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PUBLIC POLICY
INSTITUTE OF CALIFORNIA

SEPTEMBER 2018

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with research support from
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*Supported with funding
from the Sutton Family Fund*

California's Tuition Policy for Higher Education

The Impact of Tuition Increases on Affordability, Access, and Quality



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SUMMARY

CONTENTS

Introduction	5
Recessions Changed California’s Approach to Tuition	6
Tuition: Costs for Students and Revenue for Institutions	8
Examining the Impact of Tuition Increases	10
Policy Considerations	19
References	22
About the Authors	24
Acknowledgments	24

Technical appendices to this report are available on the PPIC website.

California has a long tradition of very low tuition for students enrolled in public higher education. The state broke with that policy in the 2000s, when recessions resulted in significant cuts to state funding for public colleges and universities—the University of California (UC), California State University (CSU), and California’s community colleges. In response, tuition increased, especially at UC and CSU. To mitigate the impact of higher tuition, the state and public colleges spent significantly more on financial aid to help low- and moderate-income students attend college.

Our review shows the state was mostly able to balance its goals of affordability, access, and quality while dealing with the financial crises of the past recessions. However, it also suggests room for improvement.

- **Higher tuition made the public four-year universities less affordable for some.** Overall, UC is slightly more expensive than comparable institutions in other states, while CSU is less expensive and California’s community colleges are the least expensive in the nation. Increases in tuition coincided with higher costs for some students, but financial aid generally offset tuition increases for low-income students. The most recent set of tuition increases resulted in a greater share of students taking out loans. From 2008 to 2011, the share of first-time students taking out college loans increased at UC (from 40% to 48%) and CSU (30% to 38%). The rate has since dropped to pre-recession levels at UC, but it remains elevated at CSU.
- **Higher tuition and less state funding coincided with decreases in access at public institutions.** Tuition increases coincided with lower enrollments at the two public universities: the share of high school graduates enrolling at CSU was 13 percent in 2008 and hit a low of about 11 percent in 2010, before returning to pre-recession levels in 2011; at UC, the enrollment rate fell from nearly 9 percent to just under 8 percent after 2008 and has since stayed steady. During tough budgetary times, community colleges saw large drops in enrollment among graduating high school seniors, and those lower levels of access have lasted well into the economic recovery.
- **CSU and community colleges saw declines in faculty ratios and pay.** The available data on quality are quite limited, but they suggest significant reductions to key measures of faculty investment—faculty-to-student ratios and faculty pay—at CSU and the community colleges. For example, when factoring in inflation, average faculty pay fell 17 percent at CSU and 13 percent at the community colleges from 2002 to 2015, while average salaries at UC increased almost 8 percent. However, it is important to note that these two indirect measures of quality are not enough to draw broad conclusions about how institutional quality changes during periods of reduced state funding and rapid tuition increases.

Looking forward, the state should consider developing a long-term tuition policy: shifting away from the yearly, budget-driven process would provide stakeholders with more certainty and prevent large, unpredictable increases during recessions. In addition, if the state chooses to develop a more deliberate tuition policy, it will be important to take into account that tuition comprises only a part of students' rising college costs and that campuses may respond differently to tuition increases. A more comprehensive assessment of how recent changes to tuition, state funding, and financial aid have affected different student groups and institutions would help shed light on these issues but would also require more detailed data than are currently available.

Tuition policy has changed significantly in California. While some call for the return to the days of very low or no tuition, eliminating tuition is now very expensive and would cost about \$4 billion a year. However, even without taking such a dramatic step, California policymakers can still focus on improving current practice to ensure the state's objectives for affordability, access, and quality in public higher education are met.

Introduction

College in California costs more than it ever has before. A majority of Californians think that affordability is a big problem in higher education, and more than half believe affordability is the most important problem facing the state’s public colleges and universities, according to a recent PPIC survey (Baldassare, Bonner, and Lopes 2017). These views may be partly the result of dramatic tuition increases that took place during the Great Recession. Today, yearly tuition and fees for in-state students total about \$14,000 at the University of California (UC) and \$7,000 at California State University (CSU). However, tuition at the California Community Colleges (CCC) is only about \$1,100 annually.

The state and its public higher education systems had to make difficult choices about how to pay for higher education programs during recent recessions—and these choices were likely made tougher because California does not have a policy for increasing tuition during difficult budgetary times. Tuition decisions for public higher education are largely driven by annual budget decisions made by the state legislature, which is responsible for determining community college tuition, and the governing boards of the University of California and California State University.¹ When setting higher education spending levels, the state must factor in fiscal demands in health, welfare, criminal justice, and other areas.

Even before the Great Recession, this year-by-year decision-making process resulted in tuition increases during budgetary shortfalls. Though California lacks an official tuition policy, recent history shows that the state has an implicit approach to managing tuition levels that relies on differential pricing of its three public systems, a robust financial aid system, and the transfer pathway from community colleges to four-year institutions.

Is tuition too high? Over the past two decades, UC and CSU have become increasingly reliant on tuition revenue, and college costs for students have risen significantly. The size of these changes is large enough that they may have created significant problems. For the state, tuition entails difficult trade-offs. Higher levels of tuition provide revenue to increase enrollment and improve the quality of educational programs and services, but it can come at the cost of affordability for students. Keeping tuition low helps make college more affordable, but less tuition revenue could lead to reduced access or quality.

Affordability, access, and quality are foundational goals of the state’s Master Plan for Higher Education (1960), and tuition plays an important role in the extent to which the state realizes its aspirations in these key areas:

- Affordability ensures that students can pay for their postsecondary education. Tuition affects the cost of attending college, as do room and board, books, and other costs.² Financial aid also plays a critical role in affordability.
- Access is the ability of eligible students to find a spot in a higher education institution. Tuition affects access because it supplies revenue to the systems, which in turn allows institutions to serve more students than they could on state funding alone.
- Quality represents the institutional attributes that promote student success in college and after graduation. Tuition helps pay for faculty, programs, and services that may increase educational quality. However, quality is difficult to measure, and our ability to gauge this important dimension is limited as a result.

¹ The governing board for UC is the Board of Regents; for CSU, it is the Board of Trustees. The governing boards usually set tuition in the spring after the governor presents the revised budget. They are then able to estimate how much money their system will be appropriated and consider other factors when deciding whether to increase tuition.

² The Master Plan called for free tuition at public higher education institutions.

This report begins by documenting how California’s tuition levels changed during the two recessions of the 2000s. Next, we consider the trade-offs involved in balancing affordability, access, and quality in higher education with limited financial resources, and how tuition levels can affect these priorities. We then examine data on whether and how tuition increases appear to have affected students and higher education institutions in these three areas. Finally, we describe how the state can improve upon its current approach to determining tuition for public higher education.

Recessions Changed California’s Approach to Tuition

California has a long history of very low student costs for the state’s public colleges and universities. Since the 1990s, however, California has seen periods of dramatic increases in tuition and fees, followed by periods of no or minimal increases. Large tuition increases took place during recessions, when state revenues were not sufficient to meet expected expenses. In response, the state reduced funding to most areas of the budget, including higher education (College Futures Foundation 2017). The higher education systems looked elsewhere to replace the revenue lost from the state. This resulted in charging students higher tuition, but it also included other strategies, such as deferring maintenance, hiring freezes, and enrolling more out-of-state students, who pay more in tuition than in-state students.³

