⁴

This change in relative spending is not necessarily the result of any deliberate planning process. To a certain extent, the community colleges have benefited from being a part of the Proposition 98 guarantee. Moreover, California has a longstanding commitment, enshrined in the state's Master Plan for Higher Education (1960), to providing inexpensive access to higher education, a commitment that is now largely achieved through community colleges rather than through the state's public universities.¹⁵

Despite the larger share of funding that community colleges now receive, they still get far fewer per-student dollars than UC or CSU (Figure 3).¹⁶ Considering higher education funding over time, two characteristics of state support per student stand out. First is the recent sharp decline in funding, especially for UC and CSU. This has been so severe that current state funding per student is far below long-term historical averages. In comparison, per-student funding at the community colleges remains higher than the long-term historical average, despite the recent

Figure 3. General fund appropriations per student have declined sharply



SOURCES: CPEC (2010); LAO (2011).

NOTES: Data for the 2011–12 school year are LAO estimates. Figures are per full-time-equivalent student with American Reinvestment and Recovery Act (ARRA) funds. Appropriations are adjusted for inflation and reflect 2010 dollars (see Technical Appendix A).

decline. Second is the tremendous volatility, with dramatic changes in state support from one year to the next (these changes are tied to downturns in the state budget and coupled in some years with significant enrollment growth). For example, UC's general fund support per student fell by about a third over a relatively short period, from almost \$25,000 in 2000–01 to just over \$16,000 in 2004–05. (The scale obscures the volatility at CSU and the community colleges, but the relative variation is similar for each system, with the community colleges actually experiencing higher relative variation and CSU slightly lower.) This volatility matters, because it makes planning especially difficult for both institutions and students.

The budget picture is particularly dire for 2011–12. To close the state's budget gap of \$11.1 billion, the state's public colleges and universities incurred a disproportionately large cut of \$1.8 billion—\$419 million to the CCCs and \$1.4 billion to UC and CSU combined (LAO 2011). The governor has announced that an additional \$200 million in expenditure reductions will occur for UC and CSU (\$100 million each), because revenues have fallen sufficiently short of forecasts. These are the largest cuts faced by any function of state government.

How Have Higher Education Institutions Responded to Cuts?

In the face of these cuts, California's public colleges and universities have adopted a number of strategies to balance their budgets. In general, these strategies fall into one of three categories: tuition increases, expenditure reductions, and enrollment management.

Tuition Increases

At both UC and CSU, increases in tuition and fees have been perhaps the most prominent of these strategies in terms of both dollars and the effect on students.¹⁷ Both UC and CSU have the ability to raise tuition and fees independently and do not require state approval to do so.¹⁸ As we will discuss below, community colleges do not have the same independence.

Until the early 1990s, tuition and fees at both UC and CSU remained very low—among the lowest in the nation. During the severe recession at that time, state support declined and both systems increased tuition and fees in response. Tuition and fees more than doubled from the late 1980s to early 1990s, reaching about \$4,000 per year at UC and \$2,000 per year at CSU.¹⁹ A period of relative stability prevailed until the early 2000s, but since that time, tuition and fees have been on a dramatic and relentless upward climb—more than tripling—reaching over \$12,000 per year at UC and over \$6,000 per year at CSU by 2011–12 (Figure 4; note the scale differences).

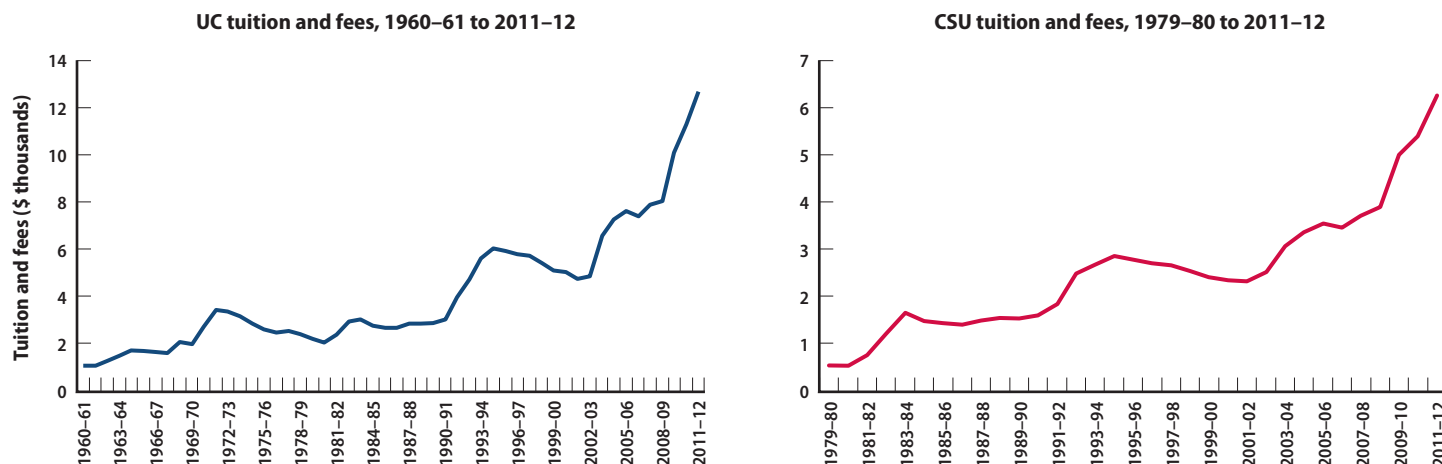
Even with the increases, CSU remains fairly affordable relative to comparable institutions in other states.²⁰ In 2010–11, tuition and fees were 23 percent lower at CSU than at comparison institutions; as recently as 2007–08, they were 38 percent lower. But increases in tuition and fees were far higher at CSU campuses (47%) than at the comparison institutions (19%) over this same time period—a trend that if continued would make CSU less affordable relative to its peers. CSU increased tuition an additional 16 percent from 2010–11 to 2011–2012 and is considering a proposal to raise tuition and fees another 9 percent for 2012–13 (CSU 2011a).²¹