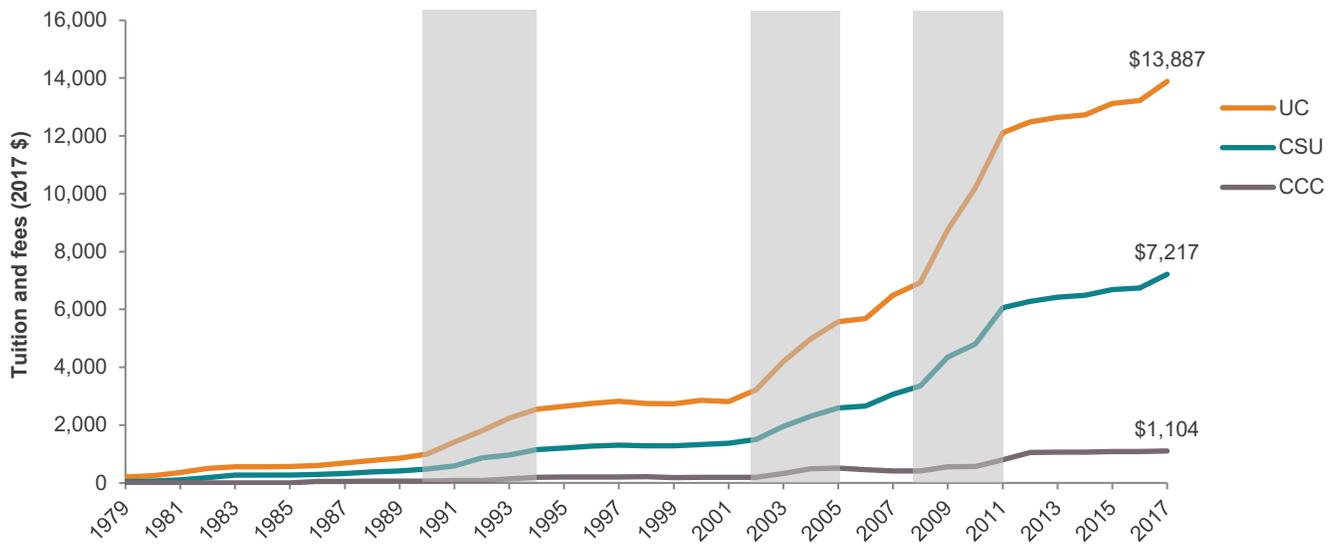
In addition to increasing tuition, campuses also increased their fees over this time. These fees tend to go toward non-instructional services and contribute to the increasing costs of attending college. Today, campus-based and systemwide fees add anywhere from 15 to 25 percent to tuition at UC and from 15 to 65 percent at CSU, depending on the campus. Total fees assessed in 2017–18 ranged from \$1,759 (UCLA) to \$2,949 (UC Santa Barbara) in the UC system and from \$843 (Fresno State) to \$3,718 (Cal Poly San Luis Obispo) at CSU campuses. Financial aid generally does not cover campus-specific fees, which can be substantial. The community colleges also have fees, but they tend to be much smaller, from zero to a high of \$264, depending on the campus.

Figure 1 illustrates the state’s history of tuition and fees. Tuition tends to increase significantly just after recessions begin. While tuition increased during the recession of the early 1990s, tuition rose even more sharply during the two recessions of the 2000s. In 1999–2000, for instance, tuition and average fees at UC and CSU increased over 300 percent, even after adjusting for inflation. Tuition at California’s community colleges also doubled during that same time span, though it remains quite low. Since 2011, tuition and fees have continued to inch upward, especially at UC and CSU. In 2017–18, UC charged \$13,887 a year, CSU cost \$7,217, and community college tuition totaled \$1,104.

³ Out-of-state students currently pay an additional \$28,000 at UC, an additional \$12,000 at CSU, and about \$8,000 to \$9,000 extra at California’s community colleges (depending on campus and units taken) on top of state tuition and fees. Unless otherwise noted, this report focuses on in-state tuition.

FIGURE 1

Tuition and fees have risen dramatically at UC and CSU over the past three decades



SOURCE: Integrated Postsecondary Education Data System (IPEDS).

NOTE: The chart shows tuition and average fees for each system, adjusted for inflation (2017 dollars). Tuition and fees represent the listed tuition plus mandatory and average campus-specific fees in each system. Shaded areas highlight the most recent time periods when tuition increased rapidly at UC and CSU.

Why Have Tuition At All?

Despite California's long history of low or minimal tuition for higher education, the reliance on a combination of state funding and tuition across public institutions in the United States reflects the fact that both the state and individuals benefit from higher education.

For the state, having more college-educated workers generally leads to more tax revenue, a more engaged populace, and less reliance on social services (Ma, Pender, and Welch 2016). Higher education can spur economic development as well (Huffman and Quigley 2002). Californians recognize these broader benefits, with 80 percent saying that California's higher education system is very important to the state's quality of life and economic vitality (Baldassare, Bonner, and Lopes 2017).

The individual benefits from a college degree certainly suggest that students should pay some share of the costs. Individuals with a college degree have higher wages, better employment outcomes, and even superior health outcomes (Bloom, Hartley, and Rosovsky 2006). For example, workers with a bachelor's degree earn about 70 percent more, on average, than workers with a high school diploma, and those benefits have grown over time (Johnson, Cuellar Mejia, and Bohn 2015).

While these factors do not necessarily shed light on how much students should pay in tuition versus how much state funding should be provided, this research does suggest that both students and the state have a stake in paying for higher education.

Tuition: Costs for Students and Revenue for Institutions

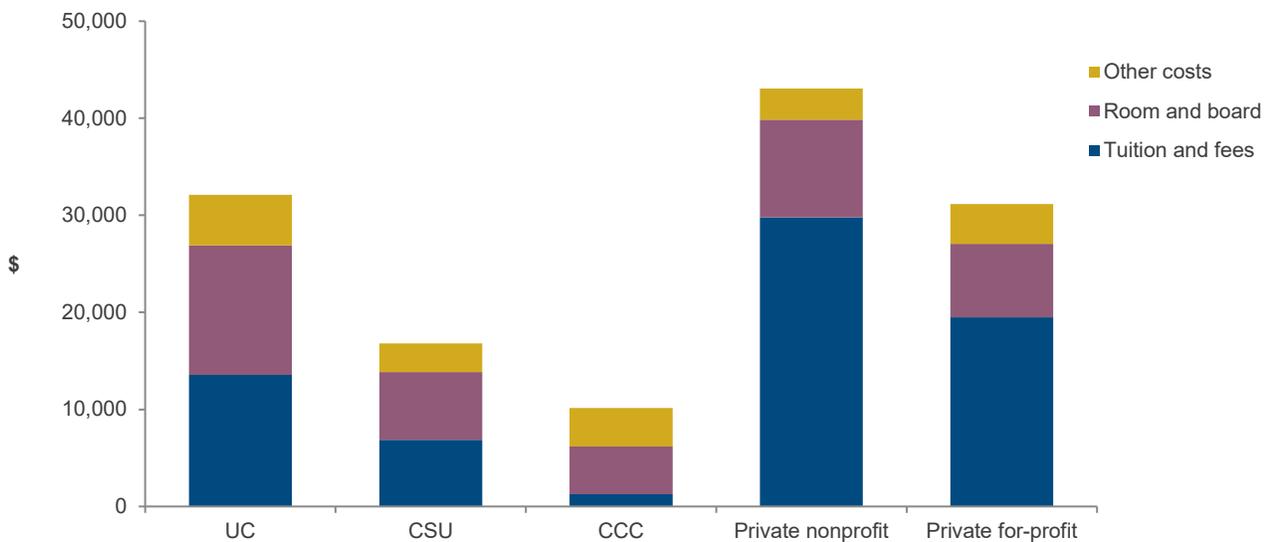
After two recessions in the 2000s, tuition now represents a significant cost for students and their families and a major source of revenue for the University of California and California State University. But despite major increases, tuition at California’s public universities currently makes up only about half of the cost of going to college—other costs, such as room and board, have been rising as well. Tuition has also become a much larger funding source for the universities. In 2001, state appropriations accounted for a much greater share of institutional revenues than tuition did. Now, tuition revenue at CSU and UC is about equal to the amount these systems receive in state funding.

Tuition Represents Less Than Half of the Cost of College for Students

While tuition has risen across all segments of higher education, so have other costs associated with attending college. Room and board, transportation, books, and other associated costs constitute over half of the total cost of attending college (Figure 2). At UC, the total cost of attendance averages just over \$32,000, with tuition and fees accounting for 42 percent of that total. At CSU, the average total cost of attendance (\$14,840) is less than half of UC’s—and tuition and fees represent only a third of costs. However, at California’s community colleges, tuition accounts for only 12 percent of the average \$10,150 cost of attending. The vast majority of costs for attending a community college are unrelated to tuition.