In contrast, UC has already become one of the most expensive public university systems in the country, with 2010–11 tuition and fees 33 percent higher than the average of other large public research universities; in 2007–08, tuition and fees were just 9 percent higher.²² Of 71 large public research universities in the nation, UC has the eighth highest tuition and fees. Moreover, dramatic increases could continue if the state continues to cut higher education allocations. Between 2007–08 and 2010–11, tuition and fees increased by 50 percent (\$3,772) at the UC campuses but only by 24 percent (\$1,627) at comparison institutions (and 19%, or \$2,083, at the more expensive comparison institutions). If current trends in tuition increases persist, UC will become the most expensive public higher education system in the country within the next five years.²³ Of course, for students paying full tuition, UC tuition remains substantially lower than that of most private institutions.

At both UC and CSU, tuition and fee increases have offset only a portion of the reductions in state support. Moreover, a portion of the fee increases went directly to students in the form of grants rather than to instruction and other functions supported by state allocations. UC and CSU both withhold a substantial share of the tuition increases to provide increased financial aid for low- and moderate-income students. Because UC and CSU enroll large numbers of these students relative to other public research universities in the country, UC's net tuition (defined as tuition not covered by grants) is still lower than that of many other state universities. Thus, the net revenue from the fee increases is lower than the gross revenue generated by the total fee increase.

Unlike UC and CSU, community colleges do not control their own fees, which are set by the state. Those fees have been quite low, and many students qualify for waivers that allow them to forgo the fees. Therefore, community colleges rely almost exclusively on state general fund support for their funding. It is worth noting that California's community colleges currently have the lowest fees in the nation: In 2010–11, average tuition and fees for full-time students was \$732, compared to \$1,386 in

Figure 4. UC and CSU have rapidly increased tuition and fees



NOTES: In 2010 nominal dollars, per year, for full-time undergraduate California residents. Includes average of campus-based fees.

New Mexico (the state with the second lowest costs) and a national average of \$2,714.²⁴ Even with an increase in fees to over \$1,000 per year for full-time students in 2011–12, California’s community colleges still had the lowest fees in the nation. Scheduled increases to \$1,380 for full-time students (\$46 per unit) for the 2012–13 academic year will put California’s community colleges at about the same level as those in New Mexico, still relatively low compared to the national average but almost twice what they were just a few years ago.

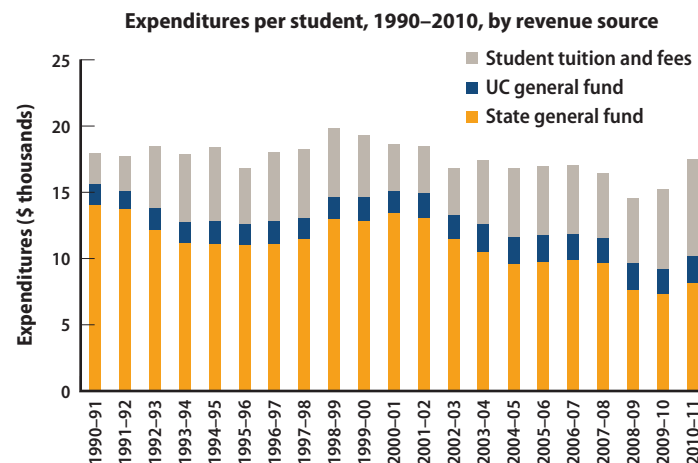
Cuts to Per-Student Spending

Because increases in tuition and fees do not fully offset reductions in state funding, both UC and CSU now spend less per student than they did in the past. At UC, for example, expenditures per student have fallen substantially over the past decade—from about \$20,000 per student in 1998–99 to less than \$15,000 in 2008–09 (in real dollars; see Figure 5). This entire decline is the result of losses in state general fund support.

By 2009–10, for the first time ever, the state was providing less than half of UC education expenditures—private sources are now a larger source of revenue. This shift suggests that UC has become a public assisted rather than a public supported institution.

At CSU, state funds per student have also declined dramatically. Net tuition and fee revenue has risen, but it only partially offsets the loss of state funds. In 1998–99, revenue per student totaled \$13,502 (with 81% from the state and 19% from net tuition and fees); by 2011–12, total revenue

Figure 5. UC’s spending per student has dropped



SOURCES: University of California Office of the President (UCOP) (2011), Table 1.5.1, per-student average expenditures for education, 1990–91 to 2009–10; UC Budget and Capital Resources.

NOTES: All figures are in 2010–11 dollars (using the Consumer Price Index). ARRA funds are included in state support for 2008–09, 2009–10, and 2010–11. State and UC general fund figures for 2011–12 are expected to decline as a result of enrollments that are higher than budgeted. Expenditures for 2010–11 are estimates. UC general fund includes nonresident supplemental tuition, a portion of indirect cost recovery revenue associated with federal contracts and grants, and other funds. Figures are net of institutional financial aid.

Unlike UC, CSU does not refer eligible students to other campuses, meaning that thousands of eligible students have been denied admission.

had fallen to \$11,971 per student (with 54% from the state and 46% from net tuition and fees).²⁵ These declines in revenue have required reductions in expenditures. For example, between fall 2008 and fall 2010, the total CSU workforce declined almost 10 percent (CSU 2012).