FIGURE 2

Tuition makes up varying shares of total college costs at different institutions



SOURCE: IPEDS.

NOTE: Data are from 2017. Costs are calculated as one year of education. Community college tuition is calculated as taking a full-time load of 12 units per quarter. Average room and board and other costs are the average cost of living for first-time, full-time freshmen weighted by the proportion of students living on campus, off campus, or with family. Other costs include books, transportation, and other associated costs.

Increases in tuition and fees have significantly raised the cost of attending a public four-year university for many students in California. But the state’s higher education system has several features that help students who may be unable to afford the higher tuition charged at UC or CSU.⁴ First, the state offers significant financial aid programs that assist students from low- and moderate-income families with the cost of tuition. Most state aid (e.g., the Cal Grant Program) is aimed at tuition, but the state does cover some non-tuition-related costs for certain students. In addition, both UC and CSU dedicate about 30 percent of revenues generated from tuition to increase financial aid for qualifying students, usually to pay for tuition. Altogether, federal, state, and institutional programs eliminate tuition for about half of all students at the two university systems (Cook 2017). Similarly, most community college students are eligible for the California College Promise Grant, which waives their tuition. This means that most students pay much less than the total costs shown in Figure 2.

Second, the structure of California’s three public higher education systems—UC, CSU, and the community colleges—gives students options about where they begin college and the costs they face. As Figure 2 shows, both the community college system and CSU are much less expensive than UC to attend, because tuition and fees are lower and because students are more likely to live at home, where living costs are lower.⁵ While community colleges offer students the opportunity to earn certificates or associate degrees, or receive training, many community college students plan to transfer to a four-year institution and attain a bachelor’s degree. Each year, transfer students account for close to half of all new CSU students and about a third of new UC students. The community college pathway to a four-year degree represents a lower-cost alternative to starting at a four-year university.

Tuition Is a Growing Source of Institutional Revenue

Figure 3 shows inflation-adjusted revenues from state funding and tuition at California’s colleges and universities in 2001 and 2015.⁶ In 2001, state appropriations to UC and CSU were over twice the revenue generated by tuition. Reductions in state funding resulted in increased tuition in an effort to make up for the lost revenue. As a consequence, now students generate as much revenue for the two public universities as the state provides. In contrast, state funding still accounts for significantly more institutional revenue than tuition does at the community colleges, though the share of tuition revenue has grown slightly.

Figure 3 also suggests that the combined amount of revenue from tuition and state funding has shrunk (when considering inflation) since 2001 at the two university systems. At UC, the combination of tuition revenue and state appropriations effectively fell 8 percent, while at CSU the decline was about 15 percent. It is difficult to imagine that such a significant drop in revenue at CSU would not affect its ability to maintain access and quality. The combined total of tuition and state funding increased slightly for community colleges over the same time period.

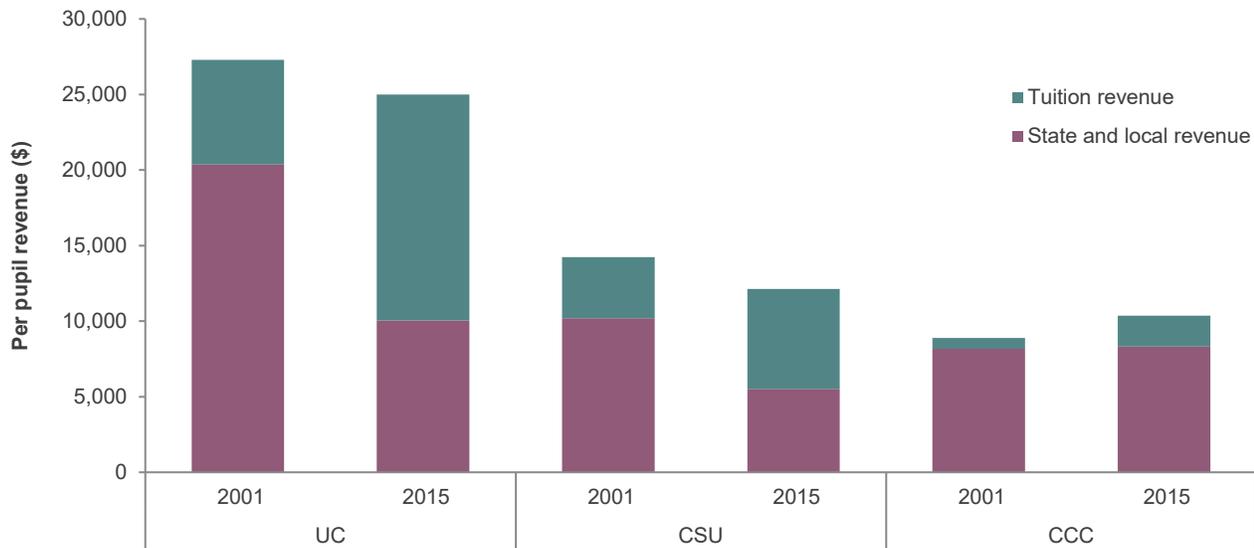
⁴ See [Technical Appendix A](#) for a summary of financial aid programs.

⁵ Both CSU and community colleges aim to offer classes that are within commuting distance of home for most high school graduates.

⁶ Please note that this report uses a variety of data sources, and not all data are available for the same time periods. Throughout, we provide data going as far back as 2000, where available.

FIGURE 3

The importance of tuition to institutions has grown at UC and CSU



SOURCE: Delta Cost Project.

NOTE: Adjusted for inflation (2015 dollars) using the Consumer Price Index. Aggregated campus data reported to IPEDS. UC includes only the nine undergraduate campuses. Tuition revenue is the amount of money institutions take in from students after institutional grant aid is provided. State and local revenue are the revenues received by the institution through acts of a state legislative body, except grants, contracts and capital appropriations, and the revenues from appropriations by a governmental entity below the state level. State and local appropriations have increased since 2015, especially at the community colleges.

Examining the Impact of Tuition Increases

Tuition increases have consequences for the students who pay tuition and the institutions that rely on tuition for an increasing share of their revenues. In this section, we investigate changes in affordability, access, and quality during the past two recessions—and how periods of rapid tuition increases may have affected these three attributes. We begin with an overview of why campuses might respond differently to tuition increases. Then, we examine available data on the impact of higher tuition on affordability, access, and quality. These data will not answer the question of whether tuition is currently set at the “right” levels, but they will help us better understand how the changes of the past decade have affected the state’s higher education priorities.

Systems and Campuses Respond Differently to Tuition Increases

The effects of higher tuition on students and institutions can be quite different depending primarily on student demand. Research shows that higher-achieving students are willing to move away from home in order to attend the most-selective college or university possible (Sapra 2014). This focus on quality—and the expected returns to students from attending higher-quality schools—creates competition among students applying to the top echelon of colleges and universities.

As a result, the pressures of affordability and quality affect the three public systems in different ways:

- UC campuses often compete in a national market for students who seek high-quality college experiences. In general, these students have more choices about where they go—and they may be less influenced by differences in costs. Many of the UC campuses are in high demand among students from other states,

despite the much higher cost that they pay compared to in-state students. As a result, UC campuses may be a relative bargain at in-state prices.

- CSU campuses face some intra-state competition based on quality, but they enroll relatively few out-of-state students compared to UC. CSU campuses also educate students who are more likely to be sensitive to college costs. CSU's mission includes serving students in the region, who in some cases may be less prepared for college and less certain of its payoffs. In this environment, low cost represents a critical factor for prospective students.
- Community college campuses represent a very low-cost option to meet a wide variety of student goals and needs, including transferring to a four-year institution and obtaining certificates or credentials. Even more than at CSU, community colleges are designed to serve the local community, including older working adults. Yet some policymakers are concerned that even very low tuition may discourage some potential students from attending.⁷

As can be seen in the brief descriptions above, the three systems have vastly different missions and serve different student groups—it makes sense that they would approach questions of affordability, access, and quality in different ways. Moreover, campuses within the UC and CSU systems are not homogeneous. For example, the reputation of individual campuses—and student demand for these campuses—may affect how they respond to tuition increases. To illustrate possible differences between campuses, where relevant in the analysis below, we breakdown the UC and CSU systems into “more selective” and “less selective” tiers.⁸ The most-selective UC campuses—Berkeley, Los Angeles, and San Diego—consistently attract very high-achieving students. In 2016, the 75th percentile SAT scores in math and critical reading for entering freshmen at these three campuses were each at least 30 points higher than at the remaining six UC campuses. At CSU, there is a smaller, but consistent, gap (at least 10 points) between the five most-selective campuses—Pomona, Long Beach, San Luis Obispo, San Jose, and San Diego—and the remaining CSU campuses.

Affordability

A key concern about the state's reliance on tuition to replace reductions in state funding is the impact on affordability. Californians are concerned about the cost of college and how much students have to borrow to attend college. More than half (56%) of Californians think affordability is a big problem, and a vast majority of Californians (79%) think students need to borrow too much to pay for their college education (Baldassare, Bonner, and Lopes 2017).

We find the large tuition increases imposed during the recent recessions have indeed made attending a public university in California more costly for many students. But the impact on *affordability*—the ability of students to pay for their education—seems relatively modest based on available data. Current tuition levels are similar to those charged by other state public systems. For lower-income students, financial aid makes the total cost of attending public university in California less expensive than for similar students in other states. Still, wealthier students must pay more, and more students are borrowing more money than in the past—though borrowing rates are also lower than those of other institutions in the state and nationwide.

Tuition Increases Had a Modest Impact on Affordability

The recent tuition increases left Californians with three very different tuition levels at the public higher education systems. How do current tuition levels compare to similar institutions nationwide? Just as before the Great Recession, the UC system is more expensive than doctoral-granting public institutions in other states, CSU is

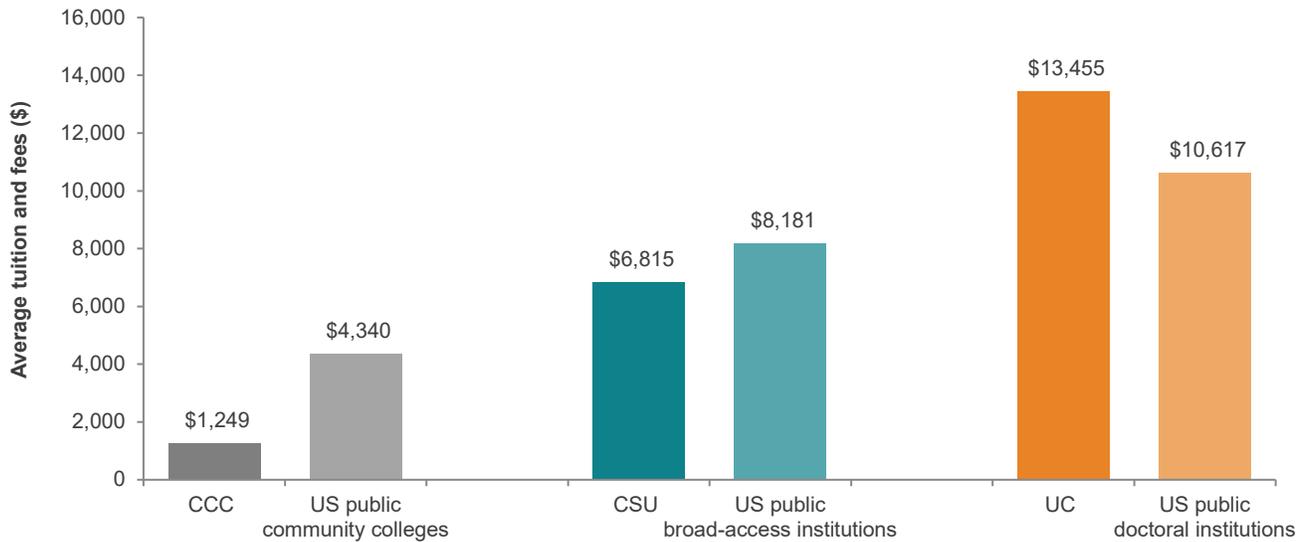
⁷ The state's recently enacted California College Promise program, which could be used to provide free first-year tuition for all first-time community college freshmen, demonstrates policymakers' concern that even very low tuition may be a barrier for some students.

⁸ These tiers are based on our assessment of campus reputations and on the achievement levels of incoming freshmen.

somewhat less expensive compared to similar institutions in other states, and the community college system has the lowest tuition in the nation (Figure 4). Given that most public higher education students are enrolled in a community college or at CSU, California has lower-than-average tuition for most of its college students.

FIGURE 4

California’s community colleges and CSU campuses cost less than comparable institutions in other states



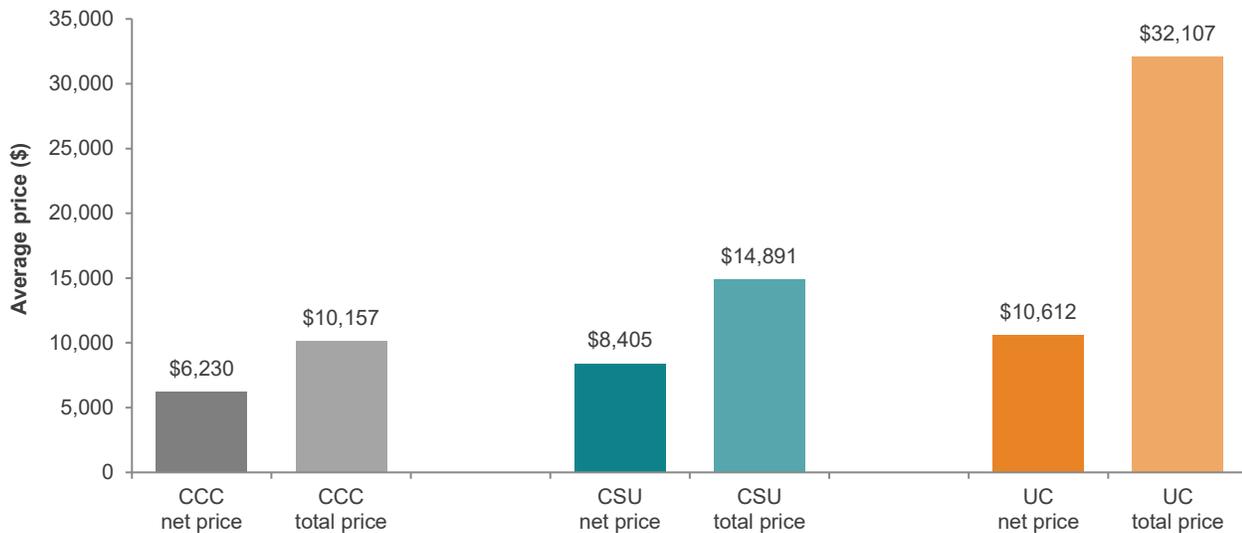
SOURCE: IPEDS.

NOTE: Average tuition and fees in 2015–16. Comparison groups are public institutions that match the Carnegie Classifications for each California public higher education system.

Further, most students from low-income families receive a combination of federal, state, and institutional grants to cover the entire cost of tuition. The net result of the financial aid programs available to California students is that students from families with low incomes generally pay a lower price than students from families with higher incomes. While the total cost of attending a UC—including tuition, books, room and board, and other associated costs—is over \$30,000, lower-income students pay, on average, less than half of that cost (Figure 5). Lower-income students at CSU and the community colleges also pay much less than the total price of college.

FIGURE 5

After financial aid and scholarships, lower-income students pay much less than the total price of college



SOURCE: IPEDS.