Cuts to community colleges have been less dramatic than those at UC or CSU. Per-student revenue from the state general fund fell about 18 percent between 2006 and 2010, from \$4,110 to \$3,370 per student. Because other sources of funds for the community colleges are limited and relatively small amounts, these general fund revenues are by far the most important determinant of trends and levels in community college expenditures per student.

As noted above, community colleges are already operating with relatively low contributions from the state and therefore have arguably less room for making further cuts. In addition, large shares, about 30 percent, of the state's community college students receive waivers that allow them to attend without paying any fees (LAO 2009). As we shall see below, community colleges have to rely on tools other than fee increases to compensate for state budget cuts.

Enrollment Reductions

In the face of decreasing state support, both UC and CSU have adopted policies and practices intentionally designed to reduce enrollment. Community colleges are required to admit any California resident with a high school diploma (or equivalent)—but they, too, have adopted policies that, in effect, reduce enrollment.

UC has reduced its campus enrollment targets, leading many campuses to become more selective. According to UC, these targets led to a decline in enrollment of 7 percent, or 2,600 students per year. More striking, perhaps, is the shift

in admission away from UC's most prestigious campuses. In 1994, half of students who applied to UC were admitted to either UC Berkeley or UCLA; in 2009, this dropped to 27 percent. Applicants who are UC-eligible but are not admitted to their campuses of choice are placed in a "referral pool" and admitted to a less-selective campus, even if they have not applied to it. In recent years, the size of the referral pool has grown dramatically, to over 10,000 students.

Students are much less likely to attend a college that is not their first choice. Indeed, our evaluation of UC yield rates—the number of accepted applicants who ultimately decide to attend a college—shows that these rates have not changed appreciably for individual campuses. Yield rates at UC Berkeley and UCLA are relatively high and exceeded 40 percent in 2009. In contrast, only 6 percent of students admitted to UC Merced actually enrolled there. In other words, students are increasingly being admitted to campuses they do not want to attend. Many students and their families might be willing to pay tuition of \$13,000 per year at Berkeley or UCLA but not at Merced.

CSU campuses have also adopted practices that limit enrollment. One practice is to designate a campus as "impacted," meaning that some students (generally those outside the local admission area) will face elevated eligibility criteria. For example, to gain admission to CSU Northridge, students who applied to the campus from outside the admission area (defined as parts of Los Angeles and Ventura Counties) had to have either a higher GPA (by 0.375 points) or a higher SAT score (by 300 points) than the CSU minimum eligibility requirements. For students applying as first-time freshmen for the 2012 fall semester, 16 of the 23 CSU campuses were impacted, including all of the system's largest campuses, up from only four impacted campuses in 2008–09.²⁶ Moreover, the number of students meeting the eligibility criteria but not offered admission at any CSU campus has grown from fewer than 4,000 applicants (out of 115,000 eligible applicants) in fall 2008 to almost 15,000 applicants (out of 124,000 eligible applicants) in 2010, and the number remained relatively high in fall 2011 (over 12,000 out of a total of 133,000).²⁷ Unlike UC, CSU does not refer eligible students to other campuses,

meaning that thousands of eligible students have been denied admission.²⁸

In contrast to the state's university systems, community colleges do not refuse any students because of their high school grades or course curriculum—therefore, they cannot cut admissions to reduce costs. Instead, community colleges have managed increasing demand and limited funding with a variety of strategies, including increasing class sizes, reducing programs and course offerings, and limiting the period in which students can apply to enroll for courses—all of which, in effect, ration enrollment.²⁹ One indicator of the extent of such rationing is the growing share of students who attend more than one community college: In 1992–93, 5.9 percent of community college students attended more than one college, and by 2009–10, 9.6 percent did so (Baron 2011).³⁰ Presumably, many of these students attend more than one college because they are not able to enroll in some desired courses at a single institution.

Enrollment Trends

Ultimately, the effects of budget cuts to public higher education in California are most problematic for California's future if they lead to less educational attainment in the state. Budget reductions for public higher education could affect potential students in a number of ways, from college preparation to enrollment decisions. In this section, we examine the demand for college and analyze enrollment trends.

Demand for College Is Growing

Californians are well aware of the budget problems facing our higher education institutions: 74 percent of respondents to a November 2010 PPIC Statewide Survey stated that the level of state funding was “not enough,” and 74 percent of parents agreed with the statement that “the price of a college education keeps students who are qualified and motivated to go to college from doing so” (Baldassare et al. 2010). However, even as Californians are concerned about rising college costs, they are also well aware of the advantages of college. In the November 2010 PPIC Statewide

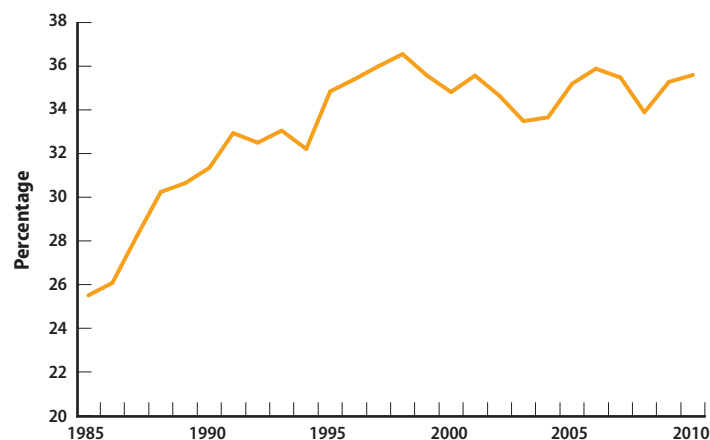
Survey, 70 percent of parents and 80 percent of Latinos agreed with the statement that “a college education is necessary for a person to be successful in today's work world” (Baldassare et al. 2010).

The most significant measure of the demand for college is the number of recent high school graduates. Most adults who attend college do so shortly after graduating from high school. Over the past 25 years, California has seen a rapid increase in the number of high school graduates, which reached an all-time high of 405,000 in 2010.³¹

Of course, not all high school graduates intend to pursue higher education. Thus, a more pointed measure of college demand is the number of high school graduates who have taken a college preparatory curriculum while in high school. In California, UC and CSU identify a set of courses for high school students, known as the “a–g” courses, which students must complete to be eligible for admission. The share of high school graduates who have completed the a–g course requirements increased sharply from the mid-1980s to the mid-1990s and has remained at historically high levels since then (Figure 6).³²

Other measures of college preparation show similar trends. For example, the share of high school graduates completing calculus, a college-level course, almost doubled between 1994 and 2005, reaching more than one in every

Figure 6. The percentage of students completing a–g requirements remains at high levels



SOURCE: Author's calculations based on CPEC online data system and California Department of Education (CDE) Dataquest (for 2008–10).

five high school graduates. California has also experienced sharp increases in the number of students taking and passing advanced placement exams and now has one of the highest rates of advanced placement credits earned in the United States.

Not only are high school graduates improving in their college readiness, they are increasingly likely to apply to and be eligible for UC and CSU, despite tuition increases. The share of California high school graduates eligible for and applying to UC increased from 12.4 percent in 1994 to 16.4 percent in 2009 (Figure 7). Similarly, the share of high school graduates who apply to CSU and meet CSU requirements increased from 19 percent in 1997–98 to 33 percent in 2008–09.

Clearly, over the long run, demand for public college has increased in California. It has increased as the number of high school graduates has grown rapidly and as greater shares of high school graduates are completing a college preparatory curriculum. Moreover, increasing shares of high school graduates are applying to, eligible for, and accepted at UC and CSU.

College Enrollment Rates Are Declining

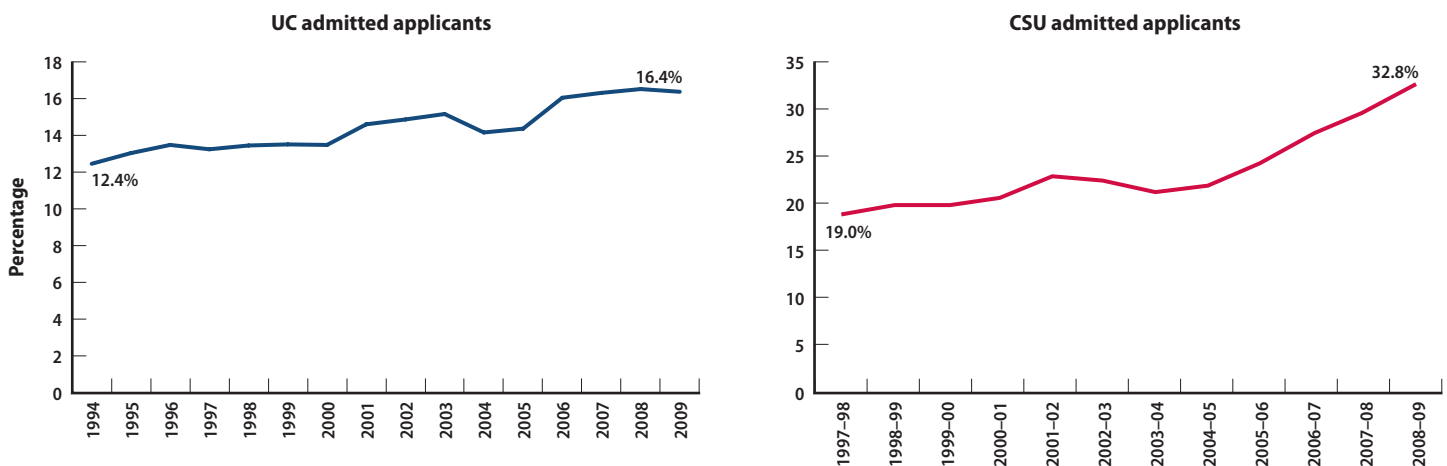
Is the increasing demand for higher education being realized? Are recent high school graduates in California more likely to enroll in college today than in the past?

The unfortunate answer is that the college enrollment rates of recent high school graduates have declined over the past five years. The share of California's top high school graduates enrolling in either UC or CSU has declined from 68 percent in 2008 to 55 percent in 2010, and the share of *all* recent high school graduates enrolling in either UC or CSU has declined from 21.9 percent to 17.8 percent.

Specifically, the share of recent high school graduates enrolling at CSU has declined from about 13 percent to less than 10 percent, and at UC, the decline has been from almost 9 percent to just over 7. The share of a–g high school graduates who enroll at CSU and UC has declined even more, with 22 percent of the state's most qualified high school graduates enrolling in UC in 2010 compared to 27 percent a few years ago; at CSU, the share has declined from 41 percent to 33 percent (Figure 8).