NOTE: Data are for 2015–16. Net price is the average total cost of a year of education for students who receive any form of federal financial aid—including federal loans—and whose families earn at or below \$75,000 per year. The net price represents the cost of tuition, room and board, books, fees, and associated costs less the grants and scholarships a student receives.

In fact, even though UC tuition is higher than that of public doctoral universities in other states, state and university financial aid programs mean UC students from low-income families pay a lower net price than similar students elsewhere (see [Technical Appendix B](#)). CSU and community college students with family incomes below \$75,000 also have a lower net cost than similar students at comparison institutions nationwide.

California’s state grants and institutional aid generally keep pace with increases in tuition, so students from lower-income families do not usually feel the impact of tuition increases (Jackson 2014). California’s approach to tuition, therefore, ends up charging wealthier families and students more, while maintaining affordability for most lower-income families and students.⁹

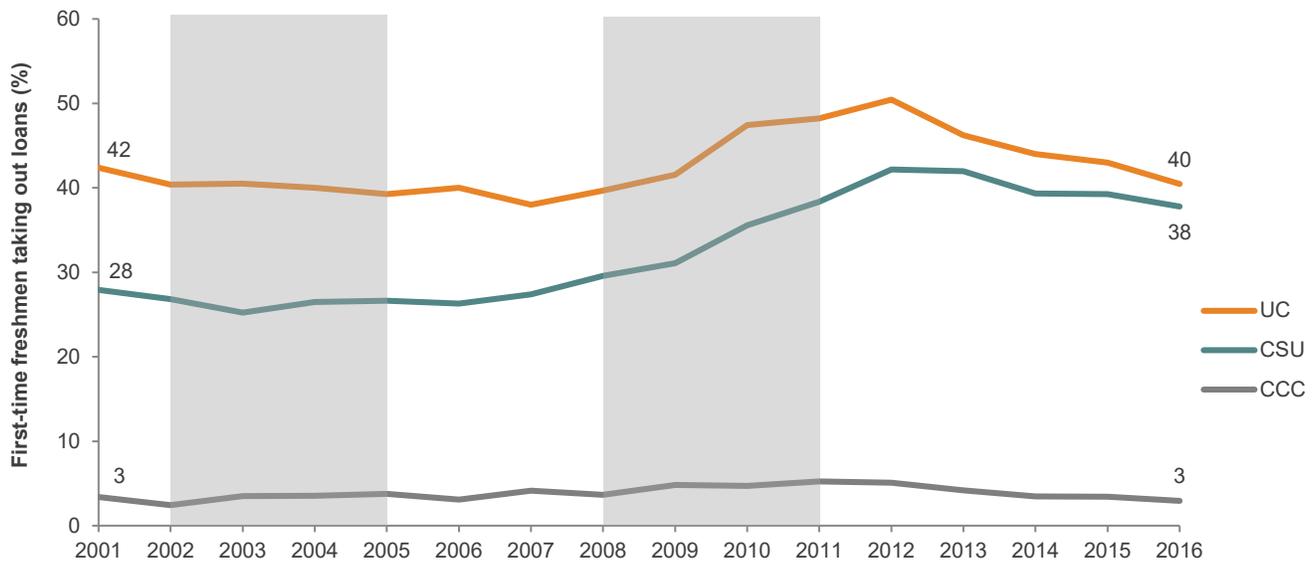
Borrowing Rates Increased But Are Low Compared with Other Institutions

Higher college costs may lead students to borrow more to pay for their education. The share of first-time freshmen taking out loans rose during the most recent tuition increase (Figure 6). From 2008 to 2011, the share of freshmen taking out loans increased by 8 percentage points at CSU (30% to 38%) and UC (40% to 48%). The average size of the loans also increased—from about \$3,800 to \$5,000 (a 31% increase) at CSU and from about \$4,300 to \$5,300 (a 21% increase) at UC. Since 2011, however, the proportion of students borrowing at UC returned to the 40 percent level of the early 2000s, while borrowing rates at CSU remained about 10 percentage points higher than in earlier years. The proportion of community college students that borrows is very low (3% in 2016), but those students borrow almost as much (\$4,900 on average) as CSU students (see [Technical Appendix B](#)).

⁹ Students who are ineligible or do not apply for financial aid also see increases in tuition, regardless of income.

FIGURE 6

More students at UC and CSU took out loans during the most recent recession



SOURCE: IPEDS.

NOTE: Shaded areas highlight years when tuition increased rapidly at UC and CSU.

It is important, however, to put this increase in context. Borrowing did not increase during the 2002–05 downturn, when both tuition increases and economic distress were smaller than in the 2008–11 recession. Also, borrowing during the recent recession could have increased because of reasons unrelated to tuition increases, such as a dip in parental income. And, despite the rise in debt taken on by UC and CSU freshmen, students attending private four-year institutions in the state borrow at much higher rates (about 70% for students at for-profit schools and over 50% for those at nonprofit colleges and universities) and amounts (about \$9,000 at for-profit schools and \$7,500 at nonprofit schools). California’s financial aid system and state appropriations for higher education also keep California’s borrowing levels and loan amounts smaller than average for the nation. Finally, UC and CSU students have low default rates, of 5 percent or less. However, the small share of community college students that borrow are much more likely to default on their loans, with default rates of more than 15 percent.¹⁰

Access

Three-quarters of Californians agree with the statement that the price of college keeps students who are otherwise qualified and motivated to go to college from doing so (Baldassare, Bonner, and Lopes 2017). California’s tuition policy plays a role in students’ ability to access higher education insofar as state investments and student tuition revenues help pay for spots in the system. Access can also be hindered if students think college is unaffordable. In addition, state funding cuts may prevent the universities from expanding to meet the state’s goals for access.

California’s Master Plan sets goals for access: UC admits students in the top 12.5 percent of California’s high school students and CSU draws from the top 33 percent of California’s high school students, while the community colleges are open-access institutions that provide education to students of all achievement levels. We can measure access to California’s universities by how many students they admit and enroll. Student demand

¹⁰ The default rates for UC and CSU students are comparable to those of private nonprofit institutions in the state. The default rates of community college students are comparable to those of private for-profit institutions in the state.

for a four-year degree—in the form of applications to UC and CSU—may also reflect how students perceive their ability to access higher education.

State funding and tuition play a large role in how many students are able to access California’s public postsecondary institutions. The state’s funding cuts and tuition increases appear to have reduced access: growth in applications slowed and the share of enrollments among high school graduates declined during the two recessions. Although these impacts mostly disappeared after tuition stabilized, a smaller proportion of graduates are enrolling at UC compared to prior to the recession.

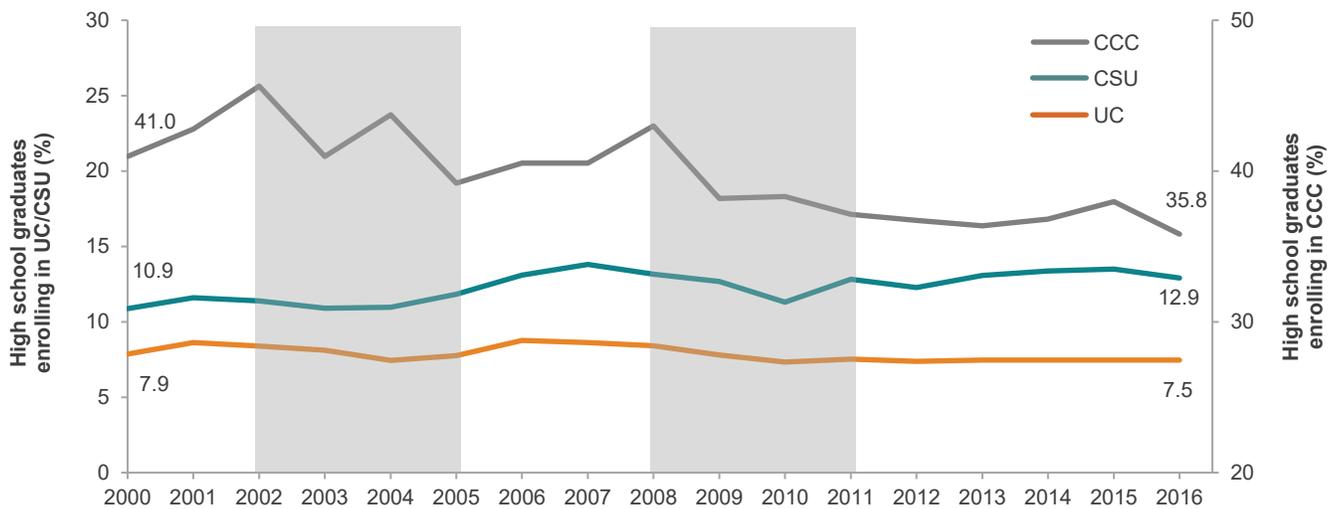
Tuition Increases Coincide with Lower Enrollments