Had the enrollment rates of recent high school graduates remained at 2007 levels, then almost 20,000 additional students would have attended either UC or CSU in 2010 than actually did so: The total number of first-time freshmen would have been about 98,000 instead of the actual number of 79,000. At current completion rates, these enrollment declines translate into a loss of about 12,000 college graduates per year.³³

Figure 7. The share of high school graduates accepted to UC or CSU is growing

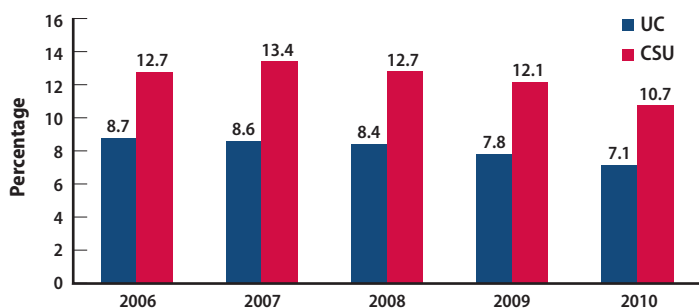


SOURCES: UCOP statfinder and CSU statistical abstract.

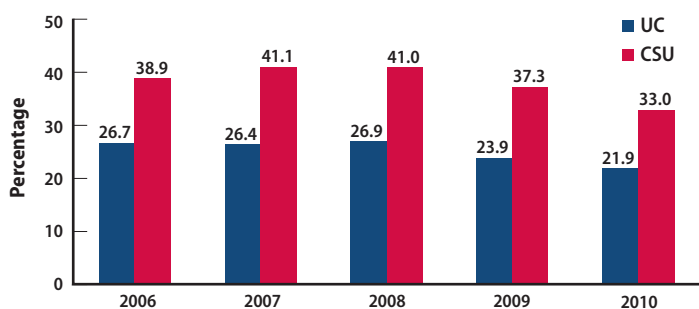
NOTE: All eligible applicants were admitted to UC except in 2004.

Figure 8. High school graduates are less likely to enroll at UC or CSU

Panel A. Share of all recent high school graduates enrolling at UC and CSU



Panel B. Share of recent a-g high school graduates enrolling at UC and CSU



SOURCE: Author's calculations based on CPEC data.

NOTES: Panel A includes both private and public high school graduates. Data on the number of private high school graduates are not available for 2010. We estimated the number of private high school graduates in 2010 by applying the 2009 ratio of private to public high school graduates to the 2010 number of public high school graduates. Less than 10 percent of high school graduates in California graduated from a private school.

The lower enrollment rates at UC and CSU are not the result of a decline in the share of applicants or a lessening of the academic qualifications of applicants. As we have seen, the share of high school graduates who meet UC and CSU requirements *and* who apply to those systems has increased slightly over the past five years. Instead, these recent declines in enrollment rates can be attributed both to direct actions taken by the universities to limit enrollment and to the indirect enrollment consequences of higher tuition. The enrollment rate declines coincide with sharp increases in tuition, suggesting that increased tuition has played a role.³⁴

Enrollment Trends for Underrepresented Groups

Because of the state's diverse population, a significant concern in California is how budget cuts in higher educa-

tion have affected students who are underrepresented in the state's higher education systems. At both UC and CSU, and among transfer students from the community colleges, Asians and whites are overrepresented (relative to their share of all high school graduates), and Latinos and African Americans are underrepresented. To a large extent, these differences reflect different rates of preparation for college; for example, in 2010, 60 percent of Asian high school graduates had completed the a-g curriculum, compared to less than 30 percent of Latino and African American high school graduates. But for every ethnic group in the state, we see notable increases in the number and share of high school graduates who have completed the a-g curriculum.³⁵

The enrollment rates of recent high school graduates to UC and CSU are declining for each of the state's four largest ethnic groups (see the table). The enrollment rates to community colleges appear to have increased slightly

Enrollment rates of recent high school graduates have dropped across racial and ethnic groups

	Latino	White	Asian	African American
Enrollment rates to UC (%)				
2006	4.4	7.6	26.5	4.2
2007	4.5	7.4	26.3	4.8
2008	4.6	7.4	24.8	5.2
2009	4.1	7.0	23.7	4.6
2010	4.0	6.3	23.1	4.3
Enrollment rates to CSU (%)				
2006	10.8	12.3	17.5	14.2
2007	11.4	12.8	18.5	14.9
2008	11.2	12.5	17.2	14.1
2009	11.1	11.6	14.9	11.0
2010	10.2	10.5	14.7	9.4
Enrollment rates to UC or CSU (%)				
2006	15.1	20.0	44.0	18.4
2007	15.9	20.3	44.8	19.7
2008	15.8	19.9	42.0	19.3
2009	15.3	18.6	38.6	15.7
2010	14.2	16.9	37.7	13.7

SOURCE: Author's analysis of CPEC and CDE data.

NOTES: Restricted to California public high school graduates. "Asian" includes Pacific Islanders.

overall but with a larger share of those students attending part-time rather than full-time.³⁶

Overall, the evidence suggests that despite improvements in college readiness, the university enrollment rates of recent high school graduates have declined for each of California's four largest ethnic groups (Latinos, whites, Asians, and African Americans). Declines are sharpest among African Americans and are the lowest among Latinos.³⁷ The relatively small decline in the likelihood that a Latino high school graduate attends either UC or CSU is notable, given the very large and growing number of Latino high school graduates in California.

Where Are Students Going?

From the perspective of the state and its future economic outlook, declines in the number of accepted applicants at UC and CSU who actually enroll would not be so problematic if students were choosing to pursue some other higher education opportunity. Many do, but overall the evidence suggests that some do not.

UC figures show that the primary destination of students who rejected their UC offer in 2010 was a private university (34%), followed by CSU (30%), a California community college (12%), and, finally, an out-of-state public college (8%). However, about one in ten did not appear to enroll in any college.³⁸ Over the past ten years, CSU has grown slightly as a destination, with no significant change in the other destinations. Among eligible applicants to CSU who were not accepted to their chosen campus, it appears that less than 10 percent did not appear to enroll in any college.³⁹

We see some evidence of increases in enrollment rates at community colleges. Our best estimate suggests that the enrollment rates of recent high school graduates have slightly increased (from 34.1% in 2006 to 35.4% in 2009).⁴⁰ But these very slight changes in community college enrollment rates do not make up for the declines in enrollment rates at UC and CSU. That is, even if the community college enrollment rates of recent high school graduates increased 1.3 percent, the enrollment rate decline of 4.2 percent at UC and CSU combined is much larger.⁴¹

We do not see any evidence that recent high school graduates in California are increasingly choosing private institutions in the state.⁴² Our best estimates indicate that the share of recent California high school graduates enrolling in private colleges in the state has remained at 3.5 percent for the past five years.⁴³

However, the number of recent high school graduates leaving California to attend four-year colleges in other states appears to have increased. By 2008, California was losing about 2,500 more students to other states than it was in 2006.⁴⁴ If this trend continued to 2010, the increase in the number of students leaving the state would have been about 5,000. Thus, it seems likely that a small but notable share of the enrollment rate declines observed at UC and CSU between 2007 and 2010 (which amounted to about 20,000 students) can be attributed to an increase in the number of students leaving the state.⁴⁵

The number of recent high school graduates leaving California to attend four-year colleges in other states appears to have increased.

When we consider enrollment decisions in terms of race and ethnicity, we find that whites, Asians, and African Americans are more likely than Latinos to choose out-of-state or private colleges. But even for those groups, only about 3 percent enroll in accredited private institutions.⁴⁶

In sum, California's recent high school graduates are less likely to find a place at UC or CSU than they were a few years ago. These declines coincide with actions taken to limit enrollment as well as with the most dramatic increases in tuition and fees in the history of those institutions—increases that were substantially higher than those of similar public universities in other states. Indeed, enrollment rates have risen in other states even as they have fallen in California. It appears that sizable numbers of high school graduates in California are increasingly less likely to enroll in any four-year college and that a small but notable share of

those who were eligible and even accepted into UC and CSU do not attend college anywhere.

Policy Implications

The benefits of higher education are at or near all-time highs, with wages for workers with a bachelor's degree approaching twice those of a worker with only a high school education. And California's high school students are making great gains in college readiness. This is important, because economic projections suggest that California will need increasing numbers of college graduates to meet the rising demand for highly educated workers.

However, despite these gains, California's high school graduates are now less likely to enroll in a four-year college than they were just a few years ago. As the state has reduced higher education budgets for UC and CSU, these institutions have dramatically increased tuition and fees and taken other measures that have led to a decline in enrollment rates. This decline represents a significant loss of human capital to California—one that the state can ill afford. Between 2007 and 2010, California lost almost 20,000 new students at UC and CSU. Moreover, the total number of students admitted but not enrolling at UC and CSU has risen by tens of thousands over the past ten years.

Discussions of the future of public higher education in California often start with an assumption that the fundamental relationship between the state and its universities has changed, with the state expected to be a less prominent—if not a slowly disappearing—partner. The specter of “privatization” of the state's public universities arises, especially with regard to UC. In the face of reduced state support, key questions emerge about how best to provide quality higher educational opportunities to the most students possible. The following recommendations offer some initial considerations.

Some have characterized the high cost of college as a short-term liquidity crisis. One response is to increase the availability and amount of loans. However, many students resist loans, as they are uncertain about future economic

prospects and worry about debt loads. One option is to offer a deferred tuition plan, in which students pay back their tuition after they graduate, with payments based on a share of their wages.⁴⁷ In this way, students have certainty that their future payments will be based on their ability to pay, offsetting some of the concern about future debt burdens. Uncertainty about the costs of college could also be resolved by guaranteeing a set, four-year tuition schedule for new students, as is done at some other colleges. Lowering the uncertainty about future costs would help students and their families make financial plans for higher education.

Another approach is to prioritize expenditures where they will create the greatest benefits.⁴⁸ Identifying and measuring those benefits is difficult, but one obvious place to start is with the state's Cal Grants program (which provides grants of about \$1 billion to low-income students in California). A complete review of student outcomes at all Cal Grant institutions, including completion, loan default, and indebtedness, should be conducted to ensure that funds are being spent efficiently and to evaluate which institutions should qualify for Cal Grants. CSAC, which administers the Cal Grant program, should determine whether it could better target aid to institutions that most effectively serve low-income and underrepresented students. In accordance with



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California needs to find ways to provide quality higher educational opportunities to as many students as possible.

Senate Bill 70, CSAC has already prohibited some institutions with high student loan default rates from participating in the Cal Grants program. Redirecting Cal Grants to institutions with the best track records of serving students could improve outcomes without generating additional costs.

Along the same lines, the state should consider funding public colleges and universities on the basis of, at least partly, student outcomes. Currently, funding is determined by student enrollment. Providing funding based on course and degree or certificate completion in addition to student enrollment should lead to greater efficiencies and an increased emphasis on improving student outcomes.

Finally, community colleges serve a majority of the state's lower-division undergraduates and do so at a relatively low per-student cost. Policies and practices that improve outcomes for community college students could be especially cost-effective. The California Community College Student Success task force has issued 22 recommendations across eight broad areas that include these and other recommendations, all of which could help improve

student outcomes including completion of career technical certificates, associate degrees, and transfer.