At UC and CSU, in times of fiscal crisis when tuition is on the rise, a smaller share of recent high school graduates are admitted and a smaller share of those graduates enroll. Since 2000, the share of high school graduates enrolling to UC and CSU has fluctuated, with rates falling early on in the two recessionary periods (Figure 7). UC admitted between 13 and 16 percent of high school graduates each year, and enrolled about 8 percent. The UC enrollment rate peaked at 8.8 percent in 2007, falling during the 2008–11 recession to 7.5 percent. That rate has not increased since then. CSU admitted between 20 and 30 percent of high school graduates, enrolling about 11 to 14 percent. CSU’s enrollment rate also fell during the recent recession to a low of 11.3 percent but has mostly recovered in recent years.¹¹

As Figure 7 shows, the percentage of recent graduates enrolling at California’s community colleges also dropped following recessionary periods. Community colleges cannot restrict admission, as almost all high school graduates are eligible. During economic downturns and budget cuts, the community colleges have proportionally little tuition revenue to rely on, and they restrict access by offering fewer courses (Bohn, Reyes, and Johnson 2013).

FIGURE 7

The share of high school graduates enrolling in public institutions generally dropped during times of tuition increases



SOURCE: University of California, California Department of Education, California Community Colleges, IPEDS.

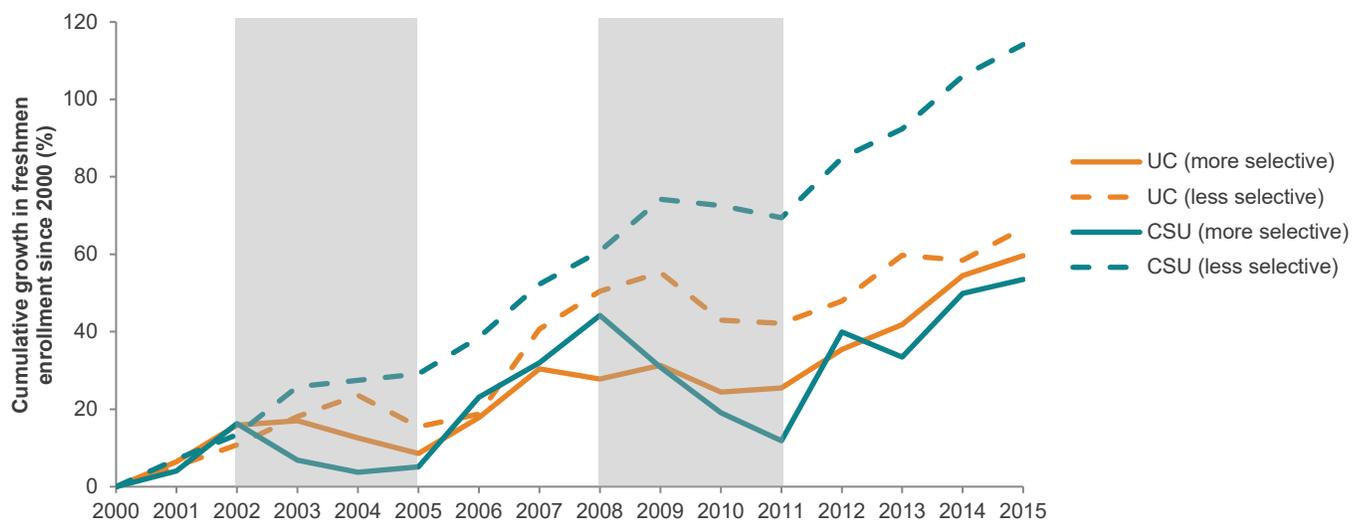
NOTE: Community college enrollment numbers are first-time students who were 19 or younger, excluding special admits. Shaded areas highlight years when tuition increased rapidly at UC and CSU.

¹¹ In part, this trend is influenced by recent increases in the number of graduating high school seniors in California. So even as shares of high school graduates enrolling in UC and CSU have declined or remained steady, total enrollments have risen.

As noted earlier, individual campuses at UC and CSU respond differently during times of financial stress. To highlight different enrollment trends within these systems, Figure 8 displays the growth in first-time freshmen at the two university systems from 2000 to 2015. On average, more-selective institutions within UC and CSU show slower freshmen enrollment growth since 2000, compared to less-selective institutions. At UC, enrollment at the less-selective campuses dropped more sharply than enrollments at the more-selective ones from 2008 to 2011. Whereas at CSU, the more-selective campuses reduced enrollment much more than did the less-selective campuses. The different growth patterns at CSU were likely influenced by the fact that the more-selective institutions have less room to grow and a high proportion of “impacted” programs—specific majors that receive more qualified applicants than can be accommodated. As a result, these factors lead to higher growth rates at less-selective campuses.

FIGURE 8

Campus enrollment growth shows different patterns within the UC and CSU systems



SOURCE: Delta Cost Project.

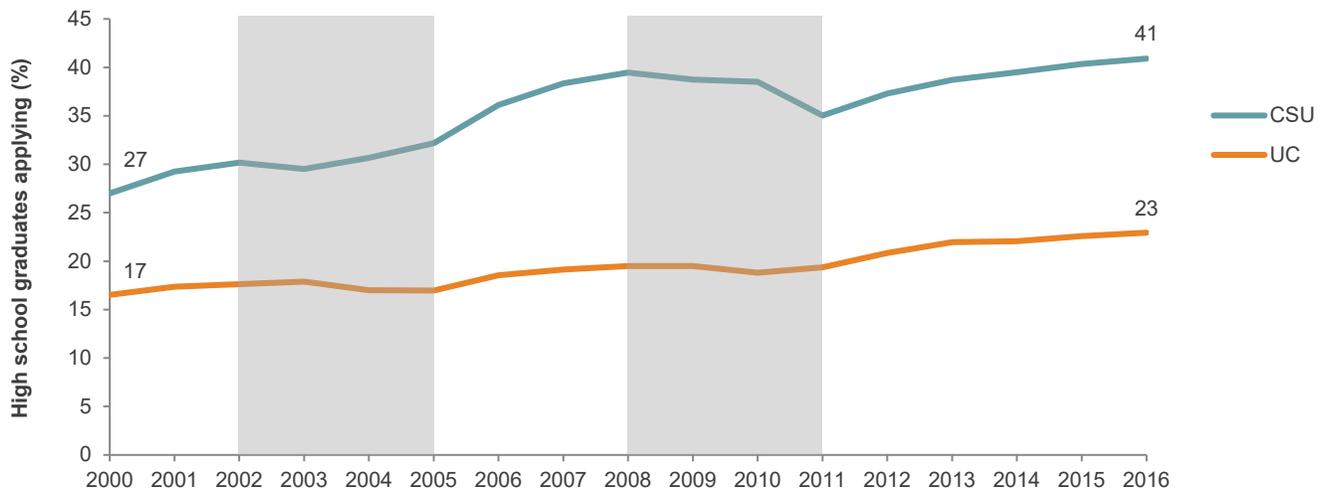
NOTE: First-time freshmen. UC Merced, Channel Islands, and Maritime Academy are not included in any group. Shaded areas highlight years when tuition increased rapidly at UC and CSU.