These strategies may help ameliorate some of the difficulties faced by California's public higher education system. But they cannot completely overcome the hardship brought on by the combination of severe budget cuts and increased student demand. Persistent and continued cuts in state support for California's public colleges and universities and the commensurate increases in tuition and fees are not sustainable if the state is to meet future demands for a highly educated workforce. In light of enrollment declines at the state's public universities, policymakers should be especially wary of making further cuts. No one doubts that difficult fiscal decisions lie ahead, with unattractive tradeoffs. Setting state priorities and funding those priorities should be the first step in moving forward. The ultimate goal, of providing more opportunities to attend and complete college, is one that California has adopted in the past with great success. With planning and foresight, Californians today can achieve that same goal. ●

Acknowledgments

The author would like to thank Marsha Hirano-Nakanishi, Kathleen Dettman, Robert Samors, Jill Cannon, and Steven Brint for their helpful and thorough reviews of an earlier draft of this report. Patrick Murphy provided keen and consistent oversight of the entire project. Finally, Richard Greene, Lynette Ubois, and Patricia Bedrosian provided excellent editorial guidance.

Technical Appendices to this report are available on the PPIC website:
www.ppic.org/content/pubs/other/512HJR_appendix.pdf

Notes

¹ These projections are not based on job requirements as identified by the Bureau of Labor Statistics but instead rely on the practices of employers. See Reed (2008) for more detail. National projections are to 2018.

² According to current demographic and education trends, 8.1 million Californians will have bachelor's or graduate degrees by 2025. See Johnson (2010) for more detail.

³ See Johnson (2010) and Johnson and Sengupta (2009) for detailed analyses and discussions of how California could close the gap.

⁴ Community college fees have increased to \$36 per unit from \$26 per unit beginning with the 2011–12 academic year. Fees are currently scheduled to increase again to \$46 per unit beginning in the summer 2012 term.

⁵ In future work we will examine how budget cuts have affected completion and transfer from community colleges to four-year universities.

⁶ In 2001–02, general fund expenditures on higher education totaled \$13.3 billion, compared to \$11.7 billion in 2010–11. Unless otherwise noted, all dollar figures are adjusted for inflation. See Technical Appendix A.

⁷ In real dollars.

⁸ This threshold was crossed for the first time in 2004–05. In 2003–04, general fund expenditures were about equal between public universities and corrections. Rapid increases in corrections and rehabilitation budgets and declines in higher education mean that the state now spends about \$1.65 on corrections for every dollar it spends on UC and CSU combined (CPEC 2010).

⁹ See California Department of Corrections year-end data and CPEC (2010).

¹⁰ For example, the California Postsecondary Education Commission was eliminated from the state budget in 2011. The Legislative Analyst's Office (LAO) notes that the state currently has no statewide higher education coordinating body (Taylor 2012).

¹¹ For example, California is one of only a few states that require a two-thirds legislative majority to increase taxes.

¹² In practice, the Proposition 98 guarantee can be suspended or deferred.

¹³ Another \$1.1 billion was spent on the California Student Aid Commission (CSAC), whose primary expenditure is on higher education grants to students (Cal Grants). Compared to the early 2000s, community colleges received substantially more general fund allocations in 2010–11 (from less than \$3 billion per year to almost \$4 billion, not adjusted for inflation) whereas CSU received about the same amount (about \$2.5 billion) and UC received less (from about \$3.2 billion to just less than \$3.0 billion) according to CPEC (2010).

¹⁴ Based on full-time-equivalent undergraduate students as reported by CPEC (2010).

¹⁵ Indeed, despite recommendations by the LAO (2009), legislators have been reticent to increase fees paid by community college students.

¹⁶ These per-student funding differences partly reflect the different missions and levels of education of these institutions, which translate into different cost structures. UC serves as the state's major doctoral granting research university, CSU primarily provides undergraduate education along with some professional graduate programs, and community colleges offer lower division academic courses as well as nonacademic courses, including career technical education, basic skills, and enrichment classes.

¹⁷ A portion of the tuition increases were reserved for grants. A substantial share of UC and CSU students are from low- and moderate-income families, and are, therefore, eligible for grants.

¹⁸ Of course, UC and CSU must take into account any political—and potentially fiscal—reactions to tuition increases by the legislature and the governor.

¹⁹ In nominal dollars.

²⁰ Based on the author's analysis of data from the Integrated Postsecondary Education Data System (IPEDS). The comparison is restricted to large public research universities (enrollment of at least 10,000 students) with a Carnegie classification of "Master's colleges and universities (larger programs)." Nationally, 91 colleges meet these criteria, including 14 CSU campuses. The most recent year available for comparisons across the nation was 2010–11. See Technical Appendix B.

²¹ Based on system-wide tuition.

²² Based on the author's analysis of IPEDS data. The comparison is restricted to large public research universities (at least 10,000 students), with a Carnegie classification of "very high research activity." In 2010–11, 71 universities across the nation, including all the UC campuses except Merced, met this classification. Only seven of those universities—Pennsylvania State University (main campus), University of Pittsburgh, Rutgers University, University of Illinois, University of Minnesota (Twin Cities campus), University of Massachusetts Amherst, and University of Michigan—exceeded the UC average. Colleges with substantially lower tuition and fees include University of Virginia, University of Texas, University of Wisconsin, and University of Washington.

²³ UC developed a tentative plan that would have raised tuition above \$20,000 by 2015–16, depending on the level of state support (T. Chea, "UC Tuition Could Nearly Double Under Budget Plan," Associated Press, September 15, 2011). However, this plan was not sent to the regents and so is not currently being considered.

²⁴ Author's calculations based on IPEDS data for public two-year colleges. Data for comparison institutions were not available beyond 2010–11.

²⁵ In 2011 constant dollars, as reported by CSU (2012).