Rapid tuition increases may also keep students from seeing college as a realistic option. Data on applications to the two universities show that demand for four-year colleges may have decreased during times of sharp tuition increases (Figure 9). This is especially true at CSU, where 40 percent of high school graduates applied to CSU in 2008 and only 35 percent applied by 2011. At UC, increases in the share of high school graduates applying slowed during the two recessions, only to pick up again when tuition leveled off. Since 2011, when tuition growth was flat, demand for CSU and UC has increased and now record proportions of high school graduates are applying to both systems. It is important to note that these changes in application behavior could be influenced by forces other than the tuition increases, including effects of the recession or variation in recruitment practices from year to year.¹²

¹² Many factors outside of the cost of education play a role in access and persistence, and these factors could mask some of the effect higher tuition had on students. High school students may be more likely to enroll in college during a recessionary job market, for instance. Also, during the recession and the recovery, the university systems increased spending on student services (Johnson et al. 2014), and CSU embarked on an initiative aimed at increasing six-year graduation rates (Jackson and Cook 2016). But the existing evidence suggests that tuition increases caused by large budget cuts in California did not significantly alter the choices students make about college.

FIGURE 9

Growth in applications to UC and CSU slowed or declined during periods of rapid tuition increases



SOURCE: University of California, California State University, California Department of Education.

NOTE: Note that the community colleges do not have an applications process. Shaded areas highlight years when tuition increased rapidly at UC and CSU.

Quality

Most Californians do not think that quality at the state’s public colleges and universities is a big problem: only 18 percent think quality is a big problem, compared to 56 percent who think affordability is a big problem (Baldassare, Bonner, and Lopes 2017). Quality represents the extent to which an institution’s instruction, programs, and structures promote student success in college and after graduation. In general, we expect that funding levels have an impact on the quality of an institution, allowing it to hire more faculty—and more highly paid faculty members—and invest in programs and services to support student success. Unfortunately, quality is difficult to measure, and our analysis cannot say for sure whether quality changed during the recessionary periods. We use data on two indirect measures of quality—faculty-to-student ratios and average faculty pay—to assess how quality may have changed during the recent recessions.

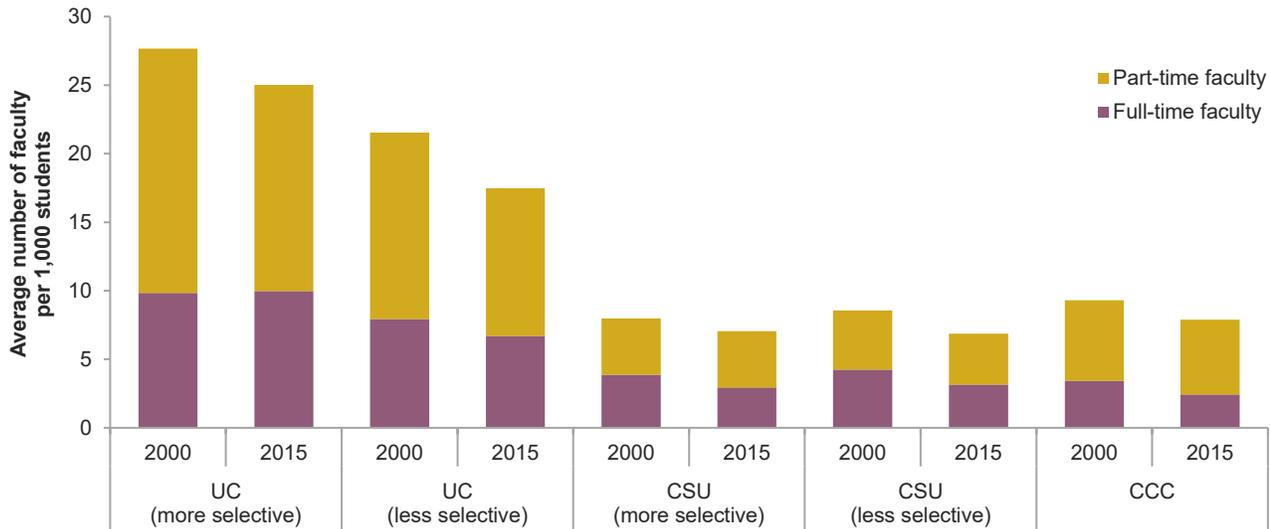
Based on these data, it appears that faculty resources were somewhat diminished during recessions. Tenure and contracts likely keep rapid staffing changes from occurring during economic downturns, but the reduced levels of faculty investment are apparent in our data. UC seems to have fared somewhat better than CSU and community colleges in the past 15 years. UC salaries grew somewhat faster than inflation, and full-time faculty support fell only at the less-selective campuses. At CSU, where state appropriations were not fully replaced by tuition increases, and at the community colleges, we saw widespread reductions in faculty ratios and declining pay over that time span.

Faculty Ratios and Average Pay Declined at CSU and the Community Colleges

The majority of a college’s expenditures are on faculty and staff, and reductions in faculty can lead to fewer course offerings and larger class sizes. Across both UC and CSU, faculty-to-student ratios dropped from 2000 to 2015. Figure 10 shows the average number of faculty per 1,000 students at the four tiers of university campuses and the community colleges. In 2015, UC campuses had more than twice the number of faculty per 1,000 students compared to CSU. Because UC emphasizes research as an intrinsic part of its educational program, UC faculty teach fewer courses than CSU faculty and ratios are higher. From 2000 to 2015, more-selective UC campuses

maintained full-time faculty ratios, while at the less-selective UC campuses and all CSU campuses, average full-time faculty ratios fell by more than one professor over this time. Both more-selective and less-selective UC campuses saw notable drops in part-time faculty ratios, which did not change as much at either the highly selective or less-selective CSU campuses. Community colleges experienced a similar drop in faculty resources as CSU.

FIGURE 10
Faculty-to-student ratios fell at all three systems over the past 15 years



SOURCE: Delta Cost Project.

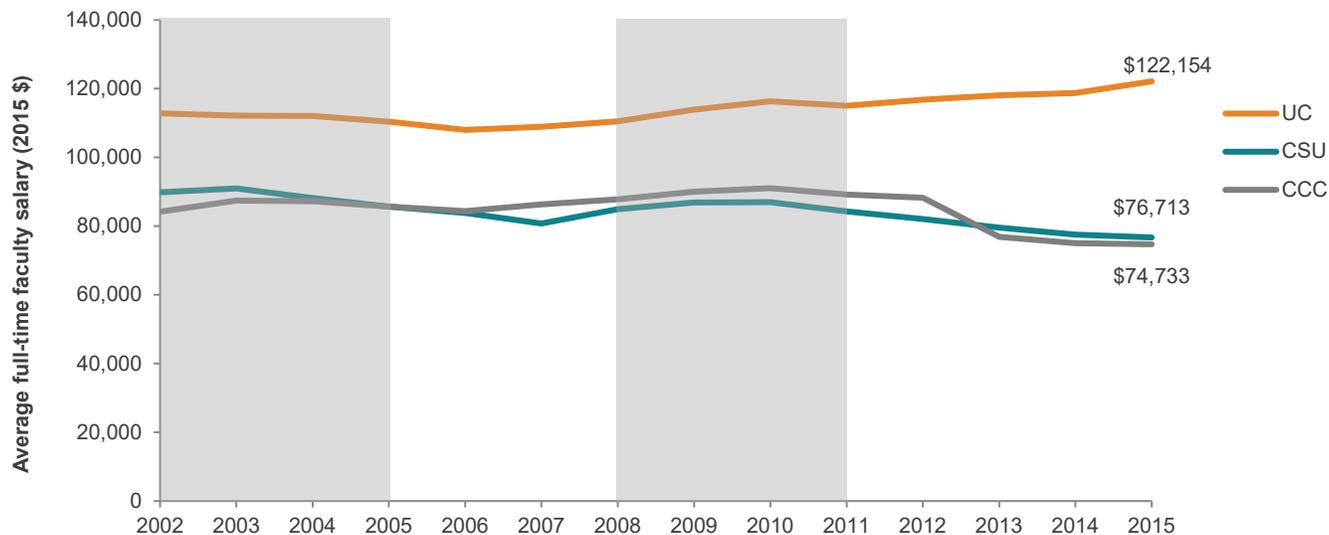
NOTE: Faculty per 1,000 students. UC Merced is not included in the chart.