²⁶ The 16 impacted campuses enrolled 87 percent of all CSU first-time freshmen in 2010. The CSU Chancellor's Office provides details on impacted campuses and majors at www.calstate.edu/pa/News/2011/Release/fall2012.shtml. For details on impactation at CSU Northridge, see www.csun.edu/anr/impaction.html. Information on the number of impacted campuses in 2008–09 was provided by Marsha Hirano-Nakanishi of the CSU Chancellor's Office.

²⁷ The number of eligible but not admitted students is based on a special run of CSU admissions data from the Academic Research Office of the CSU Chancellor's Office.

²⁸ CSU is working to develop a process that will admit all eligible students to at least one CSU campus.

²⁹ According to the LAO (2011), community colleges report that "many students" are not able to enroll in classes they need; further research is necessary to gauge the extent of the restrictions and their effect on student enrollment and completion.

³⁰ The percentage reflects the share of community college students who are enrolled in more than one college at the same time.

³¹ Projections by the California Department of Finance suggest that the number of high school graduates will remain high but

decline slightly from the 2010 peak, falling gradually to 380,000 in 2017 before increasing again to 389,000 in 2021.

³² It is possible that the share of high school graduates completing the a–g requirements would have continued to increase were it not for the rapid increases in tuition that began around 2000.

³³ The estimate of first-time freshmen enrollment numbers refers to 2010 only. The number of graduates is based on six-year graduation rates at UC and CSU.

³⁴ Students and their families are not especially sensitive to increases in tuition, but higher costs do affect enrollment decisions. Recent research examining trends in enrollment and tuition at public higher education institutions across the nation suggests that a 10 percent increase in tuition and fees will lead to a decline in total enrollment of 1.1 percent and a decline in first-time freshmen enrollment of 1.6 percent (Hemelt and Marcotte 2008). That research also suggests that students are more sensitive to tuition increases than they are to increases in aid. In other words, the positive effects of increases in grants do not seem to fully offset the negative effects of increases in tuition. Moreover, selective public research universities, with their higher tuitions and with applicants who have other options, seem most vulnerable to enrollment declines. It is important to note that increases in applications can occur as high school graduating classes increase, as was the case in California up to 2010, and as the number of college applications per high school graduate increases. Our results are generally consistent with the elasticities observed in the literature. Specifically, we observe a 43 percent increase in tuition and fees at UC (50% in nominal terms) and a 17 percent decline in the enrollment rates of recent high school graduates between 2007 and 2010; at CSU, tuition and fees increased 46 percent (53% in nominal terms), whereas enrollment rates declined 20 percent. These implied elasticities are higher than those identified by Hemelt and Marcotte (2008) but are similar to the higher elasticities in some previous research. The decline in enrollment rates at UC and CSU reflects student responses to more than just the price increases. A real or perceived reduction in quality, including larger class sizes and reduced student services, as well as administrative actions taken by the universities—such as redirecting more students to less preferred campuses—would also have affected enrollment.

³⁵ See Technical Appendix D for a–g course data.

³⁶ See Technical Appendix E for a discussion of community college enrollment rates.

³⁷ The data show that relatively few California high school graduates opt for out-of-state and private colleges. Whites, Asians, and African Americans are more likely to do so than Latinos, but only about 3 percent enroll in accredited private institutions. (These assumptions are based on our analysis of data from CPEC and CDE. Enrollment rates are restricted to California public high school graduates and include only schools accredited by the Western Association of Schools and Colleges [WASC].)

³⁸ The unadjusted estimate is 16 percent, but this is probably overstated because of the difficulty of matching students. Assuming a match rate of 95 percent, a more plausible figure would be about 11 percent of admitted applicants not enrolling in any U.S. college. These University of California Office of the President estimates are based on National Clearinghouse data on individuals enrolling in college in the United States.

³⁹ Based on data provided by Marsha Hirano-Nakanishi of the CSU Chancellor's Office. If we assume a 95 percent match rate, then the estimate would be only 5 percent.

⁴⁰ According to CPEC data, the share of California high school graduates (ages 19 and under) enrolling in community colleges declined from 30.6 percent in 2006 to 28.3 percent in 2010. However, enrollment data are missing for quite a few colleges. Our best estimate adjusts for missing data by linearly interpolating between known enrollment values.

⁴¹ The 4.2 percent decline in enrollment rates is calculated as the difference between the 22 percent share of recent high school graduates enrolling in UC or CSU in 2007 and the 18 percent share in 2010.

⁴² California's selective private universities have not appreciably enlarged their freshmen classes despite high numbers of applications.

⁴³ Based on our adjustments of CPEC data. Unadjusted data show even fewer high school graduates choosing private colleges and a downward trend. We adjusted the data for missing values. For institutions with missing values for enrollment of recent high school graduates, we interpolated between known values. Analyses were conducted using both CPEC and IPEDS data, and trends were similar between the two data sources.

⁴⁴ Data on student migration are available only every other year.

⁴⁵ It is not possible to determine what share of these students had been admitted at UC or CSU.

⁴⁶ Based on our analysis of CPEC and CDE data. Enrollment rates are restricted to California public high school graduates and include WASC accredited institutions only.

⁴⁷ One recent proposal by UC Riverside students would require no upfront tuition; instead, students would agree to pay the university 5 percent of their income for 20 years after graduation.

⁴⁸ In California, identifying costs and benefits is especially difficult because of the lack of an integrated longitudinal student data system linking student records from K-12 to college. Ideally, such a data system would include employment and wage data as well as student records.

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Library of Congress Cataloging-in-Publication Data are available for this publication.

ISBN 978-1-58213-149-8



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