The amount paid to professors provides a measure of quality that reflects their experience and accomplishments. Figure 11 shows that average inflation-adjusted faculty salaries at UC increased modestly from 2002 to 2015, while they fell significantly at CSU and the community colleges. UC salaries increased faster than inflation, an average of about 8.6 percent over this entire time period. At CSU and the community colleges, faculty pay has fluctuated since 2002 and has declined in recent years. At CSU, faculty pay dropped about 3 percent in nominal dollars (12% in inflation-adjusted dollars) from a high in 2010, and at the community colleges, faculty pay dropped about 10 percent in nominal dollars (about 18% in inflation-adjusted dollars) from a high in 2012. For both CSU and the community colleges, the drops came well into the recovery from the Great Recession.¹³ The selectivity of an institution plays a role in the average salary paid to full-time professors, even within systems. Professors at the more-selective UCs earn about 16 percent more than their counterparts at the less-selective campuses. However, there is only a 5 percent difference between the average faculty pay at the more- and less-selective CSU campuses. The pay differentials between these tiers did not change during the recent recessions.

¹³ It is important to note that CSU and the California State Faculty Association agreed to a new contract in 2016 with salary increases since these data were collected.

FIGURE 11

Faculty salaries at UC kept pace with inflation, but CSU and community college salaries did not



SOURCE: Delta Cost Project.

NOTE: Adjusted for inflation, in 2015 dollars. UC Merced, CSU Channel Islands, and CSU Maritime Academy are not included, nor are faculty of medical schools. Shaded areas highlight years when tuition increased rapidly at UC and CSU.

Policy Considerations

A true test of a tuition policy is what happens when state budgets shrink. In particular, how does lower state funding affect California’s key goals for public higher education? We find that, by matching higher tuition with higher levels of financial aid, the state and its public colleges were mostly able to balance affordability, access, and quality when major increases in tuition were made to offset large reductions in state support. However, our review suggests some potential weaknesses in the current approach, including an overall lack of predictability in future tuition costs for students and institutions, less affordability for some groups of students, and reductions in faculty investments, especially at CSU and community colleges.

There are several ways the state can improve on existing policies in these areas.

First, the state should consider developing a long-term plan for avoiding large, unexpected tuition increases when the next recession hits. Although our review finds that tuition increases did not lead to dramatic problems in affordability, access, or quality, tuition volatility does impact each of those areas for some students. A tuition policy that plans for recessions would help ensure that students and families—who have faced not only rising tuition, but also higher fees and costs of living—are able to plan and budget for attending college. In addition, the higher education system would benefit from more predictable and stable revenues, which permit better long-term planning. One potential example would be adjusting tuition each year to account for inflation, and then earmarking a portion of the state’s “rainy day” fund for higher education should a recession hit. The rainy day fund could help the state avoid cutting too much from higher education budgets and result in smaller overall tuition increases needed to fill the gap. And by consistently and moderately increasing tuition according to inflation rather than keeping tuition flat, the state would recognize the increasing cost of labor from year to year, and tuition may not need to increase as much.

It is important to note that—even if the state maintains its current approach to tuition—what happened in the last recession may not occur in the next one. The Great Recession saw more changes in many student-level metrics (e.g., student loans and access) than the recession of the early 2000s. The size of the Great Recession may have had an impact, but it is also possible that higher tuition levels played a role in the different outcomes. Increasing tuition from the current, historically high levels could cause bigger disturbances than the most recent set of increases.

Second, a state tuition policy should consider the total cost of education. Increases in financial aid were responsible for maintaining affordability for the lowest-income students in California. While financial aid generally keeps universities more affordable for lower-income students than similar public universities in other states, most students are paying living costs that far outweigh their tuition bills. At both UC and CSU, more students borrowed more money during the recent recession. While borrowing rates at UC decreased to pre-recession levels after 2011, they remain elevated at CSU: the share of first-time CSU students borrowing to pay for college was 10 percentage points higher in 2016 than in 2001. Those that do borrow are borrowing more than ever. A more comprehensive study of how changes to state appropriations, tuition, and financial aid affected students and the universities would help shed light on what caused the large increase in borrowing at CSU and whether changes to financial aid programs are warranted. The student survey being conducted by the California Student Aid Commission on non-tuition student costs may also provide further insights on this issue.

More broadly, given the state’s reliance on financial aid as a mechanism for ensuring affordability among low-income students, it is critical that state policies take into account how tuition and financial aid both play a role in overall college costs. For example, state financial aid is “placed based,” meaning the amount of financial aid a student receives is equal to the tuition at the institution they attend. But financial aid could be monetized, transforming current scholarships into portable cash awards. Students would be able to attend the best system they were accepted to—but they would be free choose how to spend financial aid dollars most effectively in meeting college costs. For instance, a student receiving the cash value of a UC scholarship could likely pay for both tuition and living costs if that student chose to attend a CSU campus. However, it is currently impossible to tell what students would do if given this offer. Better data on financial aid receipt and how it connects to individual student choices, success, and debt could help the state find out how to better use financial aid to achieve its goals.

Third, a state tuition policy should take into account the differences across institutions. The systems reacted differently when faced with budget cuts. UC made up for much of its lost revenue through tuition increases, while in 2015 CSU operated with 15 percent less revenue (inflation-adjusted) from tuition and state funding compared to 2001. In fact, many of the UC campuses have other substantial sources of revenue not tied to appropriations or tuition, such as extra tuition from out-of-state students and revenue from endowments. Therefore, budget cuts may have differential impacts on quality, which should be a concern for the state. From 2000 to 2015, many UC campuses—especially selective campuses with more out-of-state students—were mostly able to maintain their full-time faculty-to-student ratios and saw only small changes in access. In contrast, CSU and community college campuses saw their full-time faculty-to-student ratios fall across the board and experienced larger drops in access. Despite the differences over time in faculty-to-student ratios and faculty pay, graduation rates have increased, suggesting the systems are doing more with less. It is not clear what a decline in quality would look like in the short term, but policymakers should be aware that cuts may have impacts on quality that differ across the three systems.

In addition to better understanding the effects of tuition and financial aid on students and institutions, the state and its public colleges should also consider how to best use tuition and financial aid as tools in the quest for a more efficient and effective higher education system. Tuition is the price of attending college, and prices send powerful signals to consumers about their choices. For instance, higher prices could be charged for students

who major in areas that lead to higher wages after graduation, or lower prices could be charged for majors leading to in-demand careers in the state. Other states have adopted similar tuition differentials, but data on their experiences are incomplete. In this regard, a student-level statewide longitudinal data system that tracks students from K–12 education through college and eventually into the workforce could help illuminate which students are most affected by tuition and other college costs.

Tuition policy has changed significantly in California. While some call for the return to the days of very low or no tuition, eliminating tuition would get rid of an important source of revenue for UC and CSU—and replacing this revenue would cost the state \$4 billion a year. Since the state already offers robust financial aid programs that pay tuition for low-income students, lowering tuition may not have much of an impact on affordability for students in need. For that reason, we hope California policymakers recognize the advantages and disadvantages of the current approach and take steps to make it work better. By addressing some of its weaknesses, the state could help ensure that the current policy satisfies the state’s objectives for affordability, access, and quality.

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ACKNOWLEDGMENTS

We thank the Sutton Family Fund for their generous support. We appreciate thoughtful reviews from Steve Boilard, Kevin Cook, and Donald E. Heller. We appreciate reviews, guidance, and support from Patrick Murphy and Hans Johnson. Also, we thank Vicki Hsieh for reviews and editorial support, as well as Courtney Lee and Yozantli Lagunas Guerrero for their research support.

